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Community awareness of living safely with lead in Mount Isa

Yagoot Fatima, Stephanie King, Sabina Knight

Centre for Rural and Remote Health, James Cook University, QLD

Mount Isa region contains one of the world's largest deposits of copper, lead, silver and zinc and has been mined since the 1920s. The presence of lead in the environment and its potential to elevate blood lead levels in those living and working in the Mount Isa community has been acknowledged for many years and has been an issue of concern in the Mount Isa community.

In response to community concern, the Living with Lead Alliance (the "Alliance") was established in 2007-2008 to develop and deliver ongoing public education campaign to increase awareness of living safely with lead in Mount Isa. The Mount Isa Living with Lead Alliance runs extensive and ongoing public education campaigns aiming to improve awareness on how residents live and work with both naturally-occurring and non-natural sources of lead. The major message of the campaign has been "wet wipe, wash and eat well." The target audience of the health promotion efforts is community members, especially children 0 to 7 years and their parents. A broad range of strategies, e.g., TV advertisements, e-newsletters, free blood lead testing and Leadsmart school program have been used to increase parental actions to reduce their children's exposure to environmental lead. This study aims to examine the extent to which Mount Isa residents report hearing the Lead Alliance's campaign message, their knowledge level regarding home remediation strategies, and the extent to which they self-report acting on the health messages.

A 32-item questionnaire was utilised to assess parental and caregiver knowledge of reducing environmental lead exposure and penetration of Lead Alliance's campaign messages. A mix of open and closed questions was asked to facilitate depth of responses to critical issues such as the perceived barriers to the implementation of the recommended strategies for reducing children's exposure to lead in the environment. In addition to online recruitment, i.e., by posting the survey link and study details on the community Facebook page, potential participants were recruited through brief face to face invitation during the community fun events and community playgroups.

A total of 272 participants (~90% females, ~69% Caucasian) from diverse socio-cultural backgrounds took part in the study. Just over half of the participants were young adults (age group 20-35 years). About half of the participants reporting having living in Mount Isa for more than ten years. Most participants had heard "wet wipe, wash and eat well" messages and linked them to Living with Lead. We found that 65.6% perceived that Mount Isa has a high lead level risk but just under half perceived that their child might have high blood lead levels. About 43% of parents and carer reported that their children had been tested for blood lead levels and only 32% of participants were aware of a capillary blood test. There was high penetration (>70%) of all key messages from the

Alliance. Media campaigns and free blood lead test was found to be well known in the community. However, among the various campaign strategies, there was relatively less awareness for brochures from the Alliance (10%) and Leadsmart School program (34%) in the community. It was also found that new entrants in the town have significantly low awareness of lead contamination sources.

The Lead Alliance's campaign messages need to focus on new entrants and promote the availability of capillary blood testing in the community. It is suggested that giving Lead Alliance's flyers in real estate packs and revisiting the promotional strategy for Leadsmart school program will help in further penetration of the campaign messages.

Presenter

Dr Yaqoot Fatima is Research Fellow at Centre for Rural and Remote Health, James Cook University. Fatima received her PhD in Epidemiology from the School of Public Health, University of Queensland. Her research interest involves translation of epidemiological analysis to inform policy and health services. Dr Fatima's specific statistical expertise lies in the area of longitudinal (life-course) analysis, multi-level modelling, and meta-analysis.