

HCL/MW
12.7.73.

Professor Irving J. Selikoff,
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Dear Professor Selikoff,

We have recently received a transcript of a tape recording of your address to the American Industrial Hygiene Conference in Boston on 21st May, 1973 which was sent to us because of its references to our work. If the copy enclosed herewith is a true representation of that address and the graph shown by you, we must tell you that we find your assumptions and conclusions to be extremely misleading.

The case made at the end of your paper appears to rest on the fact that the data which formed the basis of our Hygiene Standard¹ was scanty. You then attempt to extract data from the Figures in HCL's publication² in order to show a discrepancy between the original data and these Figures. We are astonished at your having communicated the contents of a private correspondence to the meeting which you addressed without having obtained our agreement. We are also very displeased at the manner in which you have used the information we provided in order to launch what seems to us to be a political campaign in the USA aimed at discrediting our Hygiene Standard for asbestos. We cannot accept the implication that the HCL publication allows doubt to be cast on the validity of the ECMS Standard and are of the opinion that such a conclusion is unwarranted.

Comparisons such as those you have made between the Knox data and the HCL data are invalid for the following reasons :-

1. The paper by HCL was not intended to justify or verify the ECMS Standard, and no reference is made in this paper to environmental dust measurements. The results presented in HCL's paper were preliminary results and in the discussion section it was clearly stated that 'from the information currently available only tentative opinions can be expressed'. We are

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surprised therefore that you have been able to read far more into the incomplete picture presented than the author was able to do or even intended to do.

2. The populations reported by Knox and HCL were not identical nor were 'the very large majority' of asbestos workers 'common to both surveys', as you suggested. 'Office personnel' were not included. The population studied by HCL consisted of workers in the recognised asbestos areas, together with maintenance, quality control and research staff.
3. Knox reported on 290 men (not 913 as stated by you) with at least 10 years exposure since 1st January, 1933, when the Asbestos Industry Regulations 1931 took effect, and who were still in the Company's employ on the 30th June, 1966. HCL on the other hand has analysed the X-rays of a much larger population (1,287) as of November, 1970 irrespective of date of first employment; some were in fact first employed before 1st January, 1933.
4. Knox sub-divided his population according to actual cumulative exposure whereas HCL's was sub-divided by decades elapsed since first exposure, irrespective of the actual number of years exposed. In view of these basic differences and others which we will point out in due course, we fail to see how you derived the relationship between cumulative exposure and percentage of individuals affected on the graph which you showed (copy attached). The heading on the graph is obviously misleading as HCL at no stage in his report equated the radiological changes with 'asbestosis'.
5. Because it was possible to estimate dust exposures for the Knox population, the BOHS Sub-Committee were able to arrive at figures for cumulative exposure expressed in fibre years/cc. No such exercise was ever attempted by HCL. This is a further invalidation of the graph since you have attempted to relate radiological features described by HCL to what we can only regard as speculative exposure data.
6. Knox only recorded X-ray changes as being present which are possibly asbestotic, after taking the whole clinical picture into consideration. 'Radiological changes considered significant included those of increased general opacity of the lower lobes, blurring of the cardiac outline, pleural thickening and adhesions'.¹

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HCL on the other hand attempted to analyse his radiological findings according to the UICC/ILO classification, an entirely different set of criteria, and took no account of the clinical picture as a whole.

7. The BOHS sub-committee decided that basal rales were the 'key symptom' since all the men with X-ray changes, by the Knox criteria, had basal rales, but some with basal rales had no X-ray changes.¹ HCL points out in his paper that he has not yet attempted to correlate physical signs and X-ray changes.

8. We are obliged to point out that the use of the words 'pulmonary fibrosis' by HCL in his paper may have misled you, as they were used to describe small opacities which prior to the advent of the UICC/ILO classification may have been regarded as consistent with fibrotic changes. The use of this term does not allow for sub-division into profusion and type of opacity as is now possible with the UICC/ILO classification. For simplicity in presentation, HCL grouped all cases showing evidence of these changes together, irrespective of severity. Knox only included X-ray changes consistent with the clinical diagnosis of asbestosis. It is not possible to say, from the data that HCL has compiled, how many persons would fulfil the criteria for a clinical diagnosis of asbestosis, and to attempt to illustrate these two very different sets of data on the same graph is simply not permissible. The clinical significance of the radiological changes observed cannot as yet be defined.

You appear to have ignored completely the fact that the number of cases of asbestosis in 1968 among 335 employees (men and women) exposed for 10 years or more since 1933 in Rochdale and still employed, was 1.12% (i.e. 4 cases)³ as compared with Merewether's finding of 44.4% (i.e. 59 cases) among 133 workers exposed 10 years or more in the same industry in 1929.³ This lower incidence has occurred in spite of the fact that the Pneumoconiosis Medical Panels are better equipped to diagnose asbestosis than Merewether was. In addition, during the years immediately following 1933, there still was substantially greater exposure in certain jobs than in more recent times.

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In view of your comments and our previous correspondence we should like to remind you that we are in the process of reviewing and bringing up to date all the available data, and hope to present it for publication in the near future.

Dr.Holmes' remarks at Lyon were never intended to suggest that the BOHS Standard was not stringent enough. The BOHS Standard is 100 fibre years/cc and therefore application of a 2 f/cc limit for periods of less than 50 years has the effect of providing an ample safety margin. The BOHS Sub-committee, of which we are both members, recently reviewed the Hygiene Standards for Chrysotile Asbestos⁴ in the light of the latest available data and recommended that no change be made at the present time.

We are forwarding a copy of this letter to the President of the American Industrial Hygiene Association, the Chairman of the ACGIH, the Director of NIOSH and also the Asbestos Information Association of North America in view of their obvious interest in this important subject.

Yours sincerely,



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Chief Medical Officer.



S.HOLMES,
Chief Health Physicist.

Encl:

REFERENCES

1. Hygiene Standards for Chrysotile Asbestos Dust - Annals of Occupational Hygiene 1968.
2. The Medical Surveillance of Asbestos Workers - Royal Society of Health Journal, April 1972.
3. Report on effects of asbestos dust on the lungs and dust suppression in the asbestos industry - Merewether & Price. HMSO 1930.
4. Annals of Occupational Hygiene Vol.16, 1973.