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AAR Med. Soc
1965

① Proceedings edited/censored p. 5

② substance of testimony omitted publicly p 6
forms basis of this meeting

③ VP - operations dept ICG present p. 11
VP - personnel - ICG -
many others - p. 11 - more on p. 46 (AAA)

- C.O president said he was "ignorant of what med dept. did" p12
- reference to August 1964 issue of J.O.M. (p 30)
- discusses relationship of doctor to safety "sharp corners" p 33

* increasing claims for emphysema, fibrosis, cancer p. 57 (pulmonary disease project)

* "repeated trauma can cause the asbestoses (Dr. Leigh - Seaboard p. 98)
& can it cause cancer"?

* quote about poor ventilation

* chest X rays recommended - Dr. Lorgeway - Colorado/Southern p. 166

p. 176 - exposure to asbestos, obvious pneumoconiosis

- hydrocarbons discussed/decreases p. 171

ICG - p. 17 Olver says "don't examine applicant until you are quite sure you will hire"

ICG p. 18 "department stores screen their applicants much better than we do"

19 - at this time AAR General Claims had a clearinghouse for blackballed applicants

p. 20 - pre employment hearing exam suggested

p. 23 - pre employment psych. exams suggested to "Keep abreast of other industries"

(SP) when labor is in short supply you relax pre-emp. standards "take anyone warm"

p. 26

27 - "under FELA we are responsible for aggravation of pre-existing conditions"

p. 38 - discussion of rehabilitation programs

p. 39 - "the claims bureau that the doctor performs is important"

"[illegible] spends 1/3 of his time preparing legal defenses"

p. 49 - Dr. [illegible]

important report noted - sent to chief operating officers in 1963

p. 56 -

p. 59 - hearing loss being quickly discussed"

PROCEEDINGS

MEDICAL AND SURGICAL OFFICERS

FORTY-FIFTH MEMBERSHIP MEETING

MARCH 3, 4 & 5, 1965
SHERATON-CHICAGO HOTEL
CHICAGO, ILLINOIS

DEPOSITION EXHIBIT 8

ASSOCIATION OF AMERICAN RAILROADS

PLAINTIFF'S EXHIBIT 12 7-24-95 25

[redacted]

[redacted]

hind each other. They are a couple of inches apart. You are taking two disparate images, and you are combining them into a single image.

Now, this is binocular single vision.

MODERATOR CLAYTON: And very briefly, fusion?

DR. WIPPERMAN: Fusion is an optical sensory reflection in which you are obtaining single binocular vision.

MODERATOR CLAYTON: All right, Doctor, stereopsis?

DR. WIPPERMAN: Stereopsis is a degree of fusion in which you obtain depth perception. The first degree of fusion is simply super imposition in which you can acknowledge that each eye is seeing an image at the same time.

Second degree fusion is where you pin the tail on the donkey and get the tail in the right place. This is super-imposition.

And, third degree fusion, or stereopsis, or depth perception, is where you realize that the boy is standing on one side or the other of the donkey. There is a depth perception factor. This is the highest degree of fusion.

MODERATOR CLAYTON: We have a few other questions, but our time is up. Tomorrow we will talk about diabetic retinitis on another program.

I thank the panel for a job well done. Thank you, very much, gentlemen, for your attention. (Applause)

CHAIRMAN OLSON: I am powerful glad to get those last three things straightened out in my mind.

We will now take a short break and then we will resume and we will take up Pulmonary Diseases.

(A short recess was taken.)

CHAIRMAN OLSON: We want to adhere to the schedule as closely as possible.

The next panel symposium is on Pulmonary Diseases and will be conducted by Dr. Kaplan.

PANEL SYMPOSIUM - PULMONARY DISEASES

MODERATOR KAPLAN: Chairman Olson, officers of the Association, guests: Pulmonary Diseases is a rather unique subject for the railroad industry, since a minimum of attention has been directed to its importance. Members of my group have collected pertinent material that should be of extreme interest and value. The panel members are:

Stanley J. Cyran, M.D., Medical Director, Pennsylvania Railroad, Philadelphia, Pennsylvania.

V. W. Hollo, M.D., Chief Surgeon, St. Louis-San Francisco Railway, St. Louis, Missouri

W. J. Longeway, M.D., Chief Surgeon, Colorado & Southern Railway, Denver, Colorado.

G. Earle Wight, M.D., Chief of Medical Services, Canadian Pacific Railway, Montreal, Quebec, Canada.

C. R. Zeiss, M.D., Chief Surgeon, Elgin, Joliet & Eastern Railway, Chicago, Illinois.

I am fully aware that it is late in the afternoon, and, even though the eye panel might not be responsible for the heaviness of our orbicularis oculi muscles, it is the time of day when lactic acid accumulates and results in a state of semi-narcolepsy.

However, I do hope that you will remain alert for at least an hour and fifteen to thirty minutes, during which we will try to present to you the complexities of the pulmonary problems. It is a very delicate one. We do not profess to be experts in pulmonary physiology; we are not pulmonary internists, but we are familiar with its relationship to the railroad industry.

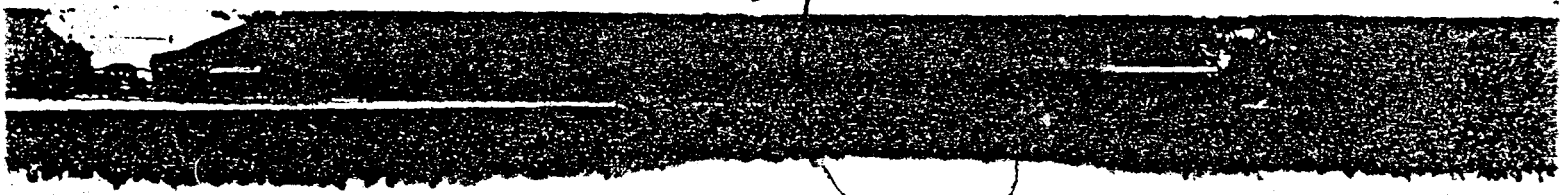
Many of you are acquainted with the historical background of lung cancer. The miners of Schneeberg and Jachymou suffered from a pulmonary disease for many years, but it was not until 1879 that it was recognized to be cancer as a result of exposure to uranium in the mined pitchblends. Later, chromates, nickel, arsenic, beryllium, and asbestos with its magnesium silicate content, were also found to be etiological factors in the production of lung cancer. More recently cigarette smoking has entered the controversy. At present the railroad industry is also becoming implicated as possibly being a factor in lung cancer because of diesel exhaust fumes.

During the past two or three decades, we have noticed a new factor insidiously creeping into the railroad industry. This is the matter of air pollution and contamination of shops and roundhouses with diesel exhaust byproducts.

This is not a new tenet, but more and more litigation in this field is being presented, and I am sure that none of us are so naive that we are not cognizant of the problems arising in our shops and roundhouses due to air pollution from diesel exhaust and other air contaminants.

Each of you has been issued a copy of "PULMONARY DISEASES IN THE RAILROAD INDUSTRY:"

A. Sources



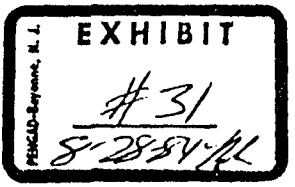
PROCEEDINGS

MEDICAL AND SURGICAL OFFICERS

FORTY-FIFTH MEMBERSHIP MEETING

MARCH 3, 4 & 5, 1965
SHERATON-CHICAGO HOTEL
CHICAGO, ILLINOIS

ASSOCIATION OF AMERICAN RAILROADS



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1964-1965

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E. C. Olson, M. D., Vice-Chairman
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MEMBERSHIP MEETING
ASSOCIATION OF AMERICAN RAILROADS
MEDICAL AND SURGICAL OFFICERS
SHERATON-CHICAGO HOTEL
CHICAGO, ILLINOIS

Wednesday, March 3, 1965

The first general session of the Forty-Fifth Membership Meeting of the Medical and Surgical Officers of the Association of American Railroads convened at 9:30 o'clock in the Boulevard Room of the Sheraton-Chicago Hotel, Chicago, Illinois, with Dr. Harvey Nelson, Chairman, presiding.

CALL TO ORDER

CHAIRMAN HARVEY NELSON: I would like to call to order the 1964 Annual Meeting now being held in 1965. This is, by the way, our Forty-Fifth Membership Meeting.

For a time, I wondered whether we ought to just join one of the brotherhoods, or at least get into some of the negotiations so we could know when to get together. At any rate, we are here.

There are a few announcements.

(Announcements concerning the meetings.)

I would like to say that this is your meeting, and the program is based on your medical problems and material that came from you in answer to questionnaires. We want you to participate with questions and remarks from the floor.

You will note that our proceedings are being recorded. These will be edited by both the moderator and the speakers. Later they will be submitted to the Medical and Surgical Advisory Committee for final review before printing.

CHAIRMAN'S MESSAGE

I presume as Chairman I should have a message. I wouldn't be much of a Chairman if I didn't have some ideas about our group and our work.

There is a feeling that permeates the Medical profession of responsibility to their work, to Medical organizations and even to community activities. Over the years, I have often marveled at the cooperation and dedication of busy medical men to time-consuming committee work. This has been particularly true in this organization. Our attendance at meetings is remarkable when we consider the fact that our members come from all over the country. I have just briefly checked and we have had some 26 committee meetings in the last two years.

For this support, I want to thank you, and I want to assure the future chairman that he can rely on this kind of help.

since our last Annual Meeting of 1963, a few changes have been made which I hope prove to be worthwhile.

First, it was your chairman's impression that we have not heretofore been satisfactorily compressing our Annual Meeting into a couple of half-day sessions. A more extended program seemed necessary to cover our material sufficiently and to allow a fair expression of the efforts of the various committees.

This has been done.

Secondly, some of us thought that we have not been willing to openly and adequately face some of our more sensitive medical problems. It would seem necessary then to find out what these problems are. To this end, questionnaires were sent out, and the substance of the replies form a substantial foundation for our present program. We hope the result will be interesting and informative, and the material a supply for future committee consideration.

Thirdly, we have never, to my knowledge, made any concerted effort to have management participate in our program. For management to understand the duties and the responsibilities of their Chief Surgeons and Medical Directors, as well as the ramifications and implications of our railroad medical, medical standards and medical legal problems, should be particularly important now as we confront the ever-increasing momentum of labor, legal and welfare promotion.

When Chief Surgeons and Medical Directors were originally appointed, their function was to treat injured employees, and later to make employment examinations. They now primarily are administrators in a complex branch of industrial medicine.

A few years ago, we were reduced organization-wise, to the status of a Medical and Surgical Advisory Committee with a questionable permission to have subcommittees and to have Annual Meetings of our whole organization. We cannot and have not operated this way. Economic stress was a stated reason for this decision, but we, as medical and surgical officers, have to accept equal responsibility for this change.

Outside of the chairman inviting his president to address the annual banquet, and a few of his officers to attend, no effort was made to have management understand the efforts and purposes of our organization.

We, ourselves, know the importance of our getting together periodically to keep abreast of fast improving medical practices and to exchange ideas in the field of railroad medicine. But does management know? Today we have, therefore, invited management to participate in our program and to attend as much of it as they can. We extend a cordial welcome to Mr. Zimmerman and members of the General Committee who are here

and to other members of management who are on the panels and in the audience.

Fourthly, for this program we have changed the format to one largely of panel symposiums. By means of this more informal, and to some extent impromptu type of discussions, we can all take part, moderators, panels and audience. Discussion material for your consideration has been accumulated, but the discussions themselves will be guided by each moderator. They will not necessarily be confined to the listed material or in that order.

Fifthly, a happy thought for me was the formation of a new committee, a sort of executive committee, titled The Steering Committee. This group, appointed by the Chairman, and including Dr. Ernest C. Olson, Dr. John R. Winston, Dr. Benjamin W. Stockwell, and Dr. Ralph A. Johnson, met as frequently as the occasion required. Preparatory planning, arranging of details and counselling the chairman were invaluable assists to our work.

I heartily recommend that this be a permanent part of our organization.

Sixthly, an idea developed this last year which is worthy of your consideration. Several members have expressed the thought that we should get together more frequently. Others have frequently stated that we sometimes are inadequately informed and are arbitrary in our decisions, and that it could not hurt us to know more about special fields or what medical authorities think.

From these two nebulous reflections evolved the embryo of a plan to have what might be called interim symposiums, possibly three or four times a year, on any worthwhile medical subject concerned with railroad medical practices. As a trial balloon, such a panel symposium was held in Chicago on January 12, 1965, on the subject of "Vision."

This panel consisted of four ophthalmologists, Dr. Fred A. Lauppe of Wayne University, Dr. James Fox Culver of the Air Force Base at San Antonio, Dr. Marvin D. Henry of Chicago and Dr. Kenneth L. Roper of Chicago, with Dr. John Winston as a very capable moderator. This program was interesting, instructive, and well received.

The advantages of such interim symposiums are obvious. The assimilation of the most modern and authoritative information on any subject for the digestion and use of our committees does not compel us to abide by the thinking of these specialists.

It is not difficult to think of many subjects and different locations in which to have meetings, as for example neuropsychiatric subjects in Topeka; vascular surgery in Minneapolis or Houston; pulmonary diseases; hearing; etc. Many of the subjects which come to mind pertain to medical standards, but not necessarily so. Backs, discs, spinal fusions, cancer, average healing periods for specific injuries, for example, would be some of interest to the Medical Legal Committee. It should be of in-

finite value to have more knowledge than we do on the many subjects we have to deal with.

The responsibilities of your chairman have involved a lot of work, but it has been gratifying. It is only fitting that I acknowledge the unselfish and very capable assistance of your Vice-Chairman, Dr. Ernest C. Olson. He will be a good leader next year.

To sail our program on a different tack has been an interesting project, and I hope you will like it.

We were very glad to forego the pleasure today of assembling in a sunny climate in order to begin our program the day before the meeting of the General Committee of the Operating-Transportation Division of the Association of American Railroads, of which Mr. Zimmerman is Chairman. A number from this committee are in attendance today.

We also are delighted that a member of this committee, as Vice President of the Operations and Maintenance Department, was willing to leave Washington a day early to address our group.

It is my pleasure to introduce you to our group, Mr. Manion. It is our pleasure to hear you talk and have this opportunity to become better acquainted with you. (Applause)

ADDRESS: R. R. Manion, Vice President, Operations and Maintenance Department, Association of American Railroads

Thank you. Dr. Nelson, Gentlemen: I am honored to be included in your program and very pleased to participate, and I am also very pleased that Dr. Nelson was able to have his meeting at such a time and place that members of the OT General Committee were able to come.

There are a number of them here, and I know a number more had intended to be here, but the bad weather we have been having around the country has had its effect on railroad operations, so a number who planned to be here didn't make it.

While this is the first time I've had an opportunity to meet with you, it is by no means my first introduction to your activities or the contributions of your members to the orderly functioning of railroads - especially from an operating standpoint.

Working with medical examiners and the local doctors as a supervisor or officer in both maintenance and operating work, I long ago appreciated the role of the Railroad Doctor in assistance to the operating man in his personnel administration and, very importantly, in the welfare of employees.

In an effort to learn more about your plans and programs, I found that this meeting had been scheduled twice before only to run afoul threatened railroad work stoppages.

Dr. Nelson mentioned that it might be advisable for your group to join one of the brotherhoods. It occurred to me that neither Doc Wolfe nor the organizations really had anything against your holding a meeting. Some, however, may be excused for harboring a slight suspicion about this. You are to be congratulated both on your perseverance and ability to select a safe date for this meeting.

Very interestingly, on your program, your first symposium, addressing itself to the extremely important relationships of Management, Manpower and Medicine, begins with a discussion of employee selection.

Several extremely significant changes in the character of our industry during the past twenty years or so - changes which have taken place in certain other industries also - have made it imperative that the selection of new employees be carefully managed and of the highest order possible.

Some of the more important of these changes - not necessarily in sequence or order of significance, are:

1. Higher order of technology applied to the industry.
2. Recognition of and determination to meet competition.
3. Acceptance of new concepts in employee relations. The particular reference is to stability of employment, costs associated with severance in case of reduction in employment levels, and extensive "fringe benefits."

The implications of these factors on the requirements for developing and maintaining qualified and effective personnel are considerable. In view of your extensive program - attacking, as it does, many of these elements - and also Dr. Nelson's welcome advice that about ten minutes would be sufficient from me - I'll point them up briefly.

1. With respect to technology:

By its very nature, ours has always been an industry requiring extraordinary disciplines. To achieve these, a large segment of the work force had to measure up to unusual standards of stamina, alertness, availability and devotion to duty. Now, with the increasing application of new technologies there evolves the requirement for us all to adapt effectively to new environments, develop new skills and to select and train people equal to these new needs.

I submit that this will challenge not only the managers, the personnel experts, but will call for the full assistance of our medical arm.

It appears to me that the role of the medical officer becomes more useful and important than ever in assisting in selection, screening, guiding and guarding employees' health and safety. Do we not have much to accomplish - not only in starting with promising people - but in assisting or encouraging them to stay well and productive?

2. Our industry has been accused of reaction and [illegible] If this has at times been justified - it is not now. This [illegible]

tinent are growing in population and production, and the centers of production are shifting.

This means the needs for transportation are growing and shifting, too and in great strides. The capabilities and limitations of the several transportation modes are becoming much better defined - and with this, it is becoming increasingly evident that the railroad industry not only will continue to be the principal and most economical mode for the great bulk of freight, but has the capability and the vitality to vastly improve the handling of goods with the dependability of service required by our economy.

I cite this situation only to emphasize again the importance of manning a dynamic industry with people qualified to participate and both equal to and eager for the challenges involved.

3. Now - from the standpoint of industry economics:

Along with some other industries - but possibly at this time in advance of most - new concepts have been adopted regarding stability of employment, and - or - benefits to employees involved in work force reductions resulting from technological adjustments, mergers, relocations and method changes.

These new factors impose challenging burdens that will not permit us to be inept or careless in the establishment and maintenance of the quality of our work force or its management. It seems to me that this presents a first-class challenge to your fine group to effect a program of participation which can be supplied only by you.

Also on the side of economics - from discussion with Ken Carney, I'm aware of the important part you play in the area of personal injury claims. To begin with, the over-ridingly important thing is to reduce to the absolute minimum the incidence of injuries, next to minimize the effect of accidents and next to provide to the claims officer the greatest of support which can be supplied only by your special abilities.

Since World War II our industry has had its ups and downs, and has had to make many adjustments to keep alive. Some of these were painful - some were overdue - on balance, I think the body will emerge more healthy than ever - along with this, our Association has gone through some adjustments, too.

Here and there we may have dropped something that should be retained. One of these of which I have become aware is the printing of your annual proceedings. I take this opportunity to tell you that arrangements have been made to reinstitute the printing of your proceedings.

I would like to add that your invitation to the General Committee to attend was very welcome and was discussed, and I would like to add again that the OT General Committee has a great appreciation for what the doctors do. Thank you very much. (Applause)

CHAIRMAN NELSON: Thank you, Mr. Manion.

I have a few names of those other than our Medical Officers, who have registered. I will just briefly read them.

We have as our guests Mr. O. H. Zimmerman, Vice President of Operating Department, Illinois Central Railroad.

Mr. W. D. Lamprecht, Vice President of Operations of the Southern Pacific.

Mr. R. D. Shelton, Vice President of Operations, Santa Fe.

Mr. C. S. Sanderson, Vice President and General Manager of the L. & N.

Mr. Earl Oliver, Vice President of Personnel, Illinois Central Railroad.

Mr. William T. Roche, General Manager of the Norfolk & Western.

Mr. Maurice N. Ray, General Claims Attorney, New York Central System.

Mr. G. M. DeLambert, Director of Personnel of the N. P.

Mr. D. L. Borchert, Director of Personnel of the Soo Line.

Mr. R. R. Minor, General Claims Agent of the Illinois Central Railroad.

Mr. Clem Maloney, General Claim Agent of the Belt Line of Chicago

Mr. B. R. Howard, General Claims Agent of the Southern Pacific in San Francisco.

Mr. Kermit Johnson, General Claim Agent of the Northern Pacific, and, incidentally, the Legal Chairman of the Medical Legal Committee.

Mr. Earl Zeigler, General Claims Attorney of the Atlantic Coast Line Railroad.

Mr. Ernest A. Jenson, Claims Attorney of Soo Line Railroad.

There undoubtedly are others. I am sorry not to have a full list. Welcome to our meeting.

It is now about time to get into our first panel. Before that, we will have a brief coffee break.

(A short recess was taken.)

PANEL - MANAGEMENT, MANPOWER AND MEDICINE

CHAIRMAN NELSON: There was no problem in selecting the moderator for our first panel symposium. All we wanted was someone to set the tempo for our entire meeting. Fortunately, such a man is just about a charter member of our group. You are all familiar with his organizational and rhetorical ability. He is the most conversant layman doctor that I know - Mr. K. A. Carney.

Mr. Carney, will you introduce your panel, please.

MODERATOR K. A. CARNEY: If you don't mind, Dr. Nelson, I would like to run this show my own way. (Laughter)

First of all, I would like to compliment Mr. Manion and Dr. Nelson for presenting our problems, and what we propose to do now is to see how we can implement what both the doctor and the executive officer of the AAR says the medical department should do, and what management expects of a medical department.

Mr. Touhy, the then president of the C. & O. at White Sulphur Springs, eight years ago, said he was abysmally ignorant. You know, I am going to have to call on "Chick" Horsley to correct me in some of these words. You will find out when Mr. Horsley gets into this picture, he will use words that you will have difficulty in understanding, and we will have someone interpret them for you, if you like, but nevertheless, Mr. Touhy said he was very ignorant of the things the medical department were doing.

He knew they were important, and he valued the meeting he attended in White Sulphur Springs immeasurably because he had learned for the first time how important you were in the area in which you serve so well.

At the same time, the then Commissioner of the Interstate Commerce Commission commented on the work of the doctor, how important it was to the safety of the railroads.

Now, our panel this morning is composed of some distinguished men, and I will introduce them beginning at the left end of the table. The first man you see is not a member of the panel. He is John Risendal. He is my assistant, and he is here for the purpose of recording and summing up the consensus of the views of this group.

The second gentleman on the left is E. T. Horsley, the carrier member of the National Railroad Adjustment Board.

The next gentleman is Ed Glennon, counsel for the Soo Line Railroad, from Minneapolis, Minnesota.

Next is Maurice Ray, General Claims Attorney of the New York Central at New York.

Next is Earl Oliver, recently appointed Vice President of Personnel of the Illinois Central Railroad, who consented at the last minute to take Maynard Parks' place, Vice President-Personnel of the Missouri Pacific.

We are very indebted to you, Mr. Oliver, for coming to us on this very short notice.

Next is Otto Zimmerman, Vice President, Director, of the Illinois Central Railroad, Chicago.

On my far right, of course, you know Bill Todd and Nelson. Then we have Dr. Olson, Chief Surgeon of the Illinois Central.

Dr. Southgate Leigh, Chief Surgeon of the Seaboard Air Line Railroad.

Dr. John Winston of the Santa Fe, and Dr. Ben Stockwell, of the Grand Trunk, and perhaps some other railroad. I don't know. (Laughter)

At any rate, I would like to make one or two announcements first. We welcome the participation of all of you. If a question is asked and you can beat a panel member to answering it, please do so. If you have a question that you don't feel like asking, but you would like to have it answered, please submit it on a piece of paper. Have some one bring it up here, and if we have time, and care to answer it, we will.

When you do ask a question, we would like you, particularly those of you in the audience, to state your name and your connection.

To the panel members, let me say we have a limited amount of time. We want to keep you on the ball and the point that is raised. Don't deviate or depart into a long-winded talk about anything. Answer the question as concisely as you can, and if you disagree, we hope that we evoke all kinds of criticism, all kinds of remarks on both sides of the question, because that is the only way we are going to get any benefit out of the program.

I think the relationship between the chief surgeon, the medical department and management, has already been answered.

Now, we are going to implement it as we study these other phases of the work. This is on page 8 and I hope all of you will turn to that page because the second question is the development of reasonable physical standards applicable to applicants for employment and for continuation in service.

Dr. Winston has been working hard on perfecting standards which are going to be submitted to the Medical Section in due course because this is an area in which the then Commissioner of the Interstate Commerce Commission said there was a great need for standards that should be adopted by the railroads generally.

John, would you care to comment a little bit on the situation in that area?

DR. JOHN R. WINSTON: There was a time when medical standards were an extremely simple set of rules to follow. The more we became enlightened about medical problems, the greater the responsibilities of the various representatives of the railroad industry become, the faster our trains, the tighter our schedules, the more complex this subject becomes.

Now, in order to get into the medical standards as such, requires an understanding of not only the duties and responsibilities and obligations of the job. It requires a much greater understanding of the man himself, not altogether from his physical capabilities, but also from his mental capabilities.

Then we want to find out how long this fellow is going to be working for us.

As Underliter said, and this relates to chief surgeons as well: Unlike clinical medicine, which deals chiefly with the problems of the present, insurance--I say railroad--medicine is concerned to a greater degree with the remote future.

In this function the physician plays the role of a prophet, rather than a healer, and believe me, in order to put this into effect, takes just a little bit of time.

Our old standards were about this size. This is the way they will probably look. (Holding up books)

MODERATOR CARNEY: Thank you very much, Dr. Winston. I might say that Dr. Winston has been working on this a long time, and it is a terrific job. Does anybody else care to make an observation in connection with standards?

MR. HORSLEY: About the necessity for standards, Mr. Moderator? I should like to say that I have long advocated the necessity for standards physical fitness for this reason, that in 14 years of sitting on the National Railway Adjustment Board, in defense of the carriers, I have found that disputes involving physical fitness for work on the railroad arose out of the assertion made consistently by labor that the opinion of a railroad doctor is no better than the opinion of the employee's private physician. Now, then, if you do not have standards of physical fitness upon which to base your opinion, then the standard of physical fitness that prevails in this adversary business of employee versus management, that standard is this:

He is fat and warm, and he doesn't wet the bed. Therefore, he can work. (Laughter) But the railroad doctor has opined he cannot work because his physical condition does not conform with the job requirements.

There you have a dispute. Hence, Mr. Moderator, I advocate the formulation of standards of physical fitness.

MODERATOR CARNEY: Thank you very much.

Does anybody else have a comment?

If not, the next observation here we make is: Should individual railroads adopt their own or accept AAR recommended standards with such reservations deemed advisable? And I would like to call upon Mr. Horsley again.

MR. HORSLEY: I would say either one, either the AAR standards or the adoption of the railroad's own physical standards, providing that the carrier's adoption of its own physical standards is not more rigid than the AAR published physical standards, unless that increased rigidity is directly related to a particular craft and the job performances of that craft on that particular railroad because of the traffic that is unique to that railroad, in a sense, or geographical conditions, but otherwise, yes, either the AAR standards or the carrier's own adoption of the standards.

MR. OLIVER: I should like to comment on that and differ just a bit with Mr. Horsley. A question frequently arises as to whether the standards are reasonable. It seems to me as a railroad personnel officer, that we would have a much better argument for the reasonableness of the standards if the standards have the backing of the AAR, than if they are simply standards drawn up by the individual railroad and the employees can show that on the Grand Trunk, for example, the standards are far different from those on the Illinois Central and so on.

MODERATOR CARNEY: Earl, do you have any ideas as to whether or not the fact the AAR is identified with these standards and a railroad makes an exception to them, would this have any effect upon your judgment at all?

You don't want them to adopt them in toto.

MR OLIVER: No, sir, I think that the basic standard should be the AAR standards modified to meet the individual carrier's own predilections.

MODERATOR CARNEY: Peculiar circumstances. Are there any other observations? Dr. Wight.

DR. G. EARLE WIGHT (Canadian Pacific Railway): As to this question of rigid printed standards, I believe that is what you are talking about. I think there is a lot of danger attached to this. In the United Kingdom some time ago they did a job analysis. It took them 10 years to do a complete job analysis, and they fixed standards for each job. By the time it was finished, the jobs had changed. The standards were no longer applicable, and once you get a thing in print and in writing, it is awfully hard to get it out, and I feel that a printed, rigid standard is somewhat dangerous.

And then, Mr. Horsley's comment about whether the railways should have their own standards or the AAR standards. I believe he made the remark that the railway standards should not be more rigid than the AAR. I think there is another way of looking at this. I think AAR standards are minimum standards applying to all railways on the North American continent, and that any railway within itself should be permitted to have higher standards if they so desire.

MR. HORSLEY: I agree with Dr. Wight, Mr. Moderator, and I believe he agrees with me in my original statement, in that deviation from the AAR standards to more rigidity should be related to the particular reasons for there being more rigidity on the particular railroad involved, either geographically or traffic conditions or otherwise.

MODERATOR CARNEY: That is a factor in establishing the reasonableness of such standards applicable to the particular operations involved.

MR. HORSLEY: Mr. Moderator, I should also like to mention that Dr. Wight spoke of his experience with respect to making standards for each job, and in my remarks I related the standards to the crafts, not each job, so that a craft standard would be much broader, of course, than an individual job function standard.

DR. WIGHT: You warned me to be careful about this man and semantics. I should have chosen my words carefully. (Laughter)

MODERATOR CARNEY: You "ain't" heard nothing yet. (Laughter)

MR. HORSLEY: No, sir, and you are not going to. He has spoken of my vocabulary and all I would like to say is that he is wrong because my vocabulary is extremely limited by the presence of this lady reporter today. (Laughter)

MR. ZIMMERMAN: That makes my job much easier because I was supposed to be here to interpret the cuss words they used.

MODERATOR CARNEY: Undoubtedly she has heard some before, so I would think that within reasonable limits you may be free to indulge yourself.

Are there any other comments? If not, let's pass on to the selection of manpower. I warn everybody in the room that we will not tolerate discussion on anything except the selection of manpower, the applicant for employment.

We are not talking about in-service employees. We are talking about a man coming to your railroad and trying to get a job.

The first question is:

Is it desirable to screen applicants for employment before submitting them for medical examinations? I would like Earl Oliver to comment on

that if he would.

MR. OLIVER: I think it is highly desirable to screen the applicants before sending them to the doctor for medical examination. It was desirable years ago, but it is particularly desirable now that a great many of us are using the back x-rays which are costly.

On the Illinois Central we use back x-rays for more than 50 per cent of the applicants. I think the medical examination all told amounts to about $35.00. That is a lot of money if you are not going to hire the applicant.

We are right now in the process of revising the instructions to our employing officers and instruction number one reads as follows: "Do not have applicant undergo a medical examination until you are quite certain you will hire him, if he is physically qualified."

MODERATOR CARNEY: Are there any other comments?

DR. NELSON: I would like to ask how thorough most railroads are in preliminary screening. Quite frequently I find that applicants come through for medical examination, who never should have. Pre-employment questionnaires and screenings are exceedingly important, not only for ordinary lay information but for medical and neuropsychiatric information as well. If these questionnaires are not adequately reviewed by responsible people, they are worthless. This, I believe, is the responsibility of personnel departments.

MODERATOR CARNEY: In other words, you would like to know from this group here how many have experiences where they are not properly screened by the employing officer before you examined them.

DR. NELSON: That is right.

MODERATOR CARNEY: Does anybody have any comments on that?

Yes, Dr. Wight?

DR. WIGHT: One small one. I agree wholeheartedly with the speaker. You are putting too much responsibility on the doctor. You will get a man appearing before the doctor for employment as a waiter in a dining car service. He is 5'9" and weighs 260 lbs. Well, now, how can that man get around? And yet, he is being sent to the doctor for examination. He hasn't been screened properly for his job.

MODERATOR CARNEY: That is a good point.

Does anyone else have any experience along this line?

MR. OLIVER: I might comment further, Mr. Carney. We have our employing officer make out a medical questionnaire. Of course, the employing officer is not attempting to take over the medical officer's job, but

he knows that certain things will be disqualifying defects, so we have him ask the applicant quite a number of questions.

For example, do you have any trouble distinguishing colors? The employing officer knows that one of our requirements for training engine service employees is absence of color-blindness, and we have quite a list of questions.

I think that this is helpful in a further screening of the applicants. We are able to send to the doctor then only those who appear to the employing officer as good prospects.

MODERATOR CARNEY: This is a good point. I would like to relate a personal experience I had some years ago when I was in the claim department of the Illinois Central.

We had a back injury growing out of a tower man who was walking to his job and fell down on the trestle, about 20 feet, and got very badly hurt. When we investigated this case, then we found in his application papers, which were cleared by the employing officer, a history that while he was in high school he had a very nervous condition. He was sent to a hospital for about a year, a state hospital for correction, brought back and his entire history the rest of the time in the hospital was one of instability.

He got a job at Northwestern University in animal culture, and they found that he couldn't work well except under the closest possible supervision. Yet, when we hired him, we put him in a tower all by himself, throwing switches, of course, for the operation of trains.

Obviously, he hadn't been adequately cleared. Now, our records in the claim business are replete with people who are brought in to the railroad service, who present great hazards from that point of view. The doctor should not be called upon to examine anybody who has a record comparable to the one I described or any other kind of record that would indicate any kind of instability in the work he is called upon to do.

We have commented time and time again that department stores sometimes screen their applicants much better than we do. Whenever we take on a man who is unstable and is difficult, we are exposing ourselves to a $50,000 or $100,000 verdict or judgment for an insignificant injury.

DR. ERNEST C. OLSON: Mr. Carney, I would like to direct something to Mr. Oliver. Isn't it true that we have a rather comprehensive interrogatory made to certain classes of applicants on the Illinois Central by the employing officer that screens out a great deal of the mental aspects in the individual?

MODERATOR CARNEY: What do you think of that, Earl?

MR. OLIVER: Dr. Olson, frankly, I am not familiar with it unless you are talking about the medical questionnaire which we do use.

MODERATOR CARNEY: No, he is asking whether or not your employment department does not undertake to examine these people and develop these apparently psychological problems.

DR. OLSON: I was referring particularly to Mr. Richardson's set of questionnaires which he has, and I know that it is used rather extensively in the Chicago area. I don't know how much it is used on line. It seemed to me that from reading these questions and answers, that you got a pretty good idea of the stability, the mental ability, the intellect and the suitability of the candidate other than his physical condition.

MR. OLIVER: Dr. Olson, we do have certain tests that we give to certain employees, but this is not universal. The rank-and-file of employees do not get these tests.

Now, I think there are some questions in the medical questionnaire that the employing officer makes that gives some idea in this direction.

DR. WINSTON: I would like to submit another area that the management might explore. That has to do with the testing of vision, color sense and hearing. I would think that the hiring officer could carry out these procedures equally as well as does the little girl up in the doctor's office who happens to be thinking about her boyfriend at that particular moment.

MODERATOR CARNEY: Another comment I think is appropriate at this time. Summing up what we think about this thing generally, we are agreed, I believe, that the employing officer, whether he happens to be a clerk in an outlying point or headquarters or whether you have a particular department for it, should be trained to pick up as many of these cases as possible before submitting them to the doctor.

I would like to submit one more thought on behalf of the service that we, in the AAR General Claims Division, provide, and which most railroads participate in. (Just two of the large railroads haven't yet got around to reporting as they should.) This is, the referring to our office an indication that you are going to employ X person, giving us his Social Security number. We then give you a reply within 24 hours, indicating whether or not that man has had a previous claim against a railroad, or was rejected by some other railroad for physical reasons.

This information is not a notice to you that this man is unemployable. It is merely a notice to you of the fact that he has been involved in some other situation that bears further inquiry on your part. We have found men who failed to disclose their prior railroad service, their railroad accidents, their prior rejections, all of which the hiring railroad ought to be cognizant of before employing an applicant.

His answers to the questionnaire and all this sort of thing, whether they are honest or not, is another indication. So, with this, you have got a screening process that should save you money for medical examination if you properly clear them, and also educate your employing personnel.

Do you have anything, Otto?

MR. ZIMMERMAN: I want to go back to that previous statement that the doctor made with respect to a clerk or employing officer making color perception tests on a man.

I don't think these laymen can be considered as qualified to make those perception tests. In the case of the gal thinking about her boyfriend, the color is bound to be rosy, whether she can see it or not. (Laughter) I would rather have the doctor make the examination as he is supposed to do. It is his signature that is on that paper. If you come to a case where color perception is an item in some sort of accident, I don't want some Joe Blow clerk out here with his name on that form or anything that might indicate the doctor did not give the thorough examination on the eyes that he should.

I would like to take a little exception to that.

DR CHESTER R. ZEISS (Elgin, Joliet and Eastern Railway): I agree with Mr. Zimmerman 100 per cent. I don't think anybody should be delegated to do medical work other than the M. D. or the Nurse.

I also want to emphasize the importance of Ken Carney's information center here. We, unfortunately, had an experience just two months ago where we got the information from his service that an individual received a four thousand dollar settlement from one of our local railways. Our employing officer, or our superintendent, paid no attention to the word of advice that was given to him through our claims department, and we hired him. Now, he wants seven thousand dollars because he said he slipped on a piece of ice. The Claims Research Bureau presents a very valuable information center.

MODERATOR CARNEY: We will pass on to question #2. Pre-employment physical examinations. How comprehensive should they be? I should like Ben Stockwell to talk on that question, if he would.

DR. BENJAMIN W. STOCKWELL: The remarks of Mr. Manion a little earlier points up the necessity for a most comprehensive pre-employment physical examination, and I think he expressed it very well. The comprehensive pre-employment pbysical examination really has a dual purpose. First, it is for the protection of the company to make sure that the employee or applicant is physically and mentally able to do the work that is required of him.

And, second, it is for the protection of the applicant himself, because he should not be permitted to try to take on a job that he isn't physically or mentally capable of doing.

We know that the man who is well examined to determine whether he can do his job, insures safer operation, will have fewer injuries, and we will have definitely more efficient operation. I think that is our objective.

Pre-employment physical examinations vary tremendously in this industry, unfortunately, and it may be somewhat of a reflection on the physicians themselves. I think it behooves the chief medical officer of the railroad to make sure that his medical examiners do a good job, that the applicant is really examined, that he has all of his clothing off at the time the examination is made, that the examination is done in a well-light room and that the doctor has all of the facilities that are required for making a head-to-toe, complete physical examination.

There is a trememdous individual variation in the examiners; the interested examiner is going to do a good job. He is the most important part of our employee selection from the medical standpoint.

We have been very much interested in advocating the use of pre-employment x-rays and other studies to determine whether a man is able to do his job, but the real, basic thing is the very carefully done physical examination by an examiner who is interested and who knows what the applicant has to do.

I may say that it is most important for the railroads to pay the examiner an adequate fee if they expect to get a good examination and a good report.

MODERATOR CARNEY: Are there any other comments?

DR. OLSON: I would like to ask Dr. Stockwell whether he thinks, aside from back x-rays, you should include any technical laboratory or other x-ray examinations.

DR. STOCKWELL: I think that it depends on the job that the man is being considered for. In certain occupations it is going to be necessary for us, for example, to do an audiogram. If the applicant is going in to certain noisy occupations, it may be necessary for us to have a determination of what his actual hearing is at the time he enters our service. Otherwise, if he has a defect, it might not be detected on the rather inaccurate determination by listening to the whispered or spoken voice.

MR. HORSLEY:: It is easier to get the floor before an arbitrator in my business. (Laughter)

The question is pre-employment examinations, how comprehensive should they be?

If I may, I should like to bring the meeting down to a specific case. A decision by the National Railway Adjustment Board having to do with the very subject in which we are momentarily interested, namely, how comprehensive should they be. This is the history of a specific case as repeated in the finds of the arbitrator in a decision of the National Railway Adjustment Board.

May I read it? It is very brief.

Claimant - and that was the one who was injured - claimant says: his mother told him that between the ages of 3 and 4 years he had frequent convulsive siezures. This condition was dormant until he was about 14 years of age; he began to have them again at irregular intervals, at which time he would become drowsy, and a great many times fall asleep and awake with a severe headache and lacerations on his tongue and lips.

In the last few years he has suffered a few dizzy spells, but they pass off without the loss of consciousness. On November 15, 1961, he had a seizure while on duty, fell and hurt his hand, lost consciousness, and was carried to a hospital.

That, gentlemen, is a train conductor. His history goes back to a time far prior to his employment. His history continues through his employment, and his history finally comes out in an arbitrary board award post-accident, so relating this history to the question: How comprehensive should pre-employment physical examinations be? I would just like to acquaint you with this history going back to the age of 3 or 4 hears, and perhaps the panel with the help of the floor can determine how that history could have been developed, whether by lay interviewer, or by a medical examiner.

In any event, I think it should have been developed long before the post-accident development of it and the recitation of it in an arbitration proceeding.

MODERATOR CARNEY: Dr. Stockwell is dying to say something.

DR. STOCKWELL: Just that this group is vitally interested in what you are talking about at the moment. One of our primary functions as chief medical officers is to eliminate the individual you are speaking of.

Dr. Walter Longeway, Chief Surgeon of the Colorado Southern Railway, has been very active in the committee that has established pre-employment physical examination standards, and a recommended uniform blank which will include all of the pertinent questions, so that we can bring these prior convulsive seizures out in the medical history. The medical history, of course, is just as important as the physical examination itself.

DR. WALTER J. LONGEWAY (Colorado and Southern Railway): The previous speakers certainly have shown the vital necessity for a complete physical examination. To really do these, the examiner needs a guide, and for some time now, the committee has been working on a pilot study of the disqualifying conditions for the pre-employment physical examinations.

We also have been working on a new pre-employment physical examination form which could be used by all the different roads.

MODERATOR CARNEY: Thank you very much. Dr. Longeway, I personally know, has been very active and has consulted the claims and other departments in the preparation of this recommended form. I urge

all of you when it is completed to get copies of it, so that you might be able to implement your own services. Are there any other comments?

MR. MAURICE N. RAY: On the New York Central the average employee injury claim runs around $2,000 and the amount paid in all employee claims amount to over five million a year. I think the answer should be that the examination should be as comprehensive as the railroad thinks it can afford.

I think it can afford very comprehensive and very thorough examination The New York Central is a little bit behind on some of its thinking along this line, but we are putting in a new program on an experimental basis, and I am quite sure that it will pay off in dollars. We haven't enough experience to demonstrate that conclusively as yet.

MODERATOR CARNEY: Thank you, Mr. Ray. Now, Dr. Nelson.

DR. NELSON: I would like to direct a question to management. In wandering through hospitals nowadays, it is rather astounding to see the amount of bed space that is taken up by people who have various types of psychiatric conditions.

One procedure that I think we are going to have to consider, if we are going to keep abreast with other industries, is some sort of pre-employment psychological testing or screening. This would not be for the purpose of job placement, but for the elimination of certain obvious accident-prone people, and certain real or potential psychiatric conditions.

This sounds rather complicated, but actually, it can be made as simple as wished. Exploration of this field could be well worthwhile Our psychiatrists in Minnesota seem to routinely use the Minnesota Multiphasic as part of their regular examination. They tell me that such an examination can anticipate some psychiatric cases and some accident-prone individuals.

It should not be too difficult to develop a psychological questionnaire applicable to the railroad industry or certain job categories as for example the operating men. This could be included in the application for employment questionnaire.

Expense should be minimal as a layman could direct the testing as it primarily consists of the applicant answering questions. The interpretation of the questionnaire can quickly be done by a doctor.

I would like to hear what Mr. Oliver or Mr. Zimmerman and others might have to say about this.

MR. ZIMMERMAN: Well, doctor, I think that you are on the right track. This goes back to the original question really, which we let Rex Manion cover, and I think that alludes to the relationship between the doctor and his own individual railroad.

I think on our railroad we have a real good relationship. As a matter of fact, we don't even call him doctor. We call him "Ole" most of the time. On some other railroads, as I understand, it may be these relationships are probably not quite what they should be. The area of psychosis or psychology is one that we have got to face. This is not only in the field of employment but in the area where employees are already on the property, and some times at managerial levels, too.

MODERATOR CARNEY: Don't get personal. (Laughter)

MR. ZIMMERMAN: I know because this applies to you probably as much as anybody. (Laughter)

But we have this area that many of us as laymen, and I think even the doctors refer to, as alcoholism. While it doesn't necessarily mean you are a drunkard or a drinker, alcoholism affects us in many different ways. This is another area, too, in this same field that I think you folks are going to have to guide us in if we are going to go the proper direction.

I agree that from the standpoint of management there should be some psychological studies made or some psychological action taken, doctor.

DR. VENCEL W. HOLLO (St. Louis, San Francisco Railway): In reference to Mr. Horsley's comments about hiring an individual that has episodes of syncope, or periods of unconsciousness, on the Frisco Railroad, we have had a questionnaire that is completely handled by the physician at the time of pre-employment examination which includes a question asking the individual if he is subject to any periods of syncope or unconsciousness. We have the individual sign that particular questionnaire at the time the doctor asks the individual. We had an occasion several years ago where an individual did not give a true statement in regard to his periods of syncope or unconsciousness and it was picked up approximately six months later; that individual was discharged from service.

DR. BENJAMIN W. RAWLES, JR. (Atlantic Coast Line Railroad): I would like to stress a point. I don't care how comprehensive the medical examination is, if the applicant has not given you a history as to these epileptic attacks, there is no way that an ordinary physical examination can find it out. I think that it is important for the employing officer to take an active part in knowing the man that he is interviewing, obtaining information and passing on all the information that he may be able to gather to the doctor.

MODERATOR CARNEY: Dr. Householder, you have something?

DR. R. HOUSEHOLDER (Chicago, Milwaukee, St. Paul and Pacific Railroad): Dr. Hollo brought up a point that I would like to inquire into further. In the pre-employment questionnaire we ask the same question regarding syncope or unconscious spells on the Milwaukee Railroad. We are confronted, quite frequently with the fact that the truth is denied. If an applicant signs the questionnaire and subsequently has an episode of unconsciousness indicating that he has falsified or withheld information,

does this constitute a valid reason for discharge from employment?

MODERATOR CARNEY: "Chick," would you like to answer that?

MR. HORSLEY: I should like to have such evidence very much, doctor. It would be a fine point of evidence before the kind of tribunals at which I practice.

MODERATOR CARNEY: Ed Glennon, would you care to comment from the legal point of view?

MR. EDWARD M. GLENNON: I agree.

MODERATOR CARNEY: Are there any other comments?

DR. A. W. HOCHBERG (Akron, Canton and Youngstown Railroad): In all these discussions of physical examinations, I think the thing that is most important is the comment that Dr. Stockwell made. The doctor has to be an interested examiner. Today lay people, doctors and the government equate comprehensiveness of examination with how much money you have spent. The doctor who is interested and who examines this patient, or rather takes his history carefully, doesn't have to be a member of the Menninger group. If a boy has quit school when he is 16 years of age and was only in the second grade, and if on closing his eyes he can't stand up, I think you don't have to be a man from Mayo's to know he has something wrong with his equilibrium. You don't have to spend $35 like our residents do when you feel a large spleen, to know that there is something wrong in the hemopoietic system.

I think you could go on all through the different systems, and you can get a good examination and a very comprehensive examination depending upon the examiner.

I think that is the crux of the whole situation. Spending another $100 for examinations or 15 centimeters sigmoidoscopic examination of the rectum. Sure, we might pick up a polyp, but if the man tells you he is bleeding, I think that is sufficient, and when you get these personality problems, the boy hasn't gone to school and he has dropped out, he has had 14 jobs in the last three months and the army wouldn't keep him longer than four weeks, I don't think you have to give him a Minnesota Multiphasic examination by a trained psychologist.

It takes only a couple of questions to bring out these histories. I don't think that it is too much of a problem to determine whether a man is a chronic alcoholic when he has difficulty like I do in speaking, but he has a tremor to go along with it, sweating hands and big liver. You don't have to be a whiz to know that he is an alcoholic, and I think most of the time, in my experience, if you ask these people, "How much do you drink?" they will tell you.

I had one experience just recently with one of our engineers. It was suspected that he was having fits, and he was seen by five or six different

men testing him. We spent $350 just having him tested. I asked him the simple question, "How often do you have fits?" He said, "Oh, once a week." (Laughter)

MODERATOR CARNEY: Doctor, thank you very much.

DR. NELSON: I think that there is a misconception of what a psychological testing is. It doesn't require the need of a psychiatrist. It does not require a lot of time or expense. The psychological testing is done by the individual who fills in a questionnaire and this is interpreted by somebody who knows how to interpret it in about five minutes by using overlays and making a graph. We are not talking about a lot of expense, we are not talking about anything excepting some time that the prospective employee has to put in.

If it is something that is worthwhile, let's find out about it. If we can eliminate certain accidents, certain psychiatric individuals that are eventually going to give us trouble, let's do it.

MODERATOR CARNEY: Thank you very much, Dr. Nelson. We are going to have to move on. At the end of the program we can bring up any of these subjects again, but I don't want to fall too far behind schedule.

We are now three and one-half minutes behind.

The next question is: When labor is in short supply, due to general conditions, peak movements or emergencies, should the physical requirements of applicants be relaxed? If so, should the examining physician make the same comprehensive examination? Mr. Zimmerman, we would like to hear from you.

MR. ZIMMERMAN: If you are in a hurry, the answer is "no," to the first part of it, and the answer is "no," to the second part of it.

MODERATOR CARNEY: Thank you so much, Mr. Zimmerman. We appreciate your comments. (Laughter)

I am sure they will do all of our members very good. We didn't expect any more out of you anyhow. Would anyone else like to contribute something worthwhile?

MR. ZIMMERMAN: I will have the Vice Chairman--I could go ahead and elaborate, but I thought Bill Lamprecht would like to say something.

MR. BILL LAMPRECHT (Southern Pacific Company): I agree with Otto Zimmerman wholeheartedly. However, the practical matter is, you do relax them, and you will in the future, if you have a situation like we had in World War II. You take anybody that is warm.

MODERATOR CARNEY: During this time, Mr. Lamprecht, however, should you make that examination so that, in the event this fellow gets into trouble, you will have at least some protection for what you have done.

MR. LAMPRECHT: To the extent that you can, yes.

MODERATOR CARNEY: You advocate then that we do to the extent that is possible, physically possible, under the circumstances.

MR. LAMPRECHT: You will have the examination and the operating department, whatever department is involved, has to determine whethe they need the people badly enough to take them.

MODERATOR CARNEY: Of course, this is not the question. The quest is, you are going to take them. We know this. You have a peak movement. You have got to get it on the road, but are you going to examine the men you bring in for that purpose?

MR. LAMPRECHT: Yes.

MODERATOR CARNEY: Fine, that answers the question. Let's bring in the next.

DR. OLSON: I want to ask one. Supposing you could find some physical disabilities that are important, and you take him anyhow. How does that protect the railroad from liability in the future?

MR. HORSLEY: It does not.

MODERATOR CARNEY: What it does, it merely gives you information which we can build whatever defense is available.

DR. OLSON: I know, but under FELA, you are responsible for condition

MODERATOR CARNEY: --for aggravation of pre-existing conditions. This is right, but again, in the testimony that might be adduced from thi person, he might deny these things, and we might be able to trap him. I mean, if we are in possession of information, we can make further investigation to determine a lot of things that will be helpful to us. It is not a defense. It is merely knowing what you have got.

We don't want to be surprised in the trial of a case.

I'm sorry, but we have got to pass on to the next one. Mr. Ray, I would like you to answer the question #4. Where temporary help is employed and it is expected they will not work over 30 days, should they be required to undergo the same physical examination and screening proces as are given to applicants for permanent employment?

What is your feeling about that?

MR. RAY: I think always that applicants should be examined and examined as carefully as possible, but under this situation, I think it is jus an impossibility. You need a thousand snow shovelers after a blizzard, and what are you going to do? The snow will be gone before you can get any of them examined. (Laughter)

MODERATOR CARNEY: Are there any other observations? These are not too important points, so the last one here, however, should the examining physician inform the applicant results of his examination?

This means if he is rejected. I would like to have Ed Glennon comment on that if he would.

MR. EDWARD M. GLENNON: This involves, of course, a policy question as to what department is going to have the responsibility for perhaps arguing with this fellow if he is turned down--the medical, personnel or operating department.

From a doctor's point of view, I suppose that if it is a simple hernia, for example, there is no harm in telling the fellow and ending the suspense, and certainly if you detect a serious type of injury or something that you expect is going to develop cancer or something of that sort, I suppose again it is simply a policy question. As a humanitarian, do you want to tell them?

And also to be sure to avoid any possible basis for liability. As I understand it, some doctors are concerned about telling the applicant the reasons for rejecting him because of the possible theory, which has had some recent publicity, of a malpractice action based on the error in judgment in disqualifying a person, and thereby keeping him out of a labor market or out of railroading.

I think this is simply a theoretical basis of liability, and while perhaps doctors are concerned about it, ultimately I would ignore it as far as any basis for legal action. You are the person responsible for making judgment decisions.

You might differ from the opinions of neighboring doctors or the family doctor, but again, they are not as experienced as you are. You have had experience not just in knowing what railroading involves, but being able to relate it to a particular type of situation or an asymptomatic condition.

If it is a congenital problem, a back problem, you are not going to argue with a fellow and just prolong any discussion when you are not going to hire him anyhow. But if there is a concern as to any legal liability, I would ignore it and reject the man if your judgment requires you to do it.

MODERATOR CARNEY: Ellsworth, would you care to comment on this?

MR. HORSLEY: Just briefly, Adrian. I think the importance of the question might be overemphasized, but the employment of applicants is the one remaining area in which carrier management, I think, has full control. There might be a few others, but I haven't come across them in my work. Nevertheless, when a man is found to be, by the medical examiner, medically rejectable, I think that looking to the reason for him being there in the first place should govern. That is, he is there at the instance of the carrier with respect to his physical condition.

He would just as soon be employed, or rather be employed without a physical examination, so the answer with respect to the physical examination is owed not to him, but to the carrier management, so that I would say briefly that the answer to this question #5 should be "no."

If, however, modifying a little bit and agreeing with my brother, Mr. Glennon, that if there is some condition which the man should know I would suggest that the doctor simply say to him that he cannot be employed as far as his physical condition is concerned, and that he strongly suggests that this man submit himself to an examination by his private physician.

MODERATOR CARNEY: Thank you, Mr. Horsley. Another thing I would like to comment on, some times when these men have been rejected for physical reasons, and there is a record from our office, some clerk has answered an inquiry from the applicant who has been rejected with this statement: Well, we got a report from the AAR. This should not be done as the data we furnish is for information only. It is incumbent upon the individual railroad to determine whether or not the information supplied needs further investigation or whether it does, as a matter of fact, make the applicant an unusual risk. What the clerk should tell the applicant, if he has made an adverse decision, is that the applicant does not fit the requirements of his company.

DR. HOLLO: Number one, in reference to giving the information to an applicant, in some states this is required. In the state of Oklahoma you have to give a copy of the physical examination to an applicant if he wants it.

Number two, with reference to physician liability in rejecting, as Mr. Horsley stated, first of all, the doctors do not hire or reject people. All they do is recommend. It is management that hires people, with recommendation of the Doctor that they meet the physical standards for employment.

DR. J. ROBERTSON KNOWLES (Boston and Maine Railroad): Under the Fair Employment Act of the state of Massachusetts, you not only have to tell them why you are disapproving them, and not approving them, and also you will have to give them a written statement, should they demand it.

DR. ROLAND S. KIEFFER (Missouri-Kansas-Texas Railroad): I would like to say you are discussing the matter of the man who makes the examination, Oklahoma City or any other place, as to whether or not this man has asked for a physical examination, and that local examiner giving the applicant the information. Is that what you are discussing?

MODERATOR CARNEY: Yes, shall the examining physician tell this man why he has been rejected?

DR. KIEFFER: I believe that would give rise to serious trouble. We have a hard and fast rule that only the medical examiner makes that de-

cision and will supply the information. We take the heat off our examiner by having him answer the applicant to the effect that he can contact the medical director.

MODERATOR CARNEY: Do you tell him why?

