THE ROLE OF THE COMMUNITY HEALTH CENTER

John D. Madden, M.D.

Director, Woodlawn Community Health Center, Chicago, Illinois.

The Woodlawn Child Health Center is an HEW supported children and youth project operated by the University of Chicago Department of Pediatrics as part of a city-wide program of child health services coordinated by the City of Chicago Board of Health and the State of Illinois Department of Public Health. The goal of this program overall is the provision of comprehensive child health services to the Woodlawn community.

Woodlawn is a predominantly black south side community which is underserved and which has the characteristics of such an underserved community: low income, high crime rates, high prematurity rates, high infant mortality rates, etc. Housing in Woodlawn is essentially all pre-World War II, predominantly multiple family dwellings and largely owned by absentee landlords who fail to maintain it. As a result of this, lead poisoning has been endemic in Woodlawn.

In 1966 the Chicago Board of Health undertook a massive lead case finding effort employing blood lead determination as the screening test. This effort was so successful in finding children with elevated blood lead determinations that the traditional practice of hospitalization for diagnostic study and for treatment had to be modified. A decision was made to treat children with laboratory evidence of excessive body burden of lead but without clinical evidence of lead poisoning as outpatients instead of hospitalizing them.

The decision was made that the Woodlawn Child Health Center

would not function as a primary screening facility, but rather would serve as a secondary referral center for the area. Any children who lived in Woodlawn who were detected to have a blood lead of 50 ug.% or more were to be referred to us for further evaluation and management.

In the early days of this program, all did not go well. We saw ourselves in a position of advocacy for the community and saw lead poisoning as the classic model of disease in the inner city--totally preventable and totally attributable to neglect of the needs of the urban poor. It was our position that lead poisoning was due to bad housing, pure and simple. Others tended to attribute lead poisoning to other causes such as maternal neglect. We were unable to accept this, having seen the anguish of mothers trying to care for children in dwellings that were unfit for habitation and in which landlords were loath to make repairs.

The initial days were stormy, as the referral system did not work well for some time. Now, however, we de receive regular referrals from the lead screening program. When we receive such a referral, we initiate contact with the patient's family. An appointment is made for a visit to the Child Health Center where the blood lead is repeated, routine hematology is done, urinary coproporphyrin excretion is measured, abdominal x-ray and x-rays of the knees are performed, a history is taken, and physical examination is carried out.

The outcome of these procedures then determines the course of action. If the blood lead is marginally elevated and there is no supportive evidence such as anemia, 3 to 4+ coproporphyrinuria, basophilic stippling or x-ray evidence of recent lead ingestion or bone deposition of lead, then the family is counseled and advised

as to the potential severity of the problem and the need for follow-up evaluation.

If there is a history of pica and especially if the housing is very bad, more careful follow-up is needed and efforts are made to assist the family in obtaining repairs or in relocating or in advising the family as to their rights as tenants and enabling them to get legal counsel.

When the blood lead is discovered to be between 60 and 80 ug.% and there is no supporting laboratory evidence, monthly monitoring of the blood lead is in order as well as attempts to correct the housing situation.

If there is a blood lead of 60-80 ug.% with supportive laboratory evidence for lead poisoning or if the blood lead is in excess of 80 ug.%, it is our belief that chelation therapy should be instituted with B.A.L. and E.D.T.A.

If the patient is asymptomatic and the blood lead is less than 120 ug.%, we believe it is safe to carry out chelation on an outpatient basis. If, however, there are symptoms suggestive of lead poisoning or if the blood lead is in excess of 120 ug.%, we are unwilling to treat the child outside the hospital.

In addition to the patients referred to us by the Board of Health, we carry out our own case finding within the population who use our Health Center.

Our principal screening tool has been the blood lead determination done by atomic absorption spectrometry. We have been impressed with this as a direct method of measuring excessive body burden of lead.

In 1970 we reported 85 children from our clinic with blood leads greater than 60 ug.%. In that report we attempted to correlate other laboratory studies with elevated blood lead. Ninety-four per cent of the children had hemoglobins of 10 gms.% or more. Only 19% had coproporphyrinuria greater than 2+ and only 11% showed basophilic stippling. Thirty-six per cent had "lead lines" on x-ray of long bones. This data seems to reaffirm our impression that the best screening tool to date is the blood lead determination.

Since May, 1969, we have treated 105 children with chelation therapy. These children have been treated principally as out-patients and were for the most part asymptomatic. We have found this to be a safe mode of therapy with no observable side effects of the therapy itself other than very occasional transient nausea with the institution of treatment.

We have observed a decreasing incidence of lead poisoning over the past few years. Forty children were chelated in 1969, twenty-six in 1970, thirty-five in 1971, and four to date in 1972. The 1971 figures are subject to skepticism because we found our laboratory at the University to have technical problems with the precedure during part of that year, a situation that has since been remedied.

It is difficult to attribute the decrease entirely to improved case finding and education. There has been a 30% drop in population in Woodlawn between the 1960 and 1970 census. We believe that this has occurred principally in the past few years and is directly related to the high incidence of fires in old buildings in East Woodlawn. We have had a decrease in population and a decrease in

environmental source of lead. It is also true, however, that as Dr. Lin-Fu has recently stated, increased surveillance does lead to decreased incidence of lead poisoning.

What are the problems that the community health center engaged in a lead poisoning prevention program faces? They are many. The logistic problem of processing data and maintaining follow-up in a population that is very mobile is enormously difficult. The problem of interpretation of findings and decision-making as to who required therapy has plagued us but is becoming more clear-cut and its solution is aided considerably by the recent statement of the United States Public Health Service that provided specific (perhaps too specific) therapeutic guidelines for the management of lead poisoning.

The most discouraging problem is the housing situation. It is not a solution that is acceptable to have those at risk from lead trade that risk for the more immediate risk of fire. We must have more meaningful housing inspection and code enforcement. Landlords have to be made accountable and tenants' rights more adequately protected by the law. We must have new low income housing. Dr. Chisholm has reminded us many times that we must remove these children from risks of returning to inadequate housing. We support that as an ideal; that we cannot do it is too often the reality.

The problem that troubles the health provider in the field is the awareness that much of the problem and of the solution lies outside his capacity to bring about change through medical management. That is why many of us attempt to direct our energies, as citizen-physicians, toward the eradication of lead poisoning.