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Summary of paper delivered by
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A film, entitled "Chronic Lead Nephropathy and Gout in Queensland", was shown. This illustrated the tropical climate with the colonial style of house surrounded by an open verandah edged with painted wooden railings. The source of the frequent childhood lead poisoning was the paint on these railings to which children had a prolonged exposure in this hot climate. Four patients who had suffered from lead poisoning in childhood were interviewed to illustrate the sequelae of their lead poisoning.

Extensive epidemiological studies have demonstrated a high incidence of chronic kidney disease in these patients who had lead poisoning in childhood. Though the kidney damage from which these patients suffered appeared to begin during the acute episode of poisoning it did not cause symptoms until many years later, often between 10 and 40 years after the initial episode of lead poisoning. At the time when these patients were seen with the kidney damage, the only residual evidence of excessive past lead absorption was an abnormally high content of lead in bone. There were no persisting signs of lead poisoning. Half of these patients with kidney damage due to lead were found to have suffered from gouty arthritis. Severe hypertension was a feature of some of these patients, but others, with the most chronic type of kidney disease, were often only mildly hypertensive.

Most of the other sequelae of childhood lead poisoning affected the nervous system. Mental impairment has been frequently observed in the Queensland patients, as has also been recorded in the U.S.A. Perhaps, in the Queensland patients, it has been most obvious as a euphoria, often with a rather labile personality, but a large variety of psychiatric disorders have been observed in these patients. A few patients have been blind following the childhood lead poisoning, due to the associated optic atrophy; epilepsy has been frequently noted and pes cavus, a persisting manifestation of the old peripheral lead neuropathy, has been frequently observed. Persisting deposits of lead have been observed in the nervous tissue

The very high frequency of lead poisoning in Queensland in comparison with the rest of Australia was first noted in 1890 and the incidence of lead poisoning in Queensland steadily increased thereafter until, in 1922, legislation was introduced to prevent the use of any paint containing more than 5% soluble white lead within four feet of the ground or floor of any residence, hall, school or other building to which children under the age of 14 years had access. This legislation was very controversial and several investigating committees looked into the association between paint, lead poisoning and chronic kidney disease. Some authorities supported lead in paint as being the causative factor, but others could not accept this explanation and blamed factors such as the lead in water, lead in food, or a familial predisposition to renal disease. It was thus very difficult to enforce such a regulation and it was many years before it had any significant effect in reducing the lead content of paint on houses in the State.

In 1937, lead poisoning at all ages was made a notifiable disease, but as with many other notifiable diseases, notification is not always carried out and the figures do not necessarily reflect the true incidence. After failure of voluntary restriction by manufacturer's codes, it was realized that the only effective way of dealing with the matter was complete prohibition of lead in paint and in the ammendments to the Health Acts in 1947, 1955 and 1967, more strict regulations were gazetted so that there is now a complete prohibition of lead in paint on any house or building within the State of Queensland.

When a case of lead poisoning is notified to the Director General of Health in Queensland, a senior Medical Officer arranges for a Health Inspector to visit the home, and the Inspector is empowered to take samples of any paint or any material which might be causing the lead poisoning. These samples are examined at the Government Chemical Laboratories, search being continued until the source of lead is located. When this has been done, the source of lead poisoning is removed, the legislative provisions being invoked if necessary. In practice however, the community has cooperated extremely well and such cases have never needed to be taken to court to have the offending lead paint removed. This general spirit of cooperation has been very largely due to the universal public awareness

in Queensland of the hazard of lead poisoning from paint, which is quite remarkable seeing that it goes back to the early part of this century, which is long before any specific body such as a Health Education Council, was in existence.

Lead poisoning is now a rare disease in Queensland and this is attributed largely to the elimination of lead from paint. This replacement of lead paint by other paints has also been facilitated in recent years by the great improvements which have been made in other types of paint, but when the original legislation was introduced it was strongly believed, not least of all by painters, that the very best paint was lead paint and many people went to considerable lengths to evade the regulations in an attempt to have the most lasting paint on their houses.

Even in Australia, however, this Queensland experience is not universally accepted. We feel this is largely because lead poisoning is less common in the colder climates in the southern parts of Australia and because, if one does not make a systematic search for the particular variety of kidney disease which follows lead poisoning, this type of kidney disease can easily be attributed to an alternative cause. Regulations in Western Australia are now as strict as in Queensland, while the two most southerly States (Victoria and Tasmania) have recently introduced regulations allowing paint to have a maximum lead content of only 0.1%. On the other hand, two large States (New South Wales and South Australia) still have no regulations relating to lead in paint, but discussions are in progress concerning the development of uniform regulations throughout the Commonwealth in relation to lead and many other toxic substances, and it is anticipated that the lead content of paint will be controlled in such legislation.