FILE NAME: Railroads (RR)

DATE: 1940 June

DOC#: RR006

DOCUMENT DESCRIPTION: Proceedings of the 20th Annual Meeting of the Medical and Surgical Section - American Railway Association

1940

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Association of American Railroads

PROCEEDINGS

OF THE

TWENTIETH ANNUAL MEETING

OF THE

MEDICAL AND SURGICAL SECTION

PENNSYLVANIA HOTEL
NEW YORK, N. Y.
JUNE 10-11, 1940

PROCEEDINGS

OF THE

TWENTIETH ANNUAL MEETING

OF THE

Association of American Railroads

MEDICAL AND SURGICAL SECTION

HELD AT

PENNSYLVANIA HOTEL, NEW YORK, N. Y.
JUNE 10-11, 1940

EASTERN PRINTING CORPORATION
NEW YORK, N. Y.
1940

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ASSOCIATION C

J. J. Pelley, President
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C. H. Buford, Vice-President
A. F. Cleveland, Vice-Preside
E. H. Bunnell, Vice-Presiden
tion Department)
H. J. Forster, Secretary-Trea

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J. J. Pelley, Chairman (ex-off
L. W. Baldwin, Chief Executi
G. D. Brooke, President, Ches
M. W. Clement, President, Pe
Geo. B. Elliott, President, Atl
E. J. Engel, President and C
Topeka & Santa Fe Railw
E. S. French, President and
Maine Railroad and Maine
F. J. Gavin, President, Great
J. B. Hill, President, Louisvill
W. M. Jeffers, President, Unio
A. D. McDonald, President, So
Ernest E. Norris, President, So
L. R. Powell, Jr., Receiver, Sea
E. W. Scheer, President, Readi
M. S. Sloan, President, Missou
Daniel Willard, President, Balti
R. L. Williams, Chief Executive
F. E. Williamson, President, N

OPERATIONS AND MAINTENANCE DEPARTMENT

C. H. Buford, Vice-President

DIVISION I—OPERATING-TRANSPORTATION

Officers

G. Metzman, Chairman
W. K. Etter, Vice-Chairman
G. C. Randall, Chairman, General Committee
L. R. Knott, Secretary

MEDICAL AND SURGICAL SECTION

Officers

Dr. W. J. Lancaster, Chairman
Dr. A. R. Metz, Vice-Chairman
J. C. Caviston, Secretary

MEMBERS OF COMMITTEES

Committee of Direction

(Term Expires in 1941)

Dr. W. J. Lancaster (Chairman), Superintendent and Medical Director, Relief Department, Atlantic Coast Line Railroad, Wilmington, N. C.
Dr. A. R. Metz (Vice-Chairman), Chief Surgeon, Chicago, Milwaukee, St. Paul & Pacific Railroad, Chicago, Ill.
Dr. A. W. Ide, Chief Surgeon, Northern Pacific Railway, St. Paul, Minn.
Dr. John R. Nilsson, Chief Surgeon, Union Pacific Railroad, Omaha, Nebr.

(Term Expires in 1942)

Dr. T. L. Hansen, Chief Surgeon, Chicago, Rock Island & Pacific Railway, Chicago, Ill.
Dr. G. I. Jones, Chief Surgeon, Southern Railway System, Washington, D. C.
Dr. John McCombe, Chief Medical Officer, Canadian National Railways, Montreal, Canada.
Dr. G. P. Myers, Medical Director, New York Central System, Detroit, Mich.

(Term Expires in 1943)

Dr. Harvey Bartle, Chief Medical Officer, Pennsylvania Railroad, Philadelphia, Pa.
Dr. J. Frank Dinnen, Chief Surgeon, Erie Railroad, Cleveland, Ohio.
Dr. Donald Guthrie, Chief Surgeon, Lehigh Valley Railroad, Sayre, Pa.
Dr. E. V. Milholland, Medical and Surgical Director, Baltimore & Ohio Railroad, Baltimore, Md.

Dr. A. J. Chesley, Secret
Health Authorities o
Dr. Thomas Parran, Jr.,
Service, Washington,

MEDICA

STANDING CO

Committee

Dr. J. R. Garner (Chairm
Atlanta, Ga.
Dr. E. C. Holmblad, Regi
East Jackson Blvd., C
D. C. A. Walker, Chief
Pacific General Hospi
Dr. R. A. Woolsey, Chief
Missouri.

Representa

Dr. G. I. Jones, Chief S
D. C.

C

Dr. R. C. Webb (Chairman
Medical Arts Bldg., M
Dr. J. C. Collins, Chief S
Air Line Bldg., Norfo
Dr. Duncan Eve, Chief Su
Hayes St. and 20th A
Dr. O. B. Zeinert, Chief
Missouri.

Representati

Dr. John R. Nilsson, Chief

Committee on Developm

Dr. O. H. Horrall (Chairma
Railroad, 547 W. Jacks
Dr. M. B. Bishoff, Chief S
Topeka, Kansas.
Dr. J. J. Brandabur, Assis
Railway, Huntingdon, V
Dr. G. G. Dowdall, Chief
Island Ave., Chicago, Il

ASSOCIATION OF AMERICAN RAILROADS

Officers

J. J. Pelley, President

R. V. Fletcher, Vice-President and General Counsel (Law Department)

C. H. Buford, Vice-President (Operations and Maintenance Department)

A. F. Cleveland, Vice-President (Traffic Department)

E. H. Bunnell, Vice-President (Finance, Accounting, Taxation and Valuation Department)

H. J. Forster, Secretary-Treasurer

Board of Directors

J. J. Pelley, Chairman (ex-officio).

L. W. Baldwin, Chief Executive Officer, Missouri Pacific Lines.

G. D. Brooke, President, Chesapeake & Ohio Railway.

M. W. Clement, President, Pennsylvania Railroad Company.

Geo. B. Elliott, President, Atlantic Coast Line Railroad Company.

E. J. Engel, President and Chairman of Executive Committee, Atchison, Topeka & Santa Fe Railway.

E. S. French, President and Chairman, Executive Committee, Boston & Maine Railroad and Maine Central Railroad Company.

F. J. Gavin, President, Great Northern Railway.

J. B. Hill, President, Louisville & Nashville Railroad.

W. M. Jeffers, President, Union Pacific Railroad.

A. D. McDonald, President, Southern Pacific Company.

Ernest E. Norris, President, Southern Railway System.

L. R. Powell, Jr., Receiver, Seaboard Air Line Railway.

E. W. Scheer, President, Reading Company.

M. S. Sloan, President, Missouri-Kansas-Texas Railroad.

Daniel Willard, President, Baltimore & Ohio Railroad Company.

R. L. Williams, Chief Executive Officer, Chicago & North Western Railway.

F. E. Williamson, President, New York Central System.

Honorary Members

Dr. A. J. Chesley, Secretary-Treasurer, Conference of State and Provincial Health Authorities of North America, St. Paul, Minn.

Dr. Thomas Parran, Jr., Surgeon General, Bureau of the Public Health Service, Washington, D. C.

MEDICAL AND SURGICAL SECTION

STANDING COMMITTEES AS OF AUGUST 1, 1940

Committee on Disability and Rehabilitation

Dr. J. R. Garner (Chairman), Chief Surgeon Western Railway of Alabama, Atlanta, Ga.