DR. KIEFFER: That is right, because often the local examiner is not in possession of all the pertinent facts about this applicant. For example, his employment application might indicate, for example, that he does have some history of previous employment in which he had had an accident, or he has had a medical history of discharge from the army, and things of that sort.

DR. STOCKWELL: The question is whether a young man who in all seriousness feels he is able to do the work, applies for a job with the railway, is entitled to any consideration at all after he has been rejected for physical reasons.

Now, we all know it would be far easier to say to that young man: "Your application for employment has not been approved." But the practical part of it is that he wants to know why, and he is going to ask someone why. The problem of how we are going to handle him, if he becomes very insistent, is a difficult one, and I don't know the answer. There is a medical-legal aspect to this, also, and that is the second point. I refer the medical members of the group to the August 1964 issue of the "Journal of Occupational Medicine," and an article by Dr. Warshaw and Thornton of New York. They have documented some litigation based on the malpractice of an examining physician, who has made the determination that the applicant is not physically fit, presumably in error, and then deprived the young man of employment. Then it becomes a jury question, so that this is a problem that we are going to hear more about.

We have had a great deal of recent publicity about this particular item following a conference in Ann Arbor at the University of Michigan Law School. It is opening up a new field for the attorneys in the field of malpractice. I will mention that briefly later in the report of the Medical-Legal Committee.

MODERATOR CARNEY: Thank you very much. We are going to have to move on again because our time is running out.

We are now going to get into the area of "Accident Prevention and Health Maintenance of Employees," on Page 9. Should the standards for in-service employees be relaxed at any time by management and, if so, to what degree and under what conditions? Mr. Zimmerman, would you care to comment?

MR. ZIMMERMAN: I won't be as brief as I was on the other because, regardless of whether you like it or not, we are going to go ahead with this thing. You can cut it off any place you want to. Any examination that you have of an in-service employee should not be relaxed in my opinion. I think it plays a real big part in the operation of the railroad.

to see that the folks on the job have proper examinations. I don't see that there is any degree or any conditions under which it should be relaxed.

MODERATOR CARNEY: Thank you very much, Mr. Zimmerman. Earl, do you care to say anything?

MR. OLIVER: I certainly agree that the standards should not be relaxed, but I likewise feel in time of war, for example, when manpower is desperately short, you may have to make some exceptions to your standards. Likewise, I think that as a practical matter, we do make exceptions to our standards for certain employees.

Some of them we refuse to make exceptions. Some of them we make an exception. It is a matter of judgment on the part of the medical officer and the operating officer.

MODERATOR CARNEY: I would like to ask one question of these two gentlemen, Mr. Zimmerman and Mr. Oliver. How about the injured employee whom we are trying to rehabilitate, and we are trying to make a settlement? He wants to come back to the railroad. We have instances where these men with similar types of injuries are working, and if it helps in the disposition of the claim at a reasonable level, would you favor making an exception in such case?

MR. ZIMMERMAN: I don't think I favor it, but we do it. (Laughter)

I think it should be purely on the basis of: can he do the job, or can he not do the job?

I think with respect to vision, this is one area that you might drop your standards a little bit, and by that, I only mean that there has been enough technology in the optical field so that a man doesn't necessarily have to have 20/20 vision. It can be provided with glasses. I would go along with that.

DR. ABBOTT SKINNER (Great Northern Railway): I take issue with Mr. Zimmerman. He has already covered one of my examples. There are certain things in the aging process, particularly vision which is perfectly normal, and yet, would not meet the standards for an applicant. Similarly, if we removed everybody from service whose blood pressure over a period of 20 years rose from 130 to 170, we would have marked difficulty, and there are other examples.

MR. OLIVER: May I speak. I think there should be two sets of standards. One for the applicant for employment and one for the person who is already in service. Certainly the standards for the person already in service will be less rigid than the standards for the applicants.

MODERATOR CARNEY: Are there any other comments?

If not, we will go on to question #2: Should accident-prone employees be given special physical examinations to determine whether physical or mental deficiencies may be involved?

Dr. Olson, do you care to comment?

DR. OLSON: I would say that if it is possible to determine such deficiencies by physical and/or mental examinations, it would be highly desirable. Whether this would disclose the answer is questionable. Physical defects which handicap an individual to the point where he cannot perform the duties of his job safely should be obvious. A person who has deteriorated mentally to any considerable degree would also be obvious, but I feel that there are many who do not present these deficiencies who are still accident-prone.

MR. HORSLEY: Mr. Moderator, just briefly, when one determines that an employee's accident-proneness is established by a medical or mental examination, that opens the question to contest that has to do with the medical opinion and its sufficiency and could bring into play a three-doctor medical panel after many, many months of treating the case. However, on the other hand, if a man's accident-proneness is left to determination only by his work record, then it is, in my opinion, much more probative of the point of his accident-proneness than a medical examination of him would establish.

MR. OLIVER: May I ask Mr. Elsworth Timms Horsley a question? Would it be, in your opinion, "Chick," possible to support a dismissal of an employee who has a record of being accident-prone, instead of going at it from a medical standpoint. That is, go at it from the fact that the man patently is an undesirable employee?

MR. HORSLEY: Yes, as I have said, Mr. Oliver. I think that a good record of his on-duty injuries would be more clearly and more probatively establish his accident-proneness on his job than could be established by a psychiatric or a strictly medical examination of him, because in the last instance, that seems to be so easily attackable by some other doctor secured by the man's representative which quarrels with our examining results.

MR. OLIVER: And we could support dismissal?

MR. HORSLEY: It has been done.

MODERATOR CARNEY: Thank you very much. Are there any other comments? If not, we will move on to the next question. How can chief medical officers contribute to safety engineering - design - construction, etc., to reduce both the accident and severity rate?

I would like Dr. Strange to comment on that, if he would.

DR VANCE M. STRANGE (Southern Pacific Company): This is a subject that is quite close to me. It has not always been right directly with the railroad itself, and I would like to use an example of an outside industry in which we had definitive cases of tenosynovitis of the forearm, involving the forearm and hand.

These cases were working in a tin finishing mill where there were tin classifiers. They were all women. They worked 20 minutes on and 20 minutes off. They had just been on a strike when they came back and were quite active in their work and had been resting much like a ball player would, actually.

These cases were hard to treat. Some of them ran on for months and months and months; we couldn't get them back to work.

MODERATOR CARNEY: This is so important, why don't you come up front, Dr. Strange?

DR. STRANGE: The cases I am going to discuss were cases not associated with the railroad industry. These cases were tin finishers where they classified tin plate. These plates were approximately 30 inches by 30 inches. They turned them over under lights to determine if there were perforations or faulty defaults within the tin. It is a repetitive type of operation. They work 20 minutes on and 20 minutes off. They developed tenosynovitis of the forearms and hands. As you all know, they were very difficult for us to treat.

These cases went on months and months. We could not get anywhere with them, and I finally went with the safety people to the chief engineer of the plant. We contacted other plants in the country and did devise a tin classifier that was automatic. They ran on a belt, used an electric eye, and a light system, and these plates were kicked off. We did get rid of the tenosynovitis, and at the same time, where 100 girls were employed, we employed about ten.

I think this will illustrate one phase of what we can do by going to the bottom of the cause and etiology of the injuries.

MODERATOR CARNEY: Thank you very much, doctor. Didn't you do some work also in connection with the construction or rehabilitation of the cabooses to remove sharp corners, replace ladders, hand holds and things of this nature?

DR. STRANGE: I have talked to our safety department about this, but our safety people have actually done the work. All I have done is just try to create their interest in the problem.

MODERATOR CARNEY: Are there any other comments? I think you ought to know that industry generally, and particularly the insurance industry, is going in a great deal for safety engineering in order to reduce compensation costs, and they have had a remarkable effect upon costs by reason of removing those areas in which injuries are more serious because of projections, sharp corners, and all this sort of thing. This is something that I think we ought to consider and medical departments ought to be particularly sensitive to, when they are evaluating injuries and their causes.

Going on to number 4. Should regular or periodic inspections be made by chief medical officers in all facilities presenting hazards of occu-

tional disease - silicosis - dermatitis - inhalation of fumes, etc. ?

Mr. Zimmerman, would you care to comment on this?

MR. ZIMMERMAN: This is one of those fields where we get into an area of disagreement, I know, Ken, because frequently the doctor, when you want to make these examinations is so busy that he doesn't have time to go with you. But I think it is important that it be done where it is possible at all for the doctor to make the examination of these facilities and make the checks that are necessary to be made.

MODERATOR CARNEY: I think it might be interesting for you to know that we in the Claims Research Bureau are documenting the types of injuries and the physical conditions and relating them to specific problems. The Medical-Legal Committee, which is composed of some of the top claims men of the country and top medical men, are analyzing the trend of all injuries growing out of inhalation of fumes and tunnels and various other phases that are becoming more prominent today. We hope, from this, to be able to pinpoint areas in which improvements might be made through recommendations of this medical-legal committee.

DR. STRANGE: I would like to say that in our own operations, too, we are at the present time tying in with the industrial hygenist, between the chief surgeon's office and that of the safety department, and he works together with the two of us just in this field.

MODERATOR CARNEY: Very good. Any other comments? If not, we will move on to question #5. Should the medical department have programs to provide tetanus toxoid inoculations, polio and influenza shots for immunization? Dr. Leigh.

DR. SOUTHGATE LEIGH: I think I have given flu shots to at least 75 per cent of our employees. We go out over the road and administer them. We have cut down, in my opinion, as much as 40 per cent on the absentee rate during the winter time. Besides this proves to be a good public relations gesture to offer this service to our employees.

Now, the tetanus inoculations. Several years ago we were having a tremendous amount of trouble with reactions to tetanus antitoxin. Now we have started a program of administering tetanus toxoid prophylactically.

I figure in our operation department now, over our little railroad, that we have about 75 per cent of the employees immunized with tetanus toxoid.

MODERATOR CARNEY: Thank you very much, Dr. Leigh. Dr. Stockwell, the devil's advocate, has something to say, I believe.

DR STOCKWELL: I am also a Colonel in the Confederate Air Force, so I would like to disagree with some of the remarks that were made by Colonel Leigh. Number one, with the exception of the tetanus program, I feel that the administration of vaccines of various types are the re-

sponsibility of the employee to obtain from his family physician.

I think we have an obligation to recommend those injections to our employees, but I believe that it should be their responsibility to obtain that type of protection.

In the case of tetanus, there is a different situation and I think that will be discussed a bit further in Dr. Leigh's report of the Committee on Trauma.

MODERATOR CARNEY: Are there any other comments? If not, let's move on to #6. Is a rehabilitation program economically feasible? This is a kind of tough one. I don't know whether we should go too far into it or not, but the question is whether physical rehabilitation programs are economically feasible. All industry is under pressure to help out with the worker, the citizen, who has certain physical impairments, to keep him working and made him productive, if possible, and if you have an old-time railroad employee, should we attempt to rehabilitate him? Earl, would you care to comment upon this?

MR. OLIVER: Ken, to quote Mr. Touhy, as you did a while ago, this is a subject on which I am abysmally ignorant, and I would prefer to dodge. I think there are others at the table here who would be much better qualified to speak on the subject than I.

MODERATOR CARNEY: I think Mr. Horsley has some very violent opinions in this area, if he cares to comment, as he did some time ago, on this question.

MR. HORSLEY: The Answer to the question is "No."

MODERATOR CARNEY: Thank you very much, Mr. Horsley. Does anyone else have any comment?

MR. HORSLEY: Mr. Moderator (Laughter), the only successful rehabilitation of an injured employee is accomplished by his securing, say, an $80,000 verdict and judgment. Then there follows a miraculous recovery and rehabilitation.

Now, I would like to explain to the doctors that my viewpoint is probably most restrictive. I can see grey areas. I am not strictly a white-and-black area man. I can see grey areas, but the cases with which I am charged as the defending of the carriers, arise from a very small percentage of the employees, but these employees are those who will exercise their right of a citizen's trial and action for $100,000 or $200,000 damages against the carrier because somebody hit him in the ccccyx with a 50-ton boxcar and then after he persuades a jury of his peers that he is entitled to at least $80,000, and judgment is satisfied by the carrier, and he has paid his lawyer and his other wife, and paid off the mortgage and has a new car, this miraculous physical recovery is a natural concomitant of all those circumstances.

So, that is the rehabilitation that I say is about the only one of which I would take cognizance. These convicted murderers are in the same field. They can be rehabilitated right now when they are walking down the aisle toward the green door, so this rehabilitation seems to me to be a kind of a thing with which we are not concerned, but with which we are daily plagued and again I would like to excuse myself before you all on the basis that this kind of case is the one that comes to my attention mostly, and rehabilitation in the minds of you gentlemen who are scientists engaged in the field of humanitarianism might think of many, many cases in which rehabilitation would actually restore any employee to a bona fide situation, but that has not been in my experience. Hency, my remarks are perhaps vitriolic and at least disciplined.

MODERATOR CARNEY: Thank you, Mr. Atheist, (Laughter) Dr. Stock-well is dying to say something, and then Ed Glennon, so if you will get it over with, Ben.

DR. STOCKWELL: I have to disagree completely with most of everything that Mr. Horsley has said. I think rehabilitation is extremely important. I think that it is one of our functions as medical officers and as physicians, and surgeons.

We start rehabilitation as soon as we see the injured employee and have to rehabilitate him to get back to work, and then getting back to work itself is the most complete rehabilitation.

I think we have to support any type of rehabilitation program that we can within our own railroad, and I think that rehabilitation is part of the medical treatment.

MR. GLENNON: This would involve again, of course, lowering of standards or having two sets of standards, but I think it is necessary with respect to any employee who has been a good employee. You just don't kick him out on the street because he has developed arthritic changes or something of that sort.

In addition to a high verdict, an adverse verdict where he gets nothing, is also very good in effecting a cure. But beyone that, I think, that from the legal standpoint if we don't make every attempt we can to rehabilitate them, we are really going to get smashed in a court room, because the person has no place to go but out in the street, and you just can't avoid being clobbered.

You've got to try and rehabilitate him. The real problem comes, of course, with the Brotherhood agreement in shifting a man to an easier assignment, which he could handle, but which, because of the Brotherhood restrictions, prevents you from actually rehabilitating the person. You can give him a lighter assignment without any problem, but we were talking about a situation last night where, on one railroad, for example, some shifts have a 14-hour run, and some have a 4-hour run. It would be nice to put the person with an injury on the softer assignment, but the Grotherhood agreement prevents it. That is the real obstacle. But

certainly every effort should be made to rehabilitate as much as possible.

MR. RAY: From my viewpoint, I should agree with Mr. Horsley if I think only of the cases that routinely come to my desk, because I see the bad ones. I see the ones where we are in trouble, where we are in litigation, where there is fraud, and I try to line my thinking, though, with the fact that I only see a tiny fraction of the cases, and those are, as I say, the bad ones. I think Mr. Horsley sees even worse ones because they are actually in the middle of the battle or after the battle.

I am certainly in favor of any reasonable rehabilitation program that we can conduct with one caution. If the employee is obviously making no attempt to cooperate and to go along with what you want him to do to rehabilitate himself, I think you are wasting your money. You might as well cut off the program because he has made up his mind that he is going to be as bad off as he can make himself be, and it will cost you a lot of money for nothing.

DR. RAWLES: This matter of rehabilitation is something that I have been interested in a long time. It started during the war, and I will right briefly give you my first experience.

I served in Italy behind the Fifth Army for pretty nearly two years when the only reserves we had were the boys who were in the hospital. We found--we were operating primarily in the field--we had to get them out in tents and get shoes on them and get them roughing again. If we didn't do that, they pretty soon got reclassified into a non-combat classification.

The same way with our railroad men. I think it is important, and the only way we are going to accomplish this, of course, is with management's help, and that is to get these men back to some kind of job. I know that everybody has argued the point that the Brotherhood agreements, prevent us from doing this, but I believe that this is an area in which management and labor can get together. I would certainly hope they would continue to try to do something about returning these men to some sort of work as soon as possible.

We are trying it on the Coast Line now. It has Mr. Rice, our president's wholehearted support. He has personally taken an interest. When the medical department has said, "We would like to see the man back at work in some capacity," he has asked our operating people to do all in their power. Formerly they immediately threw their hands up, and they said, "This man can't do everything he used to do, we don't want him." I believe rehabilitation is an area where we can work.

DR. HOLLO: I would like to make one statement. I agree with Dr. Ben Stockwell and disagree with Mr. Horsley, that in number 6, is the rehabilitation program economically feasible? I think as physicians, our job is to rehabilitate everyone that it is humanly possible, first. I think that is part of our job on all injuries, and, in fact, in any illness, too.

I think that it is up to the doctor to do the rehabilitating and it is not up to the employing officer or the local supervisor.

I think that we can initiate this rehabilitation program by talking to a patient and also encouraging him and letting him know that he is not an invalid for the rest of his life, and this has been accomplished, I am sure, in many, many and hundreds of cases.

You just don't label a man as totally disabled because he has had a fractured ankle and he has some ankylosis. These people maybe have worked 25 years. They have learned the job. They know how to compensate and adjust to it. There are many of these people that have had injuries like this that are actually safer than many of your young, embryonic individuals who just have had one or two year's service.

MODERATOR CARNEY: You don't mean to imply, however, do you, that the medical department alone is capable of doing this?

Don't you need the help of management?

DR. RAWLES: You do, but they should recommend and encourage it and initiate it.

DR. KNOWLES: As you know, I call it legitimate hokus-pokus. You will just have people on your back as long as you can hold on to them for the claims department. The minute you do not try to rehabilitate them, they go some place else.

MODERATOR CARNEY: Thank you very much. These comments have great validity, I am sure.

DR. GLENN F. CUSHMAN (*Western Pacific Railroad*): I feel quite strongly on this problem. I think the fact that we cannot implement rehabilitation due to the cry that there is no light duty and union restrictions interfere, not only makes it more difficult to rehabilitate, but frequently makes a man that could be rehabilitated unable to be rehabilitated after two or three years of inactivity.

I just wonder if management has anything to offer in the way of getting these union contracts softened so that we can do something about it.

MR. OLIVER: Actually, it is entirely possible. We have on the Illinois Cen tral, for example, an agreement that was made a few years ago with the engineers and the firemen which permitted us, if the medical department disqualifies a man, to put the man on a lighter assignment.

We also can work around some of the union agreements in various ways, either formally or informally, but I think it is simply a matter of focus, of effort, of an attempt.

If we decide we want to try to rehabilitate the employee, we can do quite a bit with the unions toward that end.

DR. WIGHT: One minute. Question #6 is really rhetorical, isn't it? Rehabilitation in medicine is the same thing. At this stage, I don't know who I am agreeing or disagreeing with, but it is as simple as that.

MODERATOR CARNEY: You are as confused as the rest of us.

DR. WIGHT: Question #5. I am sorry to revert.

Tetanus toxoid. I mentioned it a couple of years ago. Way up in our country the tetanus bug doesn't live. It is too cold for him, and I don't see why we should inoculate 75,000 people for a condition that we never see. Dr. Vaughan, have you seen any tetanus?

DR. PETER VAUGHAN (Canadian National Railways): No.

DR. WIGHT: Polio. We are not in the practice of medicine. That is the individual's responsibility. Influenza. A very large concern in Canada instituted this program and kept it up for several years, kept very active records and discontinued it. Psychologically, it may be of some good, but medically, they could see no benefit.

MODERATOR CARNEY: Because of the pressure of time, I am going to move on to the last section of our discussion. I would like to remind all of you in the audience that, if you have any questions of any kind at all that are not raised in the list that we have here, please be prepared to submit them. We will try to answer them in the remaining time we have.

If you don't care to submit a written question and want to stand up and announce some problem that you have that we are capable of getting some expression on from other members, please do it at this moment, during this last period.

Now, these are the medical-legal problems. I might start this out by saying that we believe in the claims business that the doctor performs one of the most important functions in the successful handling of personal injury claims.

Liability is close to being absolute. We are still able to successfully defend a fairly reasonable percentage of cases under the Federal Employers' Liability Act, but they are getting fewer and fewer each year. We have to be highly selective, and we have to have a very good case in order to succeed.

Now, this means that we have got to document our medical histories, treat our people. We talk about medical management more than we talk about just the treatment itself. If a patient can have confidence in the doctor, half of the claim department's battle is won because our objective is to settle the claim directly with the man.

Our records reflect this fact, that the average amount of money paid to employees whose claims are settled through lawyers are ranging between $12,000 and $14,000 a case. This level has been maintained

roughly during the past 11 years. It is an insignificant increase compared with the increase in wages, and wages have a great effect upon the amount of money you spend in the settlement or the verdict of an FELA case, because most verdicts and settlements are related more to wages and prospective loss of wages than any other individual factor.

So, the doctor is an important tool here, particularly with liability disappearing. The accent on damages is such that, unless we offer convincing proof of what we have done for this man and what he is capable of doing in the future, and are able to protect the examinations, tests, and so forth that we make, we are going to be confronted with adverse testimony from other doctors and a jury.

A lawyer is going to have to decide upon this thing. And, unless we are fully prepared to meet all the things that are constantly thrown at us, why we are in trouble. So, therefore, the doctor today has to be oriented from a medical-legal standpoint.

Not only must he treat a patient for the known complaints, but he has to apply those tests, those remedies, those observations, those comments from the man which will enable him to make it impossible or difficult for the lawyer and the doctor working for the lawyer to say that certain conditions exist when your own tests can disprove that they could have existed because of the records you keep.

Now, this is the theme of what we want to talk about now.

The first question is: What should a chief medical officer know about the medical-legal problems in the settlement and trial of employee injury cases?

I would like the General Claims Attorney of the New York Central, Maurice Ray, to talk about this.

MR. RAY: Heeding your admonition to be as brief as possible, I can only say that he should know everything possible that he can be taught about those problems. I think the claim men on railroads are the best men to educate him. I think that the medical director and examining surgeon should be given all of the data that determines the result in a lawsuit. We are doing that. We even send complete records of doctor's testimony that we have specially written, and even where cases haven't gone to the limit, where they are settled during trial, we have sent medical records, stenographic statements from the trial to our chief medical officer for his knowledge and for the man's record.

I don't think that there can be too much that all of us in the claim and law department can do to give all of our doctors, not just the chief medical officer, but all of our doctors, all the information, the trend of the decisions, the way the things go in a court room.

MODERATOR CARNEY: Does anybody else have any comments. Is Dr. Kaplan Here?

DR. NELSON: He just came in.

MODERATOR CARNEY: Does anybody else care to comment. Ed, would you care to comment?

MR. GLENNON: The closest possible relationship, of course, is advisable between the lawyer and the claims department and the doctor--the lawyer and the claim department, not necessarily being synonymous because either outside counsel or the attorney who is going to try the case is not a member of the claim department. The more the doctor knows about the case, including treatment, the less fear he has of the court action; the more he realizes the importance of the case the more he appreciates his need to testify. There isn't any such thing as too much education of the doctor and too close a relationship as far as the successful defense of a lawsuit.

MODERATOR CARNEY: Thank you very much. Does anybody else have any comments?

DR. HOLLO: I would like to make one statement. I will make it very brief. It is my opinion that the medical profession or the doctor's responsibility in regard to these disabilities or injuries sustained--I think that is what we are talking about--is to see that the man has excellent therapy and is rehabilitated as early as possible and restored to his normal condition as well as possible, and then give a report accordingly to the end result.

Now, if the cards fall that this man has 5 per cent disability, it should be so recorded.

Now, in regard to the trial and preparation, I don't think it is a part of the medical profession. I think this is a part of the law department, or else the claims department. I think that once this report is submitted, regardless who examines this particular individual, everyone will have a common denominator and come up with the same results. In other words, you cannot minimize the man's injury, and you cannot go ahead and over-emphasize it.

MODERATOR CARNEY: So that you can fully understand Dr. Hollo, he is not inferring at any point in this discussion that a doctor should give anything other than a thorough, honest report of what the situation is in connection with an injury to an employee.

We want that absolutely understood. Secondly, however, I think the doctor's obligation goes beyond what you are talking about. You are an officer of the railroad. You know that doctors are testifying in court today about conditions that don't exist, and unless you have knowledge of the medical-legal aspect of a case, how are you going to perform those tests, examinations and so forth, which will make it impossible or difficult for that doctor to bring up these situations at a later date?

DR. HOLLO: I would answer that in this fashion.

acceptable consultation from an outsider, and let him give a report which is to be used in settlements and court as well as for medical treatment.

DR. STOCKWELL: Ken, we are going to discuss this at some length this afternoon. We have a medical-legal aspect to our panel this afternoon. I would just like to make just one brief comment. That is, that I think it is apparent to all of us that the chief medical officer should know all about the medical-legal problems on his property, and that the only solution is the cooperative endeavor between three groups--management, legal, and medical.

Management is very much interested in the costs, and I think they are very much interested in seeing that the best medical defense to cut down this cost should be arranged for, and the support of our management, I may say, has been extremely helpful in fighting this FELA problem.

MODERATOR CARNEY: Thank you very much. Does anybody else have any comments at this time? If not, we will proceed to question #2. What can be done to provide such education to medical departments?

Do you want to take this up in the afternoon, Ben?

DR. STOCKWELL: I just answered it.

MODERATOR CARNEY: Fine, we will go to #3 then. What factors should be considered in the selection of a Medical Consultant in an on-duty injury case?

Now, before I ask Ed Glennon to comment on this, let me make this one observation. Frequently the doctor is a little bit jealous about his selection of an expert to come in, a consultant in a particular area, and a particular case, involving an injury on duty. Sometimes they have selected medical consultants who have been notoriously bad actors as far as testimony is concerned, and this point, I think, is what Ed would like to touch upon from his experience as an eminent trial lawyer in Minneapolis.

MR. GLENNON: The chief function of the medical department is to act as a doctor and give proper treatment, and any lawyer, whether it is a railroad lawyer or anybody else who attempts to buy medical testimony is as guilty and should be disbarred as far as I am concerned.

On the Soo Line, we have never shopped for 5 minutes for a favorable opinion. So that as Ken Carney said, we have to assume at all times that we are not asking any doctor to dirty himself by washing down his report. At least, I hope you are all treated the same way as we are on the Soo Line.

Maurice Ray talked about New York Central's annual budget for claims. It is five million dollars. That is a lot of money. It would perhaps be double that or more if some time was not spent in properly preparing a case both from the liability standpoint and from a medical

standpoint. While it is an area of sensitivity, perhaps, and I am sure the doctors resent it sometimes, that the lawyer does suggest a particular consultant. Clearly the consultation should be in the area of the problem, whether it is orthopedics, neurology or so forth, and there should be a competent doctor, not just a personality boy. However, you can't be blind to the realities of the 20th century and the 1970's, a doctor can be a very, very good doctor in his field, but he can be a crank and a crab and somebody that no jury would go to if they had the choice.

It is too bad, but this is the way life works, but as far as the medical-legal aspects is concerned, the doctor has to be able to sell to the jury the medical-legal aspects of the case. You can't really, in the trial of a lawsuit, ignore and treat separately the liability and the medical.

If your medical smells up the case, the liability is going to go down the drain with it, and vice versa. You try to tell an integrated story of fairness. If you are wrong on the facts, you are going to lose, but we win some times, too, and many of us have the pleasure, at least, from time to time, and more frequently than one might expect, of at least keeping the damages down below what the plaintiff wants.

We are faced with a situation certainly in the metropolitan areas in FELA litigation, where there is a gross amount of shopping as far as the adversary is concerned. I am not trying to be too much of an advocate, but in Minneapolis, for example, and St. Paul, we have a situation currently, at least, that one particular orthopedist--and this applied not just to the Soo Line, but other railroads, is in probably 90 per cent of the cases on the other side for one Brotherhood firm, and we know what he is going to say. We could write his report. We know there has got to be a disc, even if his head is smashed. The only situation I have currently in which he is not involved is a case involving an immediate death, and there was no need for orthopedic examination.

We have to be able to sell our story to the jury. You can't simply pass off the jury as being a bunch of give-awayers, because I really sincerely believe they are not.

I prefer trying a case before the average jury, not in Chicago perhaps where you have different problems, than I would before a judge alone. The fact of the matter is the juries have a certain ability to spot the phony. They also have a sense of fairness, and while their sympathies might be with somebody who is injured, they aren't going to necessarily bomb you just because you are representing a railroad.

To do all this properly, the doctor has to work with the lawyer in spite of the fact that he does not like to get into court because of a variety of reasons. It is time-consuming. It takes him away from his practice. He feels he is getting to be a claims man rather than a doctor, but beyond that, many of them have a lack of confidence in their ability to withstand cross-examination.

If the lawyer does his job and spends some time beforehand with the doctor, doesn't look for another whitewash but discusses the danger spots as well and what you can do to meet it, everyone should consider the case properly prepared for trial.

MODERATOR CARNEY: This is fine, Ed. Does anybody else have any comments in this area?

DR. KIEFFER: I feel that the chief medical officer of a railroad has a very heavy responsibility working with the claim and legal department. I am sure in my job I spend, I would guess, a third of my time doing just that, not to buy opinions or color opinions or anything of that sort of thing, but to plan and prepare for the defense.

Lawyers have told me that plaintiffs' lawyers usually prepare their cases better than the defense attorneys. I think the doctor can do a great deal in the direction of advising with regard to medical defense, sometimes sitting in the court room and suggesting cross examination when adverse medical testimony is distorted and such testimony occurs all over the country.

Doctors know who these men are, and I think we can contribute a great deal. Since we have started this type of cooperation, it has been a big difference in our experience. In 1961 we had seven FELA cases. We won every one of them. There were two in a county in Texas where in the whole history of the railroad we had never won a lawsuit of the railroad before.

MODERATOR CARNEY: Thank you, Dr. Kieffer. That is extremely interesting.

I have heard a complaint from time to time against lawyers as far as the doctors are concerned, that they don't hear about these lawsuits until the last minute. Then they are asked to come in and testify without adequate preparation. Does any doctor have courage enough to get up and tell us about this?

DR. KIEFFER: That is true. (Laughter)

MODERATOR CARNEY: Who said that? Dr. Kieffer?

DR. KIEFFER: We have a trial lawyer in Oklahoma City who in the past year has called me twice the day before a trial and wanted to know if I could come down.

MODERATOR CARNEY: Fine. Does anybody else have any comment?

MR. GLENNON: Could I just comment briefly on that. That lawyer shouldn't be hired by anybody who wants to spend any money for a good lawyer. I can ask our people from Minneapolis, but we never do that, of course. We usually arrange comprehensive meetings well in advance of trial. It is the most irresponsible lawyers who follow that type of practice.

DR. KIEFFER: I was not prepared as a witness.

MR. GLENNON: I appreciate that, but as far as the preparation is concerned, again, "The quality of the lawyer" and if your lawyers are preparing less than the plaintiff's, fire them, because in our experience, at least, we have saved a lot of money because of sloppiness on the part of the Brotherhood attorneys, and I am speaking now about the real volume, heavy lawsuits. Unless one or two--I don't want to get into personalities, but unless one or two of the leading lights try the case, the rest of the office staff is sloppy, and we have been able to, by proper preparation, really work out some good settlements.

The lawyer should never have the doctor at the witness table because then he is so obviously a part of it. It is just too incomprehensible for words so far as I am concerned. He should do the homework before trial. Have his cross-examination before trial and not improvise during trial by having a doctor slipping in questions, plus the fact that it takes a lot of the doctor's time, which is unrealistic.

MODERATOR CARNEY: I should like to mention at this time that Ed Glennon has a remarkable record of defending FELA cases in Minneapolis.

MR. GLENNON: And St. Paul and Duluth. I just want to get that in. (Laughter)

MODERATOR CARNEY: You can't win. (Laughter)

Is there any place else you work?

MR. GLENNON: That is it.

MODERATOR CARNEY: Does anybody else have anything to comment? If not, the time is now 12:14. The Chair is open for any questions on any subject that might be of interest to any of your doctors and operating men, claim men and lawyers.

Are there no further questions?

You are all satisfied. Did you get the questions that you wanted answered?

Dr. Nelson, would you like John Risendal to sum this up now or later.

DR. NELSON: Let's do it after lunch.

MODERATOR CARNEY: Fine, it will give him time to organize his thoughts.

I want to thank every one of you for the attention you have given to the outstanding members of this panel; to the panel members for their good homework, and their good showing and for all of you who participated

in this program, I think we have demonstrated very definitely the importance of the medical profession to the railroad industry in the control of our costs through absenteeism from any cause.

Thank you very much. (Applause)

DR. NELSON: I think our confidences in you, Ken, and your panel, certainly were justified. We are very appreciative of a very interesting meeting. It is hard for us to judge from up here, but I hope you have enjoyed it as much as I have.

This afternoon's meeting will be much of the same, and I am sure that you are going to enjoy just as much on a little different angle, a little different subject.

I want to announce a few more people that are now here. Mr. S. F. Dingle, System Vice President of the Canadian National, who is also a member of the General Committee.

Mr. C. A. Lauby, who is the Executive Vice Chairman of the OT Division of the AAR.

Mr. J. H. Maneson, General Claim Agent of the Norfolk and Western.

Mr. George C. Flanders, Chief Claim Agent of the Pennsylvania, and one additional interesting item is - I am not sure I can pronounce this right - Mr. Katzumo Kaniko, I would like to have you stand. Mr. Kaniko is the Chief of Internal Medicine of the Japanese National Railroads. (Applause)

Mr. H. A. Sanders, Vice President and General Manager of the Grand Trunk.

Mr. F. G. McGinn, Vice President of the Milwaukee, will you stand, please? (Applause)

And will Mr. Sanders stand. (Applause)

Thank you.

The panelists are our guests at the luncheon.

(The meeting recessed 12:20 o'clock.)

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Wednesday Afternoon Session
March 3, 1965

The second general session convened at 1:30 o'clock with Dr. Nelson, Chairman, presiding.

CHAIRMAN NELSON: Those of you who might not know this, Ken Carney is intending to retire this summer. (Applause)

MR. CARNEY: Thank you, gentlemen. (Laughter)

CHAIRMAN NELSON: I might have known. Ken, the best wishes from our group to you and Ethel for a very happy and healthy retirement.

MR. CARNEY: Thank you very much gentlemen. (Applause)

I merely wanted to say I am not retiring. I am giving up work. (Laughter) So, what's new, he says. (Laughter)

CHAIRMAN NELSON: John Risendal, who is taking Ken's place, has summarized some of the things that were said this morning, and we will give him about 10 minutes to do so.

MR. JOHN RISENDAL: Thank you, Doctor. Gentlemen, I feel as our good friend, Mr. DeLambeck, suggested a few minutes ago now, like the whale. He doesn't get harpooned until he comes to spawn. This is a good chance for me to be harpooned, but we are not going to bore you with a lengthy recounting of all that was said this morning.

As Dr. Nelson mentioned earlier, the panel discussion this morning has been recorded. It will be edited, printed and distributed within the near future, and it would be an impossible thing for me to try to boil down into five or ten minutes the wealth of wisdom and knowledge that this learned group has shown today, but it seems to me that Mr. Manion, in his opening address this morning, clearly outlined our present situation when he talked about the needs and the requirements of the railroad in this changing world and changing economy.

The fact that advances in so many areas would result in the requirement that personnel employed by railroads must be better equipped in many ways. They must be better educated, better trained, and better physically. With the reduced work force, the railroads must be more restrictive in the selection of persons to fill vacancies which do exist.

The need also was very aptly pointed out for closer liaison between initially the medical and the operating departments in the selection of personnel.

The question of standards was first discussed. I think that we can say that uniformly, there is a recognized need for definite standards, that these should be uniform.

There will be exceptions, of course, but these will be limited. These exceptions should be permitted only on a particular situation which might exist within one organization, within a craft, or due to certain geographical or operating requirements.

We are, I believe, also in agreement on the question of screening these applicants for employment. Again, partially it becomes a matter of economics that the applicant should be screened on individual properties by the person to whom they are applying for employment prior to being sent to a physician for an examination.

Examinations are expensive, and there is no use sending someone over who, it is apparent, should have been rejected prior, or by the person to whom he applied. Thus, only those who, it is felt, will be actually employed should be sent for those examinations.

Now, should the examinations be comprehensive? I think that again, with our changing requirements in the industry, we will find it necessary to be more selective. In order to do so, it will be necessary for more complete and comprehensive examinations to be made.

Now, again, individuals, management, and those among the ranks of the medical men will differ as to the types of tests and examinations that are necessary, but you are all striving toward the goal of selecting the person most qualified for a position which is open.

All these notes that I made this morning, I don't know how to boil them down into two or three minutes here.

Many questions arise in connection with these examinations. Should an applicant be told the reason for his rejection if he is disqualified by the medical examiner? Now, certain physicians pointed out requirements in their individual areas, statutes which make it necessary to advise an applicant why he is disqualified. In other cases the doctors feel, and I think we will all agree, that it is the humanitarian thing to do. If you find a man has a slight defect which requires medical attention, this should be called to his attention.

The greater question arises in the more severe conditions which you often find on your examinations. What should be done? If I might just try to bring to you the consensus, as I interpreted it, of those present, it would be that the man should probably be told that he requires medical care, and perhaps it should be suggested to him that he consult his personal physician and the doctor who performed the examination will be willing to discuss with the physician the findings of the doctor upon his examination.

After a man is in service, you have accepted him, should the standards be the same for those in service as they are for applicants? I heard no great disagreement of the fact that we want the standards to be as high as possible, but that as a practical matter we do not always insist that employees who have been in service for some time maintain the same

degree of physical fitness as we require of our applicants. Again, this is probably somewhat of a humanitarian approach to this that we all recognize the difficulties which do arise due to the aging process. As we all get older, we have a little more trouble, and should we be crossed off just because we have taken on some of the afflictions of increasing age?

In the matters of safety engineering, I was very much interested in Dr. Strange's comments. I think this is something that management can work with the physicians in eliminating conditions which do cause injurie which cause disabling conditions, resulting in the loss of services of these individuals. Absenteeism is expensive.. We must eliminate it whe ever possible.

With respect to the question of rehabilitation, I doubt that there is any great disagreement. We all believe in it. The question is, just how far should it go and I don't think it would be appropriate for me to try to lay down a rule to that end. You have all heard the comments made, looking at it both from the humanitarian standpoint, from the legal standpoint and I think you will all draw your own conclusions on that.

The one area in which we are vitally concerned is in the medical-legal problems. I believe that Mr. Glennon very aptly pointed out the problems which do face claim and law departments in the handling of injury cases, the necessity then for a closer liaison between the claim, law and medical departments starting initially after an accident occurs. All three persons involved in the handling of this man's claim for injuries sustained on duty should be aware of the development of these cases from day to day, and so that appropriate action can be taken timely. This is always important.

As Mr. Glennon also stated, what the claim and law departments wan from the medical department is a fair, honest and realistic appraisal of man's injuries, of his disability, of his limitations and also, of course, an appraisal of the individual himself.

This again is important to us because, as Mr. Glennon pointed out, and as Mr. Ray pointed out, these things cost a lot of money. When the railroads are spending close to one hundred million dollars a year in the handling of the settlements of disposition of personal injury claims, this is something that is of importance to railroad managements. It is important to those of us who are working with the problem.

So, gentlemen, in summation, may I just say that we should all strive, and I trust we will, for the closest possible liaison in all possible fields, between our operating people, between our claims and legal people, and our medical departments.

Thank you. (Applause).

CHAIRMAN NELSON: One of our more difficult assignments is that of the Medical Standards Committee. It is not easy to set up standards that.

that are rigid enough and flexible enough to be of value and still acceptable to the numerous variables and facets of our American Railroads.

It is a tremendous job and our existing standards need revising, and this will continue to be an unending job.

As Chairman of this committee, we have one of our profound and progressive thinkers. Yesterday, he handed me about 150 pages of what he has been doing on this medical standards work, and then handed me another 50 pages which he wouldn't let me have. I don't know what it is, but it has to do with the same thing, so you can get a little idea of how much work this is.

Our program this year was largely directed toward helping the Medical Standards Committee.

At this time, we would like to hear something about what his committee has done, and what they are planning, from the Chairman, Dr. John Winston.

REPORT OF MEDICAL STANDARDS COMMITTEE

DR. JOHN R. WINSTON: Dr. Nelson, gentlemen: I would like to recognize the other members of the Medical Standards Committee, and if you will stand, please, I would like for the audience to see you. Walter Longeway, Colorado and Southern Railway; Stanley Cyran, Pennsylvania; Bob Graham, The Pullman; H. W. Hammatt, the Burlington; J. W. Houk, N. & W.; Joe Jensen, Rock Island; Ralph Johnson, New York Central; Roland Kieffer, M. K. & T.; Jim Stack, the Northwestern, Earle Wight, Canadian Pacific. (Applause)

They have been assigned along with myself quite a sizeable task.

The Interstate Commerce Commission Chairman when he addressed this group last, said that the public has the right to assure itself that all possible measures are being taken to protect passengers, rail employees, the public generally.

Then we have the admonition of the United States Supreme Court which says that we must exercise the highest degree of care to protect the public.

So, it would seem reasonably simple to get up some medical standards that will do just that and that has been done, and it reads as follows, and this is the standard of the Interstate Commerce Commission as it relates to motor vehicle operators, largely to truck drivers, and it says:

> "No person shall drive or shall any motor carrier require or permit any person to drive any motor vehicle unless such person possesses the following minimal qualifications: Those qualifications are among others: No mental, nervous, organiz or functional diseases likely to interfere with safe driving."

That is a bit of profound mediocrity, I guess you might call it. (Laughter) Anyhow, it doesn't answer the question at all.

So, we have been charged, we as chief medical officers have been charged, to determine that for medical reasons the employee is neither required nor permitted to assume duties or responsibilities that would be to his own detriment, to detriment of other people, or result in inefficient operation of the property.

Now, this begins, of course, with the medical selection of the prospective employee. I would like to amplify the statements made this morning, that by all means, the screening process should be much more thoroughly performed before the man is sent to the medical doctor for th examination.

At that time, of course, what you are really trying to do is to determine will, can or should. Well, this person is expected to safely and satisfactorily perform all the duties and responsibilities of his occupation.

Now will he do that is largely a matter of motivation, given average intellignece. The hiring employer can learn a whole lot more about whether the man will do the job than will the medical examiner.

Now, can he do the job? Even then the employing officer can genera get a better grasp of this man's capabilities. That is, of course, a matt largely of physical ability and mental efficiency.

Then it only comes into a matter of propriety as to whether or not this person should be permitted or required to assume these duties and responsibilities. You note, using two separate items--duties and responsibilities. Those responsibilities deal largely with himself, number one, with other people number two, and with the property, number three.

If we carefully avoid permitting or requiring a person to get into any capacity that will permit him to do damage to himself or other people, it is highly unlikely he will damage company property. So, only in that instance does it come down to where the medical aspects become significant.

Now, these pages that Harvey talked about, it is about like this. We have divided this into, first of all, the objectives of the medical examinations for prospective employers. I should add this is strictly a working effort. It was necessary to get started somewhere. In order to write something of this sort, it is about like trying to write a treatise that says how are you going to operate a railroad. How are you going to set up medical standards?

It is, you can believe me, not easy. But we will start off with some objectives, and that is to avoid the injustice to the individual and to the company of permitting a person to enter a field of endeavor for which he is not fitted, and in which he will be unable to carry on successfully.

It is necessary to determine within practical limits of medical investigations that the prospective employee has no physical, emotional or mental conditions or condition, nor predisposition to such conditions that may interfere with the (1) efficiently performing the duties of his occupation, and I should add occupations to which he is expected to advance, and (2) without compromising the health and safety of himself or the health and safety of others and last, for prolonged period of time.

I think we should add another point at this time. Although we are in the transportation industry, the carriers are up to their eyeballs in the insurance business. They are not only insuring the safety of their commodity, but they are insuring the life of the employee now. They are involved in health insurance. They are involved in medical insurance, so as a prospective employee, we must keep depth in mind.

Now, I have several paragraphs about how the local hiring people might expedite their screening processes. Then when it comes over to the medical examination of the employee, the first preamble is essentially the same, but we are there changing our position a little bit.

There it is to protect the welfare of the employee by attempting to place him in positions that will not jeopardize his health, to attain the highest degree of safety to the end that the public may be assured that all possible measures are being taken to protect passengers, rail employees and the public generally, and to assist in the efficiency of operations and the protection of the company's property that otherwise may be adversely influenced by an employee with an unfavorable medical condition.

I have listed for ready reference quite a number of medical conditions that are examples of diseases or conditions that may predispose a person to an unfavorable response.

So if the person has one of those conditions or a similar one, he should be given particular attention.

I should add that I did some research - that is what I did. Research nowadays means looking up a word in something a little bigger than a college dictionary, so I did some research and found that of all those people who have medical problems, that were sent in for the chief surgeon's examination, three out of four of these problems were detected, and the recommendation was made by the supervisor rather than all in the routine medical examination.

Furthermore, one out of 90 per cent--90 per cent of those people who were restricted, taken out of service or placed in some restricted service, this process had been originated again by the alert supervisor. I don't know whether that speaks well for the alertness of the supervisor on all our properties, or whether it speaks a little disparagingly of some of the medical evaluations that we are getting.

Certainly, there is a tendency for medical evaluations to become perfunctory. When they are perfunctory, they are worse than not at all

and I hope that my associates in the management field understand that as well as I, or are as fearful of it as I am.

Now, when it comes to checking this person, there are certain aspects of the medical examination that require some particular evaluation There was a time when we could check the man's blood pressure and visi and feel that things were working out pretty well, but now then, arbitrari I have broken this down into ten areas that we feel should be evaluated on each person and graded at least in the examiner's mind.

The first is a measure of occupational responsibility. Obviously, that, of course, will be done either by job assignments or by occupations Obviously, Class A, for example, covers those assignments in which the employee has a greater than average responsibility for the lives and safety of others as well as a greater responsibility for the protection of property.

To that end, it is imperative that he, at all times, use good judgment in his work, and that he not have any known conditions, either physical, mental or emotional, that would increase the risk of his failure to respond to his responsibilities promptly and properly.

Number 2, this is a measure of strength, measure of physical strength, stamina, dexterity and so on.

Third would be a neuropsychiatric evaluation. It can be simple, or it can be sizable. A simple one, of course, is simply to send him to the post office, and see if he can get back to the depot. Other than that, you can go all the way to the absurd in the measure of his intelligence, emotional stability, dependability, judgment, etc., but if he is carefully evaluated, by either the physician or evaluated by the hiring officer and it begins to take on a measure of this man's emotional state, he can come up with a pretty good idea of his own, and feel that it will save him a lot of trouble.

Fourth, we will go into the various medical deficiencies. These medical deficiencies are the deficiencies measured on the last 50 pages that have been experienced, and as they come in, we put them on a page, and each one of them is assigned a particular rating. The next time an employee comes in with the same or a very similar condition, then we will have established a precedent that will at least indicate how we evaluate it in the past, and we can make corrections as necessary.

Finally, we come into distance, vision, air vision, color perception, form field of vision, hearing, and x-ray examination of the low back and certain other laboratory procedures if and when they are thought desirable.

Each of those are divided into five areas, classes of one, two, three, four, five.

They are listed here and numbe[illegible]

that it will be after a great, long effort, if we do, but we will try.

Thank you. (Applause)

CHAIRMAN NELSON: I am sure you can appreciate what the amount of work involves, and all we can do is keep pecking away at it and come out with something that would be of value to all of you within a reasonable period of time.

One of our most important and very active committees is the Medical-Legal Committee which is composed half of doctors with Dr. B. W. Stockwell, as chairman, and the other half members of the claim group of which Kermit Johnson is the co-chairman. Dr. Stockwell is ready to tell you a little bit about what this committee is doing. They are doing some very interesting work with something that is quite recent, that I know that you will be interested in hearing about. Dr. Stockwell.

REPORT OF MEDICAL-LEGAL COMMITTEE

DR. B. W. STOCKWELL: Thank you, Mr. Chairman. Members and Guests: You will note on page 4 of your program that the members of the Joint Medical-Legal Committee are listed, that is, the medical members.

I would like at this time to thank each of them individually for their assistance and cooperation, and specifically, for the work that they have done on their assigned projects. Dr. Stanley Cyran, Medical Director of the Pennsylvania Railroad, will you stand up. Dr. Cyran.

Dr. Glenn Cushman, Chief Surgeon of the Western Pacific Railroad.

Dr. Dowd, Chief Medical Officer of the Canadian National, is not here.

Dr. V. W. Hollo, Chief Surgeon of the St. Louis-San Francisco Railroad.

Dr. Ralph Johnson, Medical Director of the New York Central.

Dr. Isadore Kaplan, Medical and Surgical Director of the Baltimore and Ohio.

Dr. Southgate Leigh, Chief Surgeon of the Seaboard Air Line Railroad.

Dr. Vance M. Strange of the Southern Pacific Railroad.

Dr. J. R. Winston, System Medical Director of the Santa Fe.

Thank you very much, gentlemen, for your help. (Applause)

I would also at this time like to thank my co-chairman, Kermit Johnson, General Claim Agent of the Northern Pacific Railway, and the

legal members of the committee.

First, Mr. Johnson, will you stand up, please. Mr. Johnson has been very cooperative and has done a lot of work for the committee. Mr. R. R. Minor is co-chairman of the Legal Members. He is General Claim Agent of the Illinois Central Railroad.

Mr. J. D. Book, Special Representative of the General Claims Agent Pennsylvania Railroad, in New York.

Mr. R. E. Hoehle, General Claim Agent of the Elgin, Joliet and Eastern, here in Chicago.

Mr. J. A. Lee, General Claim Agent of the Southern Railway System in Washington.

Mr. R. P. O'Connell, Assistant Chief Claim Agent of the New York Central, Detroit.

Mr. J. D. Caldwell, Assistant General Claim Agent of the Southern Pacific, San Francisco.

Mr. C. S. Kester, General Claims Attorney of the Seaboard Air Line Railroad.

Mr. R. W. Centen, Assistant to the General Adjuster of the Chicago Milwaukee, St. Paul and Pacific.

Mr. E. M. Glennon, who you know from this morning's panel, is Legal Advisor to the Committee.

And the other member is Mr. L. B. Kyle, General Claims Agent of the Canadian National Railways in Winnipeg.

Mr. W. H. Kelly, Chairman of the General Claims Group, has also been most cooperative and helpful.

The Claims Research Bureau of the Association of American Railroads represents the backbone of this Committee, and the active participation of and full cooperation of Mr. Ken Carney, Director of the Claims Research Bureau, Mr. J. A. Risendal, Assistant Director of the Claims Research Bureau, and Mr. William Hawley, of the Claims Research Bureau, who acts as secretary for the Committee, greatly enhances the work.

There was some delay in starting the work of this Committee, as it was anticipated that new medical members of the group would be appointe at the membership meeting which was initially scheduled for April 22, 1964, at Las Vegas, Nevada. However, in spite of this delay, there has been considerable work done, and I will go over with you, briefly, the projects now under consideration.

Before discussing our specific projects at the moment, I would like to take just a few minutes to review the accomplishments of the Committee. The extension of impartial medical testimony in our courts, which was inaugurated by the medical sociaty and judges of New York City was promulgated by this Committee, and the Committee was instrumental in instituting the plan in several parts of the county.

The Committee studied the problem of back injuries and claims under the Federal Employers Liability Act and developed a "Recommended Pre-Employment X-Ray Program for all Railroads." This recommended program was sent to the Chief operating officers of the member roads in 1963, and thus is available to all interested.

The response to our recommendation has been gratifying and we have been in personal communication with interested people from a number of railroads that do not as yet have such a program.

As we do not feel that any project is ever completed, the recommendations of the Committee have been reviewed on occasion since our last meeting, and the Committee feels that the emphasis, as far as our pre-employment back x-ray program should be in the elimination of individuals with congenital defects which will lead to back ache in the future. If we can eliminate this one group, we have accomplished a great deal.

We have been repeatedly asked to produce some proof that a pre-employment back x-ray program will result in savings to the railroads, and at the present time, we are initiating a study on our railroad of our experience in the past eight years which we think will be of some statistical importance and which will be reported to you in the future.

In the meantime, we feel that the cases that we have in litigation at the moment, who entered our service with congenital back conditions before we inaugurated our program, are ample proof of the value of the program, because the cost of each one of these cases is going to be tremendous.

The major headache for the claims and legal departments of the railroads has been and continues to be, the employee with a back injury.

I think Mr. Carney will second that without question.

MR. CARNEY: Right.

DR. STOCKWELL: Thus the Committee has been interested in the ruptured intervertebral disc problem, and a revised questionnaire has now been sent out to all the railroads, and we are requesting this information from you on all of your cases. I think the response has been good. I think Mr. Sherman of the AAR can now tell us roughly how many answers we have had in the year of 1964.

Can you give me that information?

MR. SHERMAN: I am sorry, sir. I didn't come to the meeting prepared to do so.

DR. STOCKWELL: Give us an estimate.

MR. SHERMAN: The disc questionnaire?

DR. STOCKWELL: How many questionnaires have we had answered as far as these cases are concerned?

MR. SHERMAN: I would say probably 225.

DR. STOCKWELL: Gentlemen, that illustrates my point. It is a good start for an excellent study. The medical members of the Committee working on this project is Dr. Vance Strange, Chief Surgeon of the Southern Pacific Railway Company, and his legal counterpart is M. J. D. Caldwell, Assistant General Claims Agent of the Southern Pacific Company.

We are very pleased to announce that a code for the tabulation of the intervertebral disc data has now been worked out for recording questions that we are interested in, utilizing the data processing or IBM equipment of the Southern Pacific Railway. They have been most cooperative, and I am sure this study will be helpful to all of us.

The Cardiovascular study is being conducted by Dr. Ralph Johnson, Chief Medical Officer, New York Central Railway, and Mr. R. P. O'Connell of the Claims side of the New York Central.

The Claims Research Bureau has provided them with examples of the type of testimony that is being given in connection with relating trauma or work exertion to the existence of heart disease. The Committee is considering the question of how long a man can be kept working with heart disease in view of the responsibilities assumed under the FELA.

The Committee is keeping in close touch with cardiovascular studies that are going on in various parts of the country, and particularly one that has been conducted by the University of Minnesota Medical School involving railway employees.

As you are aware, to date, the study has been useful in proving that there is no direct association between the railway man's occupation or accidental trauma to the existence of disqualifying heart disease.

This will be discussed further, I am sure, tomorrow at the panel on cardiovascular disease.

The pulmonary disease project is assuming greater importance each year, with increasing claims for pulmonary fibrosis, pulmonary emphysema, and carcinoma of the lung.

An excellent study by Dr. Isadore Kaplan, Medical and Surgical Director of the Baltimore and Ohio Railroad has been conducted and he

is the medical representative for this project. Mr. J. A. Lee of the Southern Railway System is the Claims member assigned to this subject.

A study of the effects of Diesel Fumes on our employees was initiated by the Association of American Railroads - we contributed $30,000 for the start of the program at the University of Pittsburgh School of Occupational Health. Dr. Stanley Cyran, Chief Medical Officer of the Pennsylvania Railroad and Dr. Vencel Hollo of the St. Louis-San Francisco Railway are the medical representatives from the Committee on this project. At the end of the first year the United States Public Health Service took over the project, that is, the continuing project, that presumably will continue for a number of years.

At the present time studies indicate that there is no connection between the inhalation of some of these alleged noxious agents in the work environment and the pulmonary diseases mentioned.

In discussing this project with the general claims group at their meeting last year, I called attention to the fact that all the present pulmonary studies indicate that there is a direct connection between some of these diseases and smoking cigarettes.

We called attention to the fact that under rates that recently went into effect, some life insurance companies will issue a $50,000 life insurance policy for a non-smoker for $61.00 less per year than a smoker of the same age.

The increased incidence of neuropsychiatric claims under the Federal Employers Liability Act has been brought to the attention of the Committee, and a series of cases have been studied by Dr. Glenn Cushman, Chief Surgeon of the Western Pacific Railroad, who is the medical representative for this project. No conclusive recommendations have been made to date.

