April 2, 1941

Dr. J. A. Carter
Health Commissioner
Clermont County
District Board of Health
Batavia, Ohio

Dear Doctor Carter:

I have your letter of April 1st concerning a case of a man who died, on whom a diagnosis of lead poisoning had been made.

The lead content of the varnish, as given in this instance, is too low to have caused even low grade lead poisoning, and it certainly could not have produced fatal lead poisoning. It is conceivable, of course, that the man had some other exposure to lead in the course of his occupation, but if his work consisted solely or primarily of working with varnish under the conditions described in your letter, I think it is fair to say that occupational lead poisoning was not responsible for his death. One wonders what the actual condition was and whether in this instance the man could have been exposed to toxic vapors from the solvent, such as, for example, benzol. Benzol is not ordinarily used in this way, so that benzol poisoning would be a comparatively improbable cause of the death. On the other hand, if it seems reasonably certain that the man developed an illness from his job, it would be necessary to examine carefully into any and all possible exposures in order to determine what was the cause of his illness. I repeat that if the information which you have given me is correct, it could not have been lead poisoning, and in the absence of adequate clinical data, it would be difficult to arrive at a diagnosis. Wrist drop, as the expression is frequently used, may mean a variety of things. The expression "swollen blue gums" does not convey the idea that there was a lead line. "Blue nail beds" are an indication of cyanosis and suggest either some circulatory difficulty, or the absorption of some material which, like anilin, produces a general cyanosis. If any more information on this case is available, I should be glad to give you my best judgment concerning its meaning.

As to the variations in the lead intake of different people, and its possible relationship to lead poisoning, I may say that lead poisoning in adults in the general population is exceedingly rare, and it is quite unlikely that any non-occupational condition, with respect to lead exposure, could produce fatal lead poisoning. Some cases have occurred as a consequence of the use of battery boxes for household fuel, and there are a variety of other opportunities for serious lead exposure under some unusual circumstances. Most of the cases that develop out of these conditions, however, occur in children and chiefly because of their tendency to put everything to their mouths, and to chew at all sorts of objects.

If it seems probable that this man died of some poisoning which arose out of his occupation, it would be wise to investigate the conditions under which he worked, and to find out in as great detail as possible just what he was doing and just what sort of materials he handled. The only alternative to this, so far as I can see, if the question of lead poisoning can really be seriously considered, is to exhume the body and make analyses which will demonstrate the distribution of the quantities of lead in the tissues.

Sincerely yours,

RAK:is

Robert A. Kehoe, M.D.