Dr. E. C. Holmblad, Regional Surgeon, Railway Express Agency, Inc., 28 East Jackson Blvd., Chicago, Ill.

D. C. A. Walker, Chief Surgeon, Southern Pacific Company, Southern Pacific General Hospital, San Francisco, California.

Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Ry., St. Louis, Missouri.

Representative from Committee of Direction

Dr. G. I. Jones, Chief Surgeon, Southern Railway System, Washington, D. C.

Committee on Fractures

Dr. R. C. Webb (Chairman), Chief Surgeon, Great Northern Railway, 1849 Medical Arts Bldg., Minneapolis, Minn.

Dr. J. C. Collins, Chief Surgeon, Seaboard Air Line Railway, Seaboard Air Line Bldg., Norfolk, Va.

Dr. Duncan Eve, Chief Surgeon, Nashville, Chattanooga & St. Louis Ry., Hayes St. and 20th Ave., Nashville, Tenn.

Dr. O. B. Zeinert, Chief Surgeon, Missouri Pacific Railroad, St. Louis, Missouri.

Representative from Committee of Direction

Dr. John R. Nilsson, Chief Surgeon Union Pacific Railroad, Omaha, Nebr.

Committee on Developments Resulting from Physical Examinations

Dr. O. H. Horrall (Chairman), Chief Surgeon, Chicago, Burlington & Quincy Railroad, 547 W. Jackson Blvd., Chicago, Illinois.

Dr. M. B. Bishoff, Chief Surgeon, Atchison, Topeka & Santa Fe Railway, Topeka, Kansas.

Dr. J. J. Brandabur, Assistant Supervising Surgeon, Chesapeake & Ohio Railway, Huntingdon, West Virginia.

Dr. G. G. Dowdall, Chief Surgeon, Illinois Central System, 5800 Stoney Island Ave., Chicago, Illinois.

Representative from Committee of Direction

Dr. Geo. P. Myers, Medical Director, New York Central System, 803 Michigan Central Station, Detroit, Michigan.

Committee on Medical Aspects of Air Conditioning of Cars

Dr. T. R. Crowder (Chairman), Director Department San. & Surg., Pullman Company, Pullman Bldg., Chicago, Illinois.

Dr. D. E. Remsberg, Assistant Superintendent & Medical Director, Relief & Pensions Dept., Norfolk & Western Railway, Roanoke, Va,

Dr. Robt. S. Yancey, Medical Director, Missouri-Kansas-Texas Railroad, Sparta, Illinois.

Representative from Committee of Direction

Dr. E. V. Milholland, Medical and Surgical Director, Baltimore & Ohio Railroad, 200 Baltimore & Ohio Bldg., Baltimore, Maryland.

ASSOCIATION

DIVISION I

MEDI

1. **REPRESENTATIO** representation of membe Chief Surgeons or other p Express Agency, Inc., and in this Section.

2. **AFFILIATED MEM** collaborating or cooperati ber thereof upon the appro An affiliated member shal road representative, excep

3. The officers of the S and Secretary.

(a) As provided in **VICE-CHAIRMAN** sh its membership. Thei not succeed himself.

(b) The **SECRETAI** the Division. His sal the approval of the partment.

(c) The **COMMITT** bers, territorially repr New England and Can four from the West—el serve for three years.

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ASSOCIATION OF AMERICAN RAILROADS

DIVISION I—OPERATING—TRANSPORTATION

MEDICAL AND SURGICAL SECTION

RULES OF ORDER

1. **REPRESENTATION:** As provided in the Plan of Organization, the representation of member roads in the Medical and Surgical Section shall be Chief Surgeons or other persons engaged in a similar capacity. The Railway Express Agency, Inc., and the Pullman Company are eligible for membership in this Section.

2. **AFFILIATED MEMBERS:** A representative of an organization collaborating or cooperating with the Section may become an affiliated member thereof upon the approval of his application by the Committee of Direction. An affiliated member shall have the rights and privileges accorded a member road representative, except voting or the holding of office.

Officers and Committees

3. The officers of the Section shall consist of a Chairman, Vice-Chairman and Secretary.

(a) As provided in the Plan of Organization, the **CHAIRMAN** and **VICE-CHAIRMAN** shall be selected by the Committee of Direction from its membership. Their terms of office shall be one year. A Chairman will not succeed himself.

(b) The **SECRETARY** will be appointed by the General Committee of the Division. His salary shall be named by that Committee, subject to the approval of the Vice-President, Operations and Maintenance Department.

(c) The **COMMITTEE OF DIRECTION** will consist of twelve members, territorially representative as far as practicable—one each from New England and Canada; four from the East; two from the South and four from the West—elected as hereinafter prescribed, each of whom shall serve for three years.

The terms of office of all elective members of the Committee of Direction shall expire at the conclusion of the annual meeting. Vacancies in the committee membership shall be filled by appointment of the Committee until the next election.

In addition to the above, the Surgeon-General of the United States Bureau of Public Health Service or a representative to be designated by him, and a representative to be designated by the Conference of State and Provincial Health Authorities of North America shall be honorary members of the Committee of Direction.

The Committee of Direction will select from its elective membership a Chairman and Vice-Chairman of the Section, whose terms of office shall be one year. A Chairman will not succeed himself.

(d) The Standing Committees of the Section will be as follows:

Committee on Disability and Rehabilitation
Committee on Fractures
Committee on Developments Resulting from Physical Examinations
Committee on Medical Aspects of Air Conditioning of Cars

The representation of member roads on these committees will be, so far as is practicable, territorially selected, in approximately the same proportions as that of the Committee of Direction, personnel to be named each year by the Committee of Direction immediately following adjournment of the annual meeting.

Duties of Officers

4. The **CHAIRMAN** shall have general supervision over the affairs of the Section and shall preside at meetings of the Section and at meetings of the Committee of Direction.

5. The **VICE-CHAIRMAN**, in the absence of the Chairman, shall perform the duties of the Chairman and such other duties as may be assigned.

6. (a) The **SECRETARY** shall perform the usual duties of that office and such other duties as may be assigned to him by the Chairman.

(b) He shall receive six weeks in advance of the annual meeting each year the report of the Committee on Nominations, as elsewhere provided for, and will submit to the membership at the annual meeting the nominations contained in that report, to fill the vacancies in the membership of the Committee of Direction. He shall announce the result of the election promptly to the members.

Duties of Committees

7. The **COMMITTEE OF DIRECTION** shall:

(a) Exercise general supervision over the interests and affairs of the Section.

(b) Be empowered to act on behalf of the Section in the interim between meetings and shall submit at each meeting a report covering its actions.

(c) Examine and decide what portion of communications, papers and reports shall be submitted at the meetings. It shall determine which, if any, of the subjects presented by the various committees, shall be referred to the General Committee of the Division.

(d) Appoint two months in advance of the annual meeting each year a Committee on Nominations, consisting of representatives of five member roads, who shall not be members of the Committee of Direction.

(e) Appoint additional committees as required.

(f) Submit to the Chairman, General Committee, detail of contemplated financial requirements for conducting the work of the Section as required or as called for by that official.