A continuing study of some of the awards of the National Railway Adjustment Board in medical cases is a subject that will be developed further in the following panel. Copies of some of these awards have been forwarded to the members of the Medical-Legal Committee and I believe that many of them should be forwarded to the entire membership because of their general interest.

A new project of the Committee is the study of "Malpractice Liability in Pre-Placement Examinations." We have touched on that this morning. I mentioned the article in the August 1964 issue of the JOURNAL OF OCCUPATIONAL MEDICINE, and I think that we will hear more about that in the near future.

In this connection our membership has been asked for a report from your railroads to find out the magnitude of the problem, and specifically whether or not a suit has been instituted against your railroad based on the mal-practice or error in judgment of one of your examining physicians in declaring an applicant for employment unfit.

Some of the answers are in, and they are very interesting, but we have not had sufficient time yet to analyze them.

The problem of hearing and claims for loss of hearing against the railway industry has been a project of the Committee. Dr. K. E. Dodd, Chief Medical Officer of the Canadian National Railways has been the member of the Committee interested in this project. No specific recommendations are being made at this time, but the problem is being "quietly" observed. As there are occupational hearing losses, and you may hear much more about this in the future.

Malignancy problems, other than carcinoma of the lung, have been a project and you will hear more about this from Dr. Southgate Leigh, Chief Surgeon of the Seaboard Air Line Railroad, who is the medical member assigned to this project for the Committee and who will discuss some aspects of it in the report that he is giving as Chairman of the Committee on Trauma tomorrow. Mr. C. S. Kester, General Claims Attorney of the Seaboard Air Line Railroad Company was assigned as the claims representative to work with Dr. Leigh on this subject.

A continuing study of "the area of greatest problems" which we think is very important, is being continued through the facilities of the Claims Research Bureau. In other words, they are advising the Medical-Legal Committee when it is apparent that some new problem is cropping up that may be of considerable importance to the industry.

Mr. J. D. Book of the Pennsylvania Railroad Company is the claims member of the committee who works with the Claims Research Bureau in this connection.

Mr. R. R. Minor, Co-Chairman of the Claims group, with Mr. Kermit Johnson, Chairman of the Claims group, was assigned to handle the publicity aspects of the Committee's work.

Mr. R. W. Centen, Assistant General Adjuster, Chicago, Milwaukee, St. Paul and Pacific Railroad, was assigned the important subject of proper medical preparation of injury case litigations, which we have heard something about this morning and which we will hear more about in the following panel this afternoon.

I have now mentioned the active participation of all members of the Committee except Dr. John Winston, System Medical Director of the Atchison, Topeka & Santa Fe Railway. He is not mentioned last because of the least contribution, but because of his assistance in coordinating the work of this Committee with the important work of the Committee that he heads, the Medical Standards Committee. I think that the relationship of medical standards to the medical-legal problems that we face are very obvious.

The Joint Medical-Legal Committee is a hard-working, well functioning committee and we hope that it will continue that way in the future.

Thank you. (Applause)

CHAIRMAN NELSON: Thank you, Ben. This has been a very interesting committee because it does a lot of work on a lot of projects.

The moderator of our next symposium on Preparation for Three Doctor Board, National Railroad Adjustment Board and Trial, is equally capable in the arts of the operating room and the court room. I think you will find this a very interesting panel. Our needling friend, the purposeful and inquisitive obstructionist that we could not get along without, Ben Stockwell, will you kindly introduce your panel?

PANEL: PREPARATION FOR THREE DOCTOR BOARD, ETC.

MODERATOR B. W. STOCKWELL: Thank you, Harvey. Most of our panel members, gentlemen, you are acquainted with as a result of our excellent panel this morning.

Mr. Zimmerman, Vice President of the Operating Department of the Illinois Central Railroad.

Mr. Earl Oliver, Vice President - Personnel of the Illinois Central.

Mr. Glennon, Attorney from the Soo Line, who has contributed a great deal.

Mr. E. Horsley, Carrier Member of the First Division of the National Railroad Adjustment Board.

Mr. Ken Carney, Director of the Claims Research Bureau.

Dr. M. B. Clayton, Chief Surgeon of the Southern Railway.

Dr. William E. Mishler, Chief Surgeon of the Erie-Lackawanna.

Dr. Ernest C. Olson, Chief Surgeon of the Illinois Central.

Dr. John R. Winston, Medical Director of the Santa Fe.

The panel has been assigned some important subjects, some of which are controversial, and we will appreciate the full participation of all of you. You may address a question to any member of the panel or the panel as a whole. We will proceed with our assignment.

The first item is the preparation for the three-doctor board. I think we will follow the questions here, but change it a little bit to start with #6, instead of #1. It is most important for us to have a full understanding of the National Railroad Adjustment Board, and particularly when we are discussing a three-doctor panel, or other similar subjects. so at this time, I will ask Mr. Horsley if he will tell us what the National Railroad adjustment Board is, how its hearings are conducted, and any other comments that he wishes to make.

MR. E. T. HORSLEY: Thank you, Dr. Stockwell. Beginning with question #6: What is the National Railroad Adjustment Board? I should like to preface my attempt to explain it by expressing a deep thanks to you of the medical fraternity for expressing an interest in the National Railroad Adjustment Board in the problems that it has, which are, at least, on the periphery of your field because the help we get from you is most vital to the success of our defense of the cases that come from your respective carrier properties.

So, we do appreciate this interest very much.

The National Railroad Adjustment Board is a creature of statute. It was born of the Railway Labor Act, which was enacted by the Congress of the United States effective June 21, 1934, so it has been in existence for a long time.

Just recently, however, we have become embroiled in the problems which now, I am glad to note, address your interests.

The National Railroad Adjustment Board is a bipartisan tribunal. It is composed of four divisions. They have different jurisdictions. The First Division, of which I am a member, has to do with the operating crafts, and I am sure my terminology is understandable to all of you, with respect to the crafts.

The Second Division, the Third Division and the Fourth Division each has to do with another segment of railroad craft workers. So that it being a bipartisan board, I should like to make it very clear to you that the members of the Board are not judges in any respect. The members of the Board are by statute the chosen representatives of the two parties to the Board, namely, labor and management.

There are 36 members of the Board, not counting some supplemental divisions which are necessary to reduce workloads on those divisions. These 36 members are chosen 18 by labor, the National Labor Unions in the railroads, and 18 by the carriers. We, being the chosen representatives by statutory language, of our respective interests, of course, are not judges because a judge is not a chosen representative.

It may seem to you that I am laboring that point, but I believe it should be made clear because even today I have been called by a representative of a carrier and asked if it would be ethical to come and talk with me.

To clarify the understanding in the field that we are not judges, you can talk with me and my associates on the carrier side the same as you talk with your counsel with respect to a litigated matter on the railroad.

If anybody wants to raise a question as to why I happen to be the chosen representative on the First Division, we will reserve that discussion for later. (Laughter)

It is a bipartisan board. We are your advocates. It is the cheapest form of arbitration, if I may say so, because by statute the Board is located in Chicago, all four divisions. We are paid by the railroads. The labor representatives are paid by the labor unions. It is a board sitting in Chicago representing both sides of the industry and taking all cases that arise out of the collective bargaining agreements, all disputes arising out of those agreements, so that it is a cheap form of arbitration, because it is always sitting, and we take the cases as they come.

There is an awful work load of cases which is another subject. There are 4,054 cases now pending before my division, the First Division, of the Railroad Adjustment Board. This is due to reasons which do not address, I think the interest of this body at present, but it is not my fault, I hasten to add. (Laughter)

Now, I should like to pass on to #7: How are its hearings conducted?

The hearings of the First Division are conducted in camera, so to speak. We do not permit the parties to appear before the referee and the Board in argument of a case, so that that is the reason why we don't have any witnesses. We don't take any testimony. It is purely an arbitral situation in which the representatives on the Board, as members, represent you and use the submissions or the pleadings, if you please, that are sent in to the Board from both sides, and are put together and constitute the case.

The hearings themselves are before the referee before whom only the representatives of the parties, members of the Board, appear. However, there are oral hearings at earlier stages at which the referee is not present, the referee being the arbitrator, but it doesn't do any good for the parties to come before the Board, because at that stage, there is already a deadlock aspect to the case.

But I would like to, at this point, say that it is most helpful when those railroads do come in to see us, who wish to make their case a little more clear to the Board members and discuss it with us, and we solicit such help from the railroads.

Other than that, there is no formality to the appearance of the parties before the adjustment board.

Dr. Stockwell, should I proceed to these other questions until the question arises? It all relates to the Board.

MODERATOR STOCKWELL: I think if you would go ahead with #8, "why it will benefit us to be informed of the awards of the referee," that it would be helpful at this time.

MR. HORSLEY: Doctor, I think it would be of great benefit to the medical staffs to be familiar with the awards that are entered by the Board, that have to do with medical questions of physical condition, and I have undertaken to keep Mr. Ken Carney fully informed of those awards, and

if he has not passed them out to these doctors, I suspect that Mr. Ken Carney should answer that question, because he has all of them. They have been made available to him.

MODERATOR STOCKWELL: Thank you very much, Ken. I would like to mention at this time you have been very cooperative in forwarding to the members of the Medical-Legal Committee some of the pertinent awards and I hope that we will have the opportunity of discussing a few of them later in the panel, because there are some differences of opinion as to how well these cases were presented to the Board, and in some of them, where the decision was unfavorable to the carrier it seemed apparent from the report that you issued, that there was good reason for the loss of the case.

How far do you think the Claims Research Bureau can go, and would be willing to go, as far as the membership of this group is concerned, in the sending of some of these reports out?

MR. K. A. CARNEY: Well, we have been distributing to claim departments generally, and some of the decisions to Bill Todd for distribution to the Medical Section, in those areas where we think you are vitally interested. There certainly is no objection to your getting any material that has to do with the physical disabilities of employees, and the estoppel question growing out of the contentions that employees are permanently disabled, and then seek to return to service.

We are in great need, really, of some more uniform presentation of cases in this area, so that our carrier members may make an effective presentation, and only if you know the problems and how the referees are deciding these questions, can you adapt your own practices to the requirements.

With reference to Horsley's comments about the fact that he gives them all to us, I think there is a modicum of truth there. He sometimes does give them all to us, and we sometimes do forward them on to you, but occasionally, he lapses into forgetfulness.

I presume we are equally as neglectful of him. We, however, have remedied that situation, I believe, to the point now that we are keeping each other better informed, and if you medical officers are not receiving these reports regularly, you should make it known to Bill Todd, so that we can make certain that you do.

MODERATOR STOCKWELL: I am thinking entirely of medical cases that have been presented.

MR. CARNEY: Yes.

MODERATOR STOCKWELL: That have gone to the Board. The question arises immediately as to why a medical case ever does get to the Board, because so many of the railroads have a working agreement that should solve the problem before it is taken to the National Railroad Adjustment

Board.

DR. CHESTER R. ZEISS (Elgin, Joliet & Eastern Railway): Who appoints the referees? Who pays them?

MODERATOR STOCKWELL: Who appoints, is the question.

MR. HORSLEY: The referee is appointed by the federal government under a provision in the statute when we cannot agree on one. A referee is an arbitrator. A referee is an itinerant philosopher. (Laughter)

DR. ZEISS: Is he a Civil Service employee?

MR. HORSLEY: No. He is not.

A case that comes to the Adjustment Board and the physical condition has been passed upon by a referee, you will frequently find that referee has a Bachelor of Science, A Master of Science, a Doctor of Jurisprudence, and post-graduate work at the University of Chicago, for example, in the study of administration.

DR. A. J. SUTHERLAND (Louisville & Nashville Railroad): What percentage of the cases are involved with medical problems?

MR. HORSLEY: With respect to the whole number pending before the National Railroad Adjustment Board, the percentage involving medical questions is what some people would consider negligible, but the impact of one of those cases could spread through the entire industry, and has, and creates a lasting problem, so it isn't quite the number of cases. It is the horrible miscarriage of both jurisprudence and judgment that causes the problem.

MR. CARNEY: What is the answer to the question, though? (Laughter)

MR. HORSLEY: He said what percentage. I said it is negligible.

MR. CARNEY: Is it one per cent or two per cent?

MR. HORSLEY: What is two? (Laughter) I don't know.

MR. CARNEY: He asked a question and he didn't get an answer.

MR. HORSLEY: Of the 4,054, I suspect that those pending now at my division would not be more than 25. Now, you figure out the percentage.

MR. CARNEY: Thank you very much.

MR. HORSLEY: What is the percentage? (Laughter)

Twenty-five out of 4,054, what is the percentage? I am asking a question. I want an answer. (Laughter)

MR. CARNEY: What is the answer?

MODERATOR STOCKWELL: Regardless of the percentage, I must say that some of those cases are most interesting as far as the medical aspects of the problems are concerned.

Mr. Oliver, you had a comment?

MR. OLIVER: I should like to make an observation with respect to question #8. I agree in principle with what "Chick" Horsley has said, but I would add a word of caution. Back in the early days of the National Railroad Adjustment Board, we were inclined to take the latest decision in any particular area as gospel, as the law.

And then we would modify our practices, our policies, accordingly, but over the years, we began to learn that there was a great deal of inconsistency in the awards, and we began to discredit in our own thinking those awards that are patently nonsensical.

So I think it is well for the chief medical officers to be aware of the awards that are currently being turned out, but at the same time, they should remember that any particular award is not the final word.

MODERATOR STOCKWELL: Are there any other questions concerning the Board at this time?

I am sure we will discuss it more as we raise other questions, but at the moment, does anyone else have a question?

Very good, we will proceed to the preparation for a three-doctor Board. There is some confusion, of course, as to exactly what a three-doctor Board is, and I think the first thing that we should bring out is that it is dependent upon the working agreement that the individual railroad has with the Brotherhood concerned.

In many of these agreements there is a specific procedure established for physical examination of disqualified employees.

The importance of the work of our Committee on Medical Standards is emphasized strongly in these disputed cases. In other words if we can have the support of the AAR Committee on Medical Standards, it will be most helpful when we have a disputed case. It gives us some backing in our decision that the man is physically unfit.

That was mentioned this morning, and I would like to again emphasize it. Obviously, we must be on very strong grounds to disqualify for medical reasons an employee who has seniority. Unless we are most careful in disqualifying men with seniority, we are going to have a most difficult job in sustaining it with the medical board or before the Adjustment Board.

Mr. Horsley, would you agree?

MR. HORSLEY: Yes, I would.

MODERATOR STOCKWELL: To exemplify the types of working agreement, because we find they vary tremendously from railroad to railroad, I would like to present to you the specific provisions of the working agreement that we have on the Grand Trunk Western with the B. of R. T., and then we are going to compare that with the working agreement of one or two other roads.

This takes a minute or two, but I think we have to understand what the subject matter is when we are talking about a three-man Board on medical disqualification.

"The employee covered by this agreement disqualified for service on account of his physical condition will, in the event he feels such disqualification is not justified, handle the matter with the operating officers direct or through his representative in the usual way, and if the matter is not disposed of in a mutually satisfactory manner, the employee will provide written request made by him within 30 days" (and this is important) "from the date notified of his disqualification, be given a physical re-examination under the following conditions:

"Two, the employee involved will promptly select a physician to represent him, and the management will promptly select a physician to represent the company. The two physicians thus selected will promptly re-examine the employee and render a report of their findings within a reasonable period. If the two physicians thus selected shall agree, the conclusion reached by them will be final.

"Three, the physician selected to represent the company and the physician selected to represent the employee "must be capable." (I won't read the entire wording.)

"Four, if the two physicians selected should disagree as to the physical condition of the employee involved, they will select a third physician to be agreed upon by them who shall be of recognized standing in the medical profession.

"This Board of medical examiners" - (Now the terminology here is important.) "This Board of medical examiners thus selected will examine the employee involved and will, within a reasonable period, render a report setting forth his physical condition and their conclusions as to his fitness for service, and a decision of the majority of the Board is final and binding upon both parties to the dispute."

Now, obviously, if it is settled at that point, there would be no reason for it going before the Adjustment Board.

"After completion of the re-examination, the Board shall render a report of their findings, send two copies to the officer designated by the company, and two copies to the employee or his representative.

"Six, the company and the employee involved will each defray the expenses of their prospective appointees. If the decision of the Board selected does not confirm the justification for previous disqualification or service restriction, the employee will be permitted to return to service from which he was removed and compensated for net loss of earnings."

I may say at this time that this is the reason for proceeding with dispatch in these cases. If it does go on for a long period of time, obviously, if we lost it, we may have to pay out a lot of money for the time that that man disqualified.

We have other provisions in the agreement for handling individuals that do not request re-examination within the 30-day period, but they are not pertinent to the present discussion.

You will particularly note that at the point of a third doctor being brought into the picture, the examination is made by the three-doctor panel, sitting as a group. In other words, all three doctors are there. The matter isn't referred to the third doctor for a decision. All three doctors must be present to make this decision.

The reason for this is that the chief medical officer for the railroad can dispute the allegation of the employee who wishes to return to work, that there is "no hazard in his tour of duty," or that "he doesn't have any work to do."

I think this answers two questions, #10 and #11, on the program and illustrates again why it is most important to list the job duties required for employees.

I have asked the medical members of the panel to bring with them a copy of their working agreement with the B. of R. T. and we will ask each one now to discuss the differences between his agreement and the one that I have mentioned.

Dr. Clayton, what is the situation on the Southern?

DR. M. B. CLAYTON: When an employee is disqualified by a company physician and takes issue and presents a statement from his physician that he considers him qualified, he has the privilege of asking for examination by a neutral. The procedure henceforth is somewhat as follows:

1. When and if the employee's physician contacts the company's physician who found him disqualified, an arrangement is made between them to do a conjoint examination in the company physician's office.

2. Should they agree after the conjoint examination that he is disqualified that ends the matter. Should they disagree, then they decide upon a neutral and whatever he says is final and binding with the exception that the employee has the privilege of requesting that his case be re-opened at any time.

The employee's physician and the company's physician have the privilege of presenting any facts which might pertain to the neutral such as the nature of his occupation, the reason he was disqualified or qualified as the case may be.

DR. KNOWLES: May I ask, what is the procedure when it is an engineer? Is there any difference when you accept engineers?

DR. CLAYTON: There is no difference except two years ago we decided that our doctor and his doctor would not have to get together and do a conjoint examination. In order to save time, that they agree upon a neutral e.g. by telephone, if they wished to, and they would not have to do a conjoint examination.

MODERATOR STOCKWELL: Dr. Mishler, will you tell us how your agreement works on the Erie-Lackawanna?

DR. WILLIAM E. MISHLER: I can start out by saying that I like the very complete agreement that you have. I had very little to do with the drawing up of conditions for the agreement of our railroad except to the extent that we did have two things.

Number one, there has to be a disagreement in medical findings which is important, and the second is that the neutral when there is a difference in medical findings, shall be a man of the American Board or comparable standing.

Actually, I have to make this comment. A chief surgeon's duty is twofold. One is to see that the people who are performing their duties - and I am talking about men with service - are safe in their occupations, and in doing so, he can't be arbitrary if he wants to avoid constant conflict with the unions.

So that the first step, when men show up with things that I think might be detrimental in the particular job they are doing, is to see if I can't find some place where they can work safely. I think that has helped to a great extent.

There are always going to be people who still don't like your decision, but if over the year you have helped a certain percentage of your employees, the unions are not too agressive, but the wording of our agreement has helped a great deal.

There has to be a disagreement in the medical facts, not in whether the man can work or not work, but whether there are disagreements of medical facts.

I have always maintained with some success that, if the agreement between management and the man's family doctor is 100 per cent in accord, the decision whether he can operate a locomotive, or whether he can climb a box car is mine. That is a management decision and this is adhered to.

I think the important thing is that there has to be a disagreement on medical facts, and number two, to supplement what Dr. Clayton says, if we do pick out a man to act as neutral, he has to be a man who is a diplomat of the American Board. We then give him all the facts as to what the occupation of the man is, what his history is and what our findings were, and if the labor people would feel like they want to do anything, why they have the same privilege.

We have been reasonably successful with this program.

MODERATOR STOCKWELL: In other words, in answer to the specific question as to whether the three doctors examined this employee as a board or not, the answer is "No."

DR. MISHLER: The answer is "No." I am sorry I took all that time. I could have said, "No."

MODERATOR STOCKWELL: Very good. You brought up another very interesting point, one that is definitely controversial.

Is it the duty of the medical board to determine only the physical condition of the employee, or is it the duty of the medical board to make the determination of whether or not he may safely carry out the duties and responsibilities of his position? Now, that is the $64.00 question. It would be a wonderful thing if the medical board could only decide the medical aspects of the case, but unfortunately, it doesn't work that way, because the question is whether the man can go back to his work as a switchman, and the important question is whether he is safely able to do his job.

Mr. Horsley, would you comment on that?

MR. HORSLEY: I should like to.

In the agreement that you read, Dr. Stockwell, I think one of the concluding terms of it was the very question that shall determine whether the man can go back to work.

I don't want to over-simplify it, but if, as we started out discussing today, there was a table of physical standards to guide the medical consideration of a man, then the question would be whether or not the subject meets the carrier's physical standards, and physical standards are properly created, in my opinion, by a carrier because a carrier has the duty, as a common carrier, to its employee and to the traveling public and to the property of the shippers which it handles, so that that is closely related to the condition of the men who actually perform work.

Therefore, standards could be formulated which would have to do with these craft job duties, so that if a man's physical condition is in question, the sole determinative question would be whether or not he meets the physical standards. If he doesn't, there is no question of going back to work.

If he does, the question of going back to work is simply answered by the first question, so that when, as you have very well stated, we get into the question of whether or not a man can go back to work, that might be and seems to me in a great many of our cases is irrespective of his physical condition.

He demonstrates that he can climb a ladder. Hence, it is concluded he can climb the side ladder on a boxcar, so I am always fearful of the question being whether or not he can go back to work, because the neutral doctor in just perhaps a few moments of briefing is certainly not an authority, and he is the sole deciding factor as to whether or not a man can go back to work in the train yard of a railroad, and that is a dangerous question to put before any neutral irrespective of his standing in the profession.

He might not fully understand it. May I take a moment, Dr. Stockwell, to show what is presently pending before our Board on this very question?

MODERATOR STOCKWELL: Surely.

MR. HORSLEY: You stated that full observance of an agreement would certainly settle the question, and I agree as between reasonable prudent men it should settle the question, if it were followed out in terms of the agreement that you read as an example. But such an agreement was made on a carrier, and we now have the case pending before the Board.

I should like to read very briefly what the situation was. This conductor was in charge of suburban trains.

It was submitted to the doctor. The doctor said this: "If the duties should include or require him to struggle with difficulty to open or close doors on a train, or jump on or off moving cars, or to do any work requiring full use of the strength of his right arm, reinjury to the muscle attached to the scapula and to the transverse long end of the right biceps, humerus muscle would be likely to result.

"I do not believe that an arm which has been as badly injured as has the right shoulder of this patient and subjected to three operations could withstand the strain and stresses of sudden jerking or heavy physical work."

That would seem to be definitive and determinative of the question. However, the neutral doctor went on to say this: "It is my opinion that this patient could perform the duties of conductor-collector on suburban trains as he has described these duties to me, and as they have been described by Mr. B, without any danger to his right shoulder or without likelihood of a reinjury."

B is his labor representative.

Now, that opinion of the doctor which somewhat modified the definitive opinion which I first read, was certainly based on the self-serving

statements of the patient himself and his labor representative to the doctor, which caused the doctor to go on to modify his opinion by saying that he could perform those duties "as he has described them to me."

So that we have a situation here in which the agreement seemed to be final and binding.

The doctor's opening language in his opinion seemed to be determinative, but it all blew apart in the method followed in presenting the case to the neutral doctor, so that the neutral doctor actually got right down into the question of whether or not the man could do work represented to him as being the work by the patient and his representative.

So that it blew apart, if I may say so, the medical opinion of the doctor, and the whole thing disappeared on the basis, or is alleged to have disappeared on the basis of this modified opinion or peroration that the doctor gave based upon the testimony of the patient, and that is what can happen when you get into the question of discussing the work to be performed, and permitting those to be present who can make the self-serving statements and convince the doctor that they can do that work.

This is the case of a man who wants to go back to the very work involving the opening and closing of the suburban doors in which he was injured to the extent of having three operations.

Therefore, an agreement that is final and binding is not final and binding when they begin to kick it around, so the procedure has to be watched, very closely. This case is not determined yet by the Board.

MODERATOR STOCKWELL: I think that case illustrates very well why it is essential that this panel of three doctors has more to do than to decide the fellow has been injured in the arm. They have to decide whether the injured arm will permit him to carry out the requirements of his job.

MR. HORSLEY: Yes sir, if those job requirements can be truthfully reported to him.

MODERATOR STOCKWELL: That is the function of the chief medical officer in participating in this joint three-doctor board and then a decision is made. The decision is made that the man can return to work as a brakeman, or he cannot return to work as a brakeman. Now if that decision is made under the agreement by this medical board, is there any possibility then of its going to the labor board?

MR. HORSLEY: That should be final and binding.

MODERATOR STOCKWELL: We found it to be so. It works that way.

MR. HORSLEY: I just want to caution you on what can be the procedure before the doctor to cause him to give some credence to testimony from the other side, and these men, I am not derogating them nor disparaging them, they can speak for hours without resorting to

So that is what a doctor wouldn't recognize. (Laughter)

MODERATOR STOCKWELL: The report from the medical board should state one of two things. It should state: this employee is physically able to resume work in his regular occupation, or is not able physically to work in his usual occupation, and if you don't make that decision, I don't see how he will ever solve the problem or settle the issue.

MR. HORSLEY: That is right. Incidentally, in that particular case that man had filed suit under the FELA and had gotten a verdict for $39,000.

MODERATOR STOCKWELL: I am sure he has.

MR. HORSLEY: Estoppel wasn't in the case, though.

DR. ZEISS: Isn't the important thing with this man the fact that the three doctors are together when they make the decision?

MODERATOR STOCKWELL: That is my point, yes.

DR. ZEISS: I think they are much more likely to agree, let's say, in honesty if they are all together and not quite separate in their report.

MODERATOR STOCKWELL: That is exactly my point. That is our procedure, and that is why we have won 98 per cent of our cases. Dr. Olson, what is your procedure?

DR. OLSON: We have no formal agreement on our railroad. But we have a customary handling which is somewhat in line with the one that you mentioned. The claimant usually has had a private physician of his own selection examine him and has sent our office a report indicating that he feels that the individual is able to work. We have a report from our own examiner indicating that it is his opinion the employee is unable to perform the duties of his occupation. When the request is received, the patient selects his own doctor, usually the same one who made the original examination. Each doctor is sent a letter from our office asking that the employee be examined in accordance with the provisions of our Operating Circular No. 18, which is enclosed to the doctor, and attention is drawn to the standards which are set forth in this Circular.

We also provide authentic statements and these are developed from the employing officer concerning the nature of the duties of the man in his occupation together with any graphic material which may be available to further amplify these duties.

One case that I recall was that of the duties of a switchman, and we showed pictures of his walking on uneven ground, climbing up the ladder, coupling cars, jumping on and off. I think they were very impressive in the mind of the neutral, at least.

The same is done to our examiner, and both are then asked to submit the report of their examination to our office. Assuming then that

there is a diversity of opinion, and since there was originally a dispute, the two examiners are then asked to select a third physician, a neutral, mutually agreed upon and to whom the same information is sent, stating that his opinion following the examination will determine whether or not the man is permitted to return to work.

Incidentally, he is sent the complete report of the other examining doctors. The one big point of difference is that the patient may be examined separately by these doctors.

MODERATOR STOCKWELL: One other question, though, Dr. Olson, does this neutral decide what the physical condition of the employee is or does he decide whether he is physically able to do the job?

DR. OLSON: He decides, or he is supposed to decide, the qualification of the man to return to work on the basis of our medical standards and also gives an opinion about his ability to perform that occupation.

MODERATOR STOCKWELL: In other words, he is deciding the question whether he is physically fit or unfit.

DR. OLSON: That is right, according to our standards.

MODERATOR STOCKWELL: Dr. Winston, how do you handle it on the Santa Fe?

DR. WINSTON: There are a few aspects that are slightly different. One is that the employee has 15 days following notification of the disqualification to make his appeal for a two-doctor board. Another is the examination of the two doctors is made in the office of the company physician, and they make their judgments based on their interpretation of whether or not his physical condition does not justify removal or restriction of his service rights, so they are making a judgment based on their own observations.

Now, the two of them appoint the neutral doctor who must be a certified specialist in the disease or impairment that the employee has. It does not specify that this will be made in the company's office, but it does specify it is to be made jointly.

Their objective is to determine whether or not the employee meets the requirements of the company's physical examination rules.

MODERATOR STOCKWELL: Physical re-evaluation rules, in other words?

DR. WINSTON: It says physical examination rules.

MODERATOR STOCKWELL: For a man with seniority.

DR. WINSTON: I am just reading you what it says.

MODERATOR STOCKWELL: What does it mean?

DR. WINSTON: I don't know. (

tion rules.

MODERATOR STOCKWELL: No, I don't say that. I can't interpret your agreement. I am just asking you.

DR. WINSTON: But it says - requirements of the company's physical examination rules, so now how do you get into one of these? Well, that is another story, and briefly, do you want me to tell some more?

MODERATOR STOCKWELL: Surely. How do you handle it? How do you solve the problem?

DR. WINSTON: We have four general managers' territories, and each of them is handled differently, it seems. (Laughter)

But generally, it goes like this, that the men get together with the company's medical representative, and if the restricted opinion was reasonable on the part of my office, we will say, the recommendations are reasonable, then when the medical representative representing the company explains to the patient's representative not only this man's duties but also his responsibilities and his exposure, and a lot of this, of course, depends not only on effort but hours of work, regularity of schedules--there are a great many aspects of a job--if they are properly explained, then the neutral doctor--and I expect most of ours are settled right there, if we were correct--he usually would agree with us, I expect, in the great majority of those cases.

MODERATOR STOCKWELL: Very good.

DR. WINSTON: Now, that depends on the proper preparation. You simply don't go down there without preparation.

MODERATOR STOCKWELL: I am glad you mentioned that. It does require preparation. (Laughter)

DR. WINSTON: Now then, you select a third doctor. Then most of the time, many times, it is done in the third doctor's office with the two other doctors.

Now, again, if this third neutral doctor has been properly schooled as to why we made these restrictive recommendations in the first place, in the great majority of instances, he will agree. So we don't often lose. We don't often lose a 3-doctor board.

MODERATOR STOCKWELL: Very good. That is very similar to the method we use. Mr. Zimmerman, could you comment on the necessity for following the provisions of a working agreement? Now, it is interesting that apparently you don't have a working agreement in this particular field with the B. of R. T. on medical disqualification. What is your attitude on that?

MR. ZIMMERMAN: We don't have them with any of our unions, Dr. Stockwell. I would say where you have agreement, you should follow it

One thing that I think that probably has been lacking was almost said a moment ago, maybe I should reiterate for emphasis, is the fact that the company doctor should be rather aggressive in these cases.

Contrary to what Dr. Mishler says, I don't agree that the union representatives' doctors are not aggressive because I think that they are. In the instances where cases have been lost, I think it is because the union doctor has done a better selling job maybe than the company doctor, so certainly you should follow through on the thing and be an aggressive doctor to put your point over.

In other words, I suppose the best way to say it is a good salesman, but I do think you would have to adhere to agreements where you have them.

MODERATOR STOCKWELL: It is a real selling job, I agree. Mr. Oliver, would you make a comment on it?

MR. OLIVER: We don't have the records on the Illinois Central that you have on the Grand Trunk. I think you said you won 98 per cent of your cases. We haven't had enough cases to refer it to 98 per cent. I suspect we have won 90 per cent of our cases. I doubt that we have had 20 cases all told in the last 20 or 30 years. We have deliberately stayed away from making an agreement such as you have on the Grand Trunk, because we feel that an agreement put in the contract booklet tends to encourage the employees to dispute the findings of our medical people.

We don't want to encourage that. So we have handled it on a case-by-case basis, simply as a matter of policy.

We feel also that we can get into these individual agreements made for the particular case, better provisions than we can get if we have a full fledged contract provision.

For example, so far we have not had any difficulty in getting into the individual agreement a provision that the question to be decided is whether the man meets the standards set by the Illinois Central Railroad. Now that is very important. In other words, the standards are not standards that the neutral himself sets up. These are standards that are set up by the IC, and the question is simply a question of fact. Does this man meet those standards?

Now, some neutral doctors will tend to depart from and ignore the standards unless our representative on the panel does a good selling job, makes him understand that the agreement means exactly what it says.

We also have been able to avoid by this method a provision such as you have in your agreement about loss of earnings. We think that even though the neutral may say that the man is now physically fit to go back to work, that doesn't automatically mean that he was physically fit to go back to work at the time the dispute arose.

So, if the holding is adverse to us, and we have had only a couple or three adverse holdings, then that is a matter for personnel officers to resolve a little later.

Finally, as Dr. Olson said, we do not require the panel or the Board to sit as a group. Quite frequently the employee will designate as his member a man at New Orleans or Baton Rouge or whatnot.

Dr. Olson will designate as his member a man at Chicago, and we feel it would be an imposition, certainly on our people at Chicago, to go down to Baton Rouge, and we think that we would run into some difficulty with the union in insisting that the doctor from Baton Rouge come up here, so we have followed the procedure, and it has been fairly successful, I think, of letting the two doctors make their judgment independently, select a neutral, send the man to the neutral for examination with all of the supporting data that Dr. Olson described, and this is not simply information as to his medical history, medical condition, but it includes a job description. It includes photographs and so on. I think that method has been pretty successful.

MODERATOR STOCKWELL: Thank you. This is most interesting, that is the varying situation that exists on different roads with respect to their labor relations and the presence or absence of agreement, et cetera.

DR. WIGHT: You have been completely ignoring those of us north of the border. Dr. Vaughan and I can talk with extreme authority on this subject because we know nothing about it. (Laughter) We haven't this problem at all.

MODERATOR STOCKWELL: Proceed.

DR. WIGHT: I am proceeding, but I would like to get back to this rigid physical standard that Mr. Horsley raised. He wants rigid physical standards. If you are going to abide by your rigid physical standards, none of these men will get back to work, because your physical standards are set for your pre-employment examination.

MODERATOR STOCKWELL: No, I disagree, Dr. Wight.

DR. WIGHT: That is what was stated, though, were rigid standards. What we are doing, in effect, is invoking a flexibility clause. All the air lines do it with our pilots. They are rigid standards, but you can invoke a flexibility clause if a man has a little disability, but it is compensated by experience and that is, I think, what we do in every case, invoke a clause of that nature that doesn't exist in the railway, but we use it just the same.

Each case is decided individually.

MODERATOR STOCKWELL: I am sure, Dr. Winston, who is the chairman of the Medical Standards Committee, will agree and tell us that we have two distinctly different sets of standards, one for entrance into service

and another completely different set for individuals who are in our service and have seniority. In fact, I don't know how we could operate without those two different sets of standards.

In the first set of standards, we can make them as rigid as we want. In the second set of standards, we have to prove that the individual is physically unable to carry out the requirements of his job.

Is there anyone else?

DR. WIGHT: You may not have realized it, but I am agreeing with you.

MODERATOR STOCKWELL: Thank you. (Laughter)

DR. ABBOTT SKINNER (Great Northern Railway): As a corollary to Dr. Wight's comments, and an admittedly loaded question to Mr. Horsley, I would give the question and then if you will give me 30 seconds before he answers. How would standards--I don't care whether you say an old employee or what-not--how would a physical standard help you in the situation with your conductor opening and closing the doors?

Now, before you answer, to me and in our experience, if you make the standards rigid enough to protect the railways you are bound to make exceptions. Then, if a person gets injured, you will have let him work in defiance of our own standards and I don't see how we can make our standards both rigid and flexible for the old employee.

MR. HORSLEY: To answer your question first, as to how would that affect the opening and closing suburban doors case, it would completely escape the fault in that case, because in that case the very question of evidence as to his ability to perform the job functions was injected, and that question, that evidentiary matter with respect to his ability to perform the job function, was what changed the decision, so I agree with Mr. Oliver in that postulate that if the question is confined, as it should be, to whether or not the man meets the stated standards of physical fitness, then there is no question as to whether or not he can do the work, and that is strictly a medical question. It seems to me that whether or not a man can climb up and down a grab iron ladder of a boxcar is not a medical question.

If so, it would be varied by: could he jump off it, if it were moving? Could he jump on it and catch it efficiently if it were moving. And many other changes minutely in job's performance are all in the picture, so that to confine it to whether or not he meets the stated standards of physical fitness is, of course, what I said to begin with might be over-simplifying it, but certainly is a goal at which to shoot.

Now, as to the rigidity of standards, I believe I stated at the beginning with some perhaps misunderstood humor, that these should be rigid because any deviation from the stated standard is used in another case to show discrimination by labor, and discrimination is the charge that is so frequently brought, that such and such [illegible]

I believe you gentlemen know what I mean by that. That is, an employee of a railroad, as I said, facetiously this morning, being struck in the coccyx by a 50-ton boxcar, and thereby caused what seems to me to be the inescapable malady of something being wrong between his fourth and fifth lumbar vertebra. I never could understand why the sixth and seventh are not equally vulnerable, but I am not a doctor.

But in any event, they win the case in court after having evidenced their inability to ever resume their work of a switchman again through the opinion evidence of a medical expert summoned by them, paid by them to so state the case to the court and jury, assuming it is true in many cases.

And after that man has made all these representations as to his continuing and future inability to work for a railroad again, he has, as I mentioned this morning, gotten the judgment in his favor and become instantaneously rehabilitated physically, mentally and morally and demands within two weeks, the outstanding case--many of them two months--the man demands his return to service. He goes to the yard master.

The communications on the railroad have been admirably complete because the yard masters have said, "You will have to see So-and-so. I understand you sued us in court and said you could never work again. We think there is something wrong. You are now demanding the right to go back to work." Some of those cases have come to the National Railroad Adjustment Board and at the outset, we were quite successful in relying--and I must mention here--relying upon the excellent spade work done by the Southern Pacific Railway Company, in placing these estoppel cases upon the books of the courts in the West Coast, so that the courts have held that a man who has made these inconsistent representations out of one side of his mouth in court, and out of the other side of his mouth to the carrier, and before our board, is held to be estopped from making such inconsistent representations and is bound by those he made in court. Parenthetically, not even disappointment in the amount of the judgment escapes the application of the doctrine of estoppel to him, so he cannot effectively make such representations any place else, and the earlier cases have been closed on that basis.

The Southern Pacific championed that cause and put some excellent cases on the books, many of them, Wallace, Pendleton, et cetera.

Now, then, since that time we have had some disappointing results from, again I repeat, these itinerant philosophers who look at it in this way, that here is a man who was injured and here is a man who now maintains his ability to do his work. Who am I to disagree with him? In many cases they have put him back and ordered him to be paid, and many other cases just out of the blue they have applied the nostrum of setting up a three-doctor panel ordering the three-doctor panel to be set up rather, and that the man be paid from the time he alleged his ability to go back to work if he is found by the three-doctor panel as able to work.

That grew up into a case called the Hodges Case against the Atlantic Coast Line where the court said, upon our objections to ordering a three-doctor sans any kind of an agreement whatsoever, the board has a right by interim order to cause the creation of a three-doctor panel as an aid to the board in its determination of the dispute, the dispute being divided, as Mr. Oliver mentioned earlier, in two parts, namely, his physical, and second, the legal or quasi-legal question of whether or not he can go back to work.

So the court said in Hodges the board having the right to create the three-doctor panel, that when it is created under the aegis of this decision, that the doctors must all submit their reports to the National Railroad Adjustment Board in answer to the Board's having created them as an aid to its deliberations.

After then getting the report from the three doctors, which has already occurred in some two or three cases, then we reconvene the Board on that case and consider the medical opinions, if you please, and if the medical opinions are clear that the man can go back to work, then all that is remaining for the Board to decide is from what date he shall be paid.

We try not to get into those awards where it is inescapable under the court's ruling that we shall create a medical board in those circumstances, we try to provide that the medical board shall determine also how long he has been physically able to go to work, and all of these things are humorous to you, but by gad, they are not to me. (Laughter)

Now, another kind of a case is this one in which the man merely alleges his ability to go back to work, and we create the three-doctor panel, or order him to go back to work - this "we" if you please is the arbitrator, we order him back to work and then the carrier will not apply that award and the man takes the carrier to court in an enforcement procedure, and the carrier's defense is the doctrine of estoppel.

We have been upheld in all of those. We have not been set aside in any, and another facet of that is that, when a man has emerged successfully from an FELA proceeding, and he has a judgment for $80,000 and full satisfaction in his pocket and then demands his job be returned to him, carriers have waltzed the man right back into court before that same judge, if possible, who heard the FELA action, and say, "Your Honor, we are making petition for declaratory judgment. We would like you to declare our right in the premises now existing, those premises being in words and figures as follows: To-wit, those words and premises being that this man has now come back and wants his job, but he said the contrary to all this when he was before you a few months ago, and for which you and the jury gave him $80,000."

That is a declaratory judgment proceeding, and in two of those proceedings, the Kirkland case on the Jacksonville Terminal Railroad and the Riles case on the New York Central R[illegible]

victorious, been amazingly victorious in view of the way we have been battered about at the National Railroad Adjustment Board, by these referees. These are cases in which your opinions have been vindicated by the courts in which the man's judgment has been held binding upon him, if he attempts to change it, and the cases are of outstanding import in this particular field. The Kirkland case against the Jacksonville Terminal Railroad, the Riles case against the New York Central, the Hodges cases, and the Ezra Jones case.

Now, the Ezra Jones case arose on the Atlantic Coast Line Railroad, and it is a typical estoppel case reviewed by the court, and the man was found to be fully and effectively estopped from making an inconsistent representation post-litigation on an FELA case, and we feel quite successful in those. My only regret is, and it is deep regret, that the mistakes made by the Board with referee have to be rectified in this expensive way in post-litigation by those carriers who are saddled with these horrendous miscarriages of justice on the Adjustment Board.

MODERATOR STOCKWELL: Thank you, Mr. Horsley, and with those comments we will recess for some coffee and then continue our program.

(A short recess was taken.)

MODERATOR STOCKWELL: Gentlemen, we will continue. There have been several individuals that wanted to ask one more short question on the Adjustment Board discussion before we proceed to the preparation of a Federal Employers Liability Act case for litigation.

First, Dr. Nelson.

DR. NELSON: Ben, all I wanted to comment on was something that I thought might be overlooked as we finish up this part of the program. It is obvious that the railroads have many different types of agreements, which is something we cannot change--at least, as doctors we cannot change.

However, there are two common denominators which I think are very important for us to take home with us. One is the fact that we have adequate medical standards to back us up in our decisions. The other is that we make more than adequate preparation from the beginning in our disputed cases. This means not just a perfunctory correspondence with a doctor but the submission of complete job duties, including hours of work, weather conditions and any accessory information regarding the work, the restrictions imposed by seniority rights, and union rules, safety factors and medical standards.

This is something that takes work. Mr. Zimmerman has said you have to be aggressive. This is true because if you do not support your medical opinion, no one will. That a positive approach can be successful is attested to by the results obtained by Dr. Stockwell, Dr. Olson and others.

MODERATOR STOCKWELL: Very good. Dr. Kaplan.

DR. ISADORE KAPLAN (Baltimore & Ohio Railroad) Dr. Stockwell, first, I wish to congratulate the members of the panel for their excellent success on this three-doctor board selection. I am familiar with the fact that many railroads aren't quite as successful, so perhaps this problem is not as simple as the winning members would have us believe.

I wish to direct a bill of rights to Mr. Horsley inasmuch as he is a representative of the carriers. I think consideration should be given toward retitling this Board. We all know it as a three-man or three-doctor board or three-doctor panel, and from a technical standpoint is not correct. It is not a three-doctor board any more. I think you are familiar with the case of Clark versus the Baltimore & Ohio Railroad where we had two different three-doctor boards appointed. The employee lost both boards. The National Board then established a grievance committee that met in Baltimore to hear the case, and the railroad was favored. We are now being sued in court because we allegedly did not have a proper three-man doctor board. Our orthopedic consultant, who, incidentally, was designated and recommended by the employee's own doctor as the third and neutral doctor, consulted a radiologist for x-ray films. A very informal report was sent to the neutral doctor defining exactly what he had found, without making any conclusion.

The plaintiff's attorneys have objected as a three-doctor board was specified, whereas we used a consulting radiologist as a fourth doctor.

This case is in litigation at the present time.

MR. HORSLEY: On that point?

DR. KAPLAN: That is one of the points and it brings up the question as to how many doctors can examine one employee who is sent for a three-man board examination. Suppose he has a cardiac as well as orthopedic defect. You refer him to a cardiologist, and an orthopod. Both maintain the man is disqualified.

We can only bring in one. The orthopod will say: "I will have nothing to do with the cardiac pathology." The cardiologist will say: "I cannot testify from the orthopedic standpoint."

Perhaps we can get a little enlightenment on those two aspects.

MODERATOR STOCKWELL: Mr. Horsley. (Laughter)

MR. HORSLEY: To begin with, when you talk about retitling the board, I thought you were talking about my board, the First Division, and I have some excellent examples of my own retitling of that board, but they are not applicable here. However, if you are speaking of the three-doctor panel, designation of such a panel, I agree with you, Dr. Kaplan, that is loose, but it comes from the loose background of these itinerant osophers, and let me read a little [illegible]

"We, therefore, further find, direct and order that on or before January 1, 1964, the carrier and the claimant or his representative shall each select a doctor qualified to determine the physical qualifications of claimant for restoration to the service to which his seniority would entitle him. The two doctors, thus selected, thereafter to agree on or before February 1, 1964, upon a third similarly qualified doctor, and all three doctors having full access to Mr. Scott's entire medical history, to examine him on or before March 1, 1964, and based upon their examination and consideration of his medical history, to each make a written report on or before April 1, 1964, to this Division of the National Railroad Adjustment Board.

1. As to Mr. Scott's current physical qualifications for restoration to service and

2. If and to the extent they can do so, as to his physical qualifications for restoration to service as of January 1, 1962."

This is the reason for calling it a three-doctor panel, because actually in the orders creating such a panel, which orders have the approbation of the United States Court of Appeals for the Fifth Circuit in the Hodges Case, it is a three-doctor panel because only three doctors are provided for.

Now, if, after getting such an order as that from an Adjustment Board with respect to the precise method by which a three-doctor panel is constructed or created, you people have so prostituted the board's language as to get several other doctors into it, if I were a lawyer on the other side, I would say: What kind of an animal is this?

I am sorry that I can be of no further help. (Laughter) Did I answer your question, Doctor? (Laughter)

DR. KAPLAN: I would like to hear some interpretations of the hearings.

MR. CARNEY: I would like to make one observation, Dr. Kaplan. You said you have accepted medical reports which merely said the man is able to work. Do they not describe the nature of his physical injury and his condition?

DR. KAPLAN: Apparently the labor relations branch has in their agreement some statement to the effect that this will suffice.

MR. CARNEY: It seems to me you should require a good and sufficient medical report of his medical and physical condition. Is this not right?

MR. HORSLEY: Oh, yes, that is, of course, what the doctors are employed for. I mean, that is what our doctors are employed for. Insofar as the labor-selected doctors are concerned, the men come out of the hills with a valise full of the doctors' certificates stating, "In my opinion, having examined this man yesterday, he was able to go back to work."

They don't even know what kind of a job he has.

That is, 98.6 is his temperature, inclined to obesity is his general configuration, and has no nocturia, which some doctor told me he means he doesn't wet the bed.

MODERATOR STOCKWELL: I might add, Mr. Horsley, he is breathing. (Laughter)

MR. HORSLEY: Respiration normal.

MR. CARNEY: Isn't it a fact you can ask the doctor who has examined for the injured man for good and sufficient report before you give consideration to the establishment of a neutral three-doctor panel?

MODERATOR STOCKWELL: I think this depends on the individual company. In our company before a man is examined for return to work, he must present a report from his attending physician or surgeon that he is physically able to do the work. Up to that point he isn't entitled to the examination.

Dr. Winston. That is the last question on this subject.

DR. WINSTON: I would like first to ask a question and then make an observation.

MODERATOR STOCKWELL: To whom are you directing the question?

DR. WINSTON: I am directing it to the Chairman for further distribution.

MODERATOR STOCKWELL: Dr. Nelson?

DR. WINSTON: To you, and that is, how does this medical problem reach the National Labor Board? And the observation is that we have always been using physical standards and physically disqualified, and I hope we will use the term "medical standards" and "medical disqualification" for this reason.

We understand this very well, but a number of years ago one of our superintendents disqualified a man for physical reasons. They said he was physically disqualified and put him out of service.

The case went on through the courses and ultimately into the Adjustment Board, and we put him back to work after about three years with pay, because he was physically fine. He was just crazy as hell, that was all. (Laughter)

MODERATOR STOCKWELL: Careful, gentlemen. Now, your observation is very important. Your question has been asked by several others as well, and we will ask Mr. Horsley to answer the question: How do these cases get to the Adjustment Board?

MR. HORSLEY: That is an excellent question, of course. I think that the jurisdiction of the National Railroad Adjustment Board is so overstretched that it doesn't even contemplate what the Congress originally had in mind, giving them credit for having anything in mind, but when you have a dispute that is assumed, the National Railroad Adjustment Board's jurisdiction is over disputes arising out of the application of the collectively bargained agreements between management and the duly constituted labor organization, having to do with rate of pay, rules and working conditions.

Now, how does that embrace a physical condition? I don't know.

My first objection in handling these cases on the National Railroad Adjustment Board was a procedural objection, adjective law. It had to do with the question: What jurisdiction do we have over a matter of a man's physical condition? We are laymen, we are not doctors. Our jurisdiction is confined to disputes arising out of rates of pay, rules and working conditions. A man's physical condition is something that has not been collectively bargained for. Can it be disposed of by a collective bargaining rule?

But I have lost time and again with respect to this objection to jurisdiction. I have lost it on this ground which has been accepted by arbitrators. The collectively bargained agreement is the source of a man's seniority. A man's seniority is indicative of his right to work. That is the order in which he will work. He has a right, therefore, to work according to his seniority which is a product only of the collectively bargained agreement.

The Supreme Court of the United States has characterized seniority as a property right. Therefore, when a man has a physical condition which has caused the carrier to say, "You may not work for us any more," in other words, you may not exercise your seniority, he and his labor union say, "Oh, yes, I may work for you under my seniority, because that is what the collectively bargained agreement provides for and if there is a dispute as to my physical condition, it involves a question of my seniority, and the National Railroad Adjustment Board has jurisdiction over the collectively bargained agreement, namely, seniority. You are withholding my seniority from me, and I am going to the Board to get it back."

Now, maybe that is plausible. I don't know, but that is how these disputes arise, if that is an answer to the question.

Insofar as the decision is concerned, if I may, Dr. Stockwell--just a second--insofar as these decisions are concerned, many court decisions are patently foolish too, but I think we have the record with respect to these referees. I would like to cite just very briefly one case of a man who was discharged by the carrier. He was a train man. He was in a baggage car while the train was stopped at a station. He, in public view, urinated on a package of Dolly Madison cakes. (Laughter) And he was discharged.

He made a claim for reinstatement. His claim came to the Adjustment Board. We deadlocked on it. I didn't want him to go back to work. I thought that was a reprehensible act on his part.

We got a referee by appointment. That referee was an Associate Justice of the Supreme Court of the State of Nebraska. He is now deceased. That referee said that this man shall go back to work because, while the carrier has charged him with urinating upon the shipment of Dolly Madison cakes, there is no evidence of record to establish the controlling fact that the shipment was damaged. (Laughter)

MODERATOR STOCKWELL: Thank you, Mr. Horsley. (Laughter)

We will proceed to the last subject to be discussed by this panel.

MR. CARNEY: Mr. Chairman, I don't think Mr. Horsley has answered the question that was raised by these gentlemen back there.

They raised the question as to who can file cases before the Board. How do they get there? Can the carrier file them, or can the individual file them. This was the question.

MODERATOR STOCKWELL: I think either can file them, but go ahead and answer.

MR. HORSLEY: The Chair has answered the question.

MR. CARNEY: Thank you.

MODERATOR STOCKWELL: Preparation of Federal Employers Liability Act litigation. First, I am going to ask one question of Mr. Zimmerman, concerning FELA cases against his company. Are you interested, Mr. Zimmerman, in seeing that the best possible preparation for the litigation is carried out prior to trial?

MR ZIMMERMAN: I think that is almost academic. The better prepared you are, the better chance you have of winning the case. Certainly, I am interested in seeing that the best preparation possible is available.

MODERATOR STOCKWELL: I think you are expressing the opinion of management in general. It is very costly.

MR. ZIMMERMAN: I understand that.

MODERATOR STOCKWELL: It comes off the cream.

MR. ZIMMERMAN: Just the bare facts of doing business today are costly.

MODERATOR STOCKWELL: Thank you, Mr. Zimmerman. You answered the question.

Before asking Mr. Glennon to tell us how a FELA case should be prepared, I would like to again make the comment that I made this morning, that I feel it is a team work job, that it requires the cooperative endeavor of the legal department and the medical department with the full support of management. We can't leave it just to the legal department, that we as chief medical officers have certain obligations to our railroad and to the legal department to work with them, to help them prepare the case medically to the best of our ability.

I don't mean by that that we are going to pick the witnesses they choose, but that we should put in the time that is required for conferences on these individual cases, so that we are convinced that as far as the medical preparation is concerned, we have done as much as possible to present the true medical facts.

Mr. Glennon, will you talk about the best way of preparing a case?

MR. GLENNON: Settle. (Laughter) But as Dr. Stockwell commented, it is a team effort, and it involves, aside from the preparation just to meet the liability or the medical aspect of it, management's flexibility in its thinking is important, as for example, trying to relocate the man, offer him some other type of employment.

I think many of us start out by thinking everybody who sues is a heel, and this isn't true. Very practically speaking, an employee sometimes is sold a bill of goods. You find men who have been good employees who have done a good job. They get hurt. They are insecure. They don't know where they are going to get another living and so forth. They are visited early by the investigator or by the official greeter of the Brotherhood who tells them immediately what a bunch of no-goods the railroads are. They are going to cheat them, this and that, and they need their help and counsel. He has kids and perhaps a wife who may or may not be dominating, but for many reasons, he might decide to sign up with the Brotherhood, and he is lost to you. Immediately the breech is created between a fellow who has been a good employee and really a guy that you would like if you knew him socially, and all of a sudden you have got an area of distrust. The distrust exists between the claims department, for example, whom he thinks is trying to cheat him or perhaps con him into something. He may distrust the chief surgeon or the local doctor because he is a "full company doctor," notwithstanding that the same doctor may have taken care of his family in some of the communities for years. This distrust is built up within the mind of the employee.

I am talking about the good guys now, who just happen to sign up and who are sold, and it creates a real problem because he looks upon the Brotherhood and its attorneys as his means of salvation, as the only people who are really going to defend him and take care of him.

You have the other man, of course, who is simply a no-good. Perhaps he has been waiting for something to happen so that he can claim to be injured in order to have a big pay day. Some, too, might think in terms of: if I really tell the truth, I am not going to get a dime, because

it was all my fault." You have to expect these things. You can't appreciate these men or give them a merit of honor award but these are things that you have to, at least, temper your thinking about.

The defense of a case begins with the original investigation, and we hope that it is a good investigation by the claims department. Very often, unfortunately, the real claim of injury doesn't manifest itself for some time, as in a back case. Very often the claim department might regard this case as one that really doesn't require much work, because it is a minor injury. The local doctor says it is a muscle strain. He will be back to work in six weeks or less, et cetera, and then all kinds of things might develop. From the medical aspect of it, at least, the biggest help, will be to have a good history. This is very, very valuable. To record - "hurt back while at work" doesn't mean a thing. As a matter of fact, it serves ultimately to bolster the employee's claim because he immediately talked about the fact and you get the impression that he was all right until he hurt his back.

