

Development of a clinical practice guideline for management of elevated blood lead levels in a lead-endemic city

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Background

The National Health and Medical Research Council provides the Australian recommendation that where a person has a blood lead level (BLL) greater than 5 micrograms per decilitre (µg/dL), the source of exposure should be investigated and reduced. BLL monitoring in the lead endemic area of Port Pirie South Australia, suggests around two thirds of children aged below 5 years have a BLL exceeding this. A clinical practice guideline for prevention and management of an elevated BLL in Port Pirie has been lacking.

Objective

To provide clinicians with contemporary recommendations for minimising the adverse health impacts of lead in the community of Port Pirie where lead smelting is an important livelihood, and background lead exposure is higher than in non-endemic areas.

Methodology

The available evidence around clinical management of elevated BLLs was reviewed. Several resources informed the development of the draft *Port Pirie Clinical Lead Guideline*, including publications from the World Health Organization, the Centers for Disease Control United States, and the American College of Obstetricians and Gynecologists. Input was provided from experts in the fields of Toxicology, Paediatrics, Obstetrics, Midwifery, General Practice, and Community and Allied Health.

Results

The Clinical effectiveness and Complex Care Committee of the Yorke and Northern Local Health Network officially endorsed the Port Pirie Clinical Lead Guideline in April 2024.

Discussion

Preliminary feedback from clinicians in Port Pirie suggests the guideline has had a positive impact on routine clinical practice, facilitating clear and consistent management of individuals exposed to lead. A formal evaluation process following widespread roll-out is being planned.