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(g) Call annual meetings of the Section, subject to the approval of the General Committee of the Division, if in its judgment conditions warrant.

(h) Call meetings of the Section, upon not less than thirty days' notice to each member. It must call special meetings of the Section upon the request, in writing, of a majority of the member roads.

8. The **COMMITTEE ON NOMINATIONS,** appointed as above prescribed, shall report to the Secretary at least six weeks in advance of the annual meeting of each year, at least two nominations for each impending vacancy to replace the four members of the Committee of Direction whose terms expire that year, and to fill any vacancy.

The duties of the Standing Committees shall be as follows:

9. COMMITTEE NO. 1—The **COMMITTEE ON DISABILITY AND REHABILITATION** shall study and report, with suggestions or recommendations, on such subjects that have to do with the physical efficiency or inefficiency of railroad employes. It shall also consider ways and means for the rehabilitation of injured or incapacitated employes and the complete restoration of function.

10. COMMITTEE NO. 2—The **COMMITTEE ON FRACTURES** shall study and report on the treatment and transportation of fracture cases including (a) Diagnosis of fractures, (b) First aid and transportation splints, (c) Fracture report forms, (d) X-ray work in connection with fractures, and similar subjects.

11. COMMITTEE NO. 3—The **COMMITTEE ON DEVELOPMENTS RESULTING FROM PHYSICAL EXAMINATIONS** shall analyze and make report, with recommendations or suggestions, on data made available by periodic examinations, etc. It shall study and revise as conditions may warrant, the recommended standards covering physical examinations as well as the forms used in connection therewith.

12. COMMITTEE NO. 4—The **COMMITTEE ON MEDICAL ASPECTS OF AIR CONDITIONING OF CARS** shall study and report on this subject in its relation to the health and comfort of travelers, cooperating with other departments handling matters relating to air conditioning of equipment.

13. **VOTING AT MEETINGS OF SECTION:** (a) Vote may be taken viva voce, by rising, by roll call or by ballot. Each member road shall be entitled to one vote. The vote of the majority of the member roads represented shall be required to decide any question, motion or resolution, unless otherwise ordered. (b) Voting for candidates for membership on the Committee of Direction shall be by ballot. (c) Unless otherwise designated by it, the ranking officer will be recognized as the voting representative of a road at any meeting.

14. **LETTER BALLOTS** may be taken upon any subject by order of the Committee of Direction and must be taken on all questions affecting physical property. The voting power of the member roads shall be proportionate to the ownership of miles of track.

15. **ORDER OF BUSINESS:** The order of business at meetings of the Section shall, unless otherwise directed by a majority of the members present, be as follows:

Approval of minutes of last meeting
Reports of Standing Committees
Reports of Special Committee
Reports of Tellers
Unfinished Business
New Business

16. Robert's Rules of order shall govern the proceedings of this Section. including amendment to these Rules of Order.

MEDICAL A

Pennsylvania Hotel,

The following representative

Members

Alton R. R.....
Ann Arbor R. R.....
Atchison, Topeka & Santa Fe
Atlanta & West Point R. R.....

Atlantic Coast Line R. R.....

Baltimore & Ohio R. R.....

Baltimore & Ohio Chicago Te
R. R.....

Canadian National Rys.....
Chesapeake & Ohio Ry.....

Chicago & Illinois Midland Ry..
Chicago, Burlington & Quincy R
Chicago, Milwaukee, St. Paul
cific R. R.....
*Chicago, North Shore & Milv
R. R.....
Chicago, Rock Island & Pacific
Delaware & Hudson R. R. Corp
Denver & Rio Grande Western

Detroit & Toledo Shore Line R.
Detroit, Toledo & Ironton R. R
Erie R. R.....

Georgia R. R.....

Grand Trunk Western R. R.....
Great Northern Ry.....

*Associate Member.

Gulf, Mobile & Northern R. R.	C. H. Ramsay, Chief Surgeon.
Illinois Central System	G. G. Dowdall, Chief Surgeon.
Lehigh Valley R. R.	Donald Guthrie, Chief Surgeon.
Louisiana & Arkansas Ry.	A. A. Herold, Chief Surgeon.
Missouri Pacific R. R.	O. B. Zeinert, Chief Surgeon.
Montour R. R.	G. C. Weil, Surgeon.
Nashville, Chattanooga & St. Louis Ry.	L. W. Edwards
New York Central System	G. P. Myers, Medical Director.
	G. B. Myers.
New York, Chicago & St. Louis Ry.	J. Frank Dinnen, Chief Surgeon.
Norfolk & Western Ry.	D. E. Remsberg, Assistant Superintendent and Medical Director.
	R. P. Elder, Medical Examiner.
	H. G. Mumma, Medical Examiner.
	P. E. Topham, Medical Examiner.
Northern Pacific Ry.	A. W. Ide, Chief Surgeon, Eastern District.
Pennsylvania R. R.	Harvey Bartle, Chief Medical Examiner.
	Walter Aye, Medical Examiner.
	A. P. Harrison, Medical Examiner.
	L. S. Howard, Medical Examiner.
	C. R. Houchins, Secretary to Chief Medical Examiner.
	S. W. Hurst, Medical Examiner.
	A. P. Isenberg, Company Surgeon and Medical Examiner.
	T. B. L. Jordan, Medical Examiner and Company Surgeon.
	R. C. Kell, Neuropsychiatrist.
	J. E. Nickel, Medical Examiner.
	R. D. Saul, Medical Examiner.
	J. H. White, Medical Examiner.
Pennsylvania-Reading Seashore Lines	A. P. Isenberg, Company Surgeon and Medical Examiner.
Pullman Company	R. M. Graham, Chief Medical Examiner.
Railway Express Agency, Inc.	E. C. Holmblad, Regional Surgeon.
Reading Company	F. S. Ferris, Chief Medical Officer.
	A. Neupauer, Superintendent Relief Association.
St. Louis-San Francisco Ry.	R. A. Woolsey, Chief Surgeon.
St. Louis Southwestern Ry.	William Hibbitts, Chief Surgeon.
Seaboard Air Line Ry.	Joseph D. Collins, Chief Surgeon.
Southern Pacific Co.-Pacific Lines	C. A. Walker, Chief Surgeon.
Southern Railway System	G. I. Jones, Chief Surgeon.
Spokane International Ry.	E. R. Northrop, Chief Surgeon.
Spokane, Portland & Seattle Ry.	E. R. Northrop, Chief Surgeon.
Texas & New Orleans R. R.	Judson L. Taylor, Chief Surgeon.

*Toledo Terminal R. R.	
Union Pacific R. R.	
Wabash Ry.	
Western Maryland Ry.	
Western Railway of Alal	
American College of Sur	
Association of American	
Columbia University	
Crippled Children's Hosp	
bethtown, Pa.	
Johns Hopkins University	
State and Provincial Healt	
ties of North America	

*Associate Member.