You can have a situation where the real history would say: My back hurt for a week and a half. It was getting sorer and sorer, and then all of a sudden, I couldn't stand up when I got out of bed or did something. But unless it is a complete history, it may simply include the fact that yesterday at work I was doing some heavy lifting and all of a sudden I hurt my back, when this was not the fact.

One can talk about all kinds of individual cases, but we have right now a serious case on our own railroad, involving the amputation of a leg of a brakeman, and the complaint has now been filed. The suit is for $300,000 which doesn't mean much. It just scares the devil out of me, that is all. (Laughter) But the fact of the matter is that the attending doctor, who is not really a "company doctor," did the amputation. He has some notes which are not particularly detailed, but which present a totally different story than what will be given us when the deposition is taken. It has just been said, with a different story in the complaint, in that it has to do with where he got off the particular engine and whether the step was defective or not. I want to emphasize that an accurate, detailed history by the doctors is most important.

If you could do anything to encourage your local surgeons, I know they are busy, to take a little bit more time and get a better history, it would be infinitely valuable. In many, many cases there are a variety of stories by the time the case gets to the court house, and certainly the story changes after the interview by the Brotherhood representatives and the Brotherhood attorneys. If I sound as though I am criticizing some of them, I mean what I say. I have just had too many experiences with a complete set of perjury established, and I am not just talking as a railroad man. I have a few special favorites and except for libel, slander and so forth, and my desire to stay out of court, as a defendant, why, I would like to name names, but I am sure that most of you in the northwest, at least, know who I am talking about.

But the alleged fact does change radically. I have had the situation of being in a hotel prior to taking depositions, and unfortunately, being close enough to hear the other attorney preparing the witnesses. I just heard the alleged facts develop. These were wholly dissimilar from what our investigation showed. The original history from the doctors, whether he is treating him as the attending physician or as a subsequent consultant, the history is very, very, very important.

The more detailed, the better.

The need for selecting competent consultants, bearing in mind what we talked about this morning, the medical care, really is primary after all. You are doctors. You are not claims agents, and you are not concerned particularly or primarily, however, with the fact that a lawsuit might develop, because lawsuits are only a fraction of the injury cases. The need for good medical care by doctors you regard as very competent is essential. But also it would be well to keep in mind the fact that you want doctors who are thorough in their records as well as their medical care, who are respected by the medical and legal profession and who can, if needed, express himself and maintain his opinions.

Does the employee's word mean as much to the examining doctor after a case gets into suit? There are cases where, unknown to the carrier at least, a man has sought legal counsel, has signed up, has gone to another doctor, and from that time on, I am sure, in his own mind he regards the chief surgeon really as an enemy. Usually the patient's attitude changes from that time on and it becomes difficult for the chief surgeon at that point to evaluate the case properly, because it is going to be shaded by the person's statements to support a claim which may or may not really exist.

One of the questions is how to defend a case from gross exaggeration. Well, it is very difficult. Of course, you are limited in a sense by the fact that after a case gets into suit, although you can have a medical examination of him, you no longer can subject him to specific tests as for example spinogram or myelogram studies. Usually the other side will have already had these done as a matter of routine, with nothing to lose in building up their claims.

The doctor can usually sense by the patient's attitude whether he is recovering as rapidly as he should and whether there are outside influences affecting normal recovery. Claims departments should be notified of this as some times it is helpful to evaluate a case before it is sued out, just from the standpoint of trying to decide what might occur and how to properly prepare for it.

You can talk about the average lawsuit, the average fender bender or whiplash. These really do not even get you excited. How many times do you ever find such cases in a railroad trial. FELA trials are much more serious than that and deserve and require the best medical preparation on the part of a lawyer, infinitely beyond the scope of preparation that you have in the average automobile liability case because the money in-

volved is so great. The closest contact between the doctor and the lawyer is a must.

As far as the misrepresentation is concerned, the proper medical preparation in the sense of the good history, is the detailed history, the examinations by competent doctors in their field, and then it becomes a question of a good guy versus the bad guy, if I can characterize it that way. This is the way I try cases, at least, and I am not regarded as a nice guy in the court room, but at least we are honest. We don't hustle witnesses or try to create some phony medical or some phony witnesses on the liability, but you don't have to be a patsy, at least.

I know from reading some of your past material that some feel, for example, the chief surgeon should never be a witness. I disagree violently. I think when the chief surgeon is in the case at all and has seen the man, he knows his medical history, his personnel record, better than any outsider knows. Probably he has even taken care of him, operated on him for non-occupational illnesses or befriended him. If the chief surgeon can be bolstered by back-up testimony from a specialist such as an orthopedist or neurologist, it adds status and substance to what the chief surgeon has to say, and he won't be dismissed simply as a company man who gets a salary from the railroad.

I am sure in by far the most cases the lay jury would consider the chief surgeon as a man of responsibility in the community, a good doctor. There is no point in being ashamed of him. He should be used, but used right by having him supported by other medical testimony.

That is all unless there is something specific.

MODERATOR STOCKWELL: Thank you, Mr. Glennon. I think you have covered it very well. Are there any questions or any comments that any of you would like to make on this particular subject now?

If not, we will go to question #15. Should or should not a local doctor issue injured or sick employees return-to-duty cards when they are satisfied the employee is able to resume work, even when the employee himself says he does not believe he is ready to go back to work?

That is a real tough one for us sometimes and we will ask Dr. Mishler to start off the answer for that. Dr. Mishler.

DR. MISHLER: I think--and this is an opinion--I think the doctor should issue a return to duty card when he is satisfied that the man has recovered, and I say that both for ill people and injured people. First of all, in relation to injured people, this is important, and I am thinking in terms of trial. Attorneys have told me many times that at no time did the company doctor ever qualify a man for work. I think that the determination of disability and the termination, when it ends, is up to the man who is treating him, he is best able to decide that.

When he does issue such a card, we insist, and I am talking about the local surgeon--we insist that a complete and what we call a final report accompany a copy of that return-to-work card to my office, and a copy of that is always sent to the claim department.

I think this helps immeasurably, particularly in injured cases.

MODERATOR STOCKWELL: I will ask Mr. Kermit Johnson, the co-chairman of the Medical-Legal Committee and General Claims Agent for the Northern Pacific how he would answer that question. Does he prefer his district surgeons or treating surgeons to issue a release arbitrarily when the employee says he doesn't wish to return to work and doesn't think he is able?

MR. KERMIT JOHNSON: We have no return-to-work card, and I could go on for an hour or so why I do not prefer one, but we would like a letter from the attending doctor at that time, showing that he has released him from further attention.

MODERATOR STOCKWELL: How do you determine the end of disability if you don't have a return-to-work card? You mean you use a letter instead?

MR. JOHNSON: Yes, we do, or a claim man is in close touch with the attending doctor. They have learned from the doctor that he is ready to work. They report to us, and then we will ask for a letter or final report.

MODERATOR STOCKWELL: Mr. Ray from the New York Central, how would you suggest your district medical officers handle that problem?

MR. RAY: I think Mr. Johnson's letter sums this up very nicely. I think there should certainly be a termination, preferably in writing. I don't care whether you call it a return-to-work card or call it a letter, but I think it certainly is helpful in handling cases to know that at a certain time that a man is able to go to work in the opinion of the doctor.

MODERATOR STOCKWELL: Thank you. I have to disagree again.

DR. MISHLER: Mr. Chairman, I didn't mean to say when I answered the question that we gave anything to the employee. It is sent to the employing officer and to my office.

MODERATOR STOCKWELL: We do give them a slip and, in fact, it has always worked out well, and I don't know how the employing officer is going to know that employee is able to go back to work if it isn't conveyed to him some way that the man is able to do so.

Furthermore, there is a question of whether or not the man is returning to work at the proper time.

Supposing the man decides to go back to work if he thinks he was injured because of his own negligence, and the attending physician doesn't think he is able to do it? We feel that the release form that we use, which is a certificate that is given to the employee to take to his supervisory office with a copy going to the general claim agent, is a very useful device and it would seem to me most difficult to determine when the disability ends unless somebody makes the decision and puts it down in writing.

Are there any other comments?

DR. HOLLO: Mr. Chairman, I would like to direct a question to Mr. Horsley in reference to stating there should be no written authorization, or stating this man can return to work, that he is discharged from further medical care.

There are many people working that continue medical care.

MR. HORSLEY: That is true. When I said, return to work should not be on the certificate given to him, then the attending doctor or the chief surgeon would inform management that this man is discharged as of today and is able to go back to work from a medical standpoint.

That communication should, of course, be made to management. I am talking about the man having it in his hand that he is able to go back to work. Then when he is refused re-admission to the service for any reason by management, and of which reasons there are many, that he then has this from the doctor as evidence which he presents to a final deciding officer, such as a Board or tribunal or court, and he says, "I can go back to work and the management won't let me."

MODERATOR STOCKWELL: Thank you, Mr. Horsley.

Question #16: When the doctor fills out any form certifying as to employee's disability due to sickness or injury for insurance or other purposes, including retirement sickness benefits, should he or should he not keep a copy for his files and should he, in addition, send one to the Chief Surgeon ?

I will ask Mr. Glennon to answer that question.

MR. GLENNON: Emphatically yes. He should first of all do it just so he knows what he has been doing because the employee knows it and his attorney will know it. He certainly should advise the chief surgeon so the chief surgeon can have as complete a file as possible.

MODERATOR STOCKWELL: Thank you. We will go back to this question of the release form or return-to-work form. I would like to ask Dr. Clayton, now that I have been thinking about it a little bit, how does your injured employee get back to work? Does he just go when he is ready, or what indicates when his disability ends?

DR. CLAYTON: The examining physician [illegible]

referred the employee for examination as to whether he considers him qualified or not. It is not given to the individual. If time is an element then the employer is also informed by telephone or messenger.

MODERATOR STOCKWELL: Does it go by mail?

DR. CLAYTON: By mail or to repeat, information can be given by telephone if time is of the essence or distributed by messenger.

MODERATOR STOCKWELL: So there might be a delay of several days.

DR. CLAYTON: No, it should not. It is handled immediately. There should be no excuse for delay of several days at all.

MODERATOR STOCKWELL: It depends on how good the United States mail is working.

DR. CLAYTON: Conceivably that could be, but there is always a telephone, and if there is any delay, it is handled by telephone.

MR. ZIMMERMAN: It also depends on how good the supervisor is at watching his employees.

DR. CLAYTON: Very definitely.

MR. ZIMMERMAN: So he won't be sitting on his doorstep.

MODERATOR STOCKWELL: That is a very good point.

DR. WINTERS: Are we talking about two things, the employee injured on duty getting back and the employee who has been out of work for medical reasons?

MODERATOR STOCKWELL: We are talking about on-duty injuries.

DR. WINTERS: We are trying to get him back.

MODERATOR STOCKWELL: We are trying to get him back. The sooner, the better.

DR. WINTERS: So we are not arguing.

MODERATOR STOCKWELL: We want him back to work is right.

How about the fellow that is off with a sprained ankle for a week, ready to go to work? Do you send a letter to his employing officer that he is ready to go back to work?

DR. CLAYTON: He calls immediately.

MODERATOR STOCKWELL: Telephone?

DR. CLAYTON: Yes, and mail also.

MODERATOR STOCKWELL: Question #17. How should local or treating surgeons respond to requests from the employee or his attorney for reports of treatment, examination and prognosis?

MR. GLENNON: I know this is a question that plagues you from time to time. My advice to that particular doctor would be to answer him so he doesn't ignore him and so he would not get insulted in the court room. In the case of a doctor who is out in the lines somewhere, I do think the request should either go to the Chief Surgeon for answer to the attorney after talking to the claims department or the lawyer, or else a simple, polite letter to the employee or his representative, saying that he has been examined at the request of the railroad and he should secure permission from his employer.

Very often, unless there is some kind of a communication between the chief surgeon and the local doctor, nobody will be advised of the fact that this information has been given. The lawyer, for example, will get copies of the medical report from various doctors, but he does not get copies of their correspondence file and will be unaware of it perhaps unless the doctor mentions it casually during the interview that the medical reports are already in the hands of the opposing counsel.

This might affect the strategy of the case because you always wonder how much they know. You know they are afraid to call your doctor some times, because they think they might get hurt. It does affect the thinking, the planning for the lawsuit.

Also, there is the technical thing that once the case is in suit, then very often the local doctor might not know that a lawsuit has just been recently commenced. He might examine him once or twice more or perhaps continue to look at him on a local basis. There is the technical aspect that once the case is in suit, in federal court, and in the state court in our state, the request for a copy of the medical report, if made to the attorney, thereby is a waiver of privilege in some cases as far as their own medical is concerned. I think we would advise on our road, at least, that any request be answered by the chief surgeon or by the attorney if the case is in litigation. If it is not in litigation, by the chief surgeon simply saying that he sould get permission from personnel or from his employer.

It does put the doctor in an embarrassing position because he is treating the man, and if he were your patient, I suppose ordinarily you would give him one, but you are really acting as a representative of the carrier.

MODERATOR STOCKWELL: Thank you. Are there any other questions?

DR. MISHLER: Question. That was a long answer and isn't the truth of the matter that the doctor has no choice? He has to give him the report.

MR. GLENNON: I don't think that is the fact. I think that by simply

politely declining the answer, and, again, this doesn't apply to all cases, but I am talking especially about the case that looks like it is going to involve a lawsuit, that I prefer to take the responsibility in our cases, of being the bad boy. If the doctor is asked on the stand: "Why didn't you do it?" I will volunteer that I asked him not to because I can't get yours and so, you know, let's be fair about it. I think it takes the onus away from the doctor if he can answer that he has been advised by the attorney. The attorney can then take the responsibility and explain to the jury as to why he didn't respond.

If this were true otherwise, every doctor who examines him, I suppose, would be required to send him a copy and I don't think that is the fact.

DR. KIEFFER: We have for many years, with a great deal of satisfac- tion, instructed all of our local or treating doctors that when a request is made to them for that kind of information, for them to tactfully inform the injured employee that he has been instructed that that information could only be supplied by the medical director. Even when they have come with authorization from their attorneys, and later to my office, for some reason or other from the great majority of cases, the plaintiff's attorney doesn't prosecute the matter much further. We arbitrarily say that any determination for apparent service can only be made by the medical director.

The local examiner makes his recommendations to me, which I may accept or decline, and that has been a very satisfactory thing.

Now, I will be very brief. One thing about sickness. The heart case. It has been cared for by his private physician, and those, too, have to clear through the medical director's office. When this man with the heart decides he is ready to go back to work, he is armed sometimes with letters from his attending doctor, or if he isn't, he is instructed to obtain or have his private doctor report on his care to the medical director. Then we direct him to a specifically designated medical examiner for the company.

Incidentally, we have been doing it for years. We arbitrarily do not review any coronary for a minimum of six months.

MODERATOR STOCKWELL: Dr. Winston's committee or panel will discuss this particular problem tomorrow.

If there aren't any further questions, for this panel, I would like to thank the panel for their contributions, and we will turn the meeting back to the Chairman, Dr. Nelson. (Applause)

CHAIRMAN NELSON: I think you will agree with me that these two panels today have done a marvelous job.

I want to thank the lay portion of the panel for their time and their contributions, which we have appreciated a great deal.

Our program from here on is more confined to medical subjects, but these are subjects that concern you people from the claims department and you people from personnel department, as we are getting into five of the most important problems that we have to contend with.

I think we have assimilated as much in a day as we can today. The scientific meeting is adjourned until tomorrow morning.

(Announcements concerning arrangements.)

(The meeting recessed at 5:00 O'clock.)

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Thursday Morning Session
March 4, 1965

The third general session convened at 9:40 o'clock with Dr. E. C. Olson, presiding.

CHAIRMAN ERNEST C. OLSON: Gentlemen, will the members of the panel please come up to the head table, and will Drs. Kieffer and Leigh also come up here. Dr. Cyran, Dr. Graham, Dr. Johnson, Dr. Kaplan, Dr. McEwan, and Moderator Dr. Winston.

Good morning, gentlemen. This day is going to contain another formidable program which I am sure will rival the one of yesterday. There are a few items prior to the panel, the first of which is the Report of the Committee on First Aid, of which I happen to be chairman.

REPORT OF THE COMMITTEE ON FIRST AID

Relatively recently the pamphlet on First Aid was revised and submitted and passed and distributed to the railroads, and since that time there have been only two items that I can recall of any importance that were submitted for consideration.

One was the use of the pneumatic splints and the other was the external cardiac massage, both of which were rejected. That concludes the report of the First Aid Committee.

The next item on the agenda is that of the Report of the Committee on Trauma, Dr. Southgate Leigh.

REPORT OF COMMITTEE ON TRAUMA

DR. SOUTHGATE LEIGH: Dr. Olson, before this committee report starts, I would like to compliment Dr. Nelson, Dr. Olson, Dr. Stockwell, Dr. Johnson and Dr. Winston on the set-up of this meeting so far. The panels seem to be getting better and better.

The members of this committee are Dr. Vence Hollo, Frisco; Dr. Longeway of the Colorado Southern; Dr. Mishler of the Erie; Dr. Stockwell of the Grand Trunk; Dr. Strange of the Southern Pacific; and Dr. Winters of the Pittsburgh and Lake Erie. Thank you gentlemen.

There are two small things that I would like to mention first of all. This committee has had to do with fractures and treatment of trauma. Now, that the College of Surgeons has come out with a very nice set of rules and regulations on how to treat them, this committee recommends that they be treated that way.

The second item is tetanus. I understand that they don't have tetanus in Canada, but right across the river in Detroit, they have tetanus. I understand they don't have tetanus west of the Mississippi, but as soon as they get into Kentucky and Tennessee, they do have tetanus.

Now, we cannot demand that our employees take the tetanus toxoid, but we can make it easier for them to take it.

Dr. Stockwell was telling me that they go out with their medical car to give physical examinations. They put up a big sign and because it is free, the employees will come in and take it.

Well, even if it is free, we still have trouble giving it, but I think at the present time on the Seaboard Railroad, among the operating type of employees, about 75 per cent are now immunized against tetanus, with the toxoid.

You have the average 17 or 18-year-old boy just starting to work. He has been immunized in the pediatric dosage of whooping cough, tetanus and diphtheria as a child. One does of it now, and he is back just as if he had just finished a new course, a complete course.

Not only has the first work at Walter Reed Hospital been upheld, but the experimental work up in Boston and in other places has shown that after a booster they will develop a titer that will protect them against tetanus even 20 years after, (that is, the World War II boys who had their original course then).

The third point that this committee would like to bring up is cancer. This story has no real beginning. It has no ending. There are no real conclusions, but there are some warnings on what might be in store for us.

We have recognized for many years that repeated trauma can cause cancer; the asbestoses, the repeated trauma to burn scars and others may go into some form of cancer, but not acute traumatic cancer.

It has been claimed that a single trauma may cause cancer. If such a possibility does exist, and evidence is not conclusive, certain factors must be present, generally known as Ewing's postulates.

Number 1, authenticity of trauma; number 2, adequacy of trauma; number 3, integrity of the traumatized part prior to the trauma; number 4, the identity of the site of trauma with the site of the subsequent cancer; 5, adequate interval between the time of trauma and the appearance of cancer. Number 6, the reliability of your diagnosis of cancer, and 7, the bridging symptoms.

Now, the number 5 and the number 7 are the two about which all the argument takes place. For instance, Dr. Longeway has a case here. The story is the same as in many of these. The employee had a burn on his hand and within three weeks' time, the dermatologist says: "He has a basal cell carcinoma of his hand that was due to this burn." There isn't the adequate time interval. The cell can't go that wild in that length of time. These are the problems that we are running into.

Our lawyer friends are trying their best to exclude a lot of these postulates.

Present day experiences have yielded additional evidence that has the tendency to deny or rule out some of these postulates, and that is why we have to keep abreast of the problem and be cautious. Watch and see what develops.

Cancer can be produced by a virus. They are saying that it is not being produced in humans, but we have one of the famous cancer research scientists here in this country who has been working on animals with a form of lymphoma. She has exactly the same lymphoma herself now.

There are other evidences. I can cite eight or ten of them that I saw at the National Cancer Institute the other day. They have brought cases in, one all the way from Nigeria, with this same type of cancer that they have been giving to mice. Apparently we are going to find that a lot of these things can be produced in the human.

This virus is not specific. I saw them give animals one of these cancer viruses. They developed the gland type cancer, in the parotid gland. They also had the skin cancer. They also had the intra-abdominal cancer; several different types of cancer, all from one virus. We must watch these things.

In man, there is a resistance. If we only knew what caused this resistance, we could make a fortune. There is a resistance factor that prevents the action of these viruses in the cell nuclei, and, therefore, it prevents cancer. However, this resistance can be lowered either generally or locally, and cancer can develop.

It has been shown that cortisone lowers the resistance locally, and allows metastasis and even primary cancer.

Some of these animals had been given low doses of this cancer virus, this same lymphoma. They were separated into two groups, one had been treated with cortisone that was supposed to protect them from cancer; the other group did not have cortisone. They found that with a subminimal dose of the virus, some animals with cortisone developed cancer and others did not. The cortisone was lowering their resistance. They also found that some of them had been cortisone treated and not given the virus, but became cancerous after being in the same cage with those that had had the cancer virus.

Dr. Hueper, who was at the NIH Cancer Institute, came out definitely and said that there is no such thing as acute traumatic cancer, and the term should be abandoned. There is secondary traumatic cancer.

There are many different factors that can accentuate or cause the spread of some of these malignant growths.

A case with Ewing cell sarcoma of the femur, that has a pathological fracture, from a slight trauma, has certainly been accentuated, and under FELA we are caught.

Let me mention one here. This man claimed injury to his lower back September 22nd, when he twisted his back. His occupation required that he carry on his back a pack containing batteries and instruments. He was 48 years old. Original x-ray of the back and pelvis showed nothing of note. Continued complaint led to further x-rays which showed invasion of the sacrum and pelvis by metastatic carcinoma. The tumor was demonstrated in the lung. Suit was filed alleging that he had developed a carcinoma of the pelvis as a result of being directed and required to wear certain gauge equipment during this period of April to November.

We must look at some of the things that Dr. Winston was talking about the other day. When he was an intern in a hospital in Oklahoma City, they would bring these children in with bumps on their shin bones. They would be red and sore. He would shave them up, paint them up, put on a dressing and post them for an operation the next day. They would be operated on for osteomyelitis. That osteomyelitis is a combination of two things; one, the bump on the anterior margin of the shin; the second, the rotten tonsils in the child's throat. The infection from the throat spread and "took root" in the tibia.

As a word of warning, I think we may have the same thing with cancer and the spread of cancer virus. We certainly are going to get many claims along that line.

Thank you. (Applause)

CHAIRMAN OLSON: Thank you, Dr. Leigh.

In announcing the members of the panel, I inadvertently neglected to turn the page and forgot to mention Dr. Strange and Dr. Vaughan.

Are there any comments or questions about Dr. Leigh's report?

DR. STOCKWELL: I think for the record we should make a comment or two, and that is that regardless of what the courts may say at the present time, there is no conclusive evidence that there is any relationship whatsoever between cancer and trauma.

CHAIRMAN OLSON: There was one point you mentioned about the use of steroids which, of course, has been recognized in the last couple of years, and it strikes me that this could be a field for some trouble, because the degree to which it is being used today might raise some questions at some time that might involve the ultimate effect on a patient.

Does an yone have any comment to make on that point?

DR. HOLLO: Yes, I would like to make a comment. I just sat in on a symposium on the use of steroids in regard to ulcerative colitis, and the internists on the panel--the complications of steroids was brought up stressing the prolonged use of steroids with the development of duodenal ulcers with occasional secondary hemorrhage.

And the consensus I got from the panel, or the opinion, was that this is not a big problem. In other words, if you have an ulcerative colitis, you still give the steroid, and if the patient has a hemorrhage, you give him a blood transfusion. Maybe some of our internist colleagues would like to comment on this. (Laughter)

CHAIRMAN OLSON: It is open. Does anyone want to comment?

DR. WIGHT: I would like to comment, sir. I was just going to say the treatment of colitis takes preference over everything else, and the use of steroids is a calculated risk. It is not every case that is going to develop a duodenal ulcer. So, you simply just go ahead and use it.

CHAIRMAN OLSON: Is there any other comment? I would like to raise a question about the use of toxoid. Someone has said that it can be used in place of antitoxin, and that the effect would be quick enough so that it would protect an individual who had a wound that might harbor the claustridium tetani. Is there anyone who has any experience with that who could say something about it?

DR. RAWLES: I have had no experience, Dr. Olson, but it has been reported by Dr. Oscar Hampton of St. Louis, that the use of toxoid intradermally produces a fairly high titer, not the maximum but at a lower level.

I believe I am correct that it will produce within a period of about five days a bundle type, intradermally. That work, I understand, is continuing at the present time.

DR. ZEISS: The use of the human antitoxin along with toxoid in original injuries gives you the greatest elevation in titer against tetanus, and it is extremely effective. We do not use bovine or equine antitoxin any more but the use of the human type allows you to actively immunize the patient at the time of the accident without risk.

CHAIRMAN OLSON: I think it is pretty well accepted now that the use of the immune globulin is much to be preferred, and I know at our hospital we have discarded the equine type, but the point was whether one would feel reasonably safe in using the toxoid alone as an immediate protective agent.

DR. LEIGH: Never been immunized before?

CHAIRMAN OLSON: That is the point, exactly.

DR. LEIGH: You could with antibiotics. Your terramycin would prevent it until the toxoid took over.

CHAIRMAN OLSON: You would be willing to risk that?

DR. LEIGH: Yes.

DR. HOLLO: I will make one more comment only in regard to that.

I had a patient back in 1939 who had a perforated appendix with some fecal matter in the peritoneal cavity to whom I gave a therapeutic dose of tetanus and gas antitoxin. Within 48 hours this patient developed gas gangrene of the anterior abdominal wall and expired a short time later.

During the presentation of this particular case I was asked why I gave ATS and gas, and the only answer I had was that there was a lot of fecal matter in the peritoneal cavity, and I thought it was best.

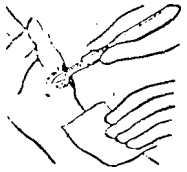
Well, they said, "You did right," but the patient still developed gas gangrene.

CHAIRMAN OLSON: The point then is that?

DR. HOLLO: It can happen either way, but it is my recommendation that therapy should be instituted as has been outlined by the Committee on Trauma, American College of Surgeons titled "Prophilaxis Against Tetanus in Wound Management." Submitted is a copy of the general principles, which are outlined in specific measures.

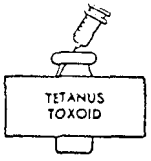
PROPHYLAXIS AGAINST TETANUS IN WOUND MANAGEMENT

Committee on Trauma, American College of Surgeons



GENERAL PRINCIPLES

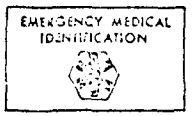
I. Regardless of the active immunization status of the patient, RENDER IMMEDIATE, METICULOUS SURGICAL CARE TO ALL WOUNDS. Removing all devitalized tissues and foreign bodies. This is one of the most important measures in the prevention of tetanus.



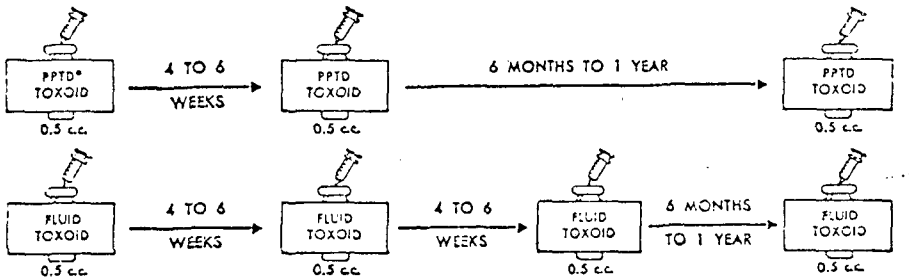
II. EVERY PATIENT SHOULD RECEIVE TETANUS TOXOID AT THE TIME OF INJURY, as a booster for those previously immunized, or as an initial immunizing dose, unless he has received a booster or completed his immunization within the past 12 months.

III. The decision to administer HUMAN OR EQUINE TETANUS ANTITOXIN for passive immunization MUST BE INDIVIDUALIZED with every patient, depending on the wound, previous active immunization status, and conditions under which the wound was incurred.

IV. To every wounded patient, give a WRITTEN RECORD OF IMMUNIZATION PROCEDURES, instruct him to carry it with him, and—if necessary—to arrange for him to complete active immunization.

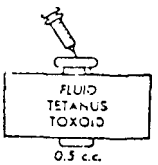


V. Basic immunization with precipitated toxoid requires three injections. With fluid toxoid four injections are preferable.



*PPTD = Precipitated

SPECIFIC MEASURES



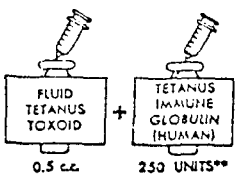
I. *Previously Immunized Individuals*

A. IMMUNIZED WITHIN PAST 6 YEARS (including reinforcing dose)

1. Give 0.5 c.c. fluid tetanus toxoid booster

B. IMMUNIZED MORE THAN 6 YEARS AGO (including reinforcing dose)

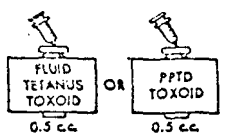
1. For the great majority of these patients with wounds
   (a) Give only 0.5 c.c. fluid tetanus toxoid booster
2. Only for those with wounds which indicate an overwhelming possibility of tetanus (tetanus prone)
   (a) Give 0.5 c.c. fluid tetanus toxoid
   (b) Give 250 units tetanus immune globulin (human)**
   (c) Consider the use of oxytetracycline or penicillin



II. *Individuals* NOT *Previously Immunized*

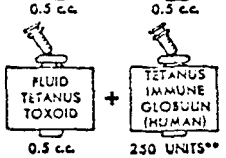
A. CLEAN MINOR WOUNDS in which tetanus is unlikely

1. Give 0.5 c.c. fluid or precipitated tetanus toxoid (initial immunizing dose)

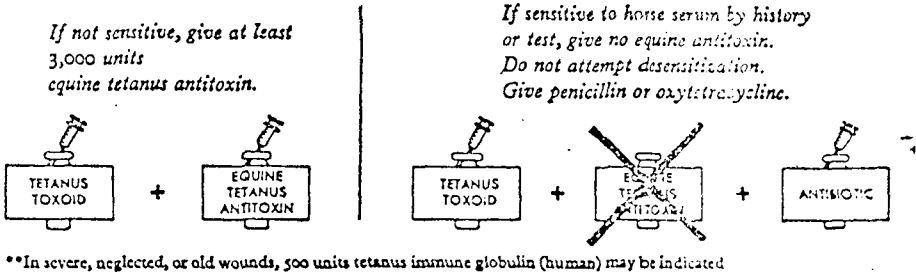


B. ALL OTHER WOUNDS

1. Give 0.5 c.c. fluid tetanus toxoid (initial immunizing dose)
2. Give 250 units tetanus immune globulin (human)**
3. Consider the use of oxytetracycline or penicillin



C. HORSE SERUM—Only if human antitoxin is not available within 24 hours and only if the possibility of tetanus outweighs the danger of reaction to horse serum, question and test for sensitivity to equine antitoxin



**In severe, neglected, or old wounds, 500 units tetanus immune globulin (human) may be indicated

CHAIRMAN OLSON: Are there any other comments on the report of Dr. Leigh?

DR. RAWLES: I think we must not neglect to stress over and over again the importance of initial wound surgery, and also the fact that patients who have not been immunized and who are not grossly contaminated, can be properly, adequately protected by good, initial wound surgery plus long-acting penicillin, bicillin.

Many hospitals, of course, today have adopted programs of that sort, stressing that, and I think it puts you in the clear pretty much when that has been adopted as a police of institutions.

In Richmond, for instance, our Medical College of Virginia has adopted what is considered a safe program which puts you in the clear from the standpoint of malpractice in many of these cases, rather than indiscriminately giving tetanus antitoxin.

CHAIRMAN OLSON: Anyone else?

Dr. Leigh, I want to thank you very much for a very interesting and provocative report.

The next is the report of the Nominating Committee, Dr. Kieffer.

REPORT OF NOMINATING COMMITTEE

DR. KIEFFER: Your Nominating Committee consisting of Dr. Hollo, Frisco; Dr. Knowles, Boston & Maine; Dr. Niles, Lehigh Valley; and Dr. Jim Stack from the North Western, with myself as Chairman submit for your action the following list of candidates for balloting.

For 3-year terms, expiring in 1968, for the Advisory Committee:

For the Eastern Division:

Dr. W. E. Mishler, Erie-Lackawanna.
Dr. B. W. Stockwell, Grand Trunk Western.
Dr. I. Kaplan, Baltimore and Ohio.
Dr. J. S. Niles, Lehigh Valley.

Four candidates, two of whom you will vote for.

There is in that same territory an unexpired term held by Dr. Brewster of the Pennsylvania, and by custom, we have been appointing the successor of the man whose term is unexpired who will stand for election at the next forthcoming period, so we have suggested Dr. Cyran, who has been serving in that place representing Pennsylvania.

For the Southern Territory for the same 3-year term expiring in 1968, two names, of which you will vote for one.

Dr. E. C. Olson, Illinois Central.
Dr. J. G. Sharpley, Central of Georgia Railway.

For the Canadian Territory, voting for one of the two candidates:

Earle Wight of the Canadian Pacific.
R. E. Nicholson, Toronto, Hamilton & Buffalo.

For the Western Territory, two candidates, again one to be voted on:

Dr. John R. Winston of the Santa Fe, and
Dr. Abbott Skinner of the Great Northern.

Agents will now pass among you distributing these ballots on which you will make the appropriate mark to indicate your choice, and the results will be tabulated at a later date.

CHAIRMAN OLSON: Thank you, Dr. Kieffer. And I would like to appoint Dr. Longeway and Hanson as the tellers to count the ballots and to turn in the results to us.

I think the time has come when this might be a good occasion to take a break, and then we can resume with the panel discussion.

(A short recess was taken.)

CHAIRMAN OLSON: The subject for this morning's panel symposium is: Cardiovascular Diseases. It will be conducted by our Moderator, Dr. John R. Winston of the Santa Fe. Dr. Winston.

PANEL SYMPOSIUM - CARDIOVASCULAR DISEASES

MODERATOR JOHN R. WINSTON: It is no doubt obvious to the audience that the type of panel has changed materially from yesterday. It will soon be obvious that the type of panel members has also changed. Yesterday we had people who were experts in their field, at least they knew more about it than the average one of us in the audience. Today the average one of you gentlemen before me knows as much about this subject as does the average one of us on the panel.

So, really, this is simply a discussion period, and what I expect to show will be that we all have a general idea and some degree of knowledge about this subject, that we also have a great deficiency in knowledge about this particular subject, and perhaps there is room for further exploration.

I shall forego introducing those on the panel inasmuch as I think they, without exception, have been introduced one way or the other. If they haven't, it will be no less detracting to their ability.

In the bulletin there are 14 questions. A great number of those questions concern themselves with the problem of coronary artery disease A great many of them relate specifically to coronary thrombosis, and myocardial infarction. I hope that again those of you in the audience will be as active in the participation of these answers as the panel. Now, let's talk a bit about the coronary artery disease, arteriosclerotic heart disease.

First of all, about the diagnosis. That is not specifically mentioned here, although question 7 talks about reliance being placed on the electrocardiogram as a basis for return to work. Let's talk about that, though. How are we going to go about establishing a diagnosis of coronary artery disease?

Without selecting someone, would any one on the panel wish to make a comment about this?

DR. HOLLO: I would like to ask Dr. Johnson a question. If you have an engineman who has been asymptomatic and continues to be asymptomatic, and after working for the railroad 20 years, during the routine follow-up, as some railroads do, this man has a EKG, and has a right bundle branch block that he did not have five years prior to the time of his previous examination, how do you handle this problem, and what disposition do you make of it?

MODERATOR WINSTON: The question relates to the significance of a right bundle branch block which we will discuss in due time.

Well, let's talk about the diagnosis of arteriosclerotic heart disease.

DR. RALPH A. JOHNSON: Well, as always, and as has been pointed out by previous essayists, the major point in making a diagnosis of coronary artery disease is the history. Invariably, it has to do with an acute onset of substernal pain, usually with radicular radiation, usually

with some degree of shock. In our society today these patients are hospitalized in the vast majority of cases, and the management of acute myocardial infarction is fairly well standardized.

There is a group that believe in anticoagulant therapy. There is a group who are opposed to it, but I am satisfied that most clinicians oriented in the field of cardiovascular disease do feel that there is a place for anticoagulant therapy in the acute case.

MODERATOR WINSTON: Excuse me. We are talking about the diagnosis of arteriosclerotic heart disease, not therapy, and we are not talking about the diagnosis necessarily of a myocardial infarction.

DR. JOHNSON: I misunderstood the question. I thought you wanted the etiology of a myocardial infarction. I don't know the cause of arteriosclerosis. I know that it is a problem, that it is the most prominent factor in cardiovascular disease today and cardiac disease is the number one killer.

Our friends oriented in insurance are very well aware of the increasing factor of arteriosclerosis, generalized as well as limited to the cardiac area, the renal area and the brain as a risk.

There are many factors that are thought to be causes in the development of arteriosclerosis. They are as well known to you as they are to me, but for the actual, fundamental cause of this process, I regret to say that I do not know that cause.

MODERATOR WINSTON: Pete, establishing the diagnosis of arteriosclerotic heart disease, how are you going to do it?

DR. PETER VAUGHAN: Well, first of all, every middle aged person, I think, has some arteriosclerotic heart disease, some atherosclerosis of the coronary arteries. The thing to determine is whether the disease is significant, and as Dr. Johnson says, one of the best ways is a history, but quite frequently, a person has significant disease without having history of chest pain or anything else.

The only other way to establish it, a good way and practical way, is by an electrocardiogram. Of course, there are other specialized tests, angiograms, etc., which really don't concern us, but if a person does not have or denies any symptoms of anginal pain, and if he has a negative electrocardiogram, I don't think you can make a diagnosis of coronary artery disease.

MODERATOR WINSTON: Does anyone wish to take exception to that?

DR. CYRAN: I think Mattingly, Robb and Masters have shown that you can make a diagnosis of coronary heart disease by doing a Masters two step, and more convincingly by doing the Masters double step.

This will actually help show that there are electrocardiographic abnormalities which can be suggestive of coronary insufficiency and coro-

nary heart disease.

MODERATOR WINSTON: Dr. Wight.

DR. WIGHT: I don't quite agree with Dr. Cyran. The Masters double two step will not always show the presence of it.

DR. CYRAN: I didn't mean to imply always; it may.

DR. WIGHT: There is another field that is becoming more and more prominent, and that is vector cardiography, and I think P. in Belgium leading the work in this field. He claims that he can pick up abnormalities a long time before there are any changes shown on the EKG. Probably Dr. Johnson is familiar with this work that is being done there.

DR. JOHNSON: Apparently not as well as you are, though I am familiar with some of this work, but in essence, a vector cardiogram is only another tool, another means of interpreting the electrocardiogram.

I believe that while it is an important tool, it takes such specialized knowledge, that I do not see it as having any real merit in the routine case myself.

DR. WIGHT: I might add that the electrocardiogram taken by this man is specialized. You are quite right, he uses 74 leads. He puts a vest on the man.

DR. JOHNSON: That is what I mean.

DR. OLSON: We have been using an ergometer in our hospital. We have been using an odometer in selected cases together with a telemetric system, and we have picked up coronary insufficiencies by this method where we did not get it with the standard Master two step, and the point that I wanted to make was you provide your exercise with the Master two step, and by the time you take your tracing, the effect on the electrocardiogram has disappeared, whereas with the telemetric system, you catch it right as it is occurring.

DR. CYRAN: The only problem with that is that they actually have been monitoring people for as long as ten and twelve hours with an attached electronic instrument which records their electrocardiogram on tape, and then they play this back at whatever speed they want to, and they have shown even normal people have changes that take place during the day.

They have T wave changes, they have ST segment changes, and they don't even know whether this is indicative of coronary disease.

So, they are getting a lot more false positives that way, and this is a measure that is being used more, but they are still not certain what this means.

DR. JOHNSON: I would call to this audience's attention Dr. Sam Levine's comment about the best index of cardiac insufficiency is shortness of breath and breathlessness, and almost invariably this symptom, shortness of breath, precedes many clinical evidences that show impairment of coronary artery flow.

I merely bring the point up to underscore the importance of the careful history. When an individual complains that walking a flight of stairs, something that he could do for many years without shortness of breath, and now he finds that at the top of the stairs he has to stop for a moment and catch his breath, is perhaps as clear an index of early coronary insufficience as we can have, and many times we will be unable to confirm that by many of our esoteric clinical investigative procedures.

DR. ZEISS: Dr. Winston, what value do the experts place on direct visualization of the retinal blood vessels in the diagnosis of atherosclerosis?

DR. JOHNSON: Considerable.

MODERATOR WINSTON: I might sum up briefly what we are talking about - the diagnosis of arteriosclerotic heart disease.

First of all, if we wait until a man has an infarction, then that is usually not difficult to diagnose. But we have waited too long because during that time, even though it is my understanding that he has not had an infarction, he is still a candidate for a sudden change in his relationships with this world, even though he is not infarcted. So, it behooves us to find this man earlier than we have been finding him.

We cannot depend on the history, in that if the man knew it, he wouldn't tell you if he felt it was going to affect his job, as a general rule.

We have found the inadequacies of the routine electrocardiogram. We have found that under stress the value of the electrocardiogram is increased, and the most routine and generally used stress factor is the Masters. It has certain shortcomings, and also, it has been shown that if this man is taking certain drugs, that it will have an ameliorating effect on the test, whereas, without them, it might be positive, and with them it would be negative.

More recently they have been doing other stress evaluation including the continued type of electrocardiographic monitor which runs for any X number of hours. The usual tape is 10 hours.

Others of them are doing certain stress efforts, using primarily the treadmill.

So, I want to come back to the ergometer in time, but now then, let's talk about the funduscopic findings as it might relate to the suspicio of arteriosclerotic heart disease.

Does anyone want to talk about that? Dr. Cyran.

DR. CYRAN: I am not aware that examination of the fundus will allow you to predict coronary artery disease.

DR. KAPLAN: Our consultant utilizes the funduscopic examination.

In evaluation of our cardiac patients, our medical consultant utilizes the visualization of the retinal vessels as one factor in deciding whether or not the employee is fit or not fit to return to duty. It is not a prime factor, and I don't think that he will utilize this per se even if it were a grade 3 or excessive amount of narrowing of the retinal vessels as a factor in disqualifying the employee.

However, if there was adequate evidence that the employee was having, say, some form of angina or shortness of breath, and there was sufficient evidence to indicate that there was peripheral impairment of the blood vessels, and this included changes in the retinal vessels, he would certainly use this as an additional wedge in disqualifying the employee from returning to work.

MODERATOR WINSTON: Dr. Vaughan.

DR. VAUGHAN: Well, I think the examination of the fundus is a very good routine examination, but if you do find, as was said, some narrowing of the retinal vessels, I don't think you can make a diagnosis of coronary artery disease on that finding alone.

If you get very marked fundus changes, of course, then the man has another condition which is disqualifying.

MODERATOR WINSTON: We might then consider that the examination of the optic fundus is an isolated picture of the arteriolar structure of the body. Arteriosclerotic heart disease is often segmental. The body is composed of ten million trillion segments, and you can be reasonable sure that if the one segment is involved, other segments are involved also, but that in itself will not establish a diagnosis.

DR. JOHNSON: I think as an internist we all very much love to look at fundi, and it is an easy way to get some idea of vascular changes if they are present, but I am quite sure that the individual who asks the question is well aware of the fact that internists and oculists have very different ideas about what a funduscopic reveals.

MODERATOR WINSTON: I think that might be worth exploring. I am glad you mentioned that, Ralph. Would you comment a little further? I mentioned that because oftentimes those of us who are not internists, or many of you, perhaps, are receiving and making judgments of an optic fundus on information that is reaching you from an ophthalmologist.

DR. JOHNSON: There is no question that an ophthalmologist depending on the fundus is far more valid than the internist, but many fundi that I classify as grade 1, the oculist will classify as 0, and unhappily, on

occasion, those I classify as normal, he will classify as early [illegible] changes being present.

There is no getting away from the fact that the man who looks in the eye all day, the oculist, has a far clearer insight as to abnormalities, but it is an easy tool for a physician to have. It is perhaps the most indispensable tool in our armamentarium. We can get an idea of the heart by direct auscultation. We can get an idea of the pulse by palpation of the radial artery, but there is only one way we can get into the fundus, and that is by use of the ophthalmoscope.

MODERATOR WINSTON: I would think, by and large, the ophthalmologist is looking primarily toward diseases of the macula, perhaps of the nerve head, and incidentally, taking a look at the vascular system, where as the internist is usually reversing it and showing primary interest in the vascular system. Now, let's try to answer some of the questions, or at least talk about them.

Those who now have an established diagnosis of coronary artery disease. Bill.

DR. MISHLER: I don't like to interrupt at this point, except to point out that, as this panel was discussing this, the implication was that the presence of arteriosclerotic heart disease, coronary heart disease, is a serious thing, and that there is a small margin of safety; at least, that was my idea. Many of the panel members pointed out that there are many ways of investigating this subject--funduscopic examination, heart size, rhythm and rate, shape, blood pressure, albuminuria, symptoms which the patient may or may not admit to. The patient's weight, x-ray of his chest, picture of the vessels, his age, and his electrocardiogram, lastly, but I would be willing to have a show of hands of those people who, in this room, think that they do not have coronary artery sclerosis.

MODERATOR WINSTON: With this bunch of old men, I doubt you will find many hands. (Laughter) Dr. Hollo.

DR. HOLLO: Mr. Chairman, I would like to address--first of all, the subject matter is the diagnosis of early arteriosclerotic heart disease, and I think there has been some work done by Dr. Judge at Cleveland Clinic in regard to the diagnosis of heart disease in the young, and the work that I remember that he published was that arteriosclerosis or early thrombosis that occurs in individuals between the age of 30 and 40 usually is on a congenital basis, and they have done a considerable amount of work in doing sinography with cardioangiography, and they have shown a narrowing in congenital defects of the coronary vessels.

This certainly is not arteriosclerosis. However, it is a congenital defect and these are the people who are predisposed to early coronary thrombosis and occlusion.

MODERATOR WINSTON: And some demise, congenital or otherwise, are notwithstanding.

DR. HOLLO: Yes.

MODERATOR WINSTON: Are there other questions from the floor?

My form field of vision, so far as I know, is not limited except insofar as my brain doesn't extend as far as my eyes will see some times.

Now, let's talk about the person who has an established diagnosis of myocardial infarction and relate that to his returning to work. Dr. Strange, tell me your thoughts about the employability. I should further qualify this that we are not addressing ourselves at this moment to entrance to service examinations. We are talking about the man who is already in service; tell me, or us, your thoughts about how you people feel about returning to employment, and I will not restrict you as to what employment, a person who has had myocardial infarction.

DR. STRANGE: In the operating departments of my railroad, people who have had a known coronary, proven and under treatment, and have recovered, from the experts that we have, I have to look to other people like these people on the panel, not myself, for this information that they have stabilized.

We are very dubious about putting them back to their regular occupations with rare exceptions. We might put them back to doing their regular work.

Should I go into the categories of work? Switchmen.

MODERATOR WINSTON: I think that is adequate for the moment.

Dr. Kieffer, you are sitting back with your feet on the handlebars. (Laughter) What is your attitude about employing the person who has had myocardial infarction, returning to employment?

DR. KIEFFER: I think we are a little bit tougher than most railroads. We do not permit an engineman, we do not permit a fireman or locomotive engineer to go back on an engine under any condition who has a proven myocardial infarction. The cardiologist gets a little nauseated about that, but we also feel that anybody who has taken anticoagulants is giving us prima facie evidence of the fact that he does have heart disease. It makes our position a little easier to maintain with the Brotherhoods.

MODERATOR WINSTON: I have heard you say on other occasions that before you considered this person's return to employment, you wanted at least six months to have elapsed between the onset of his infarction and consideration to return to employment.

DR. KIEFFER: That is right.

MODERATOR WINSTON: Then we will talk about the specifics a little bit later.

DR. KIEFFER: Now, that applies to all categories before we review him.

DR. VAUGHAN: We are not as tough as Dr. Kieffer. I think, of course, you have to consider several factors in returning a man to work after a coronary. First of all, as everybody knows, there are various degrees of coronaries. It is very important to assess his present clinical condition, and the next thing to assess is what type of work he is going back to, and the third factor, everybody has to consider, is the medical- legal implications of returning to work.

Now, with an uncomplicated recovery, recovery from uncomplicated coronary thrombosis, if the man's physical condition is otherwise quite normal and he has made a good recovery, I don't see why he shouldn't be returned in safe work. Now, the question is - what is safe work?

MODERATOR WINSTON: I might interject also safe for whom?

DR. VAUGHAN: Safe for himself and safe, of course, for the traveling public.

Now, just as there are various degrees of coronary artery disease, so there are various degrees of hardness and toughness of particular assignments.

Now, we all know that an engineman in a certain type of assignment, perhaps main line passenger work, has a more responsible job than an engineman in branch line service, for instance, and we return our men to work in the safe, relatively non-hazardous position after an uncomplicated coronary. That is, after eight weeks--eight weeks after his coronary, and we haven't had any trouble with that policy.

MODERATOR WINSTON: Does anyone have a different opinion?

DR. KIEFFER: I didn't mean to give the impression that we don't let him come back to work, in any work category. I was talking only about engineers and firemen.

MODERATOR WINSTON: Are there any other comments from the panel about the elapse of time following the infarction before employability is considered.

DR. KNOWLES: Dr. Winston, I would like to say that the Massachusetts Heart Association thought three months was a minimum to allow a patient to return to work after his first coronary.

MODERATOR WINSTON: We will next go to the diagnosis. I would say this is the next most important facet of this particular phase, Dr. Olson.

DR. OLSON: On our railroad, we disqualify all of these people on the basis of our medical standards, and then if the company chooses to request an exception, we then consider all of the factors that have been mentioned.

We have not returned engineers to work as engineers. We have re-

turned them as firemen where it seemed the condition permitted it. We have not permitted men in heavy occupations, heavy physical work, to return to work either.

DR. KAPLAN: Dr. Winston, we have accepted the entire opposite view, and in all probability, as a class 1 railroad, we are more liberal with our return to duty following coronary thrombosis than any other railroad in the country.

This has not been done without much research and taking into consideration that there is a calculated risk. However, prior to going into this change in prospective, we reviewed studies that had been done by competent authorities on this subject. Diamond, of the New York Central, has done a tremendous amount of work on railroad workers as far as longevity studies are concerned. Taylor at Minnesota has worked on railroad workers, compared sedentary occupations, with those of men in hazardous phases. Zeigler, Masters and Dr. Lowe of the Metropolitan Life Insurance Company have compiled statistical studies on cardiac longevity. They have done these studies over the period of five, ten, fifteen and twenty-five year recovery periods from the initial coronary. All agree on a common figure with the first four weeks is the danger period. If they exclude these four weeks, and then take a cross section, about 60 per cent of the employees who return to work following a coronary and go back to their regular occupations--this is important regular occupation including railroad workers--will be alive after five years.

The percentage, of course, drops after ten years, and down to fifteen. After fifteen years, you may have 14 to 17 per cent still alive.

On the basis of these statistics, we revised our standards. We have a full-time medical consultant who is a cardiologist and the most important restriction is that of an engineer going back into passenger service.

So, we exclude an engineer from going back into passenger service whether it is local or on the road, but in all other occupations, regardless of whether it is heavy duty or whether it is in a hazardous occupation, we permit the employees to get back to work if they can get past our cardiologic consultant.

DR. STOCKWELL: What do they think of anticoagulants?

DR. KAPLAN: This is something else. We are discussing a case who is not taking nitroglycerin, has no angina, and no dyspnea. He has had his coronary and is not taking anticoagulants.

MODERATOR WINSTON: That brings up the next question that will be worth evaluating, and that is, under what circumstances now?

What predicates do you require before this person is permitted to return to work. What requirements are you asking of this man before you permit him to assume, it says, heavy duty?

DR. KAPLAN: Before the employee is referred to us for evaluation, we can invariably get a hospital report of the attack of thrombosis that he has sustained. We ask for a complete copy, and are willing to pay the recording charges. In that way, we know exactly how seriously ill this man was, when he went into the hospital, and findings at the time of examination.

What has this man done since the onset of his disability? He must furnish us with a certificate from his doctor to the effect that he is able to go to work. Then we subject him to extensive history taking, and we inquire about anticoagulants and drugs he might be taking.

We usually like them to bring their medications, to see if they are taking nitroglycerin, or one of the long-acting vasodilators such as peritrates. We question him discreetly about the use of anticoagulants because we don't permit our operating department employees, except clerks, to go back to work if they are taking anticoagulants. However, I do not wish to get into the problem of anticoagulants because it is a subject in itself and is worthy of a lengthy discussion of pros and cons. We, of course, do electrocardiograms, and where indicated, will do the Masters test. Chest x-rays are also performed to check cardiac size.

If our consultant finds that the electrocardiogram has stabilized, that the T waves changes have returned to normal, or at least are stabilized, there is no cardiomegaly, and there is no evidence of any renal disease, and he is a young employee in his 40's or early 50's with good general physical condition, we feel he should be returned to his regular occupation excepting passenger and freight engineers without any restriction, regardless of what his previous occupation might have been.

MODERATOR WINSTON: What do you think about that, Dr. Clayton?

DR. CLAYTON: I agree 100 per cent. The doctor made one statement that he thought he had an exceptional railroad. I don't agree with him in this respect.

We follow his routine almost identically. I have this policy. We return to duty all employees with the exception of engineers, who had established coronary occlusions, and I think this is important. I insist that he furnish us with a written statement from his doctor that he considers him able to return to unrestricted duty. Then we are protected to a point in his litigation, and also we think that the individual is protected also.

DR. KAPLAN: I might say over a four-year period, we have been extremely fortunate. We have been wrong a few times. Some have died before they even went back to work, but this has been the exception and in general, we have not had too many recurrent coronaries.

I don't think we have had any deaths on duty in the group that we permitted to resume duty following an initial attach of coronary thrombosis.

DR. CLAYTON: Mr. Chairman, I would like to make one other point.

In looking at a study of the operating department, I think certainly if an individual has evidence of having unusual vascular changes, I insist that we have a statement about the ocular fundi in these cases.

MODERATOR WINSTON: Dr. Johnson.

DR. JOHNSON: I have nothing to add. I think, too, that these have to be settled pretty much on an individual basis. Some individuals make a very brilliant recovery from their initial infarction; some do not, and we need to have guiding rules, but specific applications are always a matter of medical judgment.

DR. WIGHT: To get back to the engineman for a moment.

This question of how long he is going to be held out of service, providing he has made a satisfactory clinical recovery, Dr. Vaughan mentioned eight weeks. Like some of the others, I feel this is short. I think the pathologist will agree that it takes roughly three months for it to be stabilized.

Now, in our railway, it is three months. With enginemen, if there are any residual signs of coronary artery disease, they are restricted. Yard Service. No branch lines because on the branch lines, the trains are even running faster than on the main line; they have to keep their schedule. But I would like to ask Dr. Johnson a question.

In an engineman who has had a frank infarct, there are roughly 10 per cent of them that will revert to normal including the EKG. In this small group, does he permit them to come back on main line service?

DR. JOHNSON: Specifically no. An individual has or has not had an infarct. If there is clinical substantiation of the fact he has had myocardial infarction, basically, on EKG evidence, and his electrocardiogram has returned to normal, that man has had an infarct, and the fact his EKG six months later is normal, does not mitigate against the fact that he has had an infarct, and he is restricted on my line.

DR. OLSON: I stated our position on it previously, but I wanted to make one comment about the value of the private physician's report.

I don't know how that could protect the railroad from any liability that one might want to thrust upon it for having allowed an individual to go back to work, knowing that he had a condition which was unpredictable. I think the fact that it is unpredictable should make us pause in allowing these men to go back to certain types of work.

MODERATOR WINSTON: You wouldn't object to having his family doctor's statement, though?

DR. OLSON: No, but I don't think it protects you from anything.

DR. CLAYTON: May I comment. We have had two suits on our railroad, in our department, whereby the court contended that the employee is put back to work with the knowledge of the chief surgeon and his medical staff, so that started me to thinking along this line.

Now, I think that we would have a definite protection in the eyes of the court if we furnish a statement that this man contends that he had a flare-up of his coronary, and if he goes back to duty, but we didn't do it on our own. We can say, "All right, his own doctor said he could do this, and that he was able to."

Now, certainly we are not infallible in any respect, but it does protect us to a point legally because I speak from experience.

MODERATOR WINSTON: I don't know about legally, but we on our property, and there is one of these forms in the presentation of yesterday, ask a man to say that he can do it, and ask the doctor to say he can do it, and then we evaluate him.

DR. SUTHERLAND: We keep talking about engineers. Maybe I have got the wrong slant on this, but in the operating department, I think that is the easiest job in the world. (Laughter)

MODERATOR WINSTON: That is a good point.

DR. SUTHERLAND: I don't think it is any more hazardous for that man to go back to work than it would be for any of us surgeons to go back into the operating room after completely recovering from a coronary. I will bet there isn't a surgeon here that wouldn't be back after he completely recovered from a coronary.

DR. MISHLER: To give you our experience, we don't follow either one extreme or the other. A man who has made a complete recovery from his coronary and has submitted the family doctor's report, that he is without symptoms, in the train service, engineers, that is, we don't allow them on the main line, but we do try to find some place for them such as a yard fireman. In brakemen and conductors, we don't allow them to do strenuous or laborious work which we think includes climbing cars or setting brakes.

That applies to the shop crafts for a similar application of the rule.

However, in all this discussion, I have always maintained that due to the progressive and eventually fatal course of this disease, these people after recovery, irrespective of their good recovery, should not be doing heavy, strenuous work.

MODERATOR WINSTON: You say you let some brakemen go back to work?

DR. MISHLER: On ground level and switch tender.

MODERATOR WINSTON: That is fine. I was wondering how he would be a brakeman and not climb cars or switch or set brakes.

DR. JOHNSON: Mr. Chairman, Dr. Sutherland raises a very good point, but in answer to it, we have to deal with engineers in labor relations as well as the medical aspect of it, and Dr. Wight alluded to that point when he said an individual who had had a myocardial infarction and six months later had a normal curve should he be permitted unrestricted in engine service?

Not in my territory. If we have evidence of a myocardian infarction, that man, because of that circumstance, is restricted to yard service.

You have to have a policy. You have to adhere to it, and when you make an exception, which you believe in one specific case to be valid, it appears as though you are waiving it in every case.

I think it is highly important that we adhere to sound, fundamental medical policies.

DR. KNOWLES: I like Dr. Johnson's idea. Now, you may have a man with a normal examination by a good, qualified man. That man may be between 45 and 50 years of age, and then have a coronary unexpectedly. I think that when you take a man who has had a known coronary - I say a known coronary, sure, allow him to go back on the main line as an engineer, and especially to run Budd cars, I think you are open to liability.

I think it is a very, very dangerous thing.

MODERATOR WINSTON: I don't think we have quite answered Dr. Sutherland's question yet. To me it is extremely important.

DR. KAPLAN: Could I inject a little statement.

Technically, I almost agree with the doctor. We could allow the engineer to go back to work in any capacity. However, you must realize there is a public image that enters into this situation. Recall the tragic accident that occurred on the Jersey Central about seven or eight years ago, when the commuter train went through a block signal and ended in the river with many deaths. There was quite a bit of hysteria, and much ado was made about it by the politicians in Washington. They started a Senatorial investigation, and wanted to know about the general health of the engineer and fireman. Autopsies were performed on these men, and it was claimed that they were hypertensives, were ill and unable and unfit to operate passenger trains.

Thus, you will realize why an examiner is reluctant to permit an engineer who has had a coronary to go back to work in the face of this mounting opposition from the general public.

You can have an accident in the yard that will cost the company a million dollars, and you won't hear one word about it as long as there are no injuries or lives involved, but have an accident involving passengers and the newspapers will blast you, especially if your engineer has had

some physical defect such as impaired vision or some previous heart attack or cardiac involvement.

DR. KIEFFER: I think that is the point I wanted to speak of. As far as Dr. Sutherland's risk of the engineer himself, I can see a great deal to hat, but he does impose a potential risk legally, and what might happen f something happened to him. Dr. Vonosky told me at the time that those wo employees were hypertensive.

DR. KAPLAN: That is correct.

DR. KIEFFER: Then Dr. Winston's railroad had another spectacular ccident five or six, seven or eight years ago, that I am sure he can tell ou about. Well, if that sort of thing happened to an engineer who was a nown cardiac, you know, you are in a bad position.

Now, furthermore, my position on this thing was arrived at after a umber of years, and I think I am probably, because we are a little raiload, closer to our claim and legal department than most of you fellows.

Every settlement on the railroad goes across my desk, and we, unke some industries, are not protected--and I say that very advisedly-- y the Workmen's Compensation Act, and I have got to be, as far as my ailroad is concerned, very much like Winston Churchill who was unilling to liquidate the British Empire.

MODERATOR WINSTON: I want to come back to that question, because it s one that is raised often, and not infrequently, by the medical staff, nd quite frequently by the supervisory forces, as I visit our people over e railroad.

Why do you restrict this man from running the Super Chief? He is n duty three hours and forty-five minutes. He has a lay-over of 4 ours. He is back home within a little over 12 hours. He is off two days fo e does this again!"

"Now, you have him restricted to where he can only work in yard ervice, which is 8 hard hours, daily, and in branch line service, which eps him out 12 or 14 hours." Why do you do that?

The reason is extremely simple. We have to look at not only this an's duties. If his condition will not permit him to assume the physical fort, then, of course, he shouldn't be doing any of these jobs.

Now, why can't he do the easier ones? Generally, because there is ore risk, not only to himself, but to other people, which is extremely portant, and also to company property.

The traffic pattern is much more dense. He is traveling at a more pid speed. A lapse of cuatiousness of a few seconds can mean the difrence between a catastrophe and fair sailing.

What is the progress of this pathology of those people who have coronary artery disease, myocardial infarction? Approximately one-fourth of them will die suddenly. Of that group that dies suddenly, four out of five will appear to be in perfect health immediately prior to their death. So the thing that causes us to take an engineer off high speed main line territory in engine service is because in the event of the incapacitation, they might damage not only themselves, but many other people. As a matter of fact, the likelihood is so great that we can't face the families of these people who are involved and say, "Well, I thought that he would do it all right. Sure I knew he was subject to sudden incapacitation, but he only works a few hours."

It is unquestionably, so far as physical effort is concerned, much the more desirable job for the man, but we have other obligations that supersede those.

Now, Dr. Earle Wight.

DR. WIGHT: I find this whole discussion very interesting. It reflects changing medicine, changing thought and so on and so forth.

We have heard how various people handle their coronaries. Doctor Kaplan referred to what they are doing. You are probably aware of the fact that in England they don't restrict their enginemen. They let them go right back into regular work.

One factor that may have a bearing on our attitude in the future is, if we adopt these electrical alerters, instead of the dead man pedal, that will be a good safety factor.

Dr. Mishler made a remark that put the engineman back in the yard as fireman. I am afraid he won't be able to do that much longer. We have no firemen in yard service up in our country, and I am quite sure you won't have here very much longer.

And then the remark that Dr. Clayton made about accepting the certificate from the doctor. I think this is very dangerous in that we can't have it two ways. In a lot of other circumstances, we say that we will not accept the doctor's certificate, that we make the final decision. We have the right to overrule the private doctor.

Now, in effect, he is turning around and wanting to use the doctor's certificate, shall we say, as a means to let these men go back to work, hoping that it will be accepted in court.

I don't think we can have it both ways. Say in one case the private doctor's certificate is as a final answer, and in other cases, it isn't.

MODERATOR WINSTON: I doubt that we have that in mind.

DR. CLAYTON: You are right. I didn't have it in mind.

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MODERATOR WINSTON: I doubt that we have that in mind.

DR. CLAYTON: You are right. I didn't have it in mind.

MODERATOR WINSTON: It is a matter of sharing the responsibility.

DR. ZEISS: Dr. Winston, there have been many statements made in this room about complete recovery from a coronary occlusion. I would suggest that this term be deleted from the record, because it is my opinion that coronary occlusion is simply an objective finding of the pathology of the blood vessels of the heart.

So, I don't see how anybody can make a complete recovery from a coronary occlusion.

MODERATOR WINSTON: I would suggest that the record stand, and we delete the term "complete recovery" from our thinking.

DR. MISHLER: I think that Dr. Stockwell had a patient who returned to work with a doctor's certificate of recovery on the Grand Trunk Western.

MODERATOR WINSTON: I want to get to Dr. McEwan without counting votes. I had him posted out there. I was looking out for my interests. I got to him before Abbott Skinner did, so he missed the first part of the discussion, but I think we should give you a chance to speak your piece, if you have something to say.

DR. ALEXANDER MCEWAN: Our policy is entirely the same as Dr. Johnson's.

MODERATOR WINSTON: That is easy. Now, unless there are some pressing questions about coronary artery disease, I would like to talk a little bit about some of the other problems.

DR. STRANGE: John, May I say one thing? I think it is pretty well settled as far as the engineers are concerned and everybody agrees they shouldn't go back, but I think, too, that these roads that are having such good luck are geographically well located.

We are located in an area in which litigation is easy, and we have a lot of it. At the present time, we probably have two to three cases going on right now against us and against our doctors on the basis of return to duty without proper restrictions.

MODERATOR WINSTON: Are there any other questions about coronary artery disease?

DR. GLENN F. CUSHMAN (Western Pacific Railroad): I Would just like to make a comment about alerters which was raised a minute ago.

I don't know how many of the men have ridden on the switch with the alerters, but they tell you about the carrying capacity before the thing goes into effect. It takes between 15 and 20 seconds before the engine stops.

MODERATOR WINSTON: Dr. Johnson suggested that perhaps Dr. Kumm[illegible]

Noveka would have a bit of comment about their attitude toward coronary artery disease in industry in general and railroads in particular. You have any comments.

DR. KUMASAKA NOVEKA (Japan): Pardon me for my bad English.

We have much less coronary disease in Japan than in the United States, and we feel mostly the same as the panel members. We do not permit them to return to labor or return to work as a driver. That is very dangerous because they can damage people.

In the other jobs, we allow them to return to work after they have retired for three months.

MODERATOR WINSTON: Thank you so much.

DR. HOLLO: Dr. Winston, I would like to make one comment in reference to the doctor's remarks, and Dr. Wight brought this out yesterday to me, that on the Japanese Railroad that the retirement age is 50 up to just recently and now they have increased it to the age of 55. So I guess that reduces their problem in regard to arteriosclerotic heart disease.

MODERATOR WINSTON: Let's now get into the general area of answering the question that Dr. Hollo raised earlier and that had to do with the development of right bundle branch block.

It was found, as I understand it, on a routine electrocardiographic investigation of a person who was roughly 45 years old.

Perhaps you would like to take a look at Laurence Lamb's previous discussion about electrocardiographic findings in the Heart Bulletin, September-October 1961. Incidentally, they have done a tremendous amount of work on cardiovascular diseases down at the Aerospace Medical Center, of the School of Aviation Medicine at San Antonio.

The most frequent finding, according to them, is premature ventricular contraction.

Let me ask if someone wants to answer Dr. Hollo's inquiry about the significance of a right bundle branch block? Dr. Hanson?

DR. O. L. HANSON (Atchison, Topeka and Santa Fe): My own impression is that if you have a man 45 years old with right bundle branch block, and this is his first electrocardiogram, and he is asymptomatic, I would not consider that indicative of cardiac disease.

If he has had previous electrocardiograms which have also shown a right bundle branch block, I would feel reasonably confident, if all other things were normal, that he did not have organic heart disease.

If he had previous electrocardiograms, which were normal, then this would be evidence of possibly organic heart disease.

MODERATOR WINSTON: It is a matter of sharing the responsibility.

DR. ZEISS: Dr. Winston, there have been many statements made in this room about complete recovery from a coronary occlusion. I would suggest that this term be deleted from the record, because it is my opinion that coronary occlusion is simply an objective finding of the pathology of the blood vessels of the heart.

So, I don't see how anybody can make a complete recovery from a coronary occlusion.

MODERATOR WINSTON: I would suggest that the record stand, and we delete the term "complete recovery" from our thinking.

DR. MISHLER: I think that Dr. Stockwell had a patient who returned to work with a doctor's certificate of recovery on the Grand Trunk Western.

MODERATOR WINSTON: I want to get to Dr. McEwan without counting votes. I had him posted out there. I was looking out for my interests. I got to him before Abbott Skinner did, so he missed the first part of the discussion, but I think we should give you a chance to speak your piece, if you have something to say.

DR. ALEXANDER MCEWAN: Our policy is entirely the same as Dr. Johnson's.

MODERATOR WINSTON: That is easy. Now, unless there are some pressing questions about coronary artery disease, I would like to talk a little bit about some of the other problems.

DR. STRANGE: John, May I say one thing? I think it is pretty well settled as far as the engineers are concerned and everybody agrees they shouldn't go back, but I think, too, that these roads that are having such good luck are geographically well located.

We are located in an area in which litigation is easy, and we have a lot of it. At the present time, we probably have two to three cases going on right now against us and against our doctors on the basis of return to duty without proper restrictions.

MODERATOR WINSTON: Are there any other questions about coronary artery disease?

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DR: WIGHT: You referred to Dr. Lamb's work a moment ago down at San Antonio. He presented the findings of a whole panel on, I think it was, 55,000 cases that they had reviewed amongst pilots and right bundle branch block was of not too great significance. He didn't attach too much importance to that.

MODERATOR WINSTON: This is a relatively young group of people, but then, to answer the question, in a person past 40 years old, it is of questionable significance. As Dr. Hanson indicated, if you happen to have had a prior one that was negative, then it probably is significant.

Now, whether it is clinically significant or not is something we don't know, but certainly it shows a change has taken place, so it doesn't give you any comfort. Neither can you use it as substantial information to support restrictive action as I view it, on that alone.

DR. WIGHT: They let the pilots fly?

MODERATOR WINSTON: Yes.

DR. VAUGHAN: If I could comment a minute, Dr. Winston, on right bundle branch block, we see a fair number of cases of right bundle branch block. Some of them, if we have not a previous electrocardiogram, we assume are of no significance.

A lot of these right bundle branch blocks, as you know, are congenital. A person who has had right bundle branch block all his life. In other cases right bundle branch block is simply a defect in the conduction. It can be caused not only or not even primarily, perhaps, by arteriosclerotic heart disease, but almost any infection which affects the conduction mechanism of the heart.

MODERATOR WINSTON: What about left bundle branch block?

DR. VAUGHAN: Left bundle branch block is more serious inasmuch as statistics have shown it is more indicative of an arteriosclerotic defect in the conduction mechanism. Therefore, I think there should be some restriction on people who develop a left bundle branch block.

DR. JOHNSON: Well, whenever I see right bundle branch block, I worry. In Dr. Hollo's specific case of a 45 year old individual whose initial cardiogram was showing right bundle branch block, I would worry. I know the percentages are in favor of it having been occurring in early adult life, maybe even in infancy as a result of infection.

It can be a manifestation of an old healed rheumatic heart disease. I imagine several other infections, but I can't rule out the possibility that it is of significance because right bundle branch block is not the pattern of normal electrocardiography.

MODERATOR WINSTON: There are several others, but let's talk about just briefly the significance of premature ventricular contraction. That is perhaps the most frequently encountered abnormality in the routine

electrocardiogram.

DR. CYRAN: I think it all depends on how many premature ventricular systoles you have seen in the tracings, how often they are occurring, whether they are multi-focal or whether they are unifocal, whether they are occurring in runs, or whether they are actually precipitated by exercise, or whether they are diminished by exercise. It has a bearing as to whether the man is a young man or older man. Premature ventricular systoles by themselves probably would be of no significance.

Our procedure usually is to do a little bit of exercise to see whether we can make them disappear.

MODERATOR WINSTON: I am concerned about premature ventricular contractions because all too often it comes in to our medical reports that he has some extra systoles which are of no significance. They are perhaps of no significance, but it does require investigation.

Let me ask one more question, and that has to do with valvular disease. We have, unfortunately, not gotten into the valvular disease. Fortunately, we don't see so much of this, but we do have some valvular disease, and the one that concerns me particularly is the disease involving the aortic valve. It is not unusual to develop in the older person. Perhaps it concerns me more if this is the stenotic lesion than if it is a regurgitant type, but in either event, you have an ideal set-up and an ideal condition set-up that could and frequently does procude a sudden incapacitation.

Now, let's mention briefly again about anticoagulants. We are going to have to say this pretty rapidly. Does anyone have any real fixed ideas about the anticoagulants, that the person using or taking anticoagulants should be restricted in their efforts.

DR. WINTERS: Most of them seem to not be taking enough to do any good.

MODERATOR WINSTON: Are there any other comments about it?

Do I gather then there is not much concern about whether they are taking them or not?

DR. KNOWLES: May I ask, isn't there some question as to the efficiency? I would like Dr. Johnson to tell us, aren't the cardiologists in a good many cases getting away from anticoagulants?

MODERATOR WINSTON: Do you want to answer that Ralph?

DR. JOHNSON: I think this is still a moot point. It is my observation that more and more cardiologists are getting away from routine, long-term use, after myocardial infarction, of anticoagulant therapy. Sometimes in these cases the risk of continued anticoagulant therapy and its management is more difficult than the risk without the use of these agents.

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Nonetheless, there are individuals who have had a type of myocardial infarction that most cardiologists feel merits long-term anticoagulant therapy.

The difference is that about six or eight years ago most cardiologists wanted to continue long-term anticoagulant therapy in myocardial infarction of whatever degree. Today, most cardiologists are confining anticoagulant therapy long-term to individuals who have had a rather extensive myocardial infarct of the type of clinical classification of a serious myocardial infarction.

MODERATOR WINSTON: The other comment I might make about the use of anticoagulants is that if the person is taking them, then it behooves you to know that he is taking them in levels that are acceptable clinically. Secondly, it tells you that the man has some major underlying vascular or significant medical condition that you should be on top of.

Now, about blood pressure. Should an arbitrary level for systolic and diastolic blood pressure be established for purposes of disqualification?

If so, what level? If anyone wants to answer that in about half a dozen well-chosen words.

DR. WIGHT: Before we go into that, may I ask the panel's opinion on fibrillation?

MODERATOR WINSTON: We are talking about auricular fibrillation now. Does anyone want to say if auricular fibrillation is significant?

Is your auricular fibrillation of any particular significance?

DR. MCEWAN: I think if it is not accompanied by congestive heart failure, sometimes it is compatible with a normal life span, but these people run the risk of throwing off an embolus any time, and then you are back to the anticoagulants again. Should you put all these people on anticoagulants?

MODERATOR WINSTON: How about it, Vance? Auricular fibrillation, what kind of a flag does that put before your employee?

DR. STRANGE: Well, if we evaluate them, our cardiologist usually tells us not to put them back to work.

MODERATOR WINSTON: How about it, Dr. Kaplan?

DR. KAPLAN: I pass on to Dr. Johnson. He is a cardiologist.

DR. CYRAN: We look on that with a little bit of inquiry. We wonder whether the man is a young man or an older man, and in a younger man this may be a paroxysmal thing, not necessarily meaning that it is indicative of serious heart disease.

In an older man, obviously, this is probably related to coronary art disease. We would restrict them. We individualize each case. I don't think we would allow them to be a passenger engineman or a road main engineman. We might allow them to work in the yard. Brakemen we might restrict from climbing and doing the regular duties of a brakeman, because of the fact that this is a condition which can absolutely incapacitate somebody.

MODERATOR WINSTON: Peter, auricular fibrillation.

DR. VAUGHAN: The usual type of auricular fibrillation, of course, is an abnormal finding. We restrict them the same way as we do coronary artery disease. It is an indication of arteriosclerotic heart disease. I think they should be restricted in the same way.

MODERATOR WINSTON: It is a serious heart disease. Whether or not a man is compensated or decompensating is of some importance to him, inasmuch as predictability, whether he is going to throw an embolus and whether sudden demise is not predictable and therefore, he is placed in the category of one who is unpredictable.

DR. MISHLER: You mentioned valvular disease. I have as a problem at the present time a number of men who have had valve replacement, who have been submitting reports from both their surgeons and cardiologists that they can do all kinds of work. This includes aortic and mitral valve replacement. I would like to have the panel's opinion about this.

MODERATOR WINSTON: Would anyone answer that real quick? It is extremely important because we are getting into this more and more.

DR. KNOWLES: I just had a letter from Dr. Harkins in Boston. He had put a cage ball in the mitral valve. He wrote me and said, "I believe this man can return to all types of work." I couldn't let him. I know Dr. Harkins, but I did not allow him to go back to work.

MODERATOR WINSTON: I would think it behooves us until we learn more about it, to feel this man's life perhaps has been extended, and possibly spared for some time, and he is quite fortunate.

DR. JOHNSON: Mr. Chairman, I think also we should include arterial grafts in here and cardiac pacemakers.

MODERATOR WINSTON: That will go in the same category.

To sum up, we will say until we learn more about them, although a man's outlook perhaps has been improved. Insofar as his employability in critical occupations is concerned, it is questionable and not suggested at this moment.

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DR. JOHNSON: I can kick off on that if you wish. Fortunately, in the last several years our antihypertensive agents have been far more successful in the clinical management of this problem than obtained until about six years ago.

Nonetheless, an individual who has a sustained systolic blood pressure above 200 and a sustained diastolic blood pressure over 100 is a potential risk, and if his personal physician cannot bring that blood pressure down to a more satisfactory level, I would disqualify him.

DR. STOCKWELL: With or without treatment?

DR. JOHNSON: I am speaking of the individual who is treated and whose blood pressure maintains above 200 systolic and above 100 diastolic would be disqualified. It invariably means he has renal damage.

MODERATOR WINSTON: And renal damage means vascular damage.

DR. JOHNSON: Yes.

MODERATOR WINSTON: And vascular damage means coronary and brain damage.

DR. SKINNER: What about a diastolic pressure--you pick the level of 120 or 130, regardless of the systolic?

DR. JOHNSON: That is always a tricky one. I have seen individuals who have a systolic blood pressure consistently in the 140's and diastolic that will remain at 110. I am uneasy about these individuals, but I have some difficulty in maintaining the disqualification because of the absence of the elevation of the systolic. Nonetheless, as a clinician, I feel that this sustained elevation of the diastolic poses a grave prognostic significance.

DR. KNOWLES: Wouldn't you say the shortening in the pulse pressure indicates a weakening of the heart muscles? Isn't there a little diagnostic point there? A drop in the systolic, an increase in the diastolic, pulse pressure lessening.

DR. JOHNSON: Well, my point is that many times under treatment we can bring these systolic pressures down to a satisfactory clinical level, but we are unable to have the same satisfactory effect on the diastolic pressure. I am sure that is a point that Dr. Skinner is getting at.

What do you do about individuals who have a consistent and persistent elevation of the diastolic blood pressure? My answer is that I sweat.

MODERATOR WINSTON: I think I might sum up that by saying that the problem of hypertension has been vastly complicated with the advent of the recent and more effective drugs. Those drugs themselves cause certain problems that are highly troublesome, one of which is mental confusion. The other has to do with syncope incidents to orthostatic

DR. NELSON: Would you mind just from a practical standpoint answering five and six, for the moment?

MODERATOR WINSTON: I will answer it for brevity. Should CVI be considered to be in the same category as a coronary thrombosis?

Yes, with or without residual, it is all the same.

6. If a coronary is permitted to return to work, should he be permitted to continue and work after a secord attack?

It depends again on his job and on his responsibility. In taking this into consideration, though, that with the second attach he has less myocardium available because obviously he has lost some more in the infarcted area. Number two, that he is getting toward the end of his string. Just one less in reserve than he had before. At this time he should be encouraged, if at all possible, to get out of this racket and start growing pansies in California before he starts pushing them. (Laughter)

Mr. Chairman, that concludes the panel. Thank you very much, gentlemen. (Applause)

CHAIRMAN OLSON: Dr. Kieffer, would you be good enough to come back up to the head table.

I wanted to make one comment about the use of the letters "CVI" on question number 5. In our hospital we use that terminology to mean cerebral vascular incident, and the reason for it is that we have had some people that have made claims against us for having said this patient died of a cerebral vascular accident. They misconstrue the term, and we have had no trouble since we have used that terminology.

I want to thank the Moderator, the panel and the audience for a very interesting program this morning. I think you have done an excellent job, and now I would like to ask Dr. Kieffer if he will give the results of the election.

DR. KIEFFER: The results of the ballotting indicates that you have chosen Dr. B. W. Stockwell, Dr. I. Kaplan, representing the Eastern Division; the Southern Territory, Dr. E. C. Olson; the Canadian Territory, Dr. Earle Wight, and for the Western Territory, J. R. Winston.

CHAIRMAN OLSON: Before we conclude, I want to tell you that our luncheon is to be held in the Kon-Tiki Ports room and that they are holding space for us now. Will you please proceed immediately to that area.

(The meeting recessed at 12:00 o'clock.)

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Mr. Chairman, that concludes the panel. Thank you very much, gentlemen. (Applause)

CHAIRMAN OLSON: Dr. Kieffer, would you be good enough to come back up to the head table.

I wanted to make one comment about the use of the letters "CVI" on question number 5. In our hospital we use that terminology to mean cerebral vascular incident, and the reason for it is that we have had some people that have made claims against us for having said this patient died of a cerebral vascular accident. They misconstrue the term, and we have had no trouble since we have used that terminology.

I want to thank the Moderator, the panel and the audience for a very interesting program this morning. I think you have done an excellent job, and now I would like to ask Dr. Kieffer if he will give the results of the election.

DR. KIEFFER: The results of the ballotting indicates that you have chosen Dr. B. W. Stockwell, Dr. I. Kaplan, representing the Eastern Division; the Southern Territory, Dr. E. C. Olson; the Canadian Territory, Dr. Earle Wight, and for the Western Territory, J. R. Winston.

CHAIRMAN OLSON: Before we conclude, I want to tell you that our luncheon is to be held in the Kon-Tiki Ports room and that they are holding space for us now. Will you please proceed immediately to that area.

(The meeting recessed at 12:00 o'clock.)

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Thursday Afternoon Session
March 4, 1965

The fourth general session convened at 1:30 o'clock with Dr. Olson, presiding.

CHAIRMAN OLSON: Gentlemen, we will begin our afternoon session. We have two panels, one on Vision and the other on Pulmonary Diseases.

Dr. Clayton will conduct the panel symposium on vision.

PANEL SYMPOSIUM - VISION

MODERATOR M. B. CLAYTON: The protocol which I shall presently read is entitled "Visual Standards - Applicants and Employees." I have no intent to dictate standards to this group. I shall simply tell you what we use on our railroad.

I shall give a somewhat panoramic view of the visual problem as it pertains to applicants and employees and which concerns the medical departments of all railroads and then turn to the panel for a combined discussion of the questions asked in the program.

Such things as accommodation, fusion, visual space sense, field of vision, stereopsis, muscle balance, and other technical subjects, of which there are many, have not been elaborated upon. Time would not permit. You may be assured, however, that these standards have not been arrived at without due consideration being given to both the technical and the practical.

What we wish to know or establish is whether or not the applicant or the employee can see well enough to do his work safely, efficiently, and satisfactorily and whether he will or will not be a hazard and a liability in what the future holds for him. This information can be obtained efficiently and in a reasonably short time by observing the following procedures:

1. First a history is taken.

2. The vision, monocular and binocular, and color vision are evaluated. Usually the Snellen test type is used to determine visual acuity and the Dvorin pseudo isochromatic plates for color vision.

3. What kind of chart to use? I like the project-o-chart but any recognized chart is satisfactory if the examiner knows what he is doing and does the examination himself. To know how to observe and interpret the actions and reactions of the examinee is just as important as the selection of the equipment with which to do the examination. It is not enough, for example, to cover one eye and say, "Read." It is necessary to know what is taking place behind the covered eye. Is he squinting? Does he continually move his head to different angles or comment about the

light not being adequate, etc. In brief, if the examinee has difficulty in reading 20/20 or within the 20/20 range then it is up to the examiner to determine why and whether the cause is sufficient to advise against his being employed or not.

4. An inspection is made of the eye and its appendages and if in doubt the binocular loupe and the slit lamp are valuable additional aids.

5. The ocular fundi are studied.

6. Muscle balance is evaluated.

7. When indicated tension should be taken by tenonometer and without exception it is always well to palpate the eye with the fingers.

8. Visual Fields--The examining ophthalmologist should decide whether perimetric studies should be done or not.

Near vision. The object of the test for near vision is to determine whether or not the individual can call into use three diopters of accommodation and the Jaeger test card is commonly employed for this purpose. The Jaeger card is prepared with six series of words. The first series should be read by the normal eye at a distance not greater than thirty-seven centimeters; the second at fifty centimeters; the third at sixty-two centimeters, etc. The card is held before the examinee at a distance of thirty-three centimeters and he is directed to read the first series. If he does so, his near vision is recorded as J-1-13," indicating that he reads Jaeger No. 1 at thirteen inches or thirty-three centimeters. If number two is the smallest that he can read easily, his near vision is recorded at J-2-13," indicating that he reads Jaeger No. 2 at thirty-three centimeters, or thirteen inches. The smallest type that he can read at thirty-three centimeters is the basis of his near vision. The normal eye should read J-1-13." If this cannot be done it indicates that his near vision is defective, and if distant vision is normal, he is presbyopic.

When to quality or disqualify is not always easy--scientifically, yes, practically, no. Usually there should be no hesitancy to disqualify in the event of muscle imbalance or when glaucoma is present or following cataract extraction and when some disease is present such as chorioretinitis and particularly when the macula is involved, retinitis pigmentosa, and also when irreversible corneal changes are present such as nebula, macula, leucoma, conical cornea, or dystrophy, and this applies to both applicants and employees.

The one-eyed employee always poses a problem and preferably should be handled on an individual basis and without controversy. Why does it become necessary to disqualify the one-eye employee in certain categories? The answer is that the ability to judge distance is many times more accurate with binocular single vision than with monocular vision.

"In monocular vision, there are eliminated the binocular parallax, convergence, and physiological diplopia. Therefore judgment must depend upon the size of the retinal image alone.

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"In monocular vision, there are eliminated the binocular parallax, convergence, and physiological diplopia. Therefore judgment must depend upon the size of the retinal image alone.

"Since judgment of distance is many times less accurate when the precision depends upon the size of the retinal image alone it follows that the important factors to be considered are physiological diplopia, the binocular parallax and convergence."

It is ideal to have a standard of 20/20 vision for all applicants, but whether it is practical or not is questionable. Applicants for clerical or related positions, and officers or potential officers are not to be disqualified if the vision can be corrected to 20/20 with glasses and the visual change is not organic in origin with this exception that applicants whose vision is 20/400 or less should be disqualified regardless of their assignments, and referred to the Chief Surgeon for final decision.

It would be well to have a standard of 20/20 vision in each eye for applicants in engine and train service and those doing precision work with the understanding that should the vision be less than 20/20 that the examiner state the reason therefor and refer the case to the Chief Surgeon for opinion. It may be that most applicants even though their vision could be corrected to 20/20 or better with glasses and if it be refractive in origin. The final decision should be left to the Chief Surgeon.

Serious consideration should be given to the disqualification of employees in engine and train service and those doing precision work whose vision in each eye is 20/40 and has resulted from lenticular changes or other conditions than a refractive error and without exception they should be disqualified if the best binocular vision is 20/40.

Engineers and switchmen with monocular vision should be disqualified without exception. Other employees should be handled on an individual basis and referred to the chief surgeon or chief medical officer for opinion as to qualification.

Engineers and switchmen who have had cataract surgery should be disqualified. Others should be handled on an individual basis.

Employees except office personnel should not be permitted to wear contact lenses unless approved by the chief surgeon or chief medical officer. The reason therefor has been given in a separate communication which is available upon request.

The post-operative cataract case has been elaborated upon in a separate communication, which is also available upon request and which I have given you.

I wish to raise the question why hasn't the ear been included in this discussion? It is just as important that accurate examination and evaluation of the ear be made as the eye for both applicants and employees.

Now, gentlemen, I shall turn to my distinguished panel.

I now wish to introduce the members who compose the panel symposium on vision. All of them are distinguished in their own right and their cooperation in contributing to the handling of the symposium is ap-

preciated:

Stanley J. Cyran, M. D., Medical Director, Pennsylvania Railroad, Philadelphia, Pennsylvania.

H. W. Hammatt, M. D., Chief Medical Officer, Chicago, Burlington & Quincy Railroad, Chicago, Illinois.

V. W. Hollo, M. D., Chief Surgeon, St. Louis-San Francisco Railway, St. Louis, Missouri.

W. E. Mishler, M. D., Chief Surgeon, Erie-Lackawanna Railroad, Cleveland, Ohio.

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F. F. Wipperman, M. D., Chief of Ophthalmology, Soo Line Railroad, Minneapolis, Minnesota.

May I introduce Dr. Stanley J. Cyran, Medical Director, Pennsylvania Railroad, who will discuss aphakia and the use of contact lenses.

DR. STANLEY J. CYRAN: With an authority like Dr. Clayton here, it is sort of presumptuous on my part to try to discuss this. I told Dr. Clayton we had need for a more uniform approach on our railroad to the problem of aphakia, both unilateral and bilateral. Because of this, I consulted our ophthalmologist and tried to evolve a policy which we are expecting to present to our management for their approval and hope, if this is finally approved, this will become a system policy.

(Dr. Cyran asked that his comments be deleted and a copy of his more liberal contact lens policy be substituted, since this is now in effect on the P. R. R.)

MEDICAL POLICY
GOVERNING THE RETURN OF TRAIN AND ENGINE SERVICE EMPLOYEES TO DUTY FOLLOWING CATARACT SURGERY

APHAKIA

Unilateral

Correction with Ordinary Lens:

Enginemen - Not qualified.
Firemen - Yard duty only.
Trainmen - Not qualified.

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Correction with Ordinary Lens:

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Firemen - Yard duty only.
Trainmen - Not qualified.

Correction with Contact Lens:

Enginemen - Yard. (Local and road freight... permissable if fireman in crew.)
Firemen - Qualified, all positions.
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Bilateral.

Correction with Ordinary Lens:

Enginemen - Not qualified.
Firemen - Not qualified.
Trainmen - Not qualified.

Special consideration may be given if aspheric lenses are prescribed, but no passenger service for enginemen-firemen.

Correction with Contact Lens:

Enginemen - Yard. (Local and road freight... permissable if fireman in crew.)
Firemen - Yard, local, and road freight.
Trainmen - Qualified, all positions.

QUALIFICATIONS

1. Enginemen-Firemen, who wear contact lenses, not permitted in same crew.

2. Those with bilateral corneal contact lenses must have a second pair of contact lenses with them at all times. Second pair must have been worn and tested for wearing time equivalent to regular tour of duty.

3. Enginemen-Trainmen-Firemen must wear approved protective goggles on duty if corneal contact lens being worn.

4. Initial medical evaluation must be performed at a full-time PRR medical office.

5. Must have statement from attending ophthalmologist that:
(a) Able to tolerate lens 8-10 hours.
(b) Has had at least one month trial wearing contact lens.
(c) Is able to resume regular duties of his position.

6. Visual acuity must meet G-45 requirements.

MEDICAL POLICY
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Each case will have to be individualized in relation to the work to be performed because of the numerous crafts and work variations within the crafts.

The important factors that must be considered in the individual case are as follows:

1. Can the employee function as a one-eyed employee.

2. Are there hazards associated with the job which might cause splashing of chemicals and resultant trapping beneath the contact lens. This is a contraindication to the wearing of contact lenses in industry.

3. If wearing ordinary aphakic or even the new aspheric lenses, following bilateral cataract surgery, will the increased image perspective hamper his work performance.

4. Are the attendant hazards of the job such that a sudden impairment of visual acuity (loss of contact lens, foreign object with blepharospasm, etc.) would compromise the safety of the employee (working at heights, on scaffolds, bridge inspectors, etc.).

5. Crane and derrick engineers, machine operators, responsible for the safety of others, cannot be qualified.

MODERATOR CLAYTON: I now introduce Dr. H. W. Hammatt, Chief Medical Officer of the Chicago, Burlington and Quincy Railroad, who will discuss the questions of relaxing visual requirements in employment examinations, general visual acuity standards and color perception.

DR. H. W. HAMMATT: Railroads have classified all employees in Class A, B or C categories.

The Class A, of course, includes the enginemen, firemen, motor men, conductors, switchmen and brakemen.

The Class B and C will permit possibly 20/20 in one eye and 20/40 in the other eye for entry to service.

I noted an entry requirement dated 1919 that a Class C employee must have 20/30 in one eye and 20/50 in the other eye for entrance to service. I do not know why these particular figures were picked. We do know that defective vision may be due to retinal disease, retinal hemorrhages, congenital defects and development, glaucoma, and possibly circulatory disturbances. Most of the visual defects, of course, are basically on a myopic basis and they may be progressive up to age 25 or 30, depending on the individual's inherited tendencies.

I feel that an individual in a Class A service which is considered to be the most essential part of the railroad industry as a fireman or a trainman, should start out with a normal vision of 20/20 without glasses. It is known that the Air Corps will not permit any pilots for training with

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I feel that an individual in a Class A service which is considered to be the most essential part of the railroad industry as a fireman or a trainman, should start out with a normal vision of 20/20 without glasses. It is known that the Air Corps will not permit any pilots for training with

vision of less than 20/20 when they start out. The FAA also will not permit any Class 1 pilots to function at their preliminary starting point with vision of less than 20/20 in each eye without glasses. The eyes have a tendency, as we age, to have attrition processes develop in them, and they have a tendency, let's say, in a few short years to show defects requiring correction with lenses. So, therefore, insofar as possible, the employee that is examined for the train service, I feel, should start out with normal vision so that we would have less difficulty in the later years of having defective vision.

The other class of employees, B and C, which include the rest of the railroad employees, have been listed as 20/30 in one eye and 20/40 in the other eye for entry to service. We probably do not have quite enough basis to limit them at that level. I personally feel that an individual with a vision of twenty-one hundreths, in either eye, which is possibly a negative 2 diopter lens, will not give us any more difficulty in any sooner number of years than an individual with 20/30 or 20/40 in eyes.

I think in certain categories such as clerical office work, that we could possibly even go as high as twenty-two hundreths for entry or twenty-four hundreths if they have not got a hazardous occupation. When we go up to twenty-two hundreths, probably around a negative 4 diopter lens, and if that vision becomes stationary, it should not deteriorate any further. If such an eye does not deteriorate any further, the employee can maintain that vision and do satisfactory work.

I feel, however, that an employee that is, say, out in the yards doing outside laboring work with a negative 4 diopter lens may be more of a hazard than one with a negative 2 lens. So, I usually recommend that outside employees or those in the laboring, mechanical or electrical departments, that twenty-one hundreths be considered as the limit of approval for these categories.

I might mention a few things on color defects. Color defects, of course, are hereditary basically. Very, very few of them are acquired. have a couple of satisfactory tests which we should use. The yarn test has now been discarded. I feel the Ishihara and Pseudo-Isochromatic color charts are satisfactory and are considered to be the only ones acceptable basically to the Air Corps, and to the Civil Federal Aviation Association. They have been recently recommended as the most acceptable for the railroads. Individuals, of course, who cannot pass the Ishihara or Pseudo-Isochromatic plates may possibly be given a Williams Lantern test, which is considered the final test to determine whether they have a complete color blindness.

I feel that Class A employees in the railroad industry should be able to pass the Pseudo-Isochromatic examination, or the Ishihara color plate for qualification in that category.

There may be found a few individuals in Class A service who were originally examined by the yarn tests years ago who may be partially

color defective. In other words, they could read the yarns at that time, but they cannot at this date read the color book, so therefore, they are only partially red green colorblind. I feel those individuals, when they are discovered in the service, should be prevented from operating on the main line of the railroad and should be placed in yard service on a restrictive basis.

There aren't very many, however, of that type of individual, so that the actual results will show that any employee who is a little bit colorblind should not be put in a position in which he is required to issue orders or in the operation of moving trains. If a person has been approved for service who is color defective, he should not be transferred or promoted to such a position which requires the use of normal color perception.

MODERATOR CLAYTON: Thank you. I would now like to introduce Dr. Vencel W. Hollo, Chief Surgeon of the St. Louis-San Francisco Railway, who will discuss administration of a vision program as it applies to his railroad and other railroads.

DR. V. W. HOLLO: Thank you, Dr. Clayton. Actually, Dr. Clayton has pretty well summarized the visual standards and also the method of examining and pre-employment standards of new employees. The only thing that I might comment on is that we have a periodic examination of people in service, and in Class A - and these periodic examinations are carried out biennially in people less than age 65. After the age of 65, they are carried out annually. The vision is examined and checked at these times.

Of course, the standards for people in service are not the same as those for pre-employment standards. The minimum standard for Class A employees is 20/30 in one eye and 20/40 in the other eye. However, I mean, with glasses, and of course, there are also borderline cases. We may detect early lens changes of senile cataracts. Many times these are incipient, and may still be corrected to the acceptable standards. However, these people are then put under a more rigid periodic examination depending on the recommendation of the oculist, which may vary anywhere from 6 months to a year, and even sometimes less. Once the standard or the vision is below 20/40 binocular vision, then, of course, consideration should be given to correction with surgery. The unilateral aphakic eye, or one eye having been operated, does permit binocular vision. There are certain oculists who will state that, with a contact lens on an eye that has been operated on, an individual may have binocular vision.

However, we have not accepted this as being acceptable to return people back into service, and we do not permit contact lenses in Class I or II employees. The only other comment I might make is that when defects are found, the employee is referred to one of our oculists to determine the underlying cause for progressive changes in vision, and if there are any other medical etiologic factors, such as diabetes, hypertension or other degenerative diseases.

vision of less than 20/20 when they start out. The FAA also will not permit any Class 1 pilots to function at their preliminary starting point with vision of less than 20/20 in each eye without glasses. The eyes have a tendency, as we age, to have attrition processes develop in them, and they have a tendency, let's say, in a few short years to show defects requiring correction with lenses. So, therefore, insofar as possible, the employee that is examined for the train service, I feel, should start out with normal vision so that we would have less difficulty in the later years of having defective vision.

The other class of employees, B and C, which include the rest of the railroad employees, have been listed as 20/30 in one eye and 20/40 in the other eye for entry to service. We probably do not have quite enough basis to limit them at that level. I personally feel that an individual with a vision of twenty-one hundreths, in either eye, which is possibly a negative 2 diopter lens, will not give us any more difficulty in any sooner number of years than an individual with 20/30 or 20/40 in eyes.

I think in certain categories such as clerical office work, that we could possibly even go as high as twenty-two hundreths for entry or twenty-four hundreths if they have not got a hazardous occupation. When we go up to twenty-two hundreths, probably around a negative 4 diopter lens, and if that vision becomes stationary, it should not deteriorate any further. If such an eye does not deteriorate any further, the employee can maintain that vision and do satisfactory work.

I feel, however, that an employee that is, say, out in the yards doing outside laboring work with a negative 4 diopter lens may be more of a hazard than one with a negative 2 lens. So, I usually recommend that outside employees or those in the laboring, mechanical or electrical departments, that twenty-one hundreths be considered as the limit of approval for these categories.

I might mention a few things on color defects. Color defects, of course, are hereditary basically. Very, very few of them are acquired. have a couple of satisfactory tests which we should use. The yarn test has now been discarded. I feel the Ishihara and Pseudo-Isochromatic color charts are satisfactory and are considered to be the only ones acceptable basically to the Air Corps, and to the Civil Federal Aviation Association. They have been recently recommended as the most acceptable for the railroads. Individuals, of course, who cannot pass the Ishihara or Pseudo-Isochromatic plates may possibly be given a Williams Lantern test, which is considered the final test to determine whether they have a complete color blindness.

I feel that Class A employees in the railroad industry should be able to pass the Pseudo-Isochromatic examination, or the Ishihara color plate for qualification in that category.

There may be found a few individuals in Class A service who were originally examined by the yarn tests years ago who may be partially

color defective. In other words, they could read the yarns at that time, but they cannot at this date read the color book, so therefore, they are only partially red green colorblind. I feel those individuals, when they are discovered in the service, should be prevented from operating on the main line of the railroad and should be placed in yard service on a restrictive basis.

There aren't very many, however, of that type of individual, so that the actual results will show that any employee who is a little bit colorblind should not be put in a position in which he is required to issue orders or in the operation of moving trains. If a person has been approved for service who is color defective, he should not be transferred or promoted to such a position which requires the use of normal color perception.

MODERATOR CLAYTON: Thank you. I would now like to introduce Dr. Vencel W. Hollo, Chief Surgeon of the St. Louis-San Francisco Railway, who will discuss administration of a vision program as it applies to his railroad and other railroads.

DR. V. W. HOLLO: Thank you, Dr. Clayton. Actually, Dr. Clayton has pretty well summarized the visual standards and also the method of examining and pre-employment standards of new employees. The only thing that I might comment on is that we have a periodic examination of people in service, and in Class A - and these periodic examinations are carried out biennially in people less than age 65. After the age of 65, they are carried out annually. The vision is examined and checked at these times.

Of course, the standards for people in service are not the same as those for pre-employment standards. The minimum standard for Class A employees is 20/30 in one eye and 20/40 in the other eye. However, I mean, with glasses, and of course, there are also borderline cases. We may detect early lens changes of senile cataracts. Many times these are incipient, and may still be corrected to the acceptable standards. However, these people are then put under a more rigid periodic examination depending on the recommendation of the oculist, which may vary anywhere from 6 months to a year, and even sometimes less. Once the standard or the vision is below 20/40 binocular vision, then, of course, consideration should be given to correction with surgery. The unilateral aphakic eye, or one eye having been operated, does permit binocular vision. There are certain oculists who will state that, with a contact lens on an eye that has been operated on, an individual may have binocular vision.

However, we have not accepted this as being acceptable to return people back into service, and we do not permit contact lenses in Class I or II employees. The only other comment I might make is that when defects are found, the employee is referred to one of our oculists to determine the underlying cause for progressive changes in vision, and if there are any other medical etiologic factors, such as diabetes, hypertension or other degenerative diseases.

MODERATOR CLAYTON: Thank you, Doctor. I now introduce Dr. W. E. Mishler, Chief Surgeon, Erie-Lackawanna Railroad.

DR. W. E. MISHLER: On our railroad, entrance to train service, both engine and otherwise, is 20/20 in both eyes. We do not allow men in train or engine service to use contact lenses, or to put it another way, the only place we allow contact lenses is in office employees. In other words, those people in other than office work are not allowed to wear contact lenses.

I think that we should mention glaucoma. We have many cases of glaucoma, and when discovered, they must submit periodic reports from their attending ophthalmologist at least every 90 days.

We also have another rule which is kind of a catch-all and that is th[illegible]ither functional or organic one-eyed men are not allowed to work ar[illegible]d moving machinery or cars.

MODERATOR CLAYTON: I would now like to introduce Dr. Peter Vaughan, Chief Medical Officer, Canadian National Railways.

DR. PETER VAUGHAN: We have been under a lot of pressure in our railway lately, as I am sure all of you have from time to time, to liberalize our vision standards.

Vision standards for all railroads in Canada are uniform. They are set by the railroads and they are enforced by federal legislation. Every few years these regulations are reviewed and some changes made.

For anybody who is interested, I have a copy of our vision regulations for the year 1912. And also one for our recently revised regulations for 1964. They differ very little. The question that arises immediately is: Why don't they differ? Operating procedures in railroads have changed considerably in the last 50 years, and particularly in the last 10 or 15 ye[illegible] We don't have any more steam engines. The engineman now sits in a[illegible]losed cab behine a wind screen with direct forward vision. Our switching operations have changed. We have automatic hump yards. We have train-to-train radio communications, train-to-dispatcher, train-to-station radio communication, and a whole lot of new operating procedures. The point is that operating procedures have changed considerably making the necessity for vision qualifications less stringent. Because there is less possibility of error on the part of the enginemen or yard man whoever it happens to be, and so many operations are becoming automated why could we not liberalize our vision standards somewhat?

With this in mind, we have held a great many conferences throughout our railroad system during the past few months, with our railroad medical officers, and with our operating officers, to see if we could arrive at a better idea as to what our modern operating procedures require.

We have received a great variety of very interesting answers. We were told, for instance, that yard service, far from being sort of a

waste paper basket in which to place disabled employees demands a very high degree of perfection in vision and certain other qualifications. Yard service now is done at relatively high speed. You have many cross-overs, many signals, and it is really a harder job than road service.

We were told, for instance, that stereopsis was not necessary for an engineman. After all, why should it be? He works in a two-dimensional field. It is not nearly so important for an engineman as for a commercial truck driver, for instance.

We were told that 20/50 vision, uncorrected, in each eye, was perfectly adequate vision. This was told to us by ophthalmologists and medical officers, and we were told a great many other things along those lines.

Now, we are reviewing our medical standards to see if perhaps we couldn't liberalize them. For many years, we have been more liberal than a lot of the railroads in the United States. We have allowed one-eyed men to work in engine service in Canada. We have never had a claim or accident where faulty vision was blamed.

As far as the other features which have been mentioned here today, our vision testing program is very similar to what has been described. I think I ought to just say something about these automatic vision testing devices like the orthorater and the sight screener. We don't think very much of them. We insist on a Snellen type of test at 20 feet.

In color vision, as was mentioned, we would like our applicants to be able to pass the Pseudo-Isochromatic charts, one type or another. The Williams' lantern has really gone out of business. It was never a good test. We used it for years, and we don't use it often any more. We use a modified Air Force type of lantern which we find much better. I might just mention here that there has been some work out in England showing that color vision does deteriorate with age, not through disease but simply through senile change in the color perception interpretation.

We have also noticed that. We have no statistics on it, but we noticed the older employees some times have difficulty in interpreting color tests. We do make some allowances for it in testing them with the Air Force lantern.

MODERATOR CLAYTON: There are a number of things which Napoleon took into consideration for evaluation for officers for selection. Health and youth, for example, were stressed, but he said this, "A body that can endure interminable riding without fatigue, the power to sleep at any moment and wake whenever he pleases, a stomach which can digest anything and makes no complaint at being put on short rations, and eyes that see and arrange everything." So the eye apparently is a very important organ in any field of endeavor.

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Railroad. Dr. Wipperman, will you comment on what you heard here today.

DR. WIPPERMAN: Thank you, Dr. Clayton. I am a part-time assistant professor at the University of Minnesota, but mainly in private practice, and yet I hesitate to qualify myself as a specialist because by definition a specialist is just an ordinary fellow a long ways from home and Minneapolis isn't very far from here.

I would like to say that when the first announcement of the meeting came up last June, and it was postponed, I did send out a letter to eight railroad Chief Surgeons and Medical Directors including the Illinois Central; the Atchison, Topeka & santa Fe; the Pennsylvania; the Canadian Pacific; the Canadian National; the Baltimore and Ohio; and the New York Central Railroad. I think the answers to the questions are relevant to the discussion here today.

In answer to the question, "Sould or would not a more liberal visual standard on entrance to service be realistic?" I got six replies from the eight railroads I contacted, and so my answers are in those percentages. Five answered, "Yes," and one answered, "No." So, it seems to be of general opinion that the railroad companies should liberalize their visual standards for not only their new applicants, but for their older employees when they are moved up to advanced jobs.

In answer to the second question, "What is the most practical method of determining color vision?" Five answered the Pseudo-Isochromatic Plates"; one answered the "lantern"; and one "plates and Lantern." So, it seems to be the opinion that the plates are the more practical and efficient method, and I assume is the method that is being used most universally.

Question 3, "Assuming an employee has a cataract, at what visual effect should he be taken out of service?" Four answered that he should be taken out of service when the vision is less than 20/50. One answered as low as 20/100.

MODERATOR CLAYTON: But that means correctable vision?

DR. WIPPERMAN: Correctable vision, right.

"Is or is not the employee with cataract surgery on one eye safe to continue in service?" Three answered that they should not be kept in the transportation or the running train service, and three answered it should be decided on an individual basis, so apparently some of these men do feel that one-eyed people who have satisfactory corrective vision after cataract surgery can be put back on their job.

I want to make a few statements about contact lenses in a few minutes, and I think this is particularly applicable to the monocular aphakic, who has satisfactory corrected vision with contact lenses. But I thought you would be interested to know how your fellow railroads are answering these questions.

They might not say it up here, but here to me they seem to say they won't qualify these people, but actually, from a practical standpoint they are putting people back to work in spite of their rules, it seems to me.

I know on the Soo Line we have several people who are monocular aphakics and are doing yard switch work. But these, again, are decided on an individual basis. I think we all know that some people after cataract surgery are clumsy and awkward and inefficient, and others just seem to be just equally as efficient as they were before the cataract surgery.

So, we come down to the next question: Would or would not an individual with a satisfactory result from a cataract surgery in both eyes be safe to return to work?" (A) A train man? Well, two of the railroads answered, "Yes." Three said, "No," and one had an equivocal answer.

For switchmen, the same percentages. For shop crafts, four said they would return the man to work. One said, "No," and one no answer.

Should an individual be permitted to wear contact lenses in the shop crafts? Five answered, "Yes."

Gentlemen, there are nine million contact lens wearers in the United States now, and this is going up a million a year. This means that one out of twenty people wearing corrective lenses are now wearing contact lenses. I am sure the unions are going to face you with the statistics and adaptability of the contact lenses and say, "Well, why can't we let this man go back to work with contact lenses?" This is a practical thing that is going to face all of you.

MODERATOR CLAYTON: Pardon me, I think the unions will find a good answer to that question in "Use of Contact Lenses in Industry" by the Council on Occupational Health of the American Medical Association, which appeared in The Journal of the American Medical Association, April 27, 1964, copies of which have been distributed.

DR. WIPPERMAN: I am sure part of the answer to that, too, is the AMA's.

MODERATOR CLAYTON: That is it.

DR. WIPPERMAN: The AMA's answer which is an excellent summary of the use of contact lenses in industry. They approach it with a word of caution, and it does have its disadvantages, but contact lenses are here to stay, and we have to face the practical applications of contact lenses.

On your own railroads in the answers, out of the six, five said they would permit an individual to return to the shop crafts, to be employed in the shop crafts, if they wore contact lenses.

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Question number 7, "Should an individual be permitted to wear contact lenses in the operating department of the railroad?" There we got 100 per cent, "No."

"Is the use of contact lenses after cataract surgery advantageous or not?" I think we all have to agree that they are advantageous.

"Should an individual who has been wearing contact lenses successfully be hired?" One hundred per cent, "No," to that in the transportation train service, and four out of six answered "Yes" outside the operating department, and two answered, "No."

I was interested in this question: "How many railroad companies pay for an employee's routine refraction examination, or any, or a part of the employee's safety glasses?" One out of the six railroads pays a part or all of the refraction examination. One railroad pays on an individual basis, and the other four do not have anything to do with paying for the fees of this.