MEDICAL AND SURGICAL SECTION

Pennsylvania Hotel, New York, N. Y., June 10-11, 1940

The following representatives were present:

Members	Representatives
Alton R. R.	E. V. Milholland, Medical Director.
Ann Arbor R. R.	A. M. Hume, Chief Surgeon.
Atchison, Topeka & Santa Fe Ry.	M. L. Bishoff, Chief Surgeon.
Atlanta & West Point R. R.	J. R. Garner, Chief Surgeon.
	E. H. Greene, Local Surgeon.
	Carter Smith, Consulting Internist.
Atlantic Coast Line R. R.	W. J. Lancaster, Superintendent and Medical Director, Relief Department.
	J. W. Roberts, Secretary to Supt. and Med. Dir. Relief Department.
Baltimore & Ohio R. R.	E. V. Milholland, Medical and Surgical Director.
Baltimore & Ohio Chicago Terminal R. R.	E. V. Milholland, Medical and Surgical Director.
Canadian National Rys.	John McCombe, Chief Medical Officer.
Chesapeake & Ohio Ry.	J. Frank Dinnen, Supervising Surgeon.
	J. J. Brandabur, Assistant Supervising Surgeon.
	G. S. Hartley, Physician.
Chicago & Illinois Midland Ry.	Don Deal, Chief Surgeon.
Chicago, Burlington & Quincy R. R.	O. H. Horrall, Chief Surgeon.
Chicago, Milwaukee, St. Paul & Pacific R. R.	A. R. Metz, Chief Surgeon.
*Chicago, North Shore & Milwaukee R. R.	Hart E. Fisher, Chief Surgeon.
Chicago, Rock Island & Pacific Ry.	T. L. Hansen, Chief Surgeon.
Delaware & Hudson R. R. Corp.	J. W. Ghormley, Surgeon.
Denver & Rio Grande Western R. R.	G. H. Curfman, Chief Surgeon.
	R. S. Allison, Asst. Chief Surgeon.
Detroit & Toledo Shore Line R. R.	B. W. Stockwell, Chief Surgeon.
Detroit, Toledo & Ironton R. R.	Roy D. McClure, Chief Surgeon.
Erie R. R.	J. Frank Dinnen, Chief Surgeon.
	J. W. Houk, Assistant to Chief Surgeon.
Georgia R. R.	J. R. Garner, Chief Surgeon.
	E. H. Greene, Local Surgeon.
Grand Trunk Western R. R.	B. W. Stockwell, Chief Surgeon.
Great Northern Ry.	R. C. Webb, Chief Surgeon.

*Associate Member.

Ramsay, Chief Surgeon.
Dowdall, Chief Surgeon.
d Guthrie, Chief Surgeon.
Herold, Chief Surgeon.
Zeinert, Chief Surgeon.
Weil, Surgeon.

Edwards
Myers, Medical Director.
Myers.
nk Dinnen, Chief Surgeon.
Remsberg, Assistant Superin-
lent and Medical Director.
Elder, Medical Examiner.
Mumma, Medical Examiner.
Topham, Medical Examiner.
. Ide, Chief Surgeon, Eastern
rict.
y Bartle, Chief Medical Exam-
.
r Aye, Medical Examiner.
Harrison, Medical Examiner.
Howard, Medical Examiner.
Houchins, Secretary to Chief
lical Examiner.
Hurst, Medical Examiner.
Isenberg, Company Surgeon and
lical Examiner.
L. Jordan, Medical Examiner
Company Surgeon.
Kell, Neuropsychiatrist.
Nickel, Medical Examiner.
Saul, Medical Examiner.
White, Medical Examiner.
Isenberg, Company Surgeon and
lical Examiner.
Graham, Chief Medical Exam-
.
Holmblad, Regional Surgeon.
Ferris, Chief Medical Officer.
eupauer, Superintendent Relief
ociation.
Woolsey, Chief Surgeon.
m Hibbitts, Chief Surgeon.
h D. Collins, Chief Surgeon.
Walker, Chief Surgeon.
Jones, Chief Surgeon.
Northrop, Chief Surgeon.
Northrop, Chief Surgeon.
n L. Taylor, Chief Surgeon.

*Toledo Terminal R. R.	T. H. Brown, Surgeon.
Union Pacific R. R.	John R. Nilsson, Chief Surgeon. Howard K. Gray, Consulting Surgeon.
Wabash Ry.	W. E. Gollings, Superintendent Wabash Hospitals.
Western Maryland Ry.	F. C. Warring, Sr., Chief Resident Surgeon.
Western Railway of Alabama	J. R. Garner, Chief Surgeon.

also

American College of Surgeons	R. H. Kennedy, Chairman, Committee on Fractures and Other Traumas.
Association of American Railroads	C. H. Buford, Vice-President, Operations and Maintenance Department. J. C. Caviston, Secretary, Medical and Surgical Section. W. J. Farrell, Secretary, Purchases and Stores Division.
Columbia University	Clay Ray Murray, Associate Professor of Surgery.
Crippled Children's Hospital, Elizabethtown, Pa.	Tom Outland.
Johns Hopkins University	W. E. Dandy, Adj. Professor of Neuro-Surgery.
State and Provincial Health Authorities of North America	A. J. Chesley, Secretary.

*Associate Member.

nittee appointed by the Secretary
coming from the national labor
n the group of twelve, two labor
Labor, two from the C.I.O., and
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ider pre-employment examinations

he first day. We spent six hours
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r discussion in this meeting, but
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measures as safety factors and at
efulness of such persons.
or two thoughts that I wanted to
specially with the background that
the work that we have accomplished
the twenty years of our existence.
Twentieth Annual Session of this

r, whom we all know, as Chairman
f the Committee on Disability and

(Circular M. & S. 222)

ASSOCIATION OF AMERICAN RAILROADS

MEDICAL AND SURGICAL SECTION

REPORT OF COMMITTEE ON DISABILITY AND REHABILITATION

Dr. J. R. Garner (Chairman), Atlanta & West Point Railroad, Western Railway of Alabama, Georgia Railroad.
Dr. E. C. Holmblad, Regional Surgeon, Railway Express Agency, Inc.
Dr. C. A. Walker, Chief Surgeon, Southern Pacific Company.
Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Railway.

Representative of Committee of Direction
Dr. W. J. Lancaster, Superintendent and Medical Director, Relief Department, Atlantic Coast Line Railroad.

New York, N. Y., May 15, 1940.

TO THE MEDICAL AND SURGICAL SECTION:

Your Committee on Disability and Rehabilitation, having continued to function during the fiscal year, submits herewith report covering its activities.

A vast amount of the Committee's work has been carried on through correspondence by the several members of the Committee handling subjects assigned to them and later reporting to the Committee as a whole at its several meetings held:

November 15, 1939, at Pittsburgh, Pa.,
February 8, 1940, at St. Louis, Mo., and
March 29, 1940, at New York, N. Y.

Many subjects brought to our attention and found to have been previously investigated and reported upon are omitted at this time, wherever no additional information was obtainable. Quite a few subjects are brought to your attention without special emphasis, while a number of major subjects, though previously reported to this Body, are of such paramount importance that your Committee has devoted considerable time to the amassing of additional data and in addition to publication in this report, arrangements have been made for special presentation of these topics by invited guests or members of the Committee.

Consideration of the following topics is invited:

Cardio-Vascular-Renal Disease

Because of the very pronounced hazard cardio-vascular-renal syndrones hold for the railroad employe, his associates and the public, your Committee feels that it cannot too strongly reiterate the reports previously presented on this subject.