I would appreciate it very much if we could show a couple of slides here.

As an oculist and a practicing ophthalmologist, who fits contact lenses, I would like to show you a couple of the advantages of contact lenses.

In ordinary aphakic perfection, you get a ring scotoma produced by the ordinary lenses, and this illustrates the ring scotoma. This is why I quite agree that trainmen should not be re-employed in the operating crafts after they have had cataract surgery, because of this ring scotoma.

(Slide) This shows the field plotted out, showing this ring scotoma. You people have been leery about putting train men back in service, and you understood that their field of vision was not full, but you may not have known exactly why. This is one of the reasons, because they get this ring scotoma effect.

Now, this, they do not have with contact lenses. Another other little trick you can try is this. If you hold up your finger like this and make a ring with your finger, hold it right up close to your eye, hold it right up close to your eye and look through it, and see how much of a field you have. All right, now put your curled finger out about a couple of inches from your eye, and you will notice how much your field of vision is cut down.

This is simply the effect that you have when you correct an aphakic with ordinary spectacle lens. He not only has a restricted field by 35 per cent, he also has this ring scotoma effect. This is eliminated by contact lenses.

Another effect that you have with ordinary aphakic correction is that you have a 25 per cent increase in image size. In contact lenses, this is reduced to about 5 to 7 per cent.

(Slide) Now, this shows the vision obtained by a contact lens. The field of vision is good, and you do not have the ring scotoma.

DR. MISHLER: Isn't that field only about 35 per cent as compared with the normal field of aphakic?

DR. WIPPERMAN: Are you talking about contact lens or aphakic?

DR. MISHLER: With contact lens?

MODERATOR CLAYTON: I think what he means, is that a full or normal field of vision is not present with a contact lens.

DR. WIPPERMAN: Yes, you have almost a full field. This shows the field of vision with your contact lens.

DR. MISHLER: I understand it is only about 35 per cent.

DR. WIPPERMAN: No, that is not true. Here you do have some restriction out at the end, but this is a series of visual fields with contact lenses, and you can see there is still somewhat of a ring effect, but it is well out in the periphery.

(Slide) Let's see. This is simply to illustrate the difference between looking through an ordinary cataract lens and looking through a contact lens. You will notice that in the lower left-hand side here, there is a picture of some steps, that the steps curve in from the periphery, and you have distorted peripheral vision, while on the right side, the stairs look straight. That is through a contact lens.

In the upper left, you have a figure of a girl, and you notice in the central area that the figure is clear, but the image in the periphery is blurred and distorted while that is through the ordinary aphakic correction. You will notice there is just a small area in the center in which the picture is sharp and clear.

Now, on the right side, you have the contact lens. Actually, you have a clear image just about in this area, and the rest is all curved and distorted. Here you have a clear image. This is certainly why there is a great deal of hesitancy about returning anyone to the operating train service who has had either monocular or bilateral cataract surgery.

I think that is the last slide on that.

But again, I want to repeat that we are fitting more and more contact lenses. We are getting more and more demand from people on contact lenses. There are nine million contact lense wearers, successful wearers in the United States now, and it is going up about one million a year, so you are going to be presented with this problem.

DR. MISHLER: The answer to that is that we are selling more Cadillacs, too.

MODERATOR CLAYTON: How much more time do we have, Dr. Olson?

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MODERATOR CLAYTON: I think what he means, is that a full or normal field of vision is not present with a contact lens.

DR. WIPPERMAN: Yes, you have almost a full field. This shows the field of vision with your contact lens.

DR. MISHLER: I understand it is only about 35 per cent.

DR. WIPPERMAN: No, that is not true. Here you do have some restriction out at the end, but this is a series of visual fields with contact lenses, and you can see there is still somewhat of a ring effect, but it is well out in the periphery.

(Slide) Let's see. This is simply to illustrate the difference between looking through an ordinary cataract lens and looking through a contact lens. You will notice that in the lower left-hand side here, there is a picture of some steps, that the steps curve in from the periphery, and you have distorted peripheral vision, while on the right side, the stairs look straight. That is through a contact lens.

In the upper left, you have a figure of a girl, and you notice in the central area that the figure is clear, but the image in the periphery is blurred and distorted while that is through the ordinary aphakic correction. You will notice there is just a small area in the center in which the picture is sharp and clear.

Now, on the right side, you have the contact lens. Actually, you have a clear image just about in this area, and the rest is all curved and distorted. Here you have a clear image. This is certainly why there is a great deal of hesitancy about returning anyone to the operating train service who has had either monocular or bilateral cataract surgery.

I think that is the last slide on that.

But again, I want to repeat that we are fitting more and more contact lenses. We are getting more and more demand from people on contact lenses. There are nine million contact lense wearers, successful wearers in the United States now, and it is going up about one million a year, so you are going to be presented with this problem.

DR. MISHLER: The answer to that is that we are selling more Cadillacs, too.

MODERATOR CLAYTON: How much more time do we have, Dr. Olson?

R. OLSON: Twenty minutes.

ODERATOR CLAYTON: Dr. Wipperman, some one nudged me and said ask you what percentage of ophthalmologists wear contact lenses?

R. WIPPERMAN: The most successful contact lens wearer is the ung adult female between the ages of 15 and 25. (Laughter)

ODERATOR CLAYTON: Dr. Wipperman, if you were the head of the edical department of a railroad, and the question arose as to whether u would permit an engineer to wear contact lens. What would be your cision?

Would you permit him or not?

R. WIPPERMAN: Dr. Vaughan made an interesting comment that is pl[illegible]le here. The trainmen are no longer hanging out the window and erating the engines, the coal-burning engines with air streaming past eir face. They are working behind nice, comfortable cabs, and is this t true?

R. MISHLER: No.

ODERATOR CLAYTON: But things can happen just the same. You re never isolated from foreign bodies?

R. WIPPERMAN: You are going to get foreign bodies in your eye whe- ier you are wearing contact lenses or not wearing contact lenses.

ODERATOR CLAYTON: But if he gets it under his contact lens while n duty he will have to be away from his post of duty until it is removed nd this should not occur.

R. WIPPERMAN: I don't think he is any more disabled. If a fellow has for [illegible]n body in his eye, that he can't get out, he isn't any more dis- ble[illegible]ith or without his contact lens.

ODERATOR CLAYTON: If he has to remove the contact lens, he would ave no one else to carry on for him. That is one reason the air lines, I nderstand, do not permit pilots to wear contact lenses. That is one eason. Another is that the lens may become blurred with moisture nd the wearer not be aware of it and there are many other things which an happen on duty.

R. MISHLER: They are more susceptible of ulcer of the cornea, too.

R. WIPPERMAN: That is true.

R. WIGHT: Are we allowed to ask questions from the floor? I have a few. You can direct them to whoever you want.

Earlier you said you disqualified applicants for employment with

20/100 vision for clerical work.

MODERATOR CLAYTON: No.

DR. WIGHT: You said that. I want to know why.

MODERATOR CLAYTON: I think that you misunderstood or did not hear accurately what I at least meant to say. I think that most applicants for clerical work if in the younger age group who have a vision of 20/400 or less should be disqualified even though it be refractive in origin. If the applicant has a good family history, no history of progressive myopia and if his eye grounds appear normal and there is no history or progressive condition, even with vision of 20/400 I would probably recommend his employment.

DR. WIGHT: I am afraid that I am not that interested in the young girl who is applying for work who has vision of 20/100 who wants to work. I am not going to dig into that. If she is corrected adequately, we will take her on.

MODERATOR CLAYTON: What I have said has been based not only on practical but also technical studies. Without elaboration if it is your desire to employ people with such findings that is your prerogative. Most of them will get along without difficulty in their earlier years but as they become older they may develop difficulty to the extent that it interferes with their efficiency.

DR. WIGHT: Ninety per cent of them are going to be grandmothers by then, and they are not going to be working. (Laughter)

DR. NELSON: Aren't you assuming something that is not entirely true? There are two things I would like to have cleared in my mind. By far the majority of people that would have vision, say, 20/30, 20/40, or even 20/50 are myopics. Wouldn't a certain group of these have vision in 5 or 10 years that is just as good as the one that is 20/20? If a person has vision of 20/30, 20/40, 20/50, and has a correction to 20/20, can't we assume that he has no real serious organic situation in his eye?

The second thing I would like to bring up is the fact that in our present classes B & C, a vision of 20/30, 20/40 and even up to 20/50 is accepted. I think that is an erroneous statement. I don't think we should accept those people unless they can obtain correction to 20/20, for the same reason that I have mentioned previously.

I would like to clarify these two points which I think are practical and something we ought to know.

MODERATOR CLAYTON: Dr. Wipperman, what do you think?

DR. WIPPERMAN: I think this is a very practical point. You can take a hyperope who is 20 years old and on his original application, he sees 20/20 or even 20/15, and he may be a hyperope of two diopters, and still

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see 20/20. Yet 10 years later, he can't see 20/40, and his correction is not changed. I certainly feel that if a person is correctable to 20/20 and has no ocular pathology, he should be considered for employment. It seems to me now with the stringent visual rules you have, you are passing up some good, intelligent people, and turning them down because of a visual problem.

MODERATOR CLAYTON: I agree. That is essentially what I have said in the protocol, gentlemen. I agree 100 per cent.

DR. WIGHT: There was one other.

DR. NELSON: Is correction to 20/20 an indication that there is not pathology?

DR. WIPPERMAN: No, this is not necessarily true because you can have glaucoma, retinal detachment, optic neuritis, a number of diseases and still have 20/20 vision.

DR. NELSON: We are talking about applicants who are probably in their 20 years which is a different situation.

DR. WIPPERMAN: I am afraid I am lost, Harvey.

DR. NELSON: We are talking about applicants for service.

DR. WIPPERMAN: Yes, sir.

DR. NELSON: Who probably are in the age 20 group. You are not going to be running into some of these things that you are talking about like glaucoma.

DR. WIPPERMAN: Not ordinarily.

DR. NELSON: That is the group that I am talking about, is correction 20/20 for the average examiner enough indication that a man doesn't have serious pathology if he has vision uncorrected to 20/30, 20/40 or 20/50?

DR. WIPPERMAN: I would say this is correct under ordinary circumstances.

DR. OLSON: I would like to ask Dr. Wipperman what uncorrected limits would you set on a man in the transportation department, correctable to 20/20?

DR. WIPPERMAN: Well, I hardly place myself on the pinnacle to answer this question, but I would say with reasonable safety that uncorrected vision of 20/40 or 20/50.

I think if you had 20/100 to 20/200 you get a high myope. This person, of course, is more subject to retinal detachment and to degenerative diseases than a person at 20/20.

DR. OLSON: Would you say a man at 20/50 is any greater risk, except for the need for glasses, than anyone with 20/20 at a comparable age?

DR. WIPPERMAN: I would say not. If we are dealing with a primarily refractive optical error, and an optical error of, say, a diopter of astigmatism, or any one of the refractive errors, I don't know why you should turn a person down because of this defect.

DR. OLSON: I don't either. I just wanted to get your concurrence.

DR. NELSON: Mr. Chairman, could I have the second part of my question answered? We now say 20/30, 20/40, 25/50 vision as such is adequate for allowing these people to return to work without any statement about their correction.

MODERATOR CLAYTON: It should be understood that the vision will be corrected to a satisfactory degree.

DR. NELSON: It isn't so understood in our regulations.

MODERATOR CLAYTON: I would not permit any individual to return to work until his vision is corrected to within normal limits. If he has some disease, it should be diagnosed.

DR. NELSON: This draws on the point I made before, that, if a person has got 20/30, 20/40 or 20/50 vision and can't be corrected to 20/20, then we are probably dealing with some pathology. I think we ought to spell it out in our vision requirements.

MODERATOR CLAYTON: In my protocol, to which you have access, I have stressed that the visual change must be refractive in origin.

DR. KNOWLES: Dr. Clayton, would Dr. Wipperman go on and tell us a little something about contact lens? We have had the problem of "it steaming up." Have they overcome that. It used to require the removal of the lens about every four hours. Also when they first came in, we had heavy contact lenses. We had light contact lenses and in some cases, they have not been a success.

Would he tell us a little about that? Is that overcome, "the steaming up," and so forth?

DR. WIPPERMAN: You would like to know how you can correct the disadvantages of contact lenses?

DR. KNOWLES: Some have to remove them, say, after four hours. Some "steam up."

DR. WIPPERMAN: Even for the successful contact lens wearer who can wear his contact lens for a period of eighteen hours, without any visual difficulty at all, we now recommend that they take off these lenses every four to five hours, clean them, rest their eyes for ten minutes to half an hour, and then reinsert the lenses.

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This gives them better vision and gives a little time for the cornea to readjust itself. The contact lens wearer whose vision blurs at the end of four hours is probably not properly fit, or he may have a blepharitis condition, blepharitis sica type of thing. He gets a lot of oil on his lenses and he has to take them out and clean them.

MODERATOR CLAYTON: Gentlemen, you have time for just a couple more questions.

DR. WIGHT: Part of my first question, Dr. Cyran made a remark which rather amazed me. First of all, he will let people wearing contact lenses work in certain occupations providing they wear ordinary glasses. I would like to ask the question, if this man accidentally drops his contact lens, how long is it before his vision returns to normal:

DR. CYRAN: We have discussed this with our ophthalmologist. I was under the impression at one time it takes quite a while, they said it is only a matter of a few minutes, actually.

DR. WIPPERMAN: This is a phenomenon called spectacle blur, and in some people this is very disturbing. Some people, when they shift from contact lens to regular glasses, it may only take a minute or two or five minutes. Some people it takes five hours and some people it takes five days, before they can see with regular lenses.

DR. WIGHT: And you still let that person work in the running trades if it takes that long, if he loses his lens?

DR. WIPPERMAN: I still feel the patient who takes five days has been improperly fit.

DR. SKINNER: Color vision is the commonest bugaboo I run into, outside of the serious cardiovascular problem. We have the same program that everyone has mentioned, but we all have employees who have been with us for many, many years before the Pseudo-Isochromatic tests. They do not pass them. We let them by on lanterns, or whatever facilities we have.

Now, perhaps, they are having green-white errors on the Williams' lantern, or whatever lantern you have. ' There are field tests given on an overhead, midnight and behind a barn, with all sorts of lanterns, and they pass those.

Do you accept these field tests, or are we going to have to take a man of 20 or 30 years' service with a perfect record, take him out of service on the basis of the Pseudo-Isochromatic test.

MODERATOR CLAYTON: I would not take him out of service, Doctor, if he can recognize individual colors. I would keep him under observation.

DR. MISHLER: May I say something? I don't care what you do or what any railroad does with a man, but I don't think you should accept so-called

field tests. The reason that I am against it and it should not be tolerated on any railroad, is because you have laymen who are deciding medical questions.

MODERATOR CLAYTON: I agree with that.

DR. RALPH JOHNSON: A man has had one cataract operation, where does he stand? Is he a one-eyed man?

MODERATOR CLAYTON: Surely, he is one-eye unless he is wearing a contact lens and has binocular vision.

DR. JOHNSON: He has a lens on the right side?

MODERATOR CLAYTON: He can conceivably get binocular vision. That is a little unusual, isn't it?

DR. WIPPERMAN: A monocular aphakic with ordinary spectacles does not get binocular, single vision, but with contact lenses, 85 per cent do get binocular single vision.

DR. ZEISS: Does the wearer of the contact lens reduce the sensitivity of his cornea?

DR. WIPPERMAN: His sensitivity is reduced because of the cataract surgery, not because of the contact lens.

DR. ZEISS: Suppose he doesn't have cataract surgery and wears contact lenses.

DR. WIPPERMAN: They have a tolerance. The corneal sensitivity is somewhat reduced. They develop a tolerance. This has been tested many times with the nylon fiber test.

MODERATOR CLAYTON: Now, gentlemen, we have a very limited time; we could go on indefinitely. Dr. Wipperman, would you briefly tell this group what is meant by binocular single vision?

DR. WIPPERMAN: I can give a didactic answer about binocular single vision. This is the process by which the visual protion of the cerebral sensory area combines with the sensory impulses initiated by two somewhat disparate retinal images of an object of regard into a single perception.

DR. MISHLER: Very good. (Laughter)

DR. WIPPERMAN: Now, shall I interpret that?

MODERATOR CLAYTON: If you will please.

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2. Chronic bronchitis, bronchial asthma, pulmonary emphysema, fibrosis, cor pulmonale.

   a. Diesel exhaust fumes

   b. Welding and burning operations

   c. Paint sprays

   d. Grinding operations

   e. Blast furnace operations

   f. Sand

   g. Chlorine Gas

   h. Coal dust

3. Silicosis

   a. Tunnel workers

   b. Asbestos (pipe insulation)

   c. Fiber glass (?)

4. Tuberculosis

   a. Tunnel workers

   b. shop fumes

Pathologic effects other than respiratory

1. Inhalation of noxious fumes, gasses or materials

   a. Carbon monoxide poisoning

      (1) Peripheral Neuritis

   b. Lead poisoning (Plumbism)

      (1) Peripheral neuritis

      (2) Renal Intoxication

   c. Trichloroethylene, perchloroethylene and carbon tetrachloride

      (1) Unconsciousness and death (cerebral)

      (2) Paroxysmal tachycardia and myocarditis

d. Damaged myocardium

(1) Coronary insufficiency

(2) Angina pectoris

In previous years, due to financial harassments, some railroads overlooked shop ventilation. Even today, not all shops and roundhouses are equipped with ventilatory fans, and not all fans are in working order. During the winter months, shops are poorly ventilated, due to windows and doors being closed, and men actually are working under conditions less than ideal. In summer, this problem doesn't exist because windows and doors are open, and there is adequate ventilation.

The panel's presentation is flexible, and you can interject questions at any time. The subject is open, and, if you wish to interrupt the panelist, you are welcome to do so. Some questions will be directed to an individual panelist, and I may even take the liberty of discussing the relationship of welding and burning fumes to pulmonary disease. Although they appear inocuous, I have sufficient literature and actual cases to impress you with the realization that welding and burning operations may have toxic possibilities.

You might say that threshold limits have been established for the noxious gases resulting from these operations, and that our safety and testing departments have found these gases are well within the threshold limits as established by the American Conference of Governmental Industrial Hygienists. However, if you recall the smog of Lenora, Pennsylvania, and the ones in Great Britain and Los Angeles, you will recall that they, too, were assayed for air pollution content and were found to be well within the defined safe threshold levels. Yet, because of a combination of other factors, they certainly were enough to produce death in those people who were subject to upper respiratory infections. So, merely to say that we have safe levels is not a satisfactory answer, and by the time we finish with our question and answer period, you will be convinced that the problem of pulmonary infection and pulmonary carcinoma is, indeed, a vital one to the railroad industry and well worth investigating.

We are going to start the panel presentation with Dr. Cyran, who is going to discuss briefly the general term - chronic broncho-pulmonary diseases and their relationship to diesel exhaust. He will also elaborate on Doctor Battigelli's report, "Environmental and Clinical Investigation of Workmen Exposed to Diesel Exhaust in Railroad Engine Houses."

DR. CYRAN: Dr. Kaplan asked me to spend about seven or eight minutes discussing chronic pulmonary disease, namely, emphysema, bronchitis and pulmonary fibrosis. Obviously, this doesn't give me much time to be very profound about this. However, with your indulgence, I would like to briefly define and describe this group of diseases so that we can be on common ground.

2. Chronic bronchitis, bronchial asthma, pulmonary emphysema, fibrosis, cor pulmonale.

   a. Diesel exhaust fumes

   b. Welding and burning operations

   c. Paint sprays

   d. Grinding operations

   e. Blast furnace operations

   f. Sand

   g. Chlorine Gas

   h. Coal dust

3. Silicosis

   a. Tunnel workers

   b. Asbestos (pipe insulation)

   c. Fiber glass (?)

4. Tuberculosis

   a. Tunnel workers

   b. shop fumes

Pathologic effects other than respiratory

1. Inhalation of noxious fumes, gasses or materials

   a. Carbon monoxide poisoning

      (1) Peripheral Neuritis

   b. Lead poisoning (Plumbism)

      (1) Peripheral neuritis

      (2) Renal Intoxication

   c. Trichloroethylene, perchloroethylene and carbon tetrachloride

      (1) Unconsciousness and death (cerebral)

      (2) Paroxysmal tachycardia and myocarditis

d. Damaged myocardium

(1) Coronary insufficiency

(2) Angina pectoris

In previous years, due to financial harassments, some railroads overlooked shop ventilation. Even today, not all shops and roundhouses are equipped with ventilatory fans, and not all fans are in working order. During the winter months, shops are poorly ventilated, due to windows and doors being closed, and men actually are working under conditions less than ideal. In summer, this problem doesn't exist because windows and doors are open, and there is adequate ventilation.

The panel's presentation is flexible, and you can interject questions at any time. The subject is open, and, if you wish to interrupt the panelist, you are welcome to do so. Some questions will be directed to an individual panelist, and I may even take the liberty of discussing the relationship of welding and burning fumes to pulmonary disease. Although they appear inocuous, I have sufficient literature and actual cases to impress you with the realization that welding and burning operations may have toxic possibilities.

You might say that threshold limits have been established for the noxious gases resulting from these operations, and that our safety and testing departments have found these gases are well within the threshold limits as established by the American Conference of Governmental Industrial Hygienists. However, if you recall the smog of Lenora, Pennsylvania, and the ones in Great Britain and Los Angeles, you will recall that they, too, were assayed for air pollution content and were found to be well within the defined safe threshold levels. Yet, because of a combination of other factors, they certainly were enough to produce death in those people who were subject to upper respiratory infections. So, merely to say that we have safe levels is not a satisfactory answer, and by the time we finish with our question and answer period, you will be convinced that the problem of pulmonary infection and pulmonary carcinoma is, indeed, a vital one to the railroad industry and well worth investigating.

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The many interpretations of the clinical terms have led to confusion in analyses of morbidy and mortality of these diseases, and especially through evaluation of the world's literature. For instance, the term "chronic bronchitis" is widely used in Great Britain where it is about the third commonest cause of death, while in this country, it has been in some disrepute and considered a sort of a waste basket covering a multitude of respiratory conditions.

The National Tuberculosis Association and its constituent associations have undertaken a program of public education in chronic respiratory diseases, and it has also published a manual for physicians, prepared by a committee of the Oregon Thoracic Society, summarizing some current concepts in the definition, recognition, and treatment of chronic obstructive pulmonary emphysema.

In the hope of finding common ground for discussion, I would like to share these with you.

CHRONIC BRONCHITIS is a disorder characterized by excessive mucous secretion in the bronchi, manifested by chronic or recurrent productive cough, arbitrarily from a minimum of three months to a year and for at least two successive years; in patients in which other causes of productive cough such as specific pulmonary infections, neoplasm, and heart disease have been excluded.

ASTHMA is a disease characterized by an increased responsiveness of the trachea and bronchi to various stimuli and manifested by a widespread narrowing of the airways, that changes in severity whether spontaneously or as a result of therapy. This area is best not applied to the bronchial narrowing, which results solely from bronchial infection or from destructive diseases of lung such as emphysema or from cardiovascular disorders.

"CHRONIC ASTHMATIC BRONCHITIS" is a commonly used term relating to patients with recurrent or chronic bronchial infection associated with bronchospasm. Some consider it part of the spectrum of chronic bronchitis, asthma, and pulmonary emphysema, and apply the term to patients exhibiting the typical features of two or more of these conditions. It has thus been applied to patients with chronic bronchitis or bronchiectasis who wheeze frequently, especially during exacerbations of respiratory infection and to patients with a past history of paroxysmal bronchial asthma who now have only intermittent non-paroxysmal wheezing and dyspnea. It is also used to describe emphysematous patients in whom a chronic wheeze and paroxysmal cough are salient features. Others use the term with the inference that there has been the onset of recurrent bronchitis and bronchospasm in middle or later life on the basis of so-called bacterial allergy arising from bronchial or sinus infection. On the whole, chronic asthmatic bronchitis would be a more useful descriptive term if we could agree upon a specific definition.

PULMONARY EMPHYSEMA can be described as an anatomic alteration of the lungs, characterized by an abnormal enlargement of the air

spaces distal to the terminal non-respiratory bronchiole, accompanied by destructive changes of the alveolar walls.

EMPHYSEMA is probably among the most baffling of the complexities of respiratory disease. It is frequently complicated and also obscured by a number of associated conditions in regard to functional, symptomatic, and morphological characteristics. It ranks second only to heart disease in the number of working men it afflicts. Actually, about one in ten people are developing the disease.

Statistics, in 1962, showed that about 7.2 per cent of the people were actually receiving disability for emphysema. Recently, in Boston, I think, the surveys found there were about 12 per cent of the people receiving disability for emphysema, so you can see that this is a real complex problem. It is an important problem, and so important that it was even written up in the Wall Street Journal about a year or so ago.

When we discuss PULMONARY FIBROSIS, we refer to the fibrosis that occurs in a number of specific and non-specific diseases affecting the lungs. Too frequently, it is not possible to identify the basic process from the x-ray examination of the lungs alone. It is necessary to correlate the histologic findings with associated changes in other organs as well as clinical data and special laboratory reports.

These aforementioned terms are those we probably are most familiar with and of great importance, because all can be claimed to be industrially related either through causation or aggravation. With expanding industrialization in this country, any physician may be called upon to identify and treat disease allegedly due to the working environment.

Certainly, our railroads are no exception, and, as we all know, only too well, are much more vulnerable. This could lead almost to sort of a defeatist attitude since many of the patients, who have chronic symptoms and are brought to the attention of a physician, have respiratory disease of moderate or even advanced degree. If we disqualify such a patient from his regular occupation, then cannot place him in some other job, and he must be retired before the normal age, he becomes a problem. In today's litigation-minded society, the FELA and the jury system, should he decide to seek legal counsel, the railroad is forced to assume the defense of a disease of non-specific etiology with many possible causative factors and/or aggravating ones.

Dr. Kaplan in his little pamphlet lists some of the preventive measures that actually should be instituted and those he recommends should be instituted rather than taking a defeatist attitude, I think there is a positive approach.

One of the positive approaches is that which Dr. Battigelli has been doing at the University of Pittsburgh. He started the program sponsored in part by a grant from the Association of American Railroads and also continued by the National Institutes of Health. What they did was in terms of clinical and physiological assessment, take a group of locomotive repair

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men currently exposed to diesel exhaust, and then compared them to a control group of railroad workers which were matched for size and age from the past extra-pulmonary history, but having no diesel contact. They surveyed two engine houses and studied in detail the engine houses to obtain a representative assessment of exposure conditions by some three hundred fifty atmospheric samplings for analysis of the various constituents of diesel exhaust. They did these summer and winter. They took them during different periods of activity and during different climatic conditions. Surprisingly, no alarming concentrations of the products of diesel combustion were found. The results showed no significant difference between the two groups relative to symptoms or chest abnormalities. They measured their vital capacities, their forced expiratory volume capacities, their maximum breathing capacities. They did diffusion studies and residual function studies, and found that actually there was no difference between these two groups.

The majority of complaints in both groups was from the smokers. There actually was better functional performance in the non-smokers. The study would indicate that diesel exhaust is not showing any evidence of pulmonary disability, and most of the abnormalities that were found were due to the smoking of cigarettes.

Dr. Hollo showed me an address by Mario C. Battigelli, Assistant Professor and Director, Diesel Exhaust Research, University of Pittsburgh, before the Forty-Second Membership Meeting of the Medical and Surgical Officers, St. Louis, Missouri, May 28, 1962.

His group also evaluated the carcinogenic potential of diesel exhaust, and his opinion, I think, to date is that they have found that in the normal functioning or normal efficient engine, there are no polycyclic hydrocarbons that are of carcinogenic potential. However, in a diesel that is not functioning, and when the diesel is apparently not idling properly, there can be some diesel exhaust which does have some hydrocarbons, especially 3-4 benzpyrine, which have carcinogenic potential. They show this by actually painting the skins of certain animals, and proving that skin cancan develop from the 3-4 benzpyrine. However, in studies actually exposing animals to inhalations of 3-4 benzpyrine, they were unable to develop any evidence of carcinogenic activity.

These studies are continuing, and will appear in the literature. They will be of great value to future claims of cancer from diesel exhaust.

MODERATOR KAPLAN: Thank you, Dr. Cyran.

Now, to contrast this view that diesel exhausts are not deleterious to the health of an individual, I am going to step out of bounds a little and go into the audience and ask Dr. Carouge, the Assistant Medical and Surgical Director, for the Baltimore and Ohio Railroad, to discuss a case which was handled by the Mayo Clinic.

This will impress you with the type of medical-legal action that has to be anticipated due to exposure to diesel exhaust.

DR. CAROUGE: In July 1963, a locomotive fireman reported off sick and sought medical care from his local attending physician. He told him that he was suffering with peripheral neuritis, and in turn, referred him to the Mayo Clinic.

Shortly after this, we were advised by a letter from the attending physician at the Mayo Clinic that it was felt this gentleman's peripheral neuritis was secondary to inhalation of fumes from his work. I, in turn, wrote to the doctor and asked him to please advise the basis on which he felt that this was a fact. In a letter which I received, he said that, "Although it is true there is little, if any, documentation in the literature of possible relationship of peripheral neuritis to hydrocarbons, we have seen a number of patients who have had peripheral neuritis, in whom there was heavy exposure to various volatile hydrocarbons and solvent mixtures, and the clinical course which these patients demonstrated leads us to believe that there is a relationship between peripheral neuritis and exposure to hydrocarbons in these instances. For instance, we have had under observation one individual who was exposed to solvents and cleaners in his work and who developed a severe peripheral neuritis, which cleared up after his exposure was eliminated. Another individual was exposed to the fumes from gasoline and diesel motors and had similar difficulty which also cleared up after his occupation was changed. Although it is extremely difficult to prove the relationship of the development of peripheral neuritis and these agents, at times we have been convinced enough about the possible relationship that we felt justified in suggesting to this man that he should assiduously avoid the heavy exposure to hydrocarbons to which he was subjected in his work."

We, in turn, put this problem to Dr. John C. Krantz, who is a Ph. D and professor of the Department of Pharmacology at the University of Maryland. We told him what the components were in the diesel fumes which had been analyzed, and he wrote back and stated that, "Of all the constituents present in the gas, the fumes to which the fireman was exposed that might have caused peripheral neuritis, carbon monoxide is the only one that can be incriminated: it has been shown that repeated exposure to this agent causes degeneration of the nervous system, and microscopic examination reveals specific damage to the nerve cells. Long exposure produces lack of sensitivity in the fingers which is indicative of neuritis."

Inasmuch as we felt there was not a high enough concentration of carbon monoxide either in the diesel cab or the atmosphere adjacent thereto to cause the neuritis, we would not accept his claim of relationship of the neuritis with his work.

MODERATOR KAPLAN: Dr. Hollo has also been interested in any possible relationship of diesel exhaust to production of lung pathology and will now cite his experiences in this field. Dr. Hollo.

DR. HOLLO: Thank you, Dr. Kaplan. First of all, my personal contacts in studies of Carcinoma of Lung among railroad employees have been strictly on a clinic basis. All of our pulmonary diseases requiring

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surgery have been referred to our Consultant Chest Surgeon, Dr. Thomas Burford, who is on the staff of Washington University Group - Barnes Hospital.

In a series of cases of one thousand and eight patients with primary Carcinoma of the Lung, between January 1, 1948 and December 31, 1955, the distribution of Lung Cancer by Age is as follows, as reported by Dr. Burford:

Age	Number	Per Cent
20-29	2	
30-39	22	2
40-49	164	17
50-59	375	37
60-69	361	36
70-79	80	8
80-89	4	
Totals	1,008	100

The Surgical Pathology Division at Barnes Hospital recognizes the following classification:

A. Epidermoid Carcinoma

B. Undifferentiated Carcinoma

C. Adenocarcinoma

D. Dronchiolar (Alveolar Cell) Carcinoma

E. Small (Oat) Cell Carcinoma

All cases of Bronchial Adenomata have been excluded from this series.

The histologic nature of the tumors is as follows:

Type	Number	Per Cent
Epidermoid	572	57.0
Undifferentiated	287	28.5
Adenocarcinoma	107	10.5
Bronchiolar	13	1.0
Small (Oat) Cell	15	1.5
Mixed Epidermoid and Adenocarcinoma	14	1.5
Totals	1,008	100.0

Of the 35% of the total group that was resected, 22% survived 5 years. There were no 5 year survivors in the group that was not resected, no matter what the treatment was. 70% of the non-resected group were dead within 6 months. If those who survived 5 years after resection are related to the total 1, 008 cases, the over-all cure rate is 9%.

Dr. Burford stated that the critical period of survival in this series was the first 30 months after resection. Of the patients who survived at least 30 months, 75% lived to become 5 years survivors.

Dr. Burford also stated that there is no greater incidence of Bronchogenic Carcinoma among railroad workers than among the general male population.

I think everybody has repeatedly heard these papers presented. There is only one paper that has impressed me, and this is of great importance with reference to railroad employees. It was the report from the Advisory Committee of Health, which was given to me by Dr. Kaplan, on railroad diesel gas and dust. This work was carried out by the Public Utilities Commission in California, and in summary again they show no particular relationship between the diesel fumes in railroad workers as being of a greater incidence amongst this occupation versus others in the locale.

Now, returning to the report that Dr. Cyran presented on chronic, obstructive pulmonary emphysema, I will read one paragraph from National Tuberculosis Association, which I think warrants reading:

(7) THE MEDICOLEGAL ASPECTS OF C. O. P. E. arise not infrequently, particularly in workmen who manifest the disease and who attribute it to occupational exposure. Their physicians may have supported such a claim out of the conviction that an etiologic relationship to conditions of employment existed. The present Oregon Industrial Accident Laws require that to be "occupational" a disease must be "Peculiar to the industrial process, trade, or occupation" and "arise out of and in the scope of such employment." In our present state of knowledge of emphysema, especially the weight given to smoking in its causation, and from the experience of seeing the disease in many "white collar" workers as well as in those exposed to possibly noxious and irritating dusts and fumes, one must conclude that generally speaking, C. O. P. E. does not fit into this definition of an occupational disease. Only in the occasional case of bronchial asthma clearly related to occupation and eventually complicated by C. O. P. E. would one decide in favor of the workman. It is possible, and even probably, that occupational exposure has aggravated emphysema in many patients, if only by contributing to their cough and bronchospasm, but exacerbation of a pre-existing disease by occupational exposure is not compensable under Oregon Law."

MODERATOR KAPLAN: Thank you. Similar opinions are also expressed in my paper that was published in the Journal of the AMA (December 12, 1959). It presented a rather comprehensive study of 6,506 deaths among railroad workers; and this included 800 deaths from all types of malignancy of which 154 involved lung cancer. This study indicated that noxious gases actually were not a factor in the production of lung

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As stated before, we are not going to discuss the tobacco controversy. We had also included this in the original lung cancer investigation, and, as in other studies, it indicated that lung cancer was definitely associated with an excessive amount of cigarette smoking, especially in clerks.

The next question is directed to Dr. Zeiss: Should employees with lobectomies or pneumonectomies be permitted to return to work?

DR. ZEISS: I believe we must consider the fact that we are dealing here with a person who has a large part of their vital capacity removed, and so consequently, we must be very careful in where we place this individual. I am quite in favor of placing the individual only in a sedentary position and avoiding all harm for that individual, because in my own private practice, I have had two one-lung patients who were involved in automobile accidents; both these individuals had fractured ribs on the good side, and both died within 24 hours. When we in the railway business attempt to put a man back to work and expose him to hazards, we must remember that he might injure the good side, break his ribs, get a contused lung, pleurisy or even a pneumonia, cause almost instant death, and we are liable.

MODERATOR KAPLAN: Dr. Rosen, as a representative of the Railroad Retirement Board, what is your attitude, or that of the Board as far as disqualifying or granting an annuity to an employee who has had a lobectomy or pneumonectomy and has been disqualified by the carrier's medical officer, yet has been considered able for duty by his personal physician?

Let's say he has had a pulmonary carcinoma removed, has had a lobectomy, and for all practical purposes appears to have gotten a so-called "cure."

DR. ROSEN: We usually go along with the carrier and say that he can work.

MODERATOR KAPLAN: The carrier says he can't work, but the family physician gives us a certificate that the man is able to work.

DR. ROSEN: Are we talking about total and permanent disability?

MODERATOR KAPLAN: As an example, we have a panelist who says he will not permit his employee to go to work because the latter has had a lobectomy for removal of pulmonary carcinoma. His family doctor and his surgeon stated he could go to work. He has had 30 years/ service, and is 60 years of age.

DR. ROSEN: We would go along with the carrier. If the carrier recommends that he is not able to work, we would go along with the carrier essentially.

You came up specifically with an occupational type of case, not a total and permanent disability case.

MODERATOR KAPLAN: Let's put it another way. Suppose he didn't have his occupational requirements, having but 17 years of service, and being 54 years of age.

DR. ROSEN: Well, on that basis, I think that we would be influenced by pulmonary function studies. If the vital capacity was substantially reduced to one second and two second vital capacity, and if the maximum breathing capacity was substantially reduced, by that, I mean below 50 per cent, why, we would say that man is totally and permanently disabled.

MODERATOR KAPLAN: Then perhaps we are being unfair to the employee by disqualifying him without rather thorough and extensive pulmonary studies to determine whether he has the functional capacity to work?

DR. ROSEN: I think that is true.

DR. HOLLO: First of all, if an individual has had a pneumonectomy, obviously his functional capacity is less than 50 per cent.

DR. ROSEN: That is not true.

MODERATOR KAPLAN: We have other opinions on the subject. This is an important question, well worthy of discussion.

DR. LEIGH: I always feel, regardless of pneumonectomy or other cause, if you get a vital capacity of less than 60 per cent you have got an impaired man who cannot perform in railroad service. I would like to get an opinion from others whether they agree or not.,

MODERATOR KAPLAN: Let's suppose the employee has had a segmental lobectomy or pneumonectomy, and postoperatively has a functional vital capacity in excess of 60 per cent. Would you disqualify him from going back to work just because he had an operation for removal of carcinoma of the lung?

DR. LEIGH: If he goes below 60 per cent, I feel he is not going to do his work.

MODERATOR KAPLAN: This holds for any disease then?

DR. LEIGH: Yes.

DR. CYRAN: Wasn't there a case, I think discussed in one of the AAR Bulletins a year back or so, where the New York Central disqualified a man?

MODERATOR KAPLAN: Yes, a trackman named Braswell.

DR. CYRAN: And he sued [illegible]

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MODERATOR KAPLAN: He collapsed while assisting in carrying ties and injured himself. The court ruled that the railroad was not liable for the injuries because the plaintiff was unable to show a causal connection for the collapse. Thus, from the legal standpoint, Dr. Zeiss, I think the courts are upholding us in allowing these men to return to work following lobectomy.

DR. GRAHAM: On the other hand, to cite the other angle, we had a case of tuberculosis in a World War II veteran. He was disqualified by specialists in the VA about six years ago because of marked fibrosis, and he had about a 30 per cent loss of function. The man was having difficulty in working and was only working about three-fourths of the time. He got a railroad retirement, and was off about two years when the same specialist from the VA then certified him as being able to return to work. We sent him to our specialists and they did lung function studies on him. They said he had about a 30 per cent loss, and they agreed that he probably could work, but might have a little shortness of breath on heavy exertion. We allowed this man to return to work subsequent to further observation, and we have had periodic reports every two months, every four months and every six months. He has worked rather steadily for the last two years without any serious complaint so far as we are concerned.

MODERATOR KAPLAN: Very true. Laboratory tests are frequently not an accurate index.

DR. ROSEN: In that second category, we must go by certain definitions of the law; and you people are thinking in terms of putting him back to work. The second part of the Act on total permanent disability says, "This man must be permanently disabled to perform any regular employment." Now, "any regular employment" in any industry. That takes in a lot of territory. It doesn't necessarily mean that this individual can do the work that he was doing in the railroad. I don't know if you follow me on this point or not. In other words, any desk job, a man with a 60 per cent maximum breathing capacity should be able to perform a desk job.

MODERATOR KAPLAN: In summation, employees in laborious occupations can be permitted to resume duty following lung surgery, provided the remaining lung tissue is normal and there is adequate breathing capacity. Many individuals in the 55-60 year group have a reduction in vital capacity corresponding to that of a lobectomy.

Due to time limitation, we will now discuss noxious fumes in tunnel operations. It is fascinating to pass through the long tunnels in West Virginia and observe members of this craft at work. They have regular assignments as tunnel supervisors, mechanics, trackmen and laborers, and generally spend their working careers as such. Theoretically, one would assume that if exposure to diesel fumes and gases produced pulmonary changes, then this would certainly be the group of employees where we would find pathology, such as tuberculosis, silicosis, pulmonary emphysema, chronic bronchitis, fibrosis, or lung cancer. However our statistics fail to reveal this.

I am going to ask Dr. Wight, who has had much experience with Canadian tunnel work, to elucidate on this subject, and tell us whether or not he thinks employees should work with respirators and how much tuberculosis or silicosis is found in such workers. Perhaps he might also discuss the relationship of tunnel fumes and gases to the production of certain respiratory diseases, such as chronic bronchitis.

DR. WIGHT: Thank you very much. Breakfast will be served in 10 hours. (Laughter)

Before answering that question, I would like to make a few remarks about some things that have been said so far.

Air pollution. Air pollution is an important thing, but is is something that is misunderstood to a certain extent. People are too impressed by figures.

In England air pollution is very high, particularly the sulphurs. There are millions of tons--millions of tons per annum. It is physically possible to remove the sulphur content from the gases, and they did in an experiment at the Battersby Power Works on the Thames in London, where they generate power from soft coal. They had the smoke belching out and polluting the atmosphere. Nobody paid any attention to it. They used that as a pilot study. They installed a means of removing the sulphur which basically was washing the gases with water from the Thames, and they can remove the sulphur 95 per cent. They did this.

After they had removed the sulphur 95 per cent, they were flooded with complaints about sulphur in the air around the Battersby Power House. Ninety-five per cent of it had been removed. They couldn't understand it until they studied it further, and it was so simple. The hot gases coming out burned through the clouds, dissipated through the countryside and nobody knew anything about it. The coal gases, as they were, after they had washed the sulphur out, were reflected in a number of mushroom effects from the clouds and fell in a small area around the power house, and the 5 per cent of the sulphur left everybody in that area complaining about it.

Now, in answer to the question: Should tunnel workers be forced to work with respirators? I don't think so. We can't see any reason for it.

MODERATOR KAPLAN: Thank you, Dr. Wight.

Is there anyone else who might wish to make a few comments on the subject of tunnel exhaust or fumes or gases?

DR. GRAHAM: Wasn't this a CNR study about four years ago?

DR. WIGHT: No, the CNR did a detailed study under the river between Detroit and Windsor. Dr. Vaughan can comment on that.

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DR. VAUGHAN: Yes, we did two studies. We have two main tunnels in our system, one under the St. Clair River, as has been mentioned, which is slightly over a mile long, and one through Mount Royal in Montreal which is about three miles long. We did exhaustive studies in these two tunnels and we found that there was no hazard from serious concentration of toxic gases.

There was an accumulation some times of a large amount of particulate matter, which might have been irritating, but it was an inert particulate matter, and the gases really didn't reach any hazardous concentration.

MODERATOR KAPLAN: Thank you, Dr. Vaughan. Incidentally, in 1959, I wrote to Dr. Halperin who was and still is the Chief Medical Examiner for the City of New York and asked him about noxious fumes in their two tunnels (Lincoln and Hudson). This was of interest since I was at that time writing the paper on lung cancer. He stated, even though the special police worked eight-hour shifts, there were no unusual health incidents and they have had no more respiratory disease or lung cancer than one would find in the general public. This is another factor which leads us to believe that gasoline and diesel fumes are not quite as noxious as some of these air pollution experts would have us believe.

MODERATOR KAPLAN: Dr. Longeway, would you be kind enough to answer the question, should railroad employees who are constantly exposed to noxious fumes or lung irritants have routine chest x-rays?

DR. LONGEWAY: We know that constant exposure to noxious fumes and lung irritants cause pulmonary irritation and pulmonary disease. The simplest way to detect these is by chest x-ray. Bronchitis is probably the most common, and it may mask a lot of things, such as carcinoma, tuberculosis or emphysema.

So, I think periodic routine chest x-rays are very much in order.

I also think it would be tremendously important, almost as important as back x-rays, to get chest x-rays to use as a base line or guide.

MODERATOR KAPLAN: I think it is also of interest to take pre-employment chest x-rays from the standpoint of getting the approximation of the cardiac silhouette, because some young people have enlarged hearts, and there is no reason to burden management with a potential cardiac when you can eliminate him at the pre-placement stage.

DR. WINTERS: What are these noxious fumes? All others have said there are no noxious fumes.

MODERATOR KAPLAN: Do you want to get into that, Dr. Longeway?

DR. LONGEWAY: There are a lot of noxious fumes. You gave us a paper which shows a lot of things that are interesting there, and actually smog is a very common thing that we see in some of our cities, which certainly

acts as a noxious fume to just the ordinary citizen.

MODERATOR KAPLAN: On the same question, as to what is meant by noxious fumes, we know that diesel fumes have as by-products, carbon monoxide, carbon dioxide, nitrous oxide, sulphur dioxide, and aldehydes. These chemicals in high concentration can be very irritant, especially to lung tissue that is abnormal. Whereas, employees with healthy lungs can tolerate increased concentrations of diesel exhaust, others with diseased lungs will cough and become short of breath at the same exposure.

Welding fumes also contain noxious gases and can produce "metal fume fever" due to exposure to zinc, copper or brass. With acetylene burning, the arc rod contains various chemicals, such as carbon, manganese, nickel, chrome, sulphur and iron. Some rods have as high as 18% chromium content and eczematous hand eruptions and facial sensitivity have been reported in the medical literature. A paper is being readied for publication concerning a possible relationship of manganese (14% in rods) to Parkinsonism.

Also, in burning operations, such as dismantling of old cars, there is exposure to lead in the paint. In the past, most railroads used paint and primer undercoating having heavy lead content, and, when burned, the lead fumes are inhaled and absorbed into the blood, producing plumbism or chronic lead poisoning.

There is a possibility of developing an allergic reaction due to exposure to noxious fumes. If you are interested, here is a reprint of a very unusual case. One of our employees maintained that, every time he welded with a specific acetylene cylinder and rod, he erupted in hives and became short of breath.

We had him examined in Cincinnati and a diagnosis was made of pulmanary emphysema. However, he still maintained that he was unable to weld due to the eruption and shortness of breath. We brought him to Baltimore and did an actual usage test on him. He was taken to our local shop, and chest and skin specialists were assigned to observe him at work. The employee used his regular welding unit, with the acetylene cylinder and "Airco" rod.

Within five minutes after pre-heating the rod, he became short of breath, and within another three minutes, broke out in urticaria over his body.

There is no question but that this employee was sensitive to something in the welding process. We are not in a position to project the answer, although it would be of scientific interest to discover why he reacted. Was he sensitive to one of the by-products of the acetylene burning, the acetylene itself, or could it have come from the metal rod contents (chrome manganese, etc.).

It was decided that this was a compensable issue and, following settlement, he applied and was granted a disability annuity.

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DR. NELSON: Dr. Kaplan, there is a tendency today to use acrylics in spray painting instead of the usual lead paints and enamels. It is my understanding the fumes from these acrylic sprays don't have the tendency to settle down like the previous paints that they used.

What has been your experience with the effect of acrylic sprays, and what have you done to combat exposure to them?

MODERATOR KAPLAN: We actually aren't using many acrylics yet, but it is in the literature that the acrylics and epoxy resins are sensitizing, and I think they have had more dermatological than pulmonary problems.

DR. NELSON: I have seen some men in this type of work and they develop asthmatic rales which usually clears up when they are off duty over the weekend.

MODERATOR KAPLAN: Has anybody else had any experience with acrylics or epoxy resins as far as pulmonary conditions are concerned?

DR. CYRAN: That has been reported in the literature. I think there is an article in the Navy Bulletin that is sent out to the Navy Reservists discussing epoxy resins and their toxic effects in industry, and they do mention that this is one of the complicating factors.

Some people can develop asthmatic symptoms. In fact, some of them develop them so severely that even walking by an area that has been using epoxy paint makes them acutely asthmatic and this sensitivity apparently persists and may even last for their life.

We are using epoxy paint in Altoona, however, instead of the polyamine catalyst, they use polyamide, which is less sensitizing, and, with adequate ventilation, we don't have any problems as yet.

We have had the industrial hygienist check this out and, before we approve any of the paints that are being used, we get a complete breakdown from the company that makes the paint. This paint is then evaluated by the testing department, and, as I say, our industrial hygienist reviews it and gives us an opinion as to whether this paint can be used safely and what precautions should be taken.

We are using it, of course, with adequate ventilation and adequate protection, respiratory protection and, so far, we have had no complaints.

DR. NELSON: Thank you.

MODERATOR KAPLAN: I have one more subject that I would like to throw into the audience and the panel, and I think it is of tremendous importance.

DR. WIGHT: Before we go on to that, could we just give this a little more attention?

Again I want to come back to this question of published reports and so on and so forth. You mentioned a while ago smog in Los Angeles and the incident at Lenora. The incident at Lenora in the Muse Valley, they were specific things, but the smog in Los Angeles and London are different problems.

I am not trying to say that smog is good. It isn't, but, after the very bad episode they had in Los Angeles a few years ago, there was an epidemiological study done by the Department of Health. They took as a criterion the admission to ten major hospitals during and subsequent to this period. In elderly patients with bronchitic or cardiac chest conditions generally, to their surprise, they found that there was no increase in admissions at all during this period.

There have been similar studies made in London during the smog epidemics. I am afraid the studies there are equivocal. Some say that there is a greater increase in admission to hospitals; some say there isn't.

I am not trying to say that smog is good, but what I am trying to say is let's not be carried away by the newspaper reports that blare forth terrifically with figures and whatnot on these things.

MODERATOR KAPLAN: Thank you. I am going to direct the next problem to Dr. Winston, and, if he doesn't feel in the mood, he may bow out gracefully. What are some cardiovascular effects that result from toxic exposure to fumes?

I thought perhaps you might have the answer, and, instead of asking you this morning, I decided to save it for this afternoon.

DR. WINSTON: I am glad you saved it because I wouldn't have known any more about it this morning than I do this afternoon. (Laughter)

Now, then, will you ask the question again?

MODERATOR KAPLAN: What are some cardiovascular effects that result from occupational exposure to noxious fumes?

DR. WINSTON: I will defer the question to the Chairman. (Laughter)

MODERATOR KAPLAN: I think a member of this group, Dr. Cyran, can take over very adequately, as the question concerns both the cardiovascular and the pulmonary panels.

DR. CYRAN: You say you have read about this. I would almost pass to you, too.

You are asking about the toxic effects on the cardiovascular system?

MODERATOR KAPLAN: That is correct. As an example, [illegible]

DR. NELSON: Dr. Kaplan, there is a tendency today to use acrylics in spray painting instead of the usual lead paints and enamels. It is my understanding the fumes from these acrylic sprays don't have the tendency to settle down like the previous paints that they used.

What has been your experience with the effect of acrylic sprays, and what have you done to combat exposure to them?

MODERATOR KAPLAN: We actually aren't using many acrylics yet, but it is in the literature that the acrylics and epoxy resins are sensitizing, and I think they have had more dermatological than pulmonary problems.

DR. NELSON: I have seen some men in this type of work and they develop asthmatic rales which usually clears up when they are off duty over the weekend.

MODERATOR KAPLAN: Has anybody else had any experience with acrylics or epoxy resins as far as pulmonary conditions are concerned?

DR. CYRAN: That has been reported in the literature. I think there is an article in the Navy Bulletin that is sent out to the Navy Reservists discussing epoxy resins and their toxic effects in industry, and they do mention that this is one of the complicating factors.

Some people can develop asthmatic symptoms. In fact, some of them develop them so severely that even walking by an area that has been using epoxy paint makes them acutely asthmatic and this sensitivity apparently persists and may even last for their life.

We are using epoxy paint in Altoona, however, instead of the polyamine catalyst, they use polyamide, which is less sensitizing, and, with adequate ventilation, we don't have any problems as yet.

We have had the industrial hygienist check this out and, before we approve any of the paints that are being used, we get a complete breakdown from the company that makes the paint. This paint is then evaluated by the testing department, and, as I say, our industrial hygienist reviews it and gives us an opinion as to whether this paint can be used safely and what precautions should be taken.

We are using it, of course, with adequate ventilation and adequate protection, respiratory protection and, so far, we have had no complaints.

DR. NELSON: Thank you.

MODERATOR KAPLAN: I have one more subject that I would like to throw into the audience and the panel, and I think it is of tremendous importance.

DR. WIGHT: Before we go on to that, could we just give this a little more attention?

Again I want to come back to this question of published reports and so on and so forth. You mentioned a while ago smog in Los Angeles and the incident at Lenora. The incident at Lenora in the Muse Valley, they were specific things, but the smog in Los Angeles and London are different problems.

I am not trying to say that smog is good. It isn't, but, after the very bad episode they had in Los Angeles a few years ago, there was an epidemiological study done by the Department of Health. They took as a criterion the admission to ten major hospitals during and subsequent to this period. In elderly patients with bronchitic or cardiac chest conditions generally, to their surprise, they found that there was no increase in admissions at all during this period.

There have been similar studies made in London during the smog epidemics. I am afraid the studies there are equivocal. Some say that there is a greater increase in admission to hospitals; some say there isn't.

I am not trying to say that smog is good, but what I am trying to say is let's not be carried away by the newspaper reports that blare forth terrifically with figures and whatnot on these things.

MODERATOR KAPLAN: Thank you. I am going to direct the next problem to Dr. Winston, and, if he doesn't feel in the mood, he may bow out gracefully. What are some cardiovascular effects that result from toxic exposure to fumes?

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DR. WINSTON: I am glad you saved it because I wouldn't have known any more about it this morning than I do this afternoon. (Laughter)

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DR. CYRAN: You say you have read about this. I would almost pass to you, too.

You are asking about the toxic effects on the cardiovascular system?

MODERATOR KAPLAN: That is correct. As an example, [illegible]

aggravation of pre-existing cardiovascular disturbances because of excessive inhalation of noxious fumes.

DR. CYRAN: I suppose the most obvious cardiovascular effect from exposure to pulmonary irritants or dusts would be the late effects of exposure to certain dusts like silica, asbestos, or the mining of bauxite. The exposure and the changes that take place in the lungs over the years probably do bring about the development of cor pulmonale and eventually signs and symptoms of right heart failure. These would be just a few of the major pneumonoconioses.

We can go into pulmonary irritants such as various chemicals like sulphur dioxide, nitrogen dioxide, or acrolein formaldehyde, or ammonia. These can create quite a severe respiratory irritation, and then through the chain of events, the respiratory irritation can cause cough and bronchial constriction, and with bronchial constriction, you get capillary dilatation, exudation of serous fluid, and this causes anoxia by interference with gaseous exchange, which causes increasing blood pressure and venous pressure with increasing exudation. Depending on the duration of exposure or the severity of the exposure, this will lead to increased viscosity of the blood. Then I suppose, cardiac dilatation and, if you are exposed long enough, eventual death, unless asphyxia causes death first by literally "drowning in his own secretions."

If the exposure is not so severe, that it causes death immediately or shortly thereafter, I suppose the man with underlying coronary heart disease who has asymptomatic heart disease might be incapacitated because of the possible anoxia that develops and he might become predisposed to coronary insufficiency, not necessarily coronary thrombosis, but I would suspect that prolonged coronary insufficiency might cause myocardial damage or perhaps even subendocardial infarction, which could be a result of the toxic exposure.

I think the important point here is the solubility of the pulmonary irritants and again the severity of the exposure. The more soluble ones aren't quite as dangerous because they affect the upper respiratory tract, and the conjunctiva, and you get irritation of the eyes and mouth and the upper respiratory tract.