The early detection of these conditions in train service employes, particularly engineers, where a rupture of an aortic aneurysm or the sudden onset of a coronary block might be productive of dire results, is of paramount importance.

For this reason we cannot too strongly urge periodic physical reexamination of all employes engaged in any form of train service, and when such employes are found to have a blood pressure above normal, and an irregular or intermittent pulse, an arteriosclerosis, or a heart exhibiting some valvular anomaly, they should be submitted to examination as often as every thirty or sixty days. When the conditions are more grave they should, of course, be removed from service. A systolic blood pressure of 200 or more and/or a diastolic pressure of 100 should be considered in this group.

In examining these cases the Surgeon should remember that trepidation and excitement attendant upon the examination may have considerably raised the blood pressure when the reading is first made. It is therefore recommended that a second or third reading should be taken before establishing the examinee's blood pressure.

Chemo-Therapy

The subject of chemo-therapy has become one of marked importance to the medical profession. This term first used by Ehrlich, and restricted to a special class of synthetic organic compounds, has enlarged greatly with the development of the aniline dye industry of Europe. Some of these dyes were found to have inhibitory powers over bacteria and to be more or less selective in their action. Ehrlich first demonstrated that this selectivity of action could be modified by chemical manipulation of the molecule, resulting in an entirely different synthetic organic compound.

Many drugs coming under this heading have been so widely used since Ehrlich's early discoveries that they require no special mention. Your Committee has given much time and investigation to the newer chemo-therapeutic products—sulfanilamide, sulfapyridine and sulfathiazol, and it is to these that we particularly invite your attention.

Rather than incorporating an extensive digest of these newer chemo-therapeutic agencies in this Report, the Committee has been fortunate in its ability to have Dr. Gordon B. Myers of the Wayne University Medical College, Detroit, Michigan, who has had much experience, of a practical nature, with these newer drugs, present this subject.

For those members desiring to make a more complete study of the subject, reference is made to the following bibliography:

"Preparation and Administration of Arsphenamine and Neoarsphenamine, Treasury Department, U. S. Public Health Service, Hugh S, Cumming, Surgeon General, Reprint #774, Public Health Reports. August 4, 1922, pp. 1867–1882.

The Relative Parasiticidal Value of Arsphenamine and Neoarsphenamine, Carl Voegtlin and D. W. Miller, Reprint #776, U. S. Public Health Reports, July 7, 1922, pp. 1627–1641.

Principles and Practice of Chemotherapy with Special Reference to the Specific and General Treatment of Syphilis, John A. Kolmer, W. B. Saunders Co., 1926.

Some Applications of Organic Chemistry to Biology and Medicine, George Barger, McGraw-Hill Book Co., 1930, Chapter IV. (Chemotherapy.)

Recent Advances in Chemotherapy, G. M. Findlay, P. Blakiston's Son & Co., Inc., 1930.

Transactions of The Royal Medico-Chirurgical Society of Glasgow, Session 1935–1936, Meeting I—4th October, 1935, Presidential Address: **Chemotherapy—The Progress of Thirty Years and the Prospect,** Professor C. H. Browning.

Prolegomenon To Current Pharmacology, Chauncey D. Leake, University of California Publications in Pharmacology, Volume 1, No. 1, pp. 1–30, University of California Press, Berkeley, 1938.

Sulfanilamide Therapy of Bacterial Infections, with Special Reference to Diseases Caused by Hemolytic Streptococci, Pneumococci, Meningococci and Gonococci, Ralph R. Mellon, Paul Gross and Frank B. Cooper, Charles C. Thomas, Publisher, Baltimore, Md., 1938.

The Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds, Perrin H. Long and Eleanor A. Bliss, The MacMillan Company, New York, 1939.

Chemistry in Medicine, The Chemical Foundation.

The Clinical Use of Sulfamethylthiazol in Infections Caused by Staphylococcus Aureus: Preliminary Report, W. E. Herrel and A. E. Brown, Proc. Staff Meetings of the Mayo Clinic, 14, 753, 1939 (Nov. 29).

Specific Chemotherapy of Experimental Staphylococcus Infections with Thiazol Derivatives of Sulfanilamide, O. W. Barlow and E. Homburger, Proc. Soc. Exptl. Biol. Med. **42,** 421, 1939 (Nov.).

Chemotherapeutic Evaluation of Sulfanilamide Derivatives of Heterocyclic Amines, Frank B. Cooper, Paul Gross and Marion Lewis, Proc. Soc. Exptl. Biol. Med. **42,** 421, 1939 (Nov.).

Therapeutic Effect of Sulfathiazole and Sulfapyridine, C. M. McKee, Geoffrey Rake, R. O. Greep and H. B. van Dyke, Proc. Soc. Exptl. Biol. Med. **42,** 417, 1939 (Nov.)."

Common Colds

The 1939 Report dealt fairly extensively with the subject of common colds, enumerating certain prophylatic measures—both hygienic and medicinal. Since there seems to be an increased interest in the use of oral vaccine for the prevention of common colds among railway employes, this subject has been discussed at considerable length.

It has been thought by many that hypodermically administered vaccines have proven to be between 60 and 80 per cent effective in the prevention of common colds. The inconvenience of taking hypodermic injections, together with the relatively high cost of same, has seemed to operate against the more extensive use of this form of prophylaxis.

Now, the same bacterial content is available for oral administration in either capsules or enteric coated tablets, which are administered: One each morning for a period of 7 days, and then twice a week until twenty (20) in all have been taken. The ease of administration, together with the small financial investment required, and the fact that no evil effects from the administration of these oral vaccines have been reported, makes this prophylatic measure one worthy of consideration and trial.

Over a period of two years, Dr. Hartwell Joiner made a study involving the history of 880 individuals giving histories of having two or more colds per year preceding the investigation. A summary of his findings is as follows:

No. Persons In Group	Medication Administered	% Persons Free from Colds
300	None (Control)	12.34
100	Daily Fruit Juice and Saline	21.00
115	Six Hypodermic Injections	66.61
115	Eight Hypodermic Injections	68.70
130	Twenty Capsules by Mouth	75.24
120	Twenty Enteric Coated Tablets by Mouth	81.92

Your Committee has a list of seventeen (17) large corporations in Chicago who regularly administer oral vaccines to their employes as a prophylaxis against common colds. The enteric coated pills are regarded with the greatest favor.

Diabetes

In 1926–1927, your Committee communicated with Dr. Elliott P. Joslin, Dr. Frederick M. Allen, Dr. R. P. Woodyatt and the Mayo Clinic in an effort to establish what might be considered a normal blood sugar level to guide us in making examinations of railway employes. Their several replies were published in the 1927 Transactions of this Section, and the members are referred to same. It was thought possible that with some twelve years additional experience these men may have changed their opinions or have noted some new developments on the subject, and hence they have again been communicated and we herewith quote the replies of Doctors Joslin, Allen and Wilder. Dr. Woodyatt was away from Chicago on an extended visit to the West Coast and could not be heard from up to the writing of this report:

Elliott P. Joslin, M.D.
Howard F. Root, M.D.
Priscilla White, M.D.
Alexander Marble, M.D.
Allen P. Joslin, M.D.

81 Bay State Road
Boston

Office hours by Appointment

Roentgenologist
Isabel K. Bogan, M.D.

January 20, 1940.

"Dr. J. R. Garner, M.D., Chairman,
Committee on Disability and Rehabilitation,
Association of American Railroads,
4 Hunter Street, S. E.,
Atlanta, Georgia.

My Dear Dr. Garner:

Proof of diabetes should depend upon examinations of both blood and urine.

My basis for diagnosis of diabetes is glycosuria plus a fasting (venous) blood sugar of 0.13 (130 milligrams) per cent or a (venous) blood sugar of 0.17 (170 milligrams) per cent at any other time of the day.

Diabetics can do much of the work involved in railroading perfectly well and it would be a shame to disbar them from all service. On the other hand, diabetic employes should not be employed in the execution of transportation, e.g., dispatchers, engineers, conductors, etc.

Sincerely yours,
(SGD.) ELLIOTT P. JOSLIN."

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OTT P. JOSLIN."

Frederick M. Allen, M.D.
1031 Fifth Avenue, New York
Telephone, Butterfield 8-2151

January 28, 1940.

"Dr. J. R. Garner,
A. & W. P. R. R.,
4 Hunter Street, S. E.,
Atlanta, Georgia.

Dear Doctor Garner:

Severe diabetes is common in the young and is also present in a minority of elderly patients. From the occupational standpoint, the distinguishing character of the severe cases is that they require insulin. Although they may enjoy excellent health, presumably the only safe rule for a railroad is that no person who takes insulin can hold any of the most dangerous positions, such as that of locomotive engineer. Other positions should be graded according to danger and responsibility, and the results that might follow if the individual should become either unconscious or mentally confused. Doubtless many station jobs, for example in baggage rooms, could safely be filled by men using insulin if they are efficient in general.

In regard to the milder cases, which can be satisfactorily controlled without insulin, my opinion is essentially as expressed in my former letter. Uncontrolled or poorly controlled diabetes, as revealed by excessively high sugar in either blood or urine, always introduces a chance of unpredictable accidents. In such cases also the high incidence of arteriosclerosis and the liability to cerebral, coronary and other attacks must receive consideration. On the other hand, a mild diabetic under good control by diet alone need not introduce any danger. My own standards are very strict in requiring thoroughly normal blood sugar in addition to the absence of glycosuria, and the most reassuring statement I can make is that patients under these conditions are as free from dangers of all kinds as non-diabetics of similar ages and conditions.

Very truly yours,

FMA:s (SGD.) FREDERICK M. ALLEN."

"MAYO CLINIC
Rochester, Minnesota

Clinical Section
of
Dr. Russell M. Wilder
Dr. Edwin J. Kepler
Dr. Edward H. Rynearson

January 31, 1940

Consulting Dietitian
Mary A. Foley

Dr. J. R. Garner, Chief Surgeon,
A. & W. P. R. R.—W. Ry. of Ala.—Ga. R. R.,
4 Hunter Street, S. E.,
Atlanta, Georgia.

Dear Doctor Garner:

It is difficult for me to tell from your letter what you want to know. I have no information to suggest that railroad employes normally show a different physiological range of blood sugar level than other well men. We regard 0.070 and 0.120 gm. per 100 c.c. as the lower and upper limits of normal fasting blood sugar levels, but do not base a diagnosis of diabetes mellitus on the blood sugar value alone because other factors, such as trauma, fever, hyperthyroidism and age, will raise it temporarily.

I am forwarding a reprint that may be useful to you, but would also refer you to a book on diabetes which I expect to have published before June. The title is "Clinical Diabetes Mellitus and Hyperinsulinism." The publishers are W. B. Saunders Company, Philadelphia.

Sincerely yours,
(SGD.) RUSSELL M. WILDER, M.D."

rmw/hh

Giving the subject of Diabetes and its treatment further study, certain conclusions have been formulated.

(1) We cannot too strongly emphasize our former recommendations that any train service or engine employe who requires insulin in the treatment of his diabetic condition constitutes a hazard to himself and others and should not be permitted to engage in such train or engine service while such treatment is being administered.

(2) The administration of insulin once or twice a week is a dangerous procedure unless the patient is hospitalized.

(3) Protamine Zinc Insulin, owing to its uncertain and slow absorption, is more likely to give rise to a hyperinsulin content of the blood than is regular insulin. The drug should be administered with greater care and employes taking same should be controlled in the same manner above described for regular insulin patients.

(4) Diabetic gangrene is apparently more prevalent than heretofore. This is thought to be due to the fact that insulin is prolonging the life expectancy of diabetic patients, and that the chemotherapeutic effect on the blood vessels is more manifest.

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Teeth.....
Tonsils.....
Sinuses.....

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A classification of the cardiac

Diseases of Endocardium:
Valvular heart disease.....
Mitral.....
Aorta.....
Diseases of the Myocardium.
Hypertensive heart disease (
Cardio-Vascular-Renal Syndr
Diseases of Vessels:
Aneurysm of Aorta.....
Endarteritis Obliterans.....
Arteriosclerosis Generalize

Epilepsy

Any person known to have had an epileptic seizure is a hazard in any form of railway train or engine service. Anyone exposed to train service accidents, working about moving machinery, or whose duties require them to do any climbing should be withheld from such employment. The fact that the sufferer has never previously had a similar attack is no defense since everything temporal, even epilepsy, must have a beginning.

Emphasis is made upon a previous recommendation to the effect that any period of unconsciousness suffered by an employe, and not otherwise sufficiently and satisfactorily accounted for, should be looked upon as a possible case of epilepsy.

It has been indeed difficult, if not impossible, to diagnose epilepsy in a person not seen during the seizure. During the interim he may appear as any other perfectly normal individual. Scars on the tongue are suggestive of epileptic seizures, but may only be regarded as subjective evidence.

Foci of Infection

The subject of focal infection has frequently been brought to your attention in previous reports and the work of your Committee during the past year emphasizes the importance of attention to these sources of infection.

A study was made by a member Chief Surgeon of 208 adult males who had spent their life work in various forms of railroad activities. The youngest of this group was 52 years and the oldest 64—the average age being 61 years.

In this group of 208 persons a total of 248 foci of infection were found to exist, enumerated as follows:

Prostate	68
Teeth	136
Tonsils	32
Sinuses	12

The multiple distribution of foci was found in 40 cases, as follows:

Prostate and teeth	26
Tonsils and teeth	9
Tonsils, teeth and sinuses	2
Tonsils and sinuses	3

In the above series all cases exhibited a dual or multiple pathology, the heart being the chief organ involved. These cases generally exhibited a myocardial degeneration with sclerosed or fragile vessels, hypertention, coronary changes, or other demonstrable existing pathology as a precursor, concurrent or residual effect.