The ones that are much more dangerous are the oxides of nitrogen, for example. These are not as soluble, and get down deeper into the bronchioles and alveoli, and then have delayed effects, so that the man actually may look all right after exposure, but a little while later may suddenly develop pulmonary edema, and eventually die.

I think Dr. Graham was discussing a case with me this morning in which his Pullman Company was involved with our company in a man who was exposed in a fire in a Pullman car, and I think they used a carbon tetrachloride fire extinguisher. The man was seen and examined and there was nothing obvious. He had some minor burns. These were treated. He was sent home and about twelve or fifteen hours later apparently started developing difficulty with his respirations. A physician

who wasn't immediately available.) This was at 5:00. By 6:00 he died. By 7:00 the physician was there, but obviously too late. This was considered probably due to some of the products of carbon tetrachloride, possibly phosgene, which Dr. Graham would take exception to, because I think carbon tetrachloride has to be exposed to pretty high temperature to break down into phosgene. It might have been some of the material they have in the mattress. I know cellulose can give out toxic fumes which may cause respiratory embarrassment eventually.

Some of the others - carbon monoxide, obviously through its anoxic effects will eventually cause some cardiovascular problems, again depending on the degree of underlying heart disease and duration of exposure. Perhaps a mild case of carbon monoxide poisoning escapes without any cardiovascular effect. However, the one that is exposed a little more severly may develop subendocardial hemorrhages, and actually may have a definite myocarditis as evidenced by ST segment changes and changes in the electrocardiogram suggestive of myocardial damage or at least temporary damage. They may develop arrhythmia. They may develop conduction defects.

Some of the more notorious cardiovascular toxic effects come from exposure to some of the chlorinated hydrocarbons like trichloroethylene or carbon tetrachloride. These can cause death either by respiratory paralysis or by ventricular fibrillation or cardiac standstill.

MODERATOR KAPLAN: Thank you, Doctor. I think you can readily realize that these chemicals are not extraneous to our workers. Trichloroethylene, carbon tetrachloride, and methyl chloroform are used very commonly in our shops as degreasers, and men go down into the pits to clean out the grease. As you know, these volatile hydrocarbons settle and there have been cases reported where men have become unconscious through the inhalation of these fumes. They act as anesthetics, and, in addition, can exert their toxic effect on the heart through cardiac standstill.

DR. CLAYTON: How about perchlorethylene?

MODERATOR KAPLAN: Perchlorethylene is another member of the same family, the aromatic hydrocarbons.

Gentlemen, are there any questions you would like to ask on the cardiovascular aspect or any other phase of the respiratory problem?

If not, we thank you, and we will now turn the meeting over again to Dr. Olson. (Applause)

CHAIRMAN OLSON: Well, again, we have listened to some very erudite discussions on a subject which is very timely and important to us.

We thank the moderator, Dr. Kaplan, all of his panel as well as you in the audience as participants.

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Friday Morning Session
March 5, 1965

The meeting of the Association of American Railroads, Medical and Surgical Officers, held in the Boulevard Room of the Sheraton-Chicago Hotel, Chicago, Illinois, reconvened at nine o'clock, Harvey Nelson, M. D., Chairman, presiding.

CHAIRMAN NELSON: The meeting will come to order.

I am pleased with the turnout we have this last day, which is always a little bit of a letdown, and starting a half-hour earlier certainly did not help matters. I hope there will be others who will be coming in later.

We have two very interesting and two very excellent portions of our program coming up, one regarding diabetes, which will be the first on the program instead of the neuropsychiatric situation. Diabetes is one that we have not received for some time. My recollection is that it is about 10 years, and, we certainly want to bring the matter up to date.

The other, on neuropsychiatric problems, is something new; and I am sure all of you appreciate the fact that this is something that we are going to have to face more and more. Before we actually start our program this morning, Dr. Mishler tells me he has a word or two he wants to announce to you.

DR. WILLIAM E. MISHLER (Chief Surgeon, Erie-Lackawanna Railroad): I have no right to be here, being in an unofficial position, but without detracting from those who have contributed to this meeting, aside from Dr. Harvey Nelson, I think it is only right that we all agree that this has been one of our best meetings. I would therefore suggest that we all stand and give a hand to Dr. Harvey Nelson who has arranged a very excellent program.

(The Assembly arose and applauded.)

CHAIRMAN NELSON: I am very much embarrassed. If I knew that was what Dr. Mishler was going to talk about I do not think I would have let him come up here. I am sure that all of you belong to organizations and know that a program like this is not a one-man show. There have been others who have put a tremendous amount of time into this, and I have received the credit. Later on, however, I want to give credit to those who should have it.

The question of diabetes is one that we should take a second look at. The pressure of the American Diabetic Association; the pressure of the unions; the improved control of diabetics as far as their safety and working ability are concerned constitute something which we have to face, and I think we, in accumulating our new medical standards, will have to consider that. It is with that in mind that we felt we should bring up the subject of diabetes at this time and take a new look at it.

I know that Dr. G. Earle Wight will adequately handle this panel. In our panel we have five internists and one surgeon. Therefore, I think we will have all aspects of this diabetic situation handled.

I will ask Dr. Wight to present his panel.

PANEL SYMPOSIUM - DIABETES

MODERATOR WIGHT: We have a very large subject to cover this morning, and we have very little time in which to do it. You are going to listen to a few platitudes, but I think it is a good thing that we take stock of ourselves at times.

We talk about changes taking place in the world. There is nothing more dynamic, or changing as fast as medicine.

If you care to think back 50 years ago, practically all medicine or all diseases were treated on an empirical basis. They had to be because we did not know anything else about them.

As recently as the first World War, when blood transfusions were used for the first time in any great quantity, nothing was known about blood typing or blood grouping. This has all come about since.

Diabetes falls into that category. Up until 1920, diabetes was a fatal disease. It was in 1924 that Banting and Best discovered insulin, and then the whole picture changed.

In the late Thirties, for the first time, diabetics could get insurance. This was quite an advance.

The next major advance was the discovery of the oral hypoglycemic agents. There were some disadvantages in connection with this, for the first hypoglycemic agent, the name of which I have forgotten, was used for five years before it became known that it was causing liver damage and was discarded.

There are more oral hypoglycemic agents used now than ever before, but paradoxically there is also more insulin being used now than ever before.

I think that can be explained on the basis that more diabetics are being discovered. They are coming forward for treatment. They were afraid of the needle of insulin before that.

Diabetes, as we all know, is a progressive disease under the best of circumstances, but with good treatment the rate of progression can be slowed down and the complications delayed and become fewer in number. Conversely, with poor treatment the complications are much greater.

As a disease, diabetes is one that with perfect treatment and perfect cooperation of the patient can be pretty well controlled and [illegible]

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As a disease, diabetes is one that with perfect treatment and perfect cooperation of the patient can be pretty well controlled and [illegible]

treated; but I would not hesitate to say that the vast majority of diabetics are poorly treated. This does not just apply to the smaller centers or rural districts; this holds true right in the cities.

Too often people just dish out tablets. No attempt is made to control the diet. Too often complete reliance is put on the first morning specimen, which is the best specimen of the day, incidentally, and the dosage is adjusted according to this.

Now we should have a little idea of our problem. It is estimated by various people that on the North American Continent, in the United State and Canada, about one-and-a-half per cent of the people have diabetes and know it. Another one to two per cent have diabetes and do not know it, or are destined to have diabetes. In round numbers that means that in our two countries there are approximately three million known diabet nd two to four million additional unknowns or people who will have it.

There is a tendency nowadays to reduce everything to figures, and is very comforting if you can put something down numerically. Out of a hundred per cent, 65 per cent of diabetics do not require insulin. Of the remaining 33 per cent, 11 per cent may require insulin but will get off it later. Of the 22 per cent left, 10 to 14 per cent may get by on the oral hypoglycemics for up to possibly three years, but they will eventua require insulin. The remaining eight per cent are the problem cases, the juvenile or brittle diabetic.

With this very brief outline we are going to put the panel to work. The panel members you all know, so I am not going to introduce them individually. First, I am going to call on Dr. John Winston to speak fo a few moments on his aspect of the disease.

DR. J. R. WINSTON (System Medical Director, Atchison, Topeka & Santa Fe Railway):
The question you want me to answer is No. 4?

MODERATOR WIGHT: Talk a little on the oral hyperglycemic drugs.

DR. WINSTON: I thought there was a question about the oral hyperglycemic case.

Let me talk about No. 5, then.

MODERATOR WIGHT: Good!

DR. WINSTON: I know all of you can read, but in the event you do not have it before you, and so that I know what I am supposed to talk about, it says: "The theory is sometimes advanced that orinase and other ora agents are less hazardous than insulin. Is this true?"

My impression is in using this frame of reference, it is hazardous but the oral agents serve a very definite purpose. To compare them w insulin is sort of like comparing a 12-gauge shotgun and a 300-magnum rifle. Both of them are good in their particular areas. They can be in

changed to a degree. One will do certain things that the other one is not expected to do.

So, as a by and large matter, I would counter this question by saying that this question was directed toward the area of the less hazardous cause of hypoglycemic reactions. In that instance, perhaps it is--that is, the oral agents are less hazardous and less likely to produce hypoglycemic reactions, for several reasons, and I will not attempt to go into the chemistry at all or even describe the hypoglycemic agents separately.

The oral hypoglycemic agent, however, is almost always used in the adult onset, stable type of diabetic. It should not be used in the juvenile or the diabetic with complications, or in the brittle diabetic. Therefore, it is not used in the diabetic who is most susceptible to hypoglycemic reaction.

The very nature of the drug is such that it also is less responsive as a hypoglycemic agent than is insulin, and for that reason you have fewer reactions.

Let us not get into out thinking, however, that hypoglycemic agent reactions do not occur with oral agents. There are many instances in the literature, and if you would like I can give you the references, where hypoglycemic reactions have occurred with the use of oral agents.

Now, did you want me to talk a little bit about diabetes in the relationship to orinase, dymelor, and DBI? If you did, I do not know anything about them, nothing that everybody else does not know.

MODERATOR WIGHT: When the questions from the floor come in covering these particular subjects we will not hesitate to refer them to you, Dr. Winston.

Thank you very much.

Dr. Johnson, would you care to talk on some of the cardiac aspects of diabetes?

DR. R. A. JOHNSON (Medical Director, New York Central System): There are no specific complications in the cardiovascular system due to diabetes except as a precipitating factor in athero and arteriosclerosis, or individuals who have poorly-controlled diabetes who do have a tendency to have vascular as well as neurological complications, secondary to poor diabetic care.

I would like to amplify your point, Mr. Moderator, and say that I am amazed at the relatively poor treatment of many diabetics on our System, because it is in the main so relatively easy to control diabetes today with the agents that we have available.

The only difficulty is it requires some sacrifice, and I do not think our employees are any more inclined to self-sacrifice than yours.

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I would like to amplify your point, Mr. Moderator, and say that I am amazed at the relatively poor treatment of many diabetics on our System, because it is in the main so relatively easy to control diabetes today with the agents that we have available.

The only difficulty is it requires some sacrifice, and I do not think our employees are any more inclined to self-sacrifice than yours.

I am disturbed, however, at the complacency of the medical profession; at the persistence of glycosuria as we find it on periodic examination. Nonetheless the attending physician will say that his patient is free of sugar in the urine, and he has had a urinalysis and the blood sugar is within limits. Yet, if we go over our charts we find the patient has 2 to 4-plus glycosuria; and it seems to me that individual is asking for trouble.

I do not know that there is any specific correlation between coronary insufficiency, hypertension, stroke, except as it is uncontrolled diabetes.

There is a very real risk to the individual in his late forties, early fifties, who has diabetes, who has minimal hypertension, who invariably has obesity, and having complications in his cardiovascular retinal neurological system because of poor control.

I firmly believe that adequate clinical control of diabetes can prevent cardiovascular complications as well as neurological ones.

DR. WINSTON: If I may make a point here, Bill Wade, in DIABETES, March-April 1959, reported a series, and he said that clinically significant cardiovascular renal disease was present in 29 per cent of the workers.

That was broken down this way: that 26 per cent of those receiving insulin, even, had this complication; and 39 per cent not receiving insulin.

I just wanted to take a little exception to Ralph's statement, that I feel some comfort if the man is well-controlled. I do not feel secure, however.

MODERATOR WIGHT: Gentlemen, the situation is rapidly becoming normal. We have the panel members arguing among themselves. Please feel free to interrupt at any time to ask any questions. Theoretically what we had planned to do was to cover a few of the fields, and the complications, and then we would get down to specific questions.

Dr. Leigh, would you care to say a few words on the surgical aspects?

DR. SOUTHGATE LEIGH, JR. (Chief Surgeon, Seaboard Air Line Railroad):
I think that anyone who has amputated a leg on a diabetic is struck with the tremendous amount of fatty deposits in the femoral artery, and in the popliteal artery.

There is a marked narrowing in the lumen of these arteries, and because of that there is bound to be change in the muscles, particularly the calf muscles and the small muscles in the feet.

I have noticed there seems to be more in your supposedly controlled diabetic on these oral drugs. Apparently they are not controlling the atherosclerosis.

I do not believe that some of these enginemen who have these changes in their arteries in their legs really know whether they have their foot on the dead man's pedal, or not.

That is not entirely on the arterial side. A lot of that is the neuropathies. They say the neuropathies come only where your diabetes is not controlled, but apparently we are seeing a lot of them now in the diabetic who is supposedly under good control.

The charcot joint, especially around the ankle and in the foot bones is readily observable. You see quite a few of those in the supposedly well-controlled diabetic.

I cannot help but feel that next to the hypoglycemia that you can get from not taking your drug properly, or eating--not eating and taking your drug, and so forth, where they have these periods of not knowing what they are doing, that, of course, represents the most dangerous thing in the railroad employee.

Next to that, however, the changes in their arteries, and the changes in the nerve setup, the nerve changes that they have as a result of diabetes, seem to be significant.

I noticed recently there have been a lot of studies. The x-ray people are having a wonderful time in injecting these arteries--the femoral arteriography. When they list their cases, anywhere from six to 20 per cent of these narrowed lumen that they have been injecting every two or three years to see what kind of progress is taking place in these arteries, anywhere from six to 20 per cent in the statistics are in the diabetic.

Therefore, we have to watch the arteries, certainly from the popliteal on down.

I have tried recently using a blood pressure cuff around the foot to see if there is any excursion in your small manometer, to tell what the pulse is in the anterior or posterior tibial artery. But you usually get them mixed up because the important one, the posterior tibial you have a difficult time feeling normally, and with the blood pressure cuff you cannot distinguish between the anterior or the posterior tibial artery.

From the surgical point of view I cannot help but agree with John R. Winston.

CHAIRMAN NELSON: Might I just add to that, that the oscillometer is an excellent addendum to determining the circulation in the lower extremities, and I think might be something we could consider using on people who have questionable circulation in the lower extremities.

MODERATOR WIGHT: Dr. Clayton, you are supposed to be up here with the rest of the panel, and while you are on your way up you had better begin thinking about what you are going to say, because you are going to talk about diabetic retinitis.

I am disturbed, however, at the complacency of the medical profession; at the persistence of glycosuria as we find it on periodic examination. Nonetheless the attending physician will say that his patient is free of sugar in the urine, and he has had a urinalysis and the blood sugar is within limits. Yet, if we go over our charts we find the patient has 2 to 4-plus glycosuria; and it seems to me that individual is asking for trouble.

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DR. MILTON B. CLAYTON (Chief Surgeon, [illegible]
Mr. Chairman, with your permission I would like to [illegible] remark for a half-minute.

A number of the men have commented about contact lenses, and I seem to have the impression that perhaps I was unalterably opposed to the use of contact lenses.

To the contrary, I am not.

I agree with what Dr. Wipperman has said, largely; but this is the thing which concerns me, gentlemen. When the lens has been removed from an eye we have a crippled eye, regardless of how you look at it. There is nothing going to take the place of the natural lens any more than something is going to take the place of a limb. We use an artificial appliance in our prosthesis.

In the eye we are using something artificial. So, when you put on top of a crippled eye an artificial appliance, something artificial such as a contact lens, then you have two strikes against you. I think we have a problem, and here is our problem--in convincing the ophthalmologist. He has an excellent result technically, but as I see it we make a great mistake in putting on the engine a man with a crippled eye, regardless of what his distance or near vision might be.

Now we go to the subject of diabetic retinopathy. I think I can very well express that in a case illustration which I shall give you briefly. Only recently I saw an officer, a high officer on a railroad, whom I have known for some time. I also saw him seven years ago.

At that time he accepted a plus 50 sphere in each eye.

He has been to a number of ophthalmologists in the last two years and has had his glasses changed a number of times. He is a diabetic; he is approximately 60 years of age; and he has gout.

He wanted my opinion. He was very confused about what was taking place. Today he accepts a plus 50 sphere in his right eye, and a minus 2 sphere in the left eye.

The ocular fundi are essentially normal in appearance with the exception I think there is some change in the normal and natural lustre of the optic disk on the left side. Something is taking place in this eye as a result of his diabetes. I am convinced of this.

So, we have a change of vision. We have visual changes; loss of vision; failure of vision; frequent changes of glasses; and that is a common symptom in the diabetic.

Now for the findings, and this is a very interesting study. You do not have to be an ophthalmologist, gentlemen; I was in my beginning a general surgeon. Later I specialized, in those days you would not [illegible]

that, so I have had, in my age, a rather unusual type of training which we do not have these days. So, to me I have learned an awful lot and I still can learn an awful lot by observing the ocular fundi in any case. You just do it routinely, but you have to have a system.

I will agree with Ralph Johnson that the working person, the person with whom you are working is better able to make the aspect clear; but we can learn regardless of our feelings.

The clinical hallmark is the presence of hemorrhage; exudates; cotton wool patch; or an infarct in the posterior portion of the fundus.

One of the most serious complications is the oozing of blood into the vitreous, bringing about a clouding of the media, with retinal detachment. This is a serious complication and not infrequently leads to blindness.

Another serious complication that occurs is the occlusion of the central retinal vein, with the subsequent development of an intractible glaucoma.

I am going to show a few slides later, and I will use the words "exudates" and "cotton wool patches," so the men will be in position to evaluate this expression.

What is the difference between an exudate and a cotton wool patch? Dr. Wipperman, would you care to answer that?

DR. F. F. WIPPERMAN (Chief of Ophthalmology, Soo Line Railroad): I think we have to realize that diabetic retinopathy is due to an alteration of hemo-dynamics.

The latest way of expressing the pathology of the retina is they attribute it to what they call a shunt mechanism. I think if we understand this, we can understand the basic pathological process.

The small microcapillaries are composed of neural and endothelial cells. For some reason in diabetes, the neural cells seem to disappear. This allows a decrease in the capillary tone of the vessels; and if you will imagine a figure Y, and the blood coming through this Y, over here (Indicating) we have loss of the neural cells, and more blood is shunted off into this arm (indicating) of the Y.

With this shunting-off process you get dilatation of the microcapillaries and formation of these microaneurysms. You get then transudates which produce the cotton wool exudates.

In the other branch of this vessel you get decreased blood flow, and anoxemia, and you get a microinfarct. It is the microinfarct that produces your hard, yellow, waxy discrete exudate, while in your area of the microaneurysm, which your transudate is, is where you get your cotton wool patch.

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DR. CLAYTON: Thank you very much.

Gentlemen, I would like to show you a few slides which I think will graphically tell the story better than we can in words.

While we are waiting for our operator, I would like to read one statement which I think is of significance:

"A diabetic retinopathy reflects neither the severity nor the course of diabetes."

Well, I will have to wait; go ahead with the slides.

(Slide) These slides are all from diabetics. In diabetes, the veins, are predominantly disturbed, more so than the arteries. Here are the nerve heads. Here (indicating) is the central retinal artery coming out with the temporals, and so on, which is a branch of the ophthalmic, which, in turn, is a branch of the internal carotid.

The veins are elongated. They are straightened. We do not notice a particular change in the arteries.

Here you see is a macula (indicating). You can see these whitish round dots, which are characteristic of diabetes, and when we speak of these white spots this is what we see.

You can see these roundish microaneurysms, or hemorrhages.

There is a lot of theory still about the extent of aneurysms on a comparable basis, but we do see in diabetes, hemorrhages, and they are usually of the round type. They can be of a flame shape, but you will notice that never are the larger vessels involved unless there is a hypertensive neuroretinopathy. Diabetes is a capillary disease.

(Slide) You see here (indicating) the white spots which we have been talking about; and you see here (indicating) are these hemorrhages scattered throughout.

(Slide) You see the same thing here again. Here is the macula (indicating); you can see them out on the peripheral part. Here (indicating) are the hemorrhages again.

(Slide) This is a rather beautiful picture of these whitish formations. You see they are encircling the macula, the hemorrhages, and where they completely encircle the macula you have a ring shape. That is almost a classical picture associated with diabetes.

It is true, however, they might have something else. Here (indicating) you see the hemorrhages again, and you will notice, gentlemen, one other thing; in the true diabetes you will seldom ever see a person with diabetes with any swelling of the nerve head. When we get the hypertensive, we get a blurring of the nerve head with hemorrhages, and so on. You seldom see that in diabetes per se.

(Slide) You see here the white patches (indicating); the hemorrhages surrounding the macula, and so on.

You can see these veins straighten out, and become elongated, and so on.

(Slide) You see again these white spots and hemorrhages.

(Slide) You see (indicating) the whitish characteristic, and this is a beautiful picture of your real microaneurysm. You can see these roundish hemorrhagic areas, and it is a beautiful picture; and when you see that, believe me, in my case I am going to begin to look for diabetes.

(Slide) Also, you see the larger vessels are not involved. You can see it is a capillary disease. You see the pigmentary formation, the hemorrhage, and so on.

(Slide) Here is something which we not infrequently see in diabetes, and this is a very disturbing thing. The central retinal vein I mentioned before not infrequently in the severe case becomes occluded, and then we get glaucoma, and usually blindness.

Here (indicating) is blockage of the superior temporal part of the vein. You can see this is just a beautiful picture.

(Slide) You see again these whitish spots scattered throughout, and so on; also, there you are getting pallor of the entire fundus.

Thank you very much, gentlemen.

MODERATOR WIGHT: Thank you, Dr. Clayton.

We will now get down to some of the practical considerations of diabetes.

First of all, there is a question I would like to pose to the panel for their opinion. The individual who is over 40 years of age; grossly overweight; has a diabetic curve--is he a true diabetic? Who on the panel wants to answer that?

DR. STANLEY J. CYRAN (Medical Director, Pennsylvania Railroad): I think before we leave diabetic retinopathy an important point in discussing some of the symptoms is in checking their visual acuity. If you are not checking them very closely you will find that they are not looking directly ahead into the Snellen chart, and you may find that their vision is actually incorrect because they were looking through the peripheral part of the retina. Most of the degeneration is macular, and you lose a lot of central vision, and some of these people can compensate by turning the head and allowing the image to fall on other parts of the retina not involved.

Would you agree with that?

DR. CLAYTON: Thank you very much.

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DR. WIPPERMAN: Yes. I think there is [illegible] brought up about this disturbed vision that I [illegible]

You can have a neuronal degeneration, a degeneration [illegible] in the retina, which can precede the vascular changes, and [illegible] disturbance of vision in these people. You can look in the fundus and actually will find it looks pretty normal, as near as you can ascertain. Microscopically, however, there is definitely neuron degeneration [illegible] accounts for some of this visual disturbance.

Secondly, in the case that Dr. Clayton mentioned, in which he had a plus-50 in one, and a minus-200 in the other, obviously this man was having some neurotic lens difficulty to make him more myopic rather than diabetic.

DR. CYRAN: Now to go back to the original question.

I know Dr. Wight will disagree. If we take the definition of diabetes as a relative or absolute deficiency of insulin, no matter what the cause, I would say that this man must be considered a diabetic. Sure, you take his weight off, and his diabetic curve improves, and maybe he is again showing a normal glucose utilization. If he gets obese again, however, he perhaps will develop a diabetic curve as compared to a somewhat overweight individual who does not have an abnormal curve. There must be some reason why this man has the abnormal curve; if so, I would say he is a diabetic.

MODERATOR WIGHT: Are there any other comments from the panel?

My question was: Is he a true diabetic?

DR. CYRAN: What is your definition of a "true diabetic?" What do you mean by that?

MODERATOR WIGHT: A true diabetic--there is a pancreatic deficiency.

DR. CRYAN: Not if you go by the definition of a relative or absolute deficiency of insulin. In this case there is a relative deficiency of insulin.

DR. CLAYTON: It has now been established that you can find evidence of diabetes, the classical diabetes, in the ocular fundi. Yet, it has not been established by clinical tests, that is, by blood sugar, and so forth.

So, diabetes is an insidious disease. It is a hidden disease. To me it is there, regardless, with the individual. I think it is largely genetic, and I think something is going on with this individual and will continue to do so all of his days, even though he does not show an abnormal amount of sugar in the urine or in the blood.

DR. CYRAN: If you consider the true diabetic the one who has the genetic predisposition, as the identical twin of a diabetic, or the person who

... a mother and father who are diabetics, if you consider that person ... true diabetic, that is one consideration. Perhaps I could not classify ... overweight man in that category.

DR. WINSTON: This matter of true or false in this day and age is somewhat academic. As I view it, we must consider this man a diabetic. He should consider himself a diabetic, and handle himself accordingly; and I feel that this has raised a good point, and that is all too often, we, or at least some people, are inclined to take some comfort because this man is not a true diabetic, if that is correct.

When I am reviewing the files that go over my desk, it is not unusual in this day to see a notation that this man has glycosuria. He had hotcakes for breakfast, but he is not a diabetic.

I think we should consider anyone who has glycosuria, anyone who has an elevated blood sugar above the allowable curve, anyone who has the typical or unusual diabetic glucose tolerance curve, so far as I am concerned, is a diabetic, and I think that he should consider himself a diabetic, and with that in mind perhaps he will be able to treat himself, and will be in a better frame of mind to treat himself as he should be treated.

MODERATOR WIGHT: This is a question that is often discussed, and it was put to me at one time in a manner that I can understand, this overweight, over-aged individual is comparable to a pancreas that is satisfactory for a Shetland pony, but will not function properly in a clydesdale; and if you get his weight down he will have a normal curve.

Are there any other comments on that? What do you people think about that?

DR. A. J. SUTHERLAND (District Surgeon, Louisville & Nashville Railroad):
Mr. Moderator, along that same line I would like to ask someone on the panel to discuss this particular case. I had one Monday, a fellow who had a coronary in November. He originally weighed 265, and he is six feet two.

His doctor brought him down to 225, but had not put him on any oral or insulin therapy.

I talked with him on the phone, and I asked him why they had not. His blood sugar is running around 200.

He said that if I put him on orinase, or any of the oral medications, he will quit losing weight. Is that true with the use of the oral hypoglycemic agents?

MODERATOR WIGHT: Would you care to answer that?

DR. WIPPERMAN: Yes. I think there is [illegible] brought up about this disturbed vision that I [illegible]

You can have a neuronal degeneration, a degeneration [illegible] in the retina, which can precede the vascular changes, and [illegible] disturbance of vision in these people. You can look in the fundus and actually will find it looks pretty normal, as near as you can ascertain. Microscopically, however, there is definitely neuron degeneration [illegible] accounts for some of this visual disturbance.

Secondly, in the case that Dr. Clayton mentioned, in which he had a plus-50 in one, and a minus-200 in the other, obviously this man was having some neurotic lens difficulty to make him more myopic rather than diabetic.

DR. CYRAN: Now to go back to the original question.

I know Dr. Wight will disagree. If we take the definition of diabetes as a relative or absolute deficiency of insulin, no matter what the cause, I would say that this man must be considered a diabetic. Sure, you take his weight off, and his diabetic curve improves, and maybe he is again showing a normal glucose utilization. If he gets obese again, however, he perhaps will develop a diabetic curve as compared to a somewhat overweight individual who does not have an abnormal curve. There must be some reason why this man has the abnormal curve; if so, I would say he is a diabetic.

MODERATOR WIGHT: Are there any other comments from the panel?

My question was: Is he a true diabetic?

DR. CYRAN: What is your definition of a "true diabetic?" What do you mean by that?

MODERATOR WIGHT: A true diabetic--there is a pancreatic deficiency.

DR. CRYAN: Not if you go by the definition of a relative or absolute deficiency of insulin. In this case there is a relative deficiency of insulin.

DR. CLAYTON: It has now been established that you can find evidence of diabetes, the classical diabetes, in the ocular fundi. Yet, it has not been established by clinical tests, that is, by blood sugar, and so forth.

So, diabetes is an insidious disease. It is a hidden disease. To me it is there, regardless, with the individual. I think it is largely genetic, and I think something is going on with this individual and will continue to do so all of his days, even though he does not show an abnormal amount of sugar in the urine or in the blood.

DR. CYRAN: If you consider the true diabetic the one who has the genetic predisposition, as the identical twin of a diabetic, or the person who

... a mother and father who are diabetics, if you consider that person ... true diabetic, that is one consideration. Perhaps I could not classify ... overweight man in that category.

DR. WINSTON: This matter of true or false in this day and age is somewhat academic. As I view it, we must consider this man a diabetic. He should consider himself a diabetic, and handle himself accordingly; and I feel that this has raised a good point, and that is all too often, we, or at least some people, are inclined to take some comfort because this man is not a true diabetic, if that is correct.

When I am reviewing the files that go over my desk, it is not unusual in this day to see a notation that this man has glycosuria. He had hotcakes for breakfast, but he is not a diabetic.

I think we should consider anyone who has glycosuria, anyone who has an elevated blood sugar above the allowable curve, anyone who has the typical or unusual diabetic glucose tolerance curve, so far as I am concerned, is a diabetic, and I think that he should consider himself a diabetic, and with that in mind perhaps he will be able to treat himself, and will be in a better frame of mind to treat himself as he should be treated.

MODERATOR WIGHT: This is a question that is often discussed, and it was put to me at one time in a manner that I can understand, this overweight, over-aged individual is comparable to a pancreas that is satisfactory for a Shetland pony, but will not function properly in a clydesdale; and if you get his weight down he will have a normal curve.

Are there any other comments on that? What do you people think about that?

DR. A. J. SUTHERLAND (District Surgeon, Louisville & Nashville Railroad):
Mr. Moderator, along that same line I would like to ask someone on the panel to discuss this particular case. I had one Monday, a fellow who had a coronary in November. He originally weighed 265, and he is six feet two.

His doctor brought him down to 225, but had not put him on any oral or insulin therapy.

I talked with him on the phone, and I asked him why they had not. His blood sugar is running around 200.

He said that if I put him on orinase, or any of the oral medications, he will quit losing weight. Is that true with the use of the oral hypoglycemic agents?

MODERATOR WIGHT: Would you care to answer that?

DR. CYRAN: This is true of some of the sulfonylureas [illegible] orinase, diabinase, dymelor. They do cause fat synthesis. [illegible] they may cause an increase in weight. Insulin has a similar effect [illegible] put weight on.

DBI, or Phenformin--the chemical name--actually the drug is being recommended in these cases because it has a lipogenetic sparing effect. It does not cause the increased tendency to fat disposition; and the overweight diabetic might be better off on DBI because he will tend to lose weight.

MODERATOR WIGHT: Are there further questions?

DR. MISHLER: I would like to ask Dr. Wight how many Clydesdales he has converted into Shetlands?

MODERATOR WIGHT: That is an academic question, I hope.

No--there are quite a number of cases in which the grossly overweight individual had his curve come down when he lost weight.

The problem, of course, as I know as well as you do, is to get them to lose the weight.

DR. MISHLER: That is the point.

MODERATOR WIGHT: The first question we have here is: "Should or should not there be restrictions on enginemen with diabetes with or without the use of diabetic agents?"

Dr. Graham, would you care to take that one?

DR. ROBERT M. GRAHAM (Director, Department of Medicine and Sanitation, The Pullman Company):
On enginemen my opinion would be yes, definitely.

MODERATOR WIGHT: Is there any argument with that answer?

DR. WINSTON: Why?

DR. GRAHAM: Of course, there again you have to analyze, as has been brought out before, the individual situation.

If you have an individual, this obese individual, with this early diabetes, that can be controlled with diet, and even in certain instances with oral hypoglycemic agents, then I would say that the man might be permitted to operate on certain lines subject to continued further observation.

Fortunately that is not the problem that I have to face.

MODERATOR WIGHT: Dr. Winston, you asked why; let's have your answer

DR. WINSTON: This question has two answers at least, and may probably have more.

Number one--the diabetic--the true diabetic whose disease is controlled, and we can go into the definition of "controlled" if you would like for some time--without the use of hypoglycemic agents--that is, by diet alone--does not, as I understand it, present a particular hazard insofar as his diabetes is concerned, with the exception that he stands the risk of developing certain complications, primarily those relating to the vascular system, and possibly the kidney, and perhaps to the nerve cell, as a result of his controlled diabetes.

He is not, however, a candidate for sudden incapacitation, or the use of poor judgment because of acidosis, or because of hypoglycemia. Therefore, he is permitted to pilot the planes on the airlines, and in our territory he is permitted to operate the locomotives.

The one about the diabetic on, I presume, hypoglycemic agents is another question--and I would imagine you would want another answer; certainly I would.

MODERATOR WIGHT: Are there any comments on that?

Dr. Hollo, would you let an engineman operate--let's split the question--an engineman with diabetes who has his condition controlled without the use of any medication? Would you let him run?

DR. VENCEL W. HOLLO (Chief Surgeon, St. Louis-San Francisco Ry.): Yes, I would.

DR. WINSTON: One thing that I should have added and that is that once the person has diabetes, he, from then on, should be subject to frequent observations. It is only through frequent observations that you are going to determine that he continues to be a safe employee.

DR. MISHLER: How frequently are they examined?

MODERATOR WIGHT: I will tell you what we do in answer to that question. An engineman who is not taking any medication and whose diabetes is controlled, is permitted to operate.

The frequency of the examination depends on the individual and his physical characteristics--blood pressure; weight, and so forth. We might ask for an examination quarterly, or every six months, whatever the case calls for in the circumstances.

DR. WINSTON: Until we have established a baseline for this particular person, then it is my thinking that it should be not more infrequent than 30 days.

After a series of examinations at that interval, then perhaps you can extend it; and we do, to three months.

DR. CYRAN: This is true of some of the sulfonylureas [illegible] orinase, diabinase, dymelor. They do cause fat synthesis. [illegible] they may cause an increase in weight. Insulin has a similar effect [illegible] put weight on.

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After a series of examinations at that interval, then perhaps you can extend it; and we do, to three months.

Then after he has established himself, and we get more confidence in him, we will make it six months. I doubt that we should extend it beyond the six-month period.

MODERATOR WIGHT: Dr. Mishler, I will qualify my answer in view of what Dr. Johnson said.

When we discover this man, we take him out of service immediately to get his condition under control. Then if we are satisfied that it can be controlled without the use of medication, we will let him go back--and then we will examine him quarterly, or in that area.

DR. HOLLO: I would like to make one point: When we have a patient who has been diagnosed as a diabetic, he is hospitalized, and then followed as you said.

MODERATOR WIGHT: Yes; investigated to establish his condition.

Does anyone else have any comment on this aspect?

DR. MISHLER: There is one remark I would like to make, and it is not really on here. That is in relation to those people who were controlled by diet.

I would like to have the second question answered.

MODERATOR WIGHT: Right.

Those enginemen, proven diabetics, who have to take medication of any kind, are they allowed to operate a main line engine, or are they restricted? That is the second part of your question, Dr. Winston. You broke the question into two.

DR. JOHNSON: I feel that an engineman who has diabetes, who requires hypoglycemic agents for control, should be restricted. That should be the rule.

It will have to be modified in specific cases; but certainly the hazard posed by oral as well as injectible hypoglycemic agents means permitting that man to work unrestricted is hazardous.

MODERATOR WIGHT: Does that answer it?

DR. MISHLER: Partly.

If he is restricted, how often is he examined?

DR. JOHNSON: The man who is restricted should be examined at least every six months. I mean, if he is a diabetic on hypoglycemic agents.

MODERATOR WIGHT: Dr. Olson, how do you handle yours?

DR. ERNEST C. OLSON (Chief Surgeon, Illinois Central Railroad): Ours is a flexible program; and those who do not require the use of anti-diabetic agents are seen not at any particular intervals, but those who do are evaluated on the severity of the diabetes. And a man who takes a relatively high dose of insulin certainly is restricted as an engineer.

MODERATOR WIGHT: Our time is running on, and the answer to Question No. 2 I think should be the same as the answer to Question No. 1.

Question No. 3: "Should there be restrictions on diabetics in the shopcrafts?"

I think the answer there is much the same--if he is working around moving equipment and is exposed to hazards of that nature.

There is one aspect that I have not touched on. I would like to ask somebody on the panel to explain this new terminology that has crept into the literature rather recently. Reference is made to a "chemical diabetes."

Dr. Johnson, can you explain what is meant by a "chemical diabetes?"

DR. JOHNSON: No, I cannot; but I know you can.

MODERATOR WIGHT: This expression has crept in recently, and it was thrown at me a short while ago, and I must admit I did not have the foggiest idea what people were referring to, so I had to look it up.

I think it is another example of where we are trying to make things more complicated than ever.

A pre-diabetic we understand slightly. It was referred to by Dr. Cyran, where the parents are diabetic, or in the case of an identical twin. You can assume that diabetes is going to be the result.

A chemical diabetic, as I understand it, is the case in which with gross stimulation by the corticoid steroids you will get a little reaction in the curve; and you can suspect that that person eventually may become a diabetic.

I think we are just asking for trouble when we try to break things down as fine as that.

A lot of the experts in metabolism do not agree that there is such a thing.

Are there any comments on that?

DR. CYRAN: I did not think you had to have the stimulation with adrenal steroids for that. I thought the chemical diabetic was one who had the abnormal curve and may be spilling sugar at the peak level, but he is not doing this throughout the day--only on excessive loads.

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MODERATOR WIGHT: Time is running along, gentlemen, and there is just one last remark I would like to make, and then ask for a few comments. This applies not only to diabetes. It applies to every sub-normal condition.

As employers of a very large number of people I feel that we must take our share of sub-normals at the pre-employment stage.

The reason I say that is that in some countries it is creeping in right now; in one country they must take three per cent of subnormals at pre-employment stage.

I say it is a pre-employment stage, not of the labor force, because in your labor force you are developing your own percentage of sub-normals, and this is becoming more common and we may be faced with it in our two countries before long.

With this in view, and this is a very open question, would you employ a diabetic?

Now I am not referring to the operating trades, but just generally. What is your feeling about employing diabetics.

DR. PETER VAUGHAN (Assistant Chief Medical Officer, Canadian National Railways):
Our policy has been as Earle stated. We have a great number of employees who develop diabetes during service, and we think we are doing our best toward diabetes by continuing to employ these people in a position that is safe for them.

We do not like to take on new diabetics; that is, applicants for employment that are frank diabetics, because it simply compounds our problem later on in contributing to the whole problem of diabetes.

We have been under some pressure, as I am sure you all have, from the diabetic associations to employ these people. We think we are doing all we can by continuing to employ those people who develop diabetes while they are in our employ without taking on new applicants with diabetes.

MODERATOR WIGHT: Realizing when we take a person on pre-employment, 18 or 20 years of age, we have to assume that they are going to be with us until they are 65 years of age, the fact remains we have to take our share.

Would you people employ them for clerical work, or anything else? Or, do you automatically bar them from employment?

DR. MISHLER: We bar them.

MODERATOR WIGHT: From all categories?

MODERATOR WIGHT: You will not be popular with the diabetic societies.

DR. HOLLO: At the present time our standards do not include employing diabetics.

DR. OLSON: We do not, either.

MODERATOR WIGHT: We do.

Is there anybody else, or are we in the minority? Am I in the minority?

DR. WINSTON: We are in the minority, but we do occasionally employ a diabetic. It becomes a matter of calculated risk, as I indicated the other day. We are in the insurance business as well as the transportation business.

This diabetic person generally will not live as long as the average. He will have more than his share of medical problems, each of which costs the insurance program.

The answer there is: What does this person have to contribute to your industry?

So, we want to select the job assignment carefully.

The next question is: What is the applicant's attitude about his diabetes?

If he is careless, then we do not want him. If he is meticulous in his care of his problem, then the risk is less.

So, in certain instances we assume this calculated risk.

DR. HOLLO: I am sure that our screening tests are not sufficiently strict that we would know whether we do employ early diabetics, or not, because our pre-employment screening test includes urinalysis only. We do not use blood sugar or glucose tolerance tests. I am sure there are some early diabetics included in our new employees.

MODERATOR WIGHT: I was referring to the known diabetic. Would you employ that person in any capacity?

DR. HOLLO: No; we do not.

MODERATOR WIGHT: It would appear that there are not very many of us who do.

Are there further questions or comments from the floor?

DR. VAUGHAN: I would like to ask a question about the detection of diabetes. What do you do with the man--as Dr. Winston mentioned---?

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has maybe eaten hotcakes; he has a glycosuria; he comes back with an early morning specimen and it is negative? Are you going to say he does not have diabetes?

And then how are you going to screen diabetics? Is AP-PC sugar enough. Or, do you want a full curve? How about dextrose sticks as a blood sugar analysis? Are they any good, or not?

DR. JOHNSON: If I have an applicant for entrance into service in any category who has a glycosuria, he is disqualified. The burden of proof is with him, in his responsibility with his personal physician. The burden of proof for the absence or presence of diabetes is his responsibility with his personal physician. I will not accept the statement that the doctor did a urinalysis and it was normal. I insist the doctor do a glucose tolerance test.

If I do not believe the test is a satisfactory one, I will continue this qualification status; but there is a problem of renal glycosuria, in which the individual does not have a true diabetes and the glucose tolerance test will very quickly disclose this type of condition which is non-hazardous.

If the individual, however, does not come back with a standard operation glucose tolerance test I do not see him again.

DR. J. ROBERTSON KNOWLES (Chief Surgeon, Boston & Maine Railroad): We work on the principle, after a great many years of experience, of "trust them but watch them,"; and we will not take a report from another doctor.

I will even say they must be told to void, if they did not bring in a morning specimen. Also, I ask them, whoever sees them after they take the specimen to feel the urinal and see that it is warm. We have had cases where urine has been brought in, in a bottle, which has been in a pocket; or, it is has been poured into the urinal in a small room. So, ask them to be sure and feel the urinal and see that it is warm.

MODERATOR WIGHT: In other words, you must have a high suspicion index?

DR. KNOWLES: Yes; "trust them but watch them."

MODERATOR WIGHT: Dr. Vaughan, did you have a comment?

DR. VAUGHAN: We did not go into that aspect of things due to time.

Briefly, in answer to your question I think it is understood that a complete curve is the best thing, but a lot of people will accept the one hour PC, or the half-hour PC.

The clinic sticks I think are a screening test, and as a screening test are very good. I think they are out in the higher levels. You cannot use them as a gauge as to the degree.

DR. ALBERT H. WINTERS (Chief Surgeon, Pittsburgh & Lake Erie Railroad):
He asked about dextrose sticks.

MODERATOR WIGHT: I am referring to dextrose sticks. They are mentioned in a recent report in the NEWSLETTER, and it is commented that in the higher ranges they are not very accurate, but in the lower ranges they are not more accurate but serve as a screening test anyway.

DR. CYRAN: We have been told they are not as high as they should be; and they are too low when they should not be too low; but in the mid-range, they are all right.

DR. WIPPERMAN: Gentlemen, as I am not a member of this organization, and as a guest panelist, and I have been out here twice, I do want to take this opportunity to thank each and every one of you for the opportunity to be here.

I see that you men are of such stature and friendliness that you are not above needling each other, and I somewhat feel, after some remarks from Dr. Clayton, that I have been stimulated a little here this week, and I would, however, like to point out that from several of the questions some men may have felt that I was pushing contact lenses.

I simply am emphasizing the fact that contact lenses are here, and they are here to stay, and you men are going to have more and more questions about them.

There are certain advantages to contact lenses in certain areas.

With those remarks, I think you very much.

MODERATOR WIGHT: If the Secretary is present, will he please note that Dr. Wipperman has appeared on two panels. He gets twice the normal rate of pay. (Applause)

Gentlemen, I would just like to thank the panel for doing the work. I would like to thank you in the audience for your participation. There were not too many questions that came in from outside left field, but I think the panel handled themselves rather well.

Thank you. (Applause)

CHAIRMAN NELSON: Gentlemen, it rather looks this morning as though our panels are going to end on the same high plane as they began.

The next panel on NEUROPSYCHIATRIC PROBLEMS will have two consultants on that panel. This is something new. We are going to have to approach this particular area, and I know that you will enjoy the panel discussion.

has maybe eaten hotcakes; he has a glycosuria; he comes back with an early morning specimen and it is negative? Are you going to say he does not have diabetes?

And then how are you going to screen diabetics? Is AP-PC sugar enough. Or, do you want a full curve? How about dextrose sticks as a blood sugar analysis? Are they any good, or not?

DR. JOHNSON: If I have an applicant for entrance into service in any category who has a glycosuria, he is disqualified. The burden of proof is with him, in his responsibility with his personal physician. The burden of proof for the absence or presence of diabetes is his responsibility with his personal physician. I will not accept the statement that the doctor did a urinalysis and it was normal. I insist the doctor do a glucose tolerance test.

If I do not believe the test is a satisfactory one, I will continue this qualification status; but there is a problem of renal glycosuria, in which the individual does not have a true diabetes and the glucose tolerance test will very quickly disclose this type of condition which is non-hazardous.

If the individual, however, does not come back with a standard operation glucose tolerance test I do not see him again.

DR. J. ROBERTSON KNOWLES (Chief Surgeon, Boston & Maine Railroad): We work on the principle, after a great many years of experience, of "trust them but watch them,"; and we will not take a report from another doctor.

I will even say they must be told to void, if they did not bring in a morning specimen. Also, I ask them, whoever sees them after they take the specimen to feel the urinal and see that it is warm. We have had cases where urine has been brought in, in a bottle, which has been in a pocket; or, it is has been poured into the urinal in a small room. So, ask them to be sure and feel the urinal and see that it is warm.

MODERATOR WIGHT: In other words, you must have a high suspicion index?

DR. KNOWLES: Yes; "trust them but watch them."

MODERATOR WIGHT: Dr. Vaughan, did you have a comment?

DR. VAUGHAN: We did not go into that aspect of things due to time.

Briefly, in answer to your question I think it is understood that a complete curve is the best thing, but a lot of people will accept the one hour PC, or the half-hour PC.

The clinic sticks I think are a screening test, and as a screening test are very good. I think they are out in the higher levels. You cannot use them as a gauge as to the degree.

DR. ALBERT H. WINTERS (Chief Surgeon, Pittsburgh & Lake Erie Railroad):
He asked about dextrose sticks.

MODERATOR WIGHT: I am referring to dextrose sticks. They are mentioned in a recent report in the NEWSLETTER, and it is commented that in the higher ranges they are not very accurate, but in the lower ranges they are not more accurate but serve as a screening test anyway.

DR. CYRAN: We have been told they are not as high as they should be; and they are too low when they should not be too low; but in the mid-range, they are all right.

DR. WIPPERMAN: Gentlemen, as I am not a member of this organization, and as a guest panelist, and I have been out here twice, I do want to take this opportunity to thank each and every one of you for the opportunity to be here.

I see that you men are of such stature and friendliness that you are not above needling each other, and I somewhat feel, after some remarks from Dr. Clayton, that I have been stimulated a little here this week, and I would, however, like to point out that from several of the questions some men may have felt that I was pushing contact lenses.

I simply am emphasizing the fact that contact lenses are here, and they are here to stay, and you men are going to have more and more questions about them.

There are certain advantages to contact lenses in certain areas.

With those remarks, I think you very much.

MODERATOR WIGHT: If the Secretary is present, will he please note that Dr. Wipperman has appeared on two panels. He gets twice the normal rate of pay. (Applause)

Gentlemen, I would just like to thank the panel for doing the work. I would like to thank you in the audience for your participation. There were not too many questions that came in from outside left field, but I think the panel handled themselves rather well.

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We are pretty much on time, and I would like to finish at approximately noon. I know there are a number of you who have to leave at that time.

Our next program panel I feel is one of the more important panels we have on our agenda. It represents something new that we have not considered as such in the past. Dr. Ernest Olson has very kindly consented to moderate this panel.

We have two guests on this panel, and I think you will find this to be an exceedingly interesting portion of your overall program, and we certainly encourage, once again, questions and discussion from the floor.

Dr. Olson.

PANEL SYMPOSIUM - NEUROPSYCHIATRIC PROBLEMS

MODERATOR OLSON: Thank you, Dr. Nelson. The subject NEUROPSYCHIATRIC PROBLEMS is one which I do not believe has been brought before us previously.

We have with us a number of our own chief medical officers as a part of this panel, all of whom you know, and in addition we have Dr. Loren Avery, who is the Consulting Neuropsychiatrist, for the Illinois Central Railroad, and for the Presbyterian-St. Luke's Hospital, Augustana, and Lutheran Deaconess Hospital, as well as a Clinical Professor of Neurology.

Dr. Avery. (Applause)

We also have Dr. D. Bernard Foster, who is the Director of the Division of Neurology and Neurosurgery, at The Menninger Clinic, at Topeka, Kansas.

Dr. Foster. (Applause)

We are very ahppy to have these two gentlemen on our panel, and we feel confident that they will be able to provide assistance in answering our academic and practical questions.

Our approach is necessarily one which involves the assessment of candidates for employment on railroads insofar as their mental makeup is concerned and their suitability for employment in the various categories of railroad work.

It also involves decisions concerning the suitability and ability of employees who have suffered some neuropsychiatric disability in the course of their employment, to either continue or to return to work.

Further, it also concerns the obligation and responsibility of the railroad to provide for employment in our social scheme for those individuals who, while they may not fall between certain relatively narrow

limits, which we call normal, may still possess some special skills which might make them valuable to the railroad and at the same time provide employment for these people.

The question also arises about the railroad's obligation to continue the act of employment of individuals who have suffered some mental disability in the course of their occupation.

As you know, there is a growing tendency for the judiciary to take the position that public opinion and social custom consider management as obligated to assume responsibility for any illness occurring in the course of that individual's employment. Does it then become one of the risks of business to accept these liabilities? Does the question of national unemployment because of certain disabilities obligate companies to take on less-than-standard risks?

Is it going to be possible to find jobs for those who are no longer able to continue in their present occupation, but who might be able to function in some lesser capacity? Can any agreement be reached which would permit suitable employees to be transferred from one type of occupation to another?

I realize that much of this is conjectural, but the changes which continue to occur in our society might bring questions of this sort to our consideration, of both candidates and employees.

In our discussion this morning we are not confined to the questions which have been printed in our program, nor is the discussion to be limited to the panel members.

We would like to begin with a consideration of a method of appraisal of the candidate for employment whereby certain practical estimates can be made by the average practitioner, or by a management interviewer of that individual's emotional stability, or of any serious mental deviation which would classify him as employable or unemployable for the particular occupation sought.

It should be borne in mind that while the individual, if accepted, may make the railroad a lifetime endeavor, and that considerable time and money may be invested in him to acquaint him with all the requirements of his job, or future jobs, with the railroad, nevertheless the appraisal is necessarily limited because of the time involved, particularly by the medical department.

Most railroads have rather comprehensive medical questionnaires and physical examinations, and for many employees a series of technical examinations which make the cost considerable.

A neuropsychiatric appraisal by its nature is a time-consuming affair and may overtax the busy practitioner. It is unlikely that all of the pre-employment examinations can be funneled into one area and must, therefore, be conducted by many different doctors as well as personnel

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With these thoughts in mind, let us now proceed to our discussion.

The first question on our program reads:

"Should a pre-employment inventory be done (similar to the Minnesota Multiphasic) in enginemen and Trainmen?"

I would like to ask Dr. Avery if he will open the discussion on that question.

DR. LOREN W. AVERY (Consulting Neuropsychiatrist, Presbyterian-St. Luke's, Augustana, Lutheran Deaconess and Illinois Central Hospitals): While I am in accord that certainly some survey of an applicant for employment on a railroad should be made, I am quite ambivalent as to some these specific personality tests, because I am not sure, first, that e tests correlate well with a man's future work performance, and I do not know, I have reason to doubt, that emotional stability; good continuity of work; good inter-personal adjustments--that those characteristics are a stable entity in any one individual; that time, illness, stress off the job, stress on the job, background play enter the role.

It seems to me that work is a great health factor. Actually in the ipitome of good performance work should be man's play, in the same way that play is child's work. There is much reason to believe that how a boy plays; how he enters into competition; how creative he is; how much in play they are solving problems; may reflect a great deal of how he will attack work as something that is pleasurable, as something of problems to be solved; a contribution to be made; and an achievement to be obtained.

I, myself, doubt that such things as the Minnesota Test will afford you a good background upon which to assess the future performance of the man; but I do think that there are means of getting a fairly good idea as to how stable and staid an individual will be, and that at least he may not ak under the ordinary stresses but might under excessive ones.

Thank you.

MODERATOR OLSON: In the event that there might be a diversity of opinion about it, Dr. Foster, would you care to comment on this question?

DR. D. BERNARD FOSTER (Director, Division of Neurology and Neurosurgery, The Menninger Clinic, Topeka, Kansas):
I share Dr. Avery's doubts as to the usefulness of such tests.

May I differentiate personality patterns of testing from aptitude testing?

The record of aptitude testing is a fair one. For instance, any personnel office is fully capable of scoring and administering a simple test of intellectual function; of vocabulary skills; of rate of accurate typewriting; of rate of accurate shorthand writing, in evaluating an applicant for a secretarial position.

Similarly, there are tests of mechanical aptitude which have a pretty high degree of reliability in assessing an individual's ability to carry out the work, let us say, of a machinist.

The batting average of psychological tests in detecting the individual who is accident-prone; who is the sick book rider; who is the unreliable employee; who does not show up at the appointed hour, is extremely poor.

Perhaps a little of our experience from World War II would be exemplary in this regard. Perhaps you will all recall that there used to be a neuropsychiatric examination included in the evaluation of draftees. I would have to say that the best that these neuropsychiatric examinations, which usually had a duration of three to 10 minutes was to screen out the grossly mentally retarded individuals, and the grossly schizophrenic individuals in between three to 10 minutes of screening will not do the job.

Perhaps an illustration from a medical-school experience also might be helpful in understanding the reservations of Dr. Avery and myself in this respect.

There have been a number of studies since Medical College. It is an expensive proposition for the school as well as for the individual, trying to figure out better methods of selecting applicants for medical students. One that I would like to cite was carried out at the University of Michigan some years ago, where the top 10 per cent of the class had a whole battery of psychological tests, and the bottom 10 per cent of the medical school class also had a battery of psychological tests. The tests were absolutely non-discriminatory in picking out the top 10 per cent from the bottom 10 per cent. They were not good enough.

In our Menninger School of Psychiatry, in Topeka, we have tried to develop and devise tests that would pick up the likely candidate to be a good psychiatrist. Our batting average "stinks," gentlemen, from these preliminary tests. We cannot do it. And we are doing it from a tremendous battery of tests that take two, three, four days, and not just the 60-odd minutes of the Minnesota Multiphasic Test.

Perhaps our own employment practice will tell you what we have determined to be one of the better techniques, and that is every employee below the level of physician is considered a probationary employee for three months. This works ten thousand per cent better than any pre-employment test. Put the man on the job in the situation where you hope he will make a useful employee; have him observed by his supervisor. Both of them know that he is on trial, so to speak. This is very, very much more satisfactory than any attempt at a pre-employment examination Nobody gets hurt if at the end of three months the individual is determined to be unsuitable for a particular job. The man or the girl has tried. You see them performing in the place where they are expected to perform.

Incidentally, the Armed Services have come to approximately this same position. The Navy, for example, at the end of three months

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naval service may dismiss an individual without prejudice particularly, and just say "unsuitable."

I would have to say that I would far more highly advocate trial on the job on probationary status as a technique for picking out the useful employee than I would any psychological test currently available.

One of the problems in the psychological tests, of course, is the problem of negative malingering. If a man is bucking for a job, the answers that he produces on these fill-in types of psychological tests, and that is what the Minnesota multiphasic is, are just untrustworthy. It is like a negative malingering you get with the 60-year-old man who comes in and tells you how strong and robust he is, and how he has not a symptom; whereas if you ask his wife and his next door neighbor, they will tell you quite a different story.

MODERATOR OLSON: Thank you, Dr. Foster.

I think that if there was complete freedom of choice on the part of the railroad to say to an individual, "We don't think you suit us," after a given interval of time, that it would be easy to handle the problem on this basis. Unfortunately, however, there is a time limit which is set after which an individual acquires seniority; and the latest dickerings have indicated that the railroads are going to be saddled with an individual the rest of his life after he acquires two years of seniority.

He goes on the roster in most places after 60 days, and whether or not this would be time enough to assess him, and whether you could convince the union that because of our thinking about this man he is just not suited, I do not know.

When a man comes in to your, we will say, hospital, to get a position as a physician, you talk to him. You try to get some sort of an idea of his personality; his general attitude; his ethics; his principles, and on, to assess all of the qualities that make up a good physician.

What can we do, then, in the preliminary interview with an employee to make sure that he is not basically a high-grade neuropsychoneurotic; or, that he does not have a paranoid trend, and you do not happen to touch upon the questions that set him off?

Does anyone want to speak to that?

DR. AVERY: I think you can get quite a little from this man providing he has good rapport with you and gives you reasonably solid answers.

I think the answer to the question, where did he come from?--is important. What kind of a family did he come from? How are his relationships with his siblings? How does he play? How did he go to school, especially how did he accept discipline? Did he accept the affection of his parents and accept the discipline as something that was natural, acceptable, and understanding, and just? Did he go to school? Did he finish?

If he worked, if he has had previous jobs, what is his work continuity? A man who is always changing from one job to another is probably uncertain.

Has he had any severe emotional break?

One has to be very careful, there, because there are many emotional breaks, and you might say the acute alteration of personality, disaster, or some toxic phenomenon, such as delirium, might be a circumstance; but if there is in the background and in this man himself repeated episodes of we will say depression, you may expect him to have them again.

One has, also, to be careful because many people who are extremely neurotic make excellent employees, and there are a great many psychotics, I am sure, who are making a good contribution to overall industry.

We have to be careful to see how the man reacted; his suspiciousness; his reticence; and I think you could tell quite a little as to what kind of a man, on a gross level this man might make, that is as we used to say in electing to the hospital certain people, is he a man you would like to play golf with? Is he a man you would like to know, accept?

MODERATOR OLSON: Dr. Foster, do you think that an employing officer would be in a better position to make this kind of an estimate of a man? And, would that be sufficient for a recommendation to give him the rest of the physical examination that is required for employment?

DR. FOSTER: I think that you need the first team, so to speak, in the personnel interview for new employees. This is not a job that should be relegated to the third, fourth, and fifth echelon of the personnel office.

The longer an individual has been in personnel work the more experienced he becomes in recognizing problem employees; and as Dr. Avery has mentioned, the skillful personnel officer of experience will ask many of the questions that the psychiatrist will ask.

He will certainly take a detailed employment record. He will take an educational record. He will ask quite bluntly, "Do you have any kind of an arrest or con viction record?"

He will certainly ask, "Have you been habituated to alcohol or other injurious agents?"

He will certainly ask about marriage; inter-personal relationships in the family. He will certainly ask about relations with parents, which, to me, represents one of the most revealing questions.

He will certainly also ask about the kind of a man or woman who is applying for a specific job situation.

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MODERATOR OLSON: Our Claim Department is represented here today, and I know there are others from other railroads. I know they are particularly interested in this problem, because the number of claims they get are based in a fair percentage I think on the attitudes that are assumed by individuals when they are injured.

One of the basic purposes of this panel is to try to settle a question of how we are going to assess these people not just from their physical attributes, but from their mental stability as well.

Many of you have commented on the need for such a program. I think some of our own people should inject themselves into this picture and state their views on how they think we can accomplish this.

Shall we at this point assume that time is wasted by the use of any these inventories?

Dr. Winston, do you want to begin?

DR. WINSTON: I would like to state for the record, which I believe is what my lawyer friends say, that we have paid all too little attention to employee selection.

That is not necessarily a fault of the medical department, but it is something, a situation that as I see it behooves us to call to the attention of those in other areas of the railroad management.

In order to buy a typewriter, or a set of car trucks, or a locomotive, an immense amount of investigation is carried on by test departments. The purchasing people have a whole organization of their own, headed by a vice-president, and I suppose most roads have a similar arrangement.

We will spend an awful lot of time dickering about an item that costs hundred dollars; and this item incidentally we can discard whenever we nt to; but we buy manpower that we will be obligated to continue to support for an indefinite number of years, and we are basing that on a brief medical evaluation.

All too often, too, that medical evaluation is perfunctory and almost useless.

So, here we have a product that is worth a half-million dollars, at least Dr. Kaplan's employee was worth a half-million dollars or so, and we are devoting a relatively few minutes to him, to decide whether or not we want him.

It would be ideal if we could do as Dr. Foster says, and have the prerogative of rejecting this person.

On our property in certain crafts we do not have that prerogative; and with certain others we do. All too often it is not used, however.

Insofar as an interview is concerned, that is practically never done, except that we are still in a relatively rural part of the nation, and at least for many years the prospective employee was known to his supervisor or boss, and perhaps there was some screening at that level.

I am also fearful that there might have been some screening in reverse. We knew this fellow, and there are other connections that made the supervisor employ him rather than reject him.

I, for my part, would be very much interested in developing some plans whereby, first, we can have some way of screening out the grossly abnormal person. Inasmuch as we do not have a manpower purchasing department, then I would like to have something that could be done, either at the clerical level, or at the doctor's office that would help screen out the grossly abnormal persons.

Then, if we could get into something that would help screen out those who offer to be problems later on, I would very much like to see that happen, too.

I hope we get some ideas about it as we go along here. As I remember the opening statement by Dr. Avery, he mentioned that there were certain considerations, he indicated to me at least that there are certain means by which you could measure a person's potential. I would like to hear a little more specifically mentioned what tests he had in mind.

MODERATOR OLSON: Do you want to talk about that 12-point program? Would that be apropos here?

DR. AVERY: Yes.

There is a program that has been brought out by the American Medical Association, under its Council of Occupational Health, and this can be modified to a pre-employment area.

This has largely to do with the employability of an employee after he has had a psychiatric illness, and they bring out 12 points that could also be of value, in the main in determining something of this man's ability to perform a service for the company.

I do not know of what age they are speaking, but I take it that all of these applicants are over 16, and 17 or 18.

I think, in the first place, a lad who has not developed some continuity, some stability at say 18 years of age, who, up to that time, has been a dropout; a behavior problem; a delinquent--I do not think there is much hope that he will develop into a first-class employee.

This 12-point program indicates the following: And I have changed the initial statement to, "What is the personality of this man?"

In that I mean, how does he react to you? Is he friendly? Does he take it for granted you accept him as an individual? Does he allow you

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know him? Is he not fearful of being scrutinized? This is in the rst category.

Then, does he have any somatic disorder that might play a role in s emotional adjustment? That could be any of the chronic disorders or ute disorders, such as asthma; a tendency to colds; rheumatic diseases, d so forth.

Then next is, what are the stresses that he has off the job? That r what responsibility does he have? How does he handle his responbilities?

Is he having problems at home with his children, or his mother, or s father, or his wife? How does he work in the community? Is he cep[illegible]d?

Then, you would have to consider that this man is an applicant for a rtain job. What are the stresses on that particular job? How much ntinuity of effort is there? Are the working conditions favorable. Is ere stress? Are there marked time limits? Is there hurry? Is there straction?

The next three points would not be applicable because they have to do th illness.

So, under Item 8, then, you would want to see his attitude about life d his attitude about work; and I think this is the most important thing u can find out about a person, is why is he working, and what does he nt to work for?

Work is something that I think is guarded by every man and every oman, and work is something that when it is denied them they are apt deteriorate, as is seen in the retirement deterioration, the retirement or[illegible]ons.

Then I think you can still go into actually how he reacts to his fellow ople. You can get a fair idea as to the stability of this man, and the work level.

One in 10 of all of us at some time may have emotional or mental eakdown. What you want to do, perhaps, is to catch that one in 10. hink you will be lucky if you catch one in a hundred.

R. MISHLER: I rise again to be a nuisance. This panel so far has esumed to be talking primarily about applicants. We have very little ouble with applicants. That is my first point.

Number two--we have very little trouble with our grossly abnormal psychotic patients. They are no problem on our railroads.

The problem that we have on our railroad, and I presume it is common on all railroads, is the so-called normal man.

My question to the two psychiatrists is, how we as chief surgeons in order to hold our job can, in some way, combat the Madison Avenue propaganda, or the propaganda of the Brotherhoods, and the ambulance chasers, after the man is injured, where avarice and the attempt to live a life of ease at the railroad's expense after the man is injured, enters the picture? I think that is our big problem, not primarily in the selection of new employees or the handling of a grossly psychotic individual.

MODERATOR OLSON: Before I ask these gentlemen to answer I would like to make this observation.

I think there is an inverse ratio between the stability of a man and the degree of his injury; and if you have a very stable individual, he can sustain a severe injury without developing these so-called traumatic neuroses, and perhaps this might be a good place to bring this up for discussion.

The man who is highly unstable requires very, very little to set him off.

For that reason I think it is fundamental that we try to select people who will behave as nearly within the confines of what we call normalcy as possible in order to avoid this kind of a situation.

DR. MISHLER: I disagree with you. I do not think that all our people who are problems are of the so-called, what was the term you used? "Functional neurotics?"

MODERATOR OLSON: "Traumatic neurosis."

DR. MISHLER: "Traumatic neuroses."

They are people who, if you give them $5,000.00 are perfectly normal people. They are not traumatic neuroses. They are people who have been influenced by propaganda, et cetra, and the willingness to prolong their disability only for the sake of money. I think it is wrong to call them traumatic neuroses.

MODERATOR OLSON: I can say, however, that you can talk to many kinds of people, and you would find some who would say that the company is "my company; I am part of it." This is something that happened. I agree that the company has a degree of liability, but I am not going to try to become a millionaire for the rest of my life as a result of it.

The mere fact that the money cures the problem is pretty good evidence to me that this is not a fundamental organic illness at all; that this is something in the mind of the individual.

I do not, however, want to belabor the point.

DR. MISHLER: Maybe I did not make my question clear. How can we--

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surgeons in some way change the atmosphere a little bit so that we do not have as large a problem as we have at the present time?

MODERATOR OLSON: Again the point was made a little while ago that one of the purposes of our discussion was to try to get the kind of people who would not do this.

DR. FOSTER: I do not think this kind of person is predictable by conventional techniques.

I also quite agree that I cordially detest that term "traumatic neurosis." Most often it is a neurosis, and the afflicted individual hangs his neurotic symptomology upon a bump, a bruise, or an injury which may or may not have been incurred in line of duty, but which is alleged to have been incurred in line of duty.

The approach to this, it seems to me, has to be in terms of prompt examination by reliable physicians. The traumatic neurosis problem is tremendously aggravated, as all of us know, by physicians who are something less than honest.

I think at every turn, when such a situation is apparent, there must be a prompt disposition of the complaint, or of the symptomology before it is permitted to crystallize in a long-term, fixed battle between lawyers.

I think, further, that the claim departments or the insurance departments must never "roll over" on these. If they do, they simply further the problem.

This problem, I think, will always be with us to some extent as long as there are fringe practitioners of medicine and fringe practitioners of the law. I do not think you can get out of this problem.

I do not think they are predictable.

I do think that one of the big problems in this area is in the area of communications; that is, the supervisor will know, many times, of an individual who is always skirting the edge of dangerous practices, but his information is not adequately communicated to management, and such an individual may be permitted to assume more and more responsible positions and higher and higher levels. Here, as I see it, is the problem in the sense that it is one of communication within an organization.

MODERATOR OLSON: Before we leave this portion of the program, I would like to ask Dr. Skinner to respond to this query: At what level of employment should we carry out a comparatively detailed interrogatory with the candidate? Would you say that the ordinary laborer should not be subjected to this kind of a screening? A man who by virtue of his occupation could easily sustain injury and become one of these liabilities?

Where would you draw the line on it?

DR. ABBOTT SKINNER (Chief Medical Officer, Great Northern Railway): That is a question about like, "How far is up?"

I think this is an area in which we would all agree there must be considerable upgrading, and any start would be good.

If we employ at the level that you are not covering, that is the level that you should go to. We know it is impractical at the present time, with the new personality inventories on our summer track labor. It might be desirable. It could even be proved economical; but it is impossible at the present time.

Great Northern has a series of questionnaires or tests which are largely aptitude and personality inventory, non-medical. I feel this is worthwhile; but this program should be extended. I cannot give you an answer.

Any full-time employee could benefit management by revealing his problem, and his personality tendencies.

MODERATOR OLSON: I would assume from your answer that it would be in the higher classified groups that you would apply this questionnaire or interrogatory. Perhaps they are less involved in claims than the men who are engaged in more arduous occupations.

Dr. Longeway, would you care to carry on about the use of it in let us say the trainmen, enginemen, and brakemen, and those in the heavier occupations?

DR. WALTER J. LONGEWAY (Chief Surgeon, Colorado & Southern Railway): I do not know whether you remember when we made this pilot study last year on pre-employment physical examinations, because on the last page we had an outline of this AMA Mental health form that Dr. Avery has been discussing. It was on this pre-employment physical examination.

Of course, that was put there for this group to discuss and to study, and our idea was that it should start right at the bottom.

MODERATOR OLSON: You mean with the common laborer?

DR. LONGEWAY: It was put in this form for such and carried on from there.

MODERATOR OLSON: Would you say that is a practical place?

DR. LONGEWAY: Yes, and no. Some of them probably cannot even read it; but some parts of it I think would be practical, yes.

MODERATOR OLSON: Dr. Hammatt, do you have any comments to make on it?

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DR. H. W. HAMMATT (Chief Medical Officer, Chicago, Burlington & Quincy Railroad):
Yes.

We have found that we have in certain categories, where the individual is not sufficiently intelligent to pass even the elementary psychiatric tests, there is this circumstance.

I feel, however, that the tests should be given to all individuals, but it is not practical for the track laborers or the extra gang fellows.

We have been giving the Wonderlich Test to all new employees. We have found that in the type of employee whom we use for our reclamation plans we have had to lower the qualifications; otherwise, we would have no employees.

So, I think that what is going to happen is if you would screen out your extra gang laborers, and extra trackmen, that there would be insufficient men to handle the occupations. Therefore, I think the railroad itself is going to have to take the responsibility and assume the risk of possible traumatic neurosis, which they will allege he has. He certainly must be a neurotic or he would not say that a minor scratch would require indefinite treatment.

MODERATOR OLSON: Thank you, Doctor.

Dr. Cushman, you have compiled something on the cost of this kind of a problem. I wonder if you would be willing to tell us something about it.

DR. GLENN F. CUSHMAN (Chief Surgeon, Western Pacific Railroad):
I have not compiled costs on this type of program.

The Medical-Legal Committee of last year brought the question whether or not the problem of psychoneurotic problems in juries should be pursued further and studied; and I was asked to go over the cases that were compiled by the AAR from their settlement cards, and I went over 44 cases that come in from January 1962 for a period of somewhat less than two years.

These reports were all the way from a very superficial notation from the railroad involved to very complete records, including the depositions of the attending doctors and psychiatrists.

On the whole they were, I would say, very inadequate for this purpose, because I do not believe the companies realized what the Medical-Legal Committee was after.

Just to briefly run down these, of these 44 cases which were settled either before, during, or after trial, 20 of them resumed work in their own occupation; only one in a different job. Eight had not returned to work. Two retired on age. Thirteen had a settlement with resignation.

One returned to work and then quit later on retirement.

The diagnoses submitted included five cases of schizophrenia; one of multiple sclerosis; and then a catch bag of all the rest of them divided between conversion hysteria and anxiety neuroses; traumatic neuroses, and so forth; and not being a psychiatrist I did not feel I was able to put these into pigeonholes, and therefore just lumped them into the psychoneuroses.

There was a history of six cases that should have been, by even a very superficial screening, not ever employed, because of previous history of mental or neurotic disturbances.

Three had other disabilities that should have been disqualifying.

All five schizophrenic cases had shock treatment, and I could only find documentation of psychotherapy, including the five who had shock treatments, in 11, or 25 per cent of the cases.

The injuries involved were: Sixteen head injuries and the big group, 22, back, neck, and pelvis, with a scattering in other injuries to other parts of the body.

The crane, yard, and enginemen contributed 16; the shop crafts, 17 out of the 44, leaving only 11 for the rest of the job classifications.

My opinion on this review was that we did not have adequate information from the companies, and that the only way we could get it if this was to be considered a major problem, would be to send out, as we are doing on the disk cases, a questionnaire which should be sent both to the claim and legal departments for their evaluation of the case, and to the chief surgeon who should review all the medical and give his opinion.

By and large, the evaluation is very superficial. Neuropsychiatric consultation was apparently obtained on behalf of the plaintiff in the case of the plaintiff and in 16 cases on behalf of the company. Whether or not the company's psychiatric consultation was as a defense procedure against the claims of the plaintiff, or not, is not documented.

That left 13 cases where the diagnosis was made apparently by the attending physician, or a non-psychiatrist, and on behalf of the plaintiff.

I think there is one thing that should be emphasized here. As long as we are talking about traumatic neurosis and psychiatric conditions, a true psychiatric condition, of course, is, as I understand it, a psychosis, which is one thing, and a neurosis, no matter what you label it, is something else again.

To point out that the first line of defense in psychoneurosis is the attending physician, and whether he knows it, or not, he is a practicing psychotherapist. He can do more, the first man who sees and treats the patient, than all subsequent consultations can possibly do.

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One returned to work and then quit later on retirement.

The diagnoses submitted included five cases of schizophrenia; one of multiple sclerosis; and then a catch bag of all the rest of them divided between conversion hysteria and anxiety neuroses; traumatic neuroses, and so forth; and not being a psychiatrist I did not feel I was able to put these into pigeonholes, and therefore just lumped them into the psychoneuroses.

There was a history of six cases that should have been, by even a very superficial screening, not ever employed, because of previous history of mental or neurotic disturbances.

Three had other disabilities that should have been disqualifying.

All five schizophrenic cases had shock treatment, and I could only find documentation of psychotherapy, including the five who had shock treatments, in 11, or 25 per cent of the cases.

The injuries involved were: Sixteen head injuries and the big group, 22, back, neck, and pelvis, with a scattering in other injuries to other parts of the body.

The crane, yard, and enginemen contributed 16; the shop crafts, 17 out of the 44, leaving only 11 for the rest of the job classifications.

My opinion on this review was that we did not have adequate information from the companies, and that the only way we could get it if this was to be considered a major problem, would be to send out, as we are doing on the disk cases, a questionnaire which should be sent both to the claim and legal departments for their evaluation of the case, and to the chief surgeon who should review all the medical and give his opinion.

By and large, the evaluation is very superficial. Neuropsychiatric consultation was apparently obtained on behalf of the plaintiff in the case of the plaintiff and in 16 cases on behalf of the company. Whether or not the company's psychiatric consultation was as a defense procedure against the claims of the plaintiff, or not, is not documented.

That left 13 cases where the diagnosis was made apparently by the attending physician, or a non-psychiatrist, and on behalf of the plaintiff.

I think there is one thing that should be emphasized here. As long as we are talking about traumatic neurosis and psychiatric conditions, a true psychiatric condition, of course, is, as I understand it, a psychosis, which is one thing, and a neurosis, no matter what you label it, is something else again.

To point out that the first line of defense in psychoneurosis is the attending physician, and whether he knows it, or not, he is a practicing psychotherapist. He can do more, the first man who sees and treats the patient, than all subsequent consultations can possibly do.

It is only the thin core, the ones that we cannot reconcile and get to the psychiatrist, and they represent a rather poor group of people for the psychiatrist to do anything about.

MODERATOR OLSON: Thank you, Doctor.

We could perhaps conclude this phase by saying that it is the consensus that the conventional inventory studies are not trustworthy enough to warrant their general use; that the oral interrogatory by a qualified interviewer would, perhaps, uncover as much as can be uncovered.

Thirdly, that within the limit of time that is permitted, that the extended observation of the candidate would determine his suitability to continue his employment.

I think that this subject warrants considerable thinking on the part of all of us, and I think that it would be worthwhile to pursue, at some later meeting.

DR. WIGHT: Is there audience participation in this?

MODERATOR OLSON: I am sorry if it appears that we have monopolized the discussion.

DR. WIGHT: Dr. Foster made a remark a short while ago, and I think it was agreed to by Dr. Avery about the unreliability of these tests.

I would like to cite one example of this which supports them 100 per cent.

A few years ago a country in Europe, which shall be nameless, that has compulsory military training, put on a concerted effort to get their lads to go into the air force. Three thousand applicants, three thousand people applied for the air force. They were all interviewed with a whole battery of tests.

Out of the three thousand, 30 were accepted for the air force. Out of the 30 that were accepted, 15 broke down in the preliminary training.

This just proves the inadequacy of these tests. I think we all know that had there been a war, out of 3,000 applicants probably 2500 would have made good pilots.

MODERATOR OLSON: That would seem to be a rather sad commentary on the value of the tests.

DR. WIGHT: There is another way of looking at it.

DR. KNOWLES: Dr. Olson, I would like to say something on possible traumatic neurosis. There is one definite cure. The sooner you use it, the better, and that is a good greenback poultice, that will clean them right up. The sooner you get that case, the quicker he will respond and

MODERATOR OLSON: That is right; and that is one of the things that has been quoted as proving that this was not an illness because money should not cure an illness.

DR. WINSTON: I would also like to make the observation that you have cured him of that particular phase of his illness. You have accentuated his underlying, fundamental instability, as I view it.

MODERATOR OLSON: One of our problems is the increasing demand on the exchecquer of the railroads for all kinds of things; and if it is possible to take a stand against some of these things, I think it is much to the railroad's advantage, and we should probe into all of the avenues that might lead to it.

We have a rather important subject that many of you have inquired about, and I think it will probably take the rest of the hour. We are not going to be able to cover all of the questions.

That problem is one of alcoholism. In Question No. 10, it says that many medical officers feel that alcoholism is more of a problem than management appreciates. Would it, or would it not aggravate the situation if a stricter approach to the problem was instigated?

My thoughts on this are that it may be true that management does not appreciate the extent of alcoholism, but I think that most companies do. In the operating fields, the ruling has been enforced, and a fair number of individuals have been put on probation or dismissed as a result of it.

One angle, however, that occurs to me is the problem with the customers' men who are required to entertain their prospects frequently at midday, and then, because it is necessary to provide the suitable inhibitors before the meal, one gets the immediate effect on the discussions that follow the luncheon.

It has been said that many of the customers object to transacting business because the representative is not functioning at his best, and it is difficult to arrive at good judgments and prompt handling of the problems.

I think that Dr. Kaplan has done considerable work in this field, and I would like to ask him to open this discussion.

DR. ISADORE KAPLAN (Medical and Surgical Director, Baltimore & Ohio Railroad):
Dr. Olson, do you want me to adhere strictly to the question, or shall I interject some of our experiences?

MODERATOR OLSON: You use your own judgment. We have about 15 minutes.

DR. KAPLAN: The drinking population of the United States is about 70 million. Of these, five million are identified as alcoholics. Business

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and industry can count approximately three million workers as being alcoholics. They lost an average of 22 work days annually, and are twice as accident-prone as the non-alcoholic. This is, of course, of great importance to claim agents and legal representatives.

The national average of alcoholic employees, from the industrial standpoint, ranges anywhere from one to 12 per cent; but I think of a more realistic percentage as being between six and eight per cent.

As we know the problem of alcoholism, or dipsomania, it is now classified by the AMA as being a disease. It is no longer a scourge, and must be considered as an illness. It now ranks with heart disease, cancer, and mental illness as one of the nation's four most serious health problems.

For some unknown reason, it has a great proclivity for members of the steel and railroad industries. This may be because of poor supervision of train crews, and the fact that employees are on the road where they are subjected to traveling boredom, solitude, and frustration.

The Medical Department of the Baltimore and Ohio Railroad in its work classification unit has a separate, integral group that applies only to alcoholic problems.

Once weekly we have a psychiatrist who comes to the Medical Department headquarters to examine alcoholics who have been referred to us either by management or our own medical examiners. We evaluate these strictly on an alcoholic psychiatric and physical basis. Since 1961, we have found a total of 175 alcoholics, plus 54 who have been dismissed from service because of Rule "G" violation.

During the year 1964, 23 employees were dismissed from company service because of Rule "G: violation; and, during this same period, an additional 85 employees were classified by our unit as alcoholics. Of this group 19 were initially permitted to return to work, and later an additional seven were allowed to go back to work following re-evaluation. Thus out of the 75 alcoholics we were only able to rehabilitate 26, and lost 49 of our trained employees.

The average age for alcoholic disqualification by the Medical Department is 45 years, and the average length of service is 14 years. This is very important because it involves an employee at the peak of his performance. He is well-trained, and has average service of 14 or 15 years. If we are losing 50 per cent of them, it means they have progressed to the point where they have organic changes affecting both physical and mental faculties, such as enlarged liver, abnormal blood chemistries and wet brains.

Management realizes the cost of training a new employee and to alert supervision to this problem, we have now instituted a program in the Baltimore area. I am very unhappy to tell you that it has not been a great success.

A week ago I was with Dr. Franco, of Consolidated Edison, who stated that there are about 70 alcohol programs in industry. I told him I was very much disillusioned and unhappy with the results of our work; that we had worked hard for three or four years, and had nothing to show but a group of disqualified alcoholics. He said this was correct because in the beginning all you get are known alcoholics, which management is trying to dispose of. However, they will not refer the early or unrecognized alcoholic, unless specially trained in this aspect.

The doctor further stated that in his initial program he had disqualified as high as 75 per cent of their alcoholics, but as time progressed he was able to indoctrinate management with the fact that he wanted the early hidden alcoholics (those who did not drink before they came to work or during lunch). When he was able to consult with this group, results were much better and it was possible to rehabilitate many of them. At that point he was no longer getting known alcoholics. He made the observation that company alcohol programs could be markedly improved if management would only provide better cooperation. We have noticed that there is a greater percentage of alcoholism in our trainmen as contrasted with engineers and firemen or yardmasters, passenger agents, waiters, crew dispatchers, and operators.

In the mechanical department, for some unknown reason, the affliction is applicable to car men and car inspectors. This is where we have our highest percentage of alcoholics.

In conclusion, because of time, I want to make a very pertinent comment regarding convulsive seizures, or what the laymen call "falling out" spells. We refer them to Dr. Merlis at the University of Maryland Hospital as he is one of the world's greatest interpreter of electroencephalograms. He has apprised us of this little gem - many of these seizures are not true epileptic seizures, and are in no way related to epilepsy - they are found in alcoholics who have been on drinking sessions and are in the withdrawal stage.

The electroencephalograms show absolutely normal tracings, and no abnormal foci are found; but we have been advised the whiskey convulsions occur during the withdrawal syndrome from the excessive use of alcohol.

MODERATOR OLSON: Thank you, Doctor.

Before we close I would like to ask both of our consultants to comment on this problem of alcohol, and I would like to ask them one particular question.

It has been my impression that the AA's have been THE most successful group, but recently I have received some letters saying that the profession itself, and a particular hospital in Chicago, has been much more successful in the treatment of these patients.

Would you start it off, Dr. Avery. Please?

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Would you start it off, Dr. Avery. Please?

DR. AVERY: I know the hospital has this group therapy which I think has been very successful. I do not know the details of it.

There are, however, many group therapies, or places where you can get group therapy carried on by either the staff of the hospital or individuals who apparently do a fairly good job with the alcoholic.

The AA has a good program for those who will make it work.

I am not optimistic about the rehabilitation of a confirmed alcoholic. I do think, as the doctor stated, in those men who are doing hard labor, and have responsibilities, that they take care of their alcoholism better than the higher-up.

I do not know that psychotherapy has as yet made a great inroad on coholism.

MODERATOR OLSON: Dr. Foster.

DR. FOSTER: I should like to refer to Query 10 in our folders here, where it is indicated that the question is being asked: "Would it or would it not aggravate the situation if a stricter approach to the problem (that is, of alcoholism) was instigated?"

It is true that if one ferrets out every last instance of every individual who even takes a drink, there is a tendency to drive the pathological alcoholic underground so to speak.

I have to say, however, that the climate of acceptance of heavy or pathological alcoholism is, to me, a very important factor in the incidenc of alcoholism.

One has only to look for instance, at some of the geographical and racial incidence of alcoholism. It is certainly no secret that in certain ts of the British Isles the incidence is terrific. The incidence in the Scandinavian countries is terrific. The incidence among Jews is extreme low.

What does this mean?

This means that it is a part of the culture. It is a part of the mores. It is socially acceptable for one to be a heavy and a pathological drinker.

When one has the situation where hierachy, supervisory management people are well known as being pathological drinkers, you are dead. You simply cannot create the climate that to me is necessary among operating employees of the non-acceptance industrially of heavy and pathological drinking.

Perhaps a good way to epitomize this point is from the airline pilot regulations. Among American airlines, a pilot and co-pilot are governed by rulings, and the equivalent of such ruling is that no pilot may take any alcohol for 24 hours before he takes off in the plane with the pilot at the controls. In contrast, Air France, does not have such a rule in effect; and I have been on Air France transcontinental planes where the stewardess lugs the jug of wine right up to the operating personnel of the aircraft while it is in the air over the Atlantic Ocean.

Here, you see, you have the climate, and this is what I am talking about when I say "climate," where alcoholism is acceptable.

If we ever get to the stage where alcoholism becomes acceptable among operating personnel it seems to me we are dead. We are not operating safe railroads.

The other point to which I would like to direct a comment is under Query 11, in which it says: "Assuming that alcoholism is a disease, and as such the employee is entitled to treatment for the disease"--may I make very clear that to me chronic alcoholism is a serious and severe addiction and I share Dr. Avery's conviction that it is a very difficult addiction to break up.

I do not agree, however, that it is a disease; it is a symptom. It is a symptom of a great many different kinds of deviations, personalitywise and otherwise; but the individual in his forties who loses his wife, and may lose his bearings with the depression and take to the bottle for a couple of months, is not at all the same kind of a treatment problem; management problem; medical problem; psychiatric problem as an individual who began his heavy drinking at age 18 and has been putting away his pint a day, day in and day out for 20 years.

They are quite different problems; and to think of alcoholism as a disease entity is, I think, to obscure the issue rather grossly.

As to the heavy pathological drinker of 15, 20, 25 years' duration, with organic changes, I think there can be no question, if he is an operating employee, as to what has to happen to him. He just cannot be permitted to continue in a job where he has to be "on the ball." This I think is where the medical departments fail in an appreciable number of instances.

The physician may know that the patient is a drinking man, so to speak, by common repute of fellow-employees or by information communicated by the supervisor. There is, in my view, too often insufficient examination of this individual's mental status to pick up what, to a careful psychiatrist or a thorough psychological testing, would clearly show evidence of organic, intellectual enfeeblement, even when the patient had not been recently ingesting alcohol.

Let us face it--alcohol and the nutritional deficiency, and other problems that go with it, represent an important cause of enurological deficit status; and one of the commoner ones among those who have been drinking for too many years is organic intellectual enfeeblement.

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They may put up a good social front. They may have a reasonable vocabulary. They may have a jocular attitude and other desirable traits among a group. But they cannot cut the mustard, so to speak, when it comes to carrying out higher discriminatory acts on the higher nervous system.

I do not think we are testing these people carefully enough too often to pick out this particular issue. I think this must be a much more strict and higher level of examination for the operating employee group than it does for the non-operating employee group; and as I say, if we ever let our standards down here we are dead, it seems to me, in an employment sense.

Regarding Dr. Kaplan's comments about the rum fits, or the whiskey convulsions that may go along with the drying-out stage of alcoholism, I have a great deal of faith in the electroencephalogram. I have been using an electroencephalogram from the two-channel days of 1939 and 1940. I like it very much. I like the help it gives me in the evaluation of structural diseases of the nervous system.

I have to tell you, as Dr. Kaplan has told you, that most individuals with rum fits have normal electroencephalograms. As a matter of fact, the history of a well-verified background of an overt grand mal seizure, with a negative electroencephalogram, alerts me to the possibility that this well may be a rum fit kind of convulsion. They are very apt to have negative electroencephalograms.

MODERATOR OLSON: Thank you, Doctor.

Are there any comments?

DR. KNOWLES: I would like to ask Dr. Kaplan, how many of the number of cases have dried out, and had he allowed them to return to work? How many of his group have really dried out after a period?

The organization has come to you and they want to return the man to work.

DR. KAPLAN: In the 1964 we had 75 alcoholics who were originally referred to us for examination; of this group, 19 were originally permitted to return to work, and later we allowed an additional seven.

An alcoholism clinic was recently established by the City of Baltimore, and we are now using it and referring our employees to the unit for rehabilitation. At this time some of our employees attend their group therapy meetings which are held at night.

DR. WINSTON: I would like to explore, just a moment more, the problem of organic intellectual enfeeblement.

The overt psychotic is not a big problem; that is, we can recognize it ordinarily.

Here, however, we are dealing with a person whose potential is materially limited. Oftentimes, he is occupying a job of considerable responsibility; and this organic intellectual enfeeblement is not all caused by alcohol. There are many other causes.

In my experience it is the greatest single problem that I encounter.

How would you go about detecting organic intellectual enfeeblement, Dr. Foster.

DR. FOSTER: The more gross degrees of it are not particularly difficult to detect. There are a number of more or less routinized types of testing for intellectual function, which most astute psychiatrists or neurologists will carry out as a part of a routine examination.

We look for such things as excessive garrulity; we look for evidences of impairment in recent memory. For instance, we will ask the individual to remember an address for a few minutes. "Mr. Jones, I am asking you to remember that my address is 375 Cedar Street." We attempt to get him to repeat it after us, and then five minutes later ask him for this address.

Depending on his intellectual level in education, we will push him to the limits of his arithmetical calculations. How much is nine times eight? How much is twelve times thirteen? If apples cost three for a nickel, how many can you buy for a quarter?

This, interestingly enough, is a common one that the organic flubs the dub on. You see, the multiplication table is pure memory. Nine times eight is 72; but if you put the multiplication table in the form of an abstract problem, such as apples cost three for a nickel, how many can you buy for a quarter?--he cannot do the abstraction, but he can do the rote memory problem.

There is the matter of reversing the presidents. This is a very common device. Who is the President of the United States now? Who preceded him? Who preceded him? And again, push the limits as far backward as the individual can go.

Another common one is to ask the individual to paraphrase proverbs. We will ask him, "What does this mean: A rolling stone gathers no moss?"

Even the dull-witted individual, without gross organism, will somehow get back into the concept of his answer that people who keep on the move too much, people who roam from job to job, do not ever amount to very much. In other words, they can abstract the concept and the kernel from such a familiar proverb.

There are more formal tests and again most psychiatrists have a few pencil-and-paper tests in their office desks. My particular one happens to be called the Shipley-Hartford Retreat Test, and in 20 minutes this gives me an excellent idea of the individual's vocabulary ability as com-

They may put up a good social front. They may have a reasonable vocabulary. They may have a jocular attitude and other desirable traits among a group. But they cannot cut the mustard, so to speak, when it comes to carrying out higher discriminatory acts on the higher nervous system.

I do not think we are testing these people carefully enough too often to pick out this particular issue. I think this must be a much more strict and higher level of examination for the operating employee group than it does for the non-operating employee group; and as I say, if we ever let our standards down here we are dead, it seems to me, in an employment sense.

Regarding Dr. Kaplan's comments about the rum fits, or the whiskey convulsions that may go along with the drying-out stage of alcoholism, I have a great deal of faith in the electroencephalogram. I have been using an electroencephalogram from the two-channel days of 1939 and 1940. I like it very much. I like the help it gives me in the evaluation of structural diseases of the nervous system.

I have to tell you, as Dr. Kaplan has told you, that most individuals with rum fits have normal electroencephalograms. As a matter of fact, the history of a well-verified background of an overt grand mal seizure, with a negative electroencephalogram, alerts me to the possibility that this well may be a rum fit kind of convulsion. They are very apt to have negative electroencephalograms.

MODERATOR OLSON: Thank you, Doctor.

Are there any comments?

DR. KNOWLES: I would like to ask Dr. Kaplan, how many of the number of cases have dried out, and had he allowed them to return to work? How many of his group have really dried out after a period?

The organization has come to you and they want to return the man to work.

DR. KAPLAN: In the 1964 we had 75 alcoholics who were originally referred to us for examination; of this group, 19 were originally permitted to return to work, and later we allowed an additional seven.

An alcoholism clinic was recently established by the City of Baltimore, and we are now using it and referring our employees to the unit for rehabilitation. At this time some of our employees attend their group therapy meetings which are held at night.

DR. WINSTON: I would like to explore, just a moment more, the problem of organic intellectual enfeeblement.

The overt psychotic is not a big problem; that is, we can recognize it ordinarily.

Here, however, we are dealing with a person whose potential is materially limited. Oftentimes, he is occupying a job of considerable responsibility; and this organic intellectual enfeeblement is not all caused by alcohol. There are many other causes.

In my experience it is the greatest single problem that I encounter.

How would you go about detecting organic intellectual enfeeblement, Dr. Foster.

DR. FOSTER: The more gross degrees of it are not particularly difficult to detect. There are a number of more or less routinized types of testing for intellectual function, which most astute psychiatrists or neurologists will carry out as a part of a routine examination.

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You have to remember that in organic brain disease, language, grammar, syntax are preserved to the bitter end, so to speak; that the individual's flow of speech and his use of words may be high average to superior, but his ability to think and to discriminate and to abstract, as well as to carry out conceptual thinking and to use judgment and foresight may be tremendously impaired in spite of a pretty good vocabulary.

If it is a kind of a borderline situation, we are in the happy circumstance that I am where we may refer them to a psychologist who can carry out much more detailed tests; and this is one of the areas where the psychologist is at his best--the detection of the thought disorder; the intellectual deficits; the memory impairments; the abstraction deficiencies; the judgment deficiencies of people with organic brain damage and a particular problem.

There are two problems in the area of evaluating. Does this individual have acquired brain damage from alcoholism, or arteriosclerosis, or whatnot?

The first one is the problem of the barely literate, dull, normal person with an IQ of 60 to 70 as his native endowment, and the individual of very superior intelligence. You see, if you start off with an IQ of 140 or 150, and you get some organic brain damage that may reduce your IQ by 20 or 30 points, you still may be in the high average group.

So, these are the two areas that we have our most trouble with in the detection of acquired organic damage.

There are a few other simple motor tests that most physicians can carry out, and which will give us an idea of reaction time. Remember this: That an engineer at the helm of a train that is traveling from 60 to 80 miles an hour has to see and respond appropriately on one railroad signal which I am familiar about every 40 to 60 seconds. He has to respond to a signal.

If he does not have good reaction time, of course he is going to be missing signals. Play catch with him. This gives a wonderful idea of eye-hand reaction time.

Another simple thing is to ask him to kick as though he were kicking football. The ability to stand on one leg, to get vision and hand and foot coordination all into one piece is well preserved in the organically, well-integrated individual; and it is not well put together and reaction time and eye-hand coordination are significantly and seriously impaired in many organics.

MODERATOR OLSON: Dr. Skinner, did you have a comment you wanted to make?

DR. SKINNER: I will keep it very brief, Mr. Chairman.

Several of the men have asked me about the alcohol program on the

Great Northern Railway Company.

It was started in 1951, and it is conducted almost entirely by a social counselor and his wife, working fulltime.

In the first decade, out of 1,224 cases there were 750 satisfactory results; 150 indicated no improvement; and 300 either died or were dismissed.

There are just five items to which we attribute the success of the program.

First is vigorous support from top management.

Second is early detection, and this includes the wives and families.

Third is the confidential and personal approach. The social counselor sends a confidential report, which goes only to the president, vice-president of personnel and operations, and the chief medical officer.

Contacts are made off the company property.

The treatment program, the Alcoholics Anonymous followup, is perhaps the keystone of the whole program. After all, we realize there is no cure, and we must also emphasize the fact that alcoholism is more than just drinking too much. Referrals to the AA are entirely on a voluntary basis.

I do not think I will go into the rest of it except to say that our hospital recovery rate among our employees is twice as good as that of the general population.

MODERATOR OLSON: That is excellent.

I will ask the other members of the panel, is there any comment you want to make:

Is there anyone in the audience who would care to comment?

(No response)

I am sorry that we have not been able to cover all of the items that were proposed, but I hope that what we have done has been of interest and value to you.

I do want to thank all of the members of the panel and the audience, and particularly the two consultants who took the time to come here and who have contributed so much to the program.

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Thank you, gentlemen. (Applause)

CHAIRMAN NELSON: I hope that everyone will remain for just a few minutes. We will bring the meeting quickly to a close.

I want to thank Dr. Olson, the members of his panel, and particularly Dr. Avery and Dr. Foster, for bringing to us a new subject, and I am sure we are just touching on it, approaching the field, and it will have to be covered more adequately in the future.

Dr. Mishler has very kindly made some remarks regarding my setting up this program. Of course, your Chairman has a great deal to do with setting the course of your ship during the tenure of his office, and arranging the format of your Annual Program; but this is his job. If you feel that this type of program has been worthwhile it more than compensates for the effort expended.

I would, however, like to remind you that the work of this organization is in committees, and without their work there just would not be any organization or any meeting. Please keep that in mind when you are complimenting me about the amount of work that I have done.

An important feature in this meeting has been your response from the audience with the questions and remarks which have certainly pepped up the panels.

Secondly, the response of management.

This was set up as an informal meeting with audience participation, and you have responded beautifully.

I think I can assure you, too, that we have made a substantial step forward in reaching some sort of understanding with management as to what are our problems; how important they are; how we are trying to resolve them; some idea of the importance of our work; and finally, what our ultimate position in the railroad structure will be, and in the AAR.

We had eight or 10 members of the General Committee present during the first day of our meeting. The word will spread well beyond them I assure you.

This has been a considerable divergence from our previous program. We know now some of its advantages and drawbacks. For the edification of the new Chairman, would you like, in general, this type of program in the future? I would like a few comments from the floor as to whether this type of program has been too long; whether it has been an education to you; whether you find that it is worthwhile?

DR. KNOWLES: It is an ideal program.

(Replies of, "Excellent," and, "I agree.")

CHAIRMAN NELSON: I will ask that the new Chairman keep that in

At this time I would like to thank Bill Todd. All of the details that go into the setting up of the program and following through are his responsibility. I personally do not feel that we have ever had a better arrangement; a better room; and a better type of setup for our meeting. Bill, I, and I know everybody here, want to thank you for your work. (Applause)

There is one unpleasant task and one pleasant task that I have before me as Unfinished Business.

During the last few months we have lost Dr. Duncan Eve; Dr. Arthur Metz; and in not too long a period of time, Dr. Washburn; Dr. Dick Bennett; Dr. Ira Goldowski; and Dr. Thurman Colton.

If my recollection does not fail me, each of these men at some time was a chairman of your group.

Would you stand just a moment in respect to their memory?

(In Memoriam)

CHAIRMAN NELSON: I have the more pleasant task of announcing some changes which are inevitable as we progress.

Dr. Stanley Cyran, will you stand? Dr. Cyran has been on these programs. He is taking the place of Dr. John Brewster, as Medical Director of the Pennsylvania Railroad.

You all know Dr. Peter Vaughan. He, too, has been on these programs. Peter Vaughan is not yet officially the Medical Director of the Canadian National.

Our good friend, Ken Dowd, has officially resigned as of April 1st, but in the usual manner of a railroad man, he is taking his last month for a vacation, and with his usual respect for everybody's feelings he refused to come to this meeting and asked Dr. Vaughan to attend.

Chester Zeiss, you have big shoes to fill in replacing our very excellent prior Chairman, Dr. Dick Bennett.

Thank you for coming. (Applause)

And finally, Frank Mahoney, is taking the place of Dr. Ira Goldowski, of the Central New Jersey, and you all know him very well.

That is all I have under the Unfinished Business.

Is there any other Unfinished Business before we go on to New Business?

(No response)

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(No response)

The New Business will be rather short. I have a resolution which was drawn up by members of our group, and I am grateful to Dr. Ralph Johnson for following through on this.

The resolution reads as follows:

"Whereas, Kenneth A. Carney has devoted (exactly the right word) many years of service as Director of the Claims Research Bureau of the AAR; and

"Whereas, His able assistance and advice, his ready and cheerful cooperation with the officers and members of the Medical and Surgical Advisory Committee has appreciably expedited its work; and

"Whereas, His devotion to the principles of good medicine and railroad affairs as well as his profound understanding of the clinical aspects of patient-employee care have avoided problems that might otherwise have occurred; and

"Whereas, Mr. Carney, affectionately known as 'Ken' to us all is soon to retire, this is his last official participation in our proceedings and it does seem retirees are getting younger all the time; now, therefore, be it

RESOLVED: That the best wishes of the Medical and Surgical Advisory Committee in Annual Session assembled be afforded him by the adoption of this resolution which expresses our abiding respect and regard."

I would like to receive a motion to the effect that we unanimously accept this resolution.

DR. WIGHT: I so move.

(The motion was severally seconded.)

CHAIRMAN NELSON: I will declare the motion seconded and unanimously carried.

Unfortunately, Mr. Carney was not able to be here. I think his wife became ill. She has not been very well.

We will, however, forward this to him.

I would like to make one additional recommendation, and that is that he be made an honorary and perennial member of our group and be so notified of all the meetings that we have.

DR. LEIGH: I will so move.

DR. WIGHT: I will second the motion.

CHAIRMAN NELSON: The motion having been made and seconded, the Chair will indicate that this be included with the resolution that is to be sent to Mr. Carney.

At the Medical and Surgical Advisory Committee meeting held yesterday, after our proceedings the question of the location and the time of our next Annual Meeting was brought up. I am only mentioning it at this time. If there is anyone who has any preference as to where the meeting should be held, I wish they would speak up at this time so as to assist our new Chairman.

DR. WIGHT: I think it is only fair to say that this was discussed at length, and it was felt that inasmuch as all the preliminary work had been done relative to our going to Las Vegas, that due consideration should be given to that place next year.

CHAIRMAN NELSON: Are there any other comments?

DR. KNOWLES: I would like to say because of the problems of other meetings the situation has become somewhat acute. I wonder if we should go back and meet just previous to the meeting of the surgeons, which I understand will follow in about two weeks or three weeks here in Chicago; or, whether we should proceed to meet prior to the American Medical Association meeting, so that we have the opportunity of attending two meetings at the same time. I think that is a thought that should be considered.

CHAIRMAN NELSON: Does it meet with your approval to leave this up to the Medical and Surgical Advisory Committee; and if they so feel inclined, to the Steering Committee that Dr. Olson will select?

DR. WIGHT: There is just one remark I think should be made apropos of Dr. Knowles' suggestion. If we tie in directly or indirectly with either of these meetings, it will mean that we will be absent for a prolonged period of time; and two shorter absences are preferable to one long one.

CHAIRMAN NELSON: I might comment on this a little further. This was discussed in some degree. There was discussed the question of the length of the meeting. It was felt that three days were enough; that if you went beyond the three days it would take the entire week.

Inasmuch as we are thinking in terms of going back to a resort, and we have no reason for not thinking that way, I do not think we could very well have an adequate meeting in less than three days, assuming we allow a little time for some recreation.

As to the time, there are a number of factors, Dr. Knowles, that have to be considered. There are a number of meetings that we have to dovetail in with, and the question of weather is a factor, also. So, if we could leave it up to the Medical and Surgical Advisory Committee, and the Steering Committee, I am sure they will consider all of your thinking.

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So, it is with a feeling of a letdown after the present effort I have had directing your activities, but admittedly with a considerable feeling of relief, that I come to my last pleasant duty as Chairman.

I will ask Dr. Milton Clayton and Dr. Robert Graham to escort our new Chairman to the podium. This election took place yesterday afternoon. I presume some of you know what has happened, but this is a formality that we usually like to conduct.

With his customary humility, he has attempted to come in the back door. Your new Chairman, Dr. Ernest Olson, is a person of considerable ability. He depreciates it himself, but I certainly do not. I know his capabilities.

Ernie, here is the gavel, and with that, I ask that you introduce your new Vice-Chairman.

(Presentation of Gavel - Applause.)

(Dr. Ernest Olson assumed the Chair.)

CHAIRMAN OLSON: Gentlemen, I am greatly complimented that you have expressed this confidence in me. I feel that it is going to be a bit difficult to measure up to the kind of a program that Dr. Nelson has prepared for you; but if you can assure me of your help I will certainly do my best.

Again, I want to thank you most sincerely.

Dr. Winston, please, front and center. I understand he has had lots of time to prepare a speech, so, gentlemen, it gives me great pleasure to present the new Vice-Chairman, Dr. John Winston. (Applause)

DR. WINSTON: I did prepare a speech--thank you very much. (Applause)

CHAIRMAN OLSON: That concludes our program.

We stand adjourned.

(The meeting adjourned at twelve-thirty o'clock.)

****

ATTENDANCE

ATCHISON, TOPEKA & SANTA FE RAILWAY
- J. R. Winston, M. D., System Medical Director, Chicago, Illinois.
- D. D. Baird, Superintendent of Safety, Chicago, Illinois.
- O. L. Hanson, M. D., Chief Surgeon, Topeka, Kansas.
- R. D. Shelton, Vice President Operations, Chicago, Illinois.
- Gus Svolos, Assistant General Attorney, Chicago, Illinois.

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- B. W. Rawles, Jr., M. D., Chief Surgeon, Richmond, Virginia.
- G. T. Faircloth, Division Claim Agent, Jacksonville, Florida.
- E. N. Zeigler, General Claims Attorney, Jacksonville, Florida.

BALTIMORE & OHIO RAILROAD
- I. Kaplan, M. D., Medical & Surgical Director, Baltimore, Maryland.
- G. M. Carouge, M. D., Assistant Medical and Surgical Director, Baltimore, Ohio.
- M. M. Hoag, Nurse, Chicago, Illinois
- E. L. Reeves, Superintendent, Chicago, Illinois.

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- C. Maloney, General Claim Agent, Chicago, Illinois.

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- J. R. Knowles, M. D., Chief Surgeon, Boston, Massachusetts.

CANADIAN NATIONAL RAILWAYS
- Peter Vaughan, M. D., Assistant Chief Medical Officer, Montreal, Que., Canada.
- S. F. Dingle, System Vice President, Montreal, Que., Canada.

CANADIAN PACIFIC RAILWAY
- G. Earle Wight, M. D., Chief of Medical Services, Montreal, Que. Canada.

CENTRAL OF GEORGIA - SAVANNAH & ATLANTA RAILWAY
- J. G. Sharpley, M. D., Chief Surgeon, Savannah, Georgia.

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- F. W. Mahoney, M. D., Medical Director, Jersey City, New Jersey.

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- R. R. Brandon, M. D., Chief Medical Examiner, Huntington, West Virginia.
- J. J. Smole, Special Representative, Huntington, West Virginia.
- R. A. Straub, General Claims Attorney, Detroit, Michigan.

CHICAGO & NORTH WESTERN RAILWAY
- W. H. Kelly, General Claims Attorney, Chicago, Illinois.

So, it is with a feeling of a letdown after the present effort I have had directing your activities, but admittedly with a considerable feeling of relief, that I come to my last pleasant duty as Chairman.

I will ask Dr. Milton Clayton and Dr. Robert Graham to escort our new Chairman to the podium. This election took place yesterday afternoon. I presume some of you know what has happened, but this is a formality that we usually like to conduct.

With his customary humility, he has attempted to come in the back door. Your new Chairman, Dr. Ernest Olson, is a person of considerable ability. He depreciates it himself, but I certainly do not. I know his capabilities.

Ernie, here is the gavel, and with that, I ask that you introduce your new Vice-Chairman.

(Presentation of Gavel - Applause.)

(Dr. Ernest Olson assumed the Chair.)

CHAIRMAN OLSON: Gentlemen, I am greatly complimented that you have expressed this confidence in me. I feel that it is going to be a bit difficult to measure up to the kind of a program that Dr. Nelson has prepared for you; but if you can assure me of your help I will certainly do my best.

Again, I want to thank you most sincerely.

Dr. Winston, please, front and center. I understand he has had lots of time to prepare a speech, so, gentlemen, it gives me great pleasure to present the new Vice-Chairman, Dr. John Winston. (Applause)

DR. WINSTON: I did prepare a speech--thank you very much. (Applause)

CHAIRMAN OLSON: That concludes our program.

We stand adjourned.

(The meeting adjourned at twelve-thirty o'clock.)

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ATTENDANCE

ATCHISON, TOPEKA & SANTA FE RAILWAY
- J. R. Winston, M. D., System Medical Director, Chicago, Illinois.
- D. D. Baird, Superintendent of Safety, Chicago, Illinois.
- O. L. Hanson, M. D., Chief Surgeon, Topeka, Kansas.
- R. D. Shelton, Vice President Operations, Chicago, Illinois.
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J. A. Jakubec, Assistant to Vice President Operations, Chicago, Illinois.

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COLORADO & SOUTHERN RAILWAY
W. J. Longeway, M. D., Chief Surgeon, Denver, Colorado.

DULUTH, MISSABE & IRON RANGE RAILWAY
H. J. Meyer, M. D., Chief Surgeon, Duluth, Minnesota.
R. M. Downes, Director of Safety & Plant Protection, Proctor, Minnesota.

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C. R. Zeiss, M. D., Chief Surgeon, Chicago, Illinois.

ERIE-LACKAWANNA RAILROAD
W. E. Mishler, M. D., Chief Surgeon, Cleveland, Ohio.

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W. P. Higgins, M. D., Chief Surgeon, Fort Worth, Texas.

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H. A. Sanders, Vice President & General Manager, Detroit, Michigan.

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E. Oliver, Vice President - Personnel, Chicago, Illinois.
E. Buelow, General Manager, Chicago, Illinois.
W. R. Hovious, Chief Claim Agent, Chicago, Illinois.
R. R. Minor, General Claim Agent, Chicago, Illinois.

MISSOURI PACIFIC HOSPITAL
J. A. Lembeck, M. D., Chief Medical Examiner, St. Louis, Missouri.

JAPANESE NATIONAL RAILWAYS
Katsumi Kaneko, Chief of Internal Medicine, Tokyo, Japan.

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G. Owens, M. D., Chief Surgeon, Kansas City, Missouri.

LEHIGH VALLEY RAILROAD
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V. Capozzi, M. D., Chief Medical Examiner, Jamaica, New York.

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C. Buffington, District Claims Agent, Birmingham, Alabama.

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M. N. Ray, General Claims Attorney, New York, New York.
J. T. Lynch, Assistant to General Claims Attorney, New York, New York.

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W. T. Ross, General Manager Transportation, Roanoke, Virginia.
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A. M. Harris, General Manager Transportation, Philadelphia, Pennsylvania.
T. F. Schaekel, Manager Car Service Records, Philadelphia, Pennsylvania.

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Sam H. McGuirt, Supervising Claim Agent, Richmond, Virginia.

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F. F. Wippermann, M. D., Oculist, Minneapolis, Minnesota.
D. L. Borchert, Director of Personnel, Minneapolis, Minnesota.
E. M. Glennon, Attorney, Minneapolis, Minnesota.
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