A classification of the cardiac disabilities was as follows:

Diseases of Endocardium:	
Valvular heart disease	18
Mitral	15
Aorta	3
Diseases of the Myocardium	128
Hypertensive heart disease (Endo-myocardial)	51
Cardio-Vascular-Renal Syndrone	3
Diseases of Vessels:	
Aneurysm of Aorta	3
Endarteritis Obliterans	3
Arteriosclerosis Generalized with marked Cerebral Changes	2

The conclusions drawn from the above are:

(1) Remediable foci of infection are common among railroad workers.
(2) There has been a relaxation in the importance of the recognization of foci of infection and prompt elimination of same as an important contributing factor in the production of cardio-vascular disability.
(3) Cardio-Vascular disease is an unnecessarily common cause of disability among railroad employes.
(4) Programs of education and periodic physical examinations would greatly aid in the improvement of general health, increase of work capacity and efficiency, and the reduction of the incidence of disabling cardio-vascular diseases.
(5) Foci of infection are responsible for organic degenerative changes in the heart and blood vessels.

It is especially noted that the finding of one focus of infection should not deter the Examining Surgeon from seeking out other foci which may be equally, possibly more, responsible for the existing disability. This is particularly shown in the fact that in 70 cases where infected teeth had been found, examination of the prostate disclosed 62 per cent to have infections in this organ. Removal of the teeth and neglect of treatment for the prostatic infection would have availed nothing in these cases.

A muchly overlooked focus of infection is the colon. When it is recalled that colon bacillus have been found in such distant localities as arthritic joints, the gall-bladder, and even the mastoid, the importance of not overlooking this organ as a focus of infection is apparent.

Heat Cramps

As the summer months approach, attention well may again be directed to the use of Sodium Chloride for the prevention of "heat cramps." As much as 15 pounds (2 gallons) of water and 25 grams of salt may be thrown off through the process of sweating by a normal man in the course of 24 hours. Hence, it is easily recognizable that the salt loss should be compensated for in order to prevent deleterious effects.

Whether the salt intake be in the form of granular salt, salt tablets, or salted water, is immaterial.

A member Line instituted the use of salt tablets for the prevention of heat cramps and reports as follows:

(1) Employes voluntarily use the tablets.
(2) The incidence of heat prostration and other physical effects of dehydration is greatly reduced.
(3) Fatigue and physical inertia among employes is considerably less conspicuous when increased quantities of sodium chloride are taken with the drinking water.
(4) That diminution of fatigue and other manifestations of salt depletion and of dehydration results in improvement of the morale among employes working during hot weather months and where the conditions of work cause excessive perspiration.

Man-Failure in Connection with Accidents

From the study of I. C. C. reports of twenty investigated accidents occurring within a period of sixty (60) days, only four were found to be due to unpreventable causes, while the remaining sixteen were attributable to man-power

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failure in some form. In the sixteen accidents, due to man-power failure, fifteen deaths and one hundred and fifty injuries were reported. An enormous human and industrial loss which might have been prevented.

Much study has been given to this subject in the past, and in 1928 the Committee originated a recommendation which has now been approved by the Association of American Railroads for promulgation to the members as a recommended standard practice of the Association. This recommendation follows:

> "Whenever investigation of any train or train service accident indicates man-failure as a causative factor—such as disregard of signal indication; disregard of or misinterpretation of train orders or rules—and suggests an impaired physical condition as a contributing cause of the failure, a medical examination directed by the Company of the employe or employes so involved is recommended."

If all member Lines will adopt and follow this recommendation, the procedure will undoubtedly lead to a minimization of accidents, the elimination of much pain and suffering and the preservation of many lives.

Mental Disorders

All Psychiatrists consulted have expressed the unanimous opinion that a person once having suffered from a mental disorder is more prone to a recurrence of such mental aberration, particularly if he returns to the same social, family, and business surroundings existing at the time of the first mental breakdown.

We cannot too strongly emphasize the importance of a firm handling of all individuals who develop any form of mental disorder. They should not be permitted to remain in positions of responsibility or where they may become *hazardous to themselves or others. This even after apparent recovery.*

Overweight

Past reports make frequent reference to the dangers of overweight in certain classes of railway employes. Certain basic points should always be borne in mind:

(1) High blood pressure is influenced by overweight.
(2) Diabetes occurs more frequently in people of overweight.
(3) Heart, kidneys, and liver are prematurely exhausted due to the extra work put upon them by the body which is carrying an excess of fat.
(4) Hernia, especially the direct inguinal type, may develop in individuals who have distended abdomens from excess of fat within, which weakens and over-stresses the abdominal wall.
(5) Overweight predisposes to a premature deterioration of vital body organs and functions, which cannot be corrected if too long existing.
(6) People carrying an excess of fat naturally have a considerable amount of fat deposited about the heart. This may weaken the organ and interfere with its normal function.
(7) Overweight persons have a tendency to become sluggish in both their physical and mental activities. This lessens their physical and mental dependability and predisposes to a slow cerebration.
(8) The continuous regulation of body weight by diet and exercise is one of the best safe-guards for continued good health.

Physiotherapy

Your Committee was asked to investigate the problem of physiotherapy and to include recommendations in this Report. We are convinced that there are certain cases in which physiotherapy is undoubtedly of value, but find abuses of physiotherapy to be so many and varied that the practice has almost become a "racket." Our conclusions are as follows:

(1) The practice of physiotherapy should always be conducted under properly supervised medical care.

(2) Persons are more likely to rely on physiotherapy than to help themselves by returning to work.

(3) Physiotherapy is of most use in those who will not help themselves.

(4) There is no better physiotherapy than natural work, that is work which is natural for the person involved—his regular duties.

Pneumonoconiosis

Much time and study is devoted to the subject of pneumonoconiosis, silicosis, anthricosis and allied troubles, by the Air-Hygiene Foundation of America, Inc., which holds its annual meeting at the Mellon Institute in Pittsburgh, Pa., during the month of November of each year. As representative of the Association of American Railroads, the Chairman of this Committee has attended these meetings, as previously reported, and was present at the meeting held November 14–15, 1939. A resume of the program is as follows:

(1) Mr. Robert J. Watt, International Labor Representative, American Federation of Labor, spoke on "Labor's Viewpoint on Occupational Disease Prevention."

(2) Mr. Phillip Drinker, Chairman, Preventative Engineering Committee, Harvard School of Public Health, presented a "Report of the Preventative Engineering Committee." He dealt extensively with the washing, cleansing and filtering of air; with toxic vapors and with ventilation.

(3) Mr. Theodore C. Waters, Chairman, Maryland Occupational Disease Committee, presented a "Review of Recent Occupational Disease Legislation."

(4) This feature was a Symposium of Reports from the Medical Committee and in this Mr. S. Reid Warren, Jr., Assistant Director X-Ray Laboratory, University of Pennsylvania, spoke on the "Choice of Methods used in Roentgen-Ray Examination of the Chest for Diagnostic Surveys." Dr. Elliott R. Clark, Professor of Anatomy, University of Pennsylvania, reported on "Methods Used in the Microscopic Study of Cells and Tissues in the Living Mammal." Dr. Clark and Mr. Haagensen further reported on "The Reaction of Living Cells and Tissues to Silica Granules as Observed Microscopically in the Living Mammal."

(5) A Symposium on "Sick Absenteeism in Industry, Its Extent, Its Causes and Control" was conducted by Dr. A. J. Lanza, Assistant Medical Director, Metropolitan Life Insurance Company.

A number of prominent medical men participated in this presentation, including Dr. R. R. Sayers of the United States Public Health Service, and Dr. C. H. Watson, Medical Director, American Telephone and Telegraph Company.

(6) "An Employer's Viewpoint on Industrial Health" was presented by Mr. Andrew Fletcher, Vice-President, St. Joseph Lead Company.

(7) Mr. V. P. Ahearn spo
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(7) Mr. V. P. Ahearn spoke on "Impact of Employes Health on Industrial and Public Relations."

Reports of General Committees and routine business matters occupied the remainder of the session.

The general work of the Air Hygiene Foundation of America, Inc., does not very closely interlock with that of the Association of American Railroads, yet many details are brought out at their annual meetings which can be made of immense value to the Railroads.

Poison Oak and Poison Ivy

Employes working upon the roadway, cleaning the right-of-way, and repairing and installing telephone and telegraph lines frequently come into contact with poison oak, poison ivy and similar toxic growths. Extensive allusion has been made upon the conditions arising from these sources in former reports. The following is a summary of recommendations:

(1) The best prophylaxis is for those likely to come into contact with such growths to apply a coating of laundry soap to such exposed parts of the body, as the arms and hands. This is done by making a heavy lather, which is applied and allowed to dry.

(2) Those who have come into contact with these toxic growths should immediately scrub the exposed parts with an abundant amount of soap and water so as to remove the poison before it has opportunity of penetrating into the skin.

(3) In cases where the characteristic dermititis develops, a solution of acetate of lead applied locally is probably the best form of treatment.

(4) Several pharmaceutical houses now make available an injection treatment for this form of poisoning. This is probably an extract from the plant. Many favorable reports have been made following its use.

Pulmonary Tuberculosis

Your Committee feels it should reiterate its former recommendation that all employes exhibiting any active manifestation of pulmonary tuberculosis should be held out of service. They should then only be permitted to return to work when, after thorough examination, the case is classed as arrested and the sufferer is deemed non-infectious to others.

Rehabilitation

In a previous report (1938 and 1939) your Committee has indicated the structural difficulties presented by contracts between the railroads and employe organizations to the promotion of any constructive endeavor in rehabilitation of partially disabled employes.

The transfer of a partially disabled railroad employe from a specific type of work for which he has been trained and in which he is proficient, but for which he is disabled because of some physical defect, would appear to be sound practice from the viewpoint of the employe as well as the employer. Rehabilitation policies and programs for the education and training of men disqualified because of increase in the accident risk created by his physical defect could be adopted and made effective if sympathetic interest and support could be developed.

The situation at present precludes the adoption and practice of a positive rehabilitation program.

There does exist now an opportunity for a form of rehabilitation, which, while it has no particular value to the service accomplishments of the employe, has a human and morale value which should be promoted.

This has to do with the preparation, through education, of those employes who are approaching the age in which disqualifying defects and enforced retirement becomes inevitable both in the interest of the longevity of the individual and the preservation of the reasonable degree of collective efficiency of personnel which a properly operated transportation system demands.

It is a common experience that railroad employes are psychologically unprepared for retirement because of disqualifying physical defects or of age and are not only separated from the work to which they have devoted their lives, in a most unhappy mental state, but resent and resist the action as an unjust and unreasonable imposition creating an event for which they are neither economically or spiritually prepared.

Considering the elements of accident risk and maintenance of average collective efficiency in railroad operation, it is not unreasonable to assume that practically all railroad employes who reach the age of sixty-five years may expect retirement because of physical defects and that continuance beyond that age will be rare exception rather than the indulgent practice.

It would, therefore, be appropriate to give all employes knowledge of the fact that experience (a) justifies the anticipation of retirement at the age of 65; (b) the transition from active railroad work to mentally less engaging and interesting existence on a retired status creates a sense of insecurity and unhappiness unless some compensating avocation is developed to maintain interest after retirement.

It is recommended that appropriate action be taken in the organization of program of instruction and education through the brotherhoods and railroad authorities in order that employes may be fully informed of the necessity of mental interest in the attainment of physical health and contentment when the event of retirement is imposed upon them.

Syphilis

Too much emphasis cannot be placed upon the importance of impressing syphilitic employes with the fact of syphilis, properly and adequately treated being curable and that their employment will not be interfered with so long as they are taking proper treatment, provided their condition is not in a stage to constitute a hazard to others and has not advanced to the point where there is little hope of controlling and curing their malady, and where there is danger of a sudden catastrophe. Quite obviously there is no place in train or engine service for the neuro-syphilitic.

In a previous report (1939) reference was made to use of the Klein Test as being reliable as to negative findings, easily and rapidly made, and relatively inexpensive. It seems especially suitable for examination of railroad employes and applicants for employment since in these cases proof of absence of syphilis is paramount.

A five-year report from the Pathological Laboratory of one of the States shows that during this period there were made 136,287 Wassermann tests of which 27,162 were reported positive. This was 20 per cent of the total number made. This group included 1,774 railway employes examined and 378,

or 21 per cent, were found positive. This does not fix the percentage of incidence of syphilis among railway employes at so high a figure since those examined were only employes under suspicion or else under treatment and by no means constituted a cross-section of all railroad employes.

The importance of special examinations is stressed particularly of engine men as regards their reaction time to external stimuli.

All cases of aortic aneurysm are conceded to be of a syphilitic etiology and the presence of such an aneurysm creates so great a hazard, regardless of the specific treatment the patient may receive, that it is unhesitatingly recommended to remove from engine and/or train service any employe in whom an aortic aneurysm is detected.

Typhoid

All persons are strongly urged to protect themselves against typhoid by immunization. This is particularly important for railway employes who are not at all times in position to control the sources of their food and water supplies.

For some years oral typhoid vaccine has been employed in Europe and other countries but was not introduced into the United States until recently. In September, 1937, H. D. Moore and I. L. Brown published a comparison of their observations on oral and parenteral typhoid vaccine in the *Journal of Laboratory and Clinical Medicine*. Their conclusions being:

(1) "Typhoid vaccine administered orally produces as great or greater concentration of agglutinin anti-bodies in the blood serum of human beings as the typhoid vaccine administered subcutaneously."

(2) "The oral vaccine brings about this concentration of agglutinin anti-bodies in a shorter length of time."

(3) "No observed or reported reaction following the administration of the oral vaccine."

(4) "Severe reactions causing loss of time from work do occur when the vaccine is given subcutaneously."

(5) "People in general take the oral vaccine more willingly than they do the subcutaneous."

(6) "The oral vaccine is more easily administered because it requires less equipment and preliminary preparation."

(7) "Economically and practically the oral vaccine is more desirable than the subcutaneous."

If the oral typhoid vaccine is relatively as efficacious as is the parenteral form, it has three factors in its favor:

(1) The absence of marked reaction.

(2) The greater possibility of repeating the immunization at stated intervals.

(3) The greater convenience to the patient.

Oral typhoid vaccine and oral typhoid mixed vaccine are now available, being manufactured by two pharmaceutical houses.

"Typhoral" (oral typhoid vaccine) and "Typhoral Mixed" (oral typhoid mixed vaccine) is manufactured by Eli Lilly and Company and marketed in filled capsules with the recommendation that one capsule is to be taken an hour before breakfast on three successive mornings. Each "Typhoral"

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