



Pregnant women and parents misled about dangers of living with lead pollution

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Pregnant women in three Australian cities are not told that lead exposure during pregnancy is linked to miscarriage and early delivery.

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Parents in three Australian states are being given misleading information about the dangers of lead exposure for babies and small children – including failing to warn pregnant women about the risks of miscarriage.

Lead is particularly harmful to unborn babies and young children. As the [World Health Organization](#) warns, “there is no known level of lead exposure that is considered safe”. Childhood lead exposure is estimated to contribute to about 600,000 new cases of children developing intellectual disabilities every year.

Yet [our research](#), published in the international journal [Environmental Health](#), found that official online educational materials aimed at people in Broken Hill in New South Wales, Mount Isa in Queensland and Port Pirie in South Australia understate the health risks of lead for fetuses, babies and children.



Mount Isa in north-west Queensland. [Rob and Stephanie Levy/Flickr, CC BY](#)

All three cities are home to an active lead mine or smelter.

With slogans such as [“Lead, it’s in our hands”](#) and [“Living safely with lead”](#), the cities’ health education programs all promote the idea that parents can sufficiently protect their children from lead exposure through individual actions, such hand washing, household cleaning, and taking precautions in the garden.

Yet there is no evidence to show that’s true. In 2014, a group of international experts [reviewed 14 studies involving 2656 children](#). They found that “educational and dust control interventions are not effective in reducing blood lead levels of young children”. They also concluded that there was “insufficient evidence” to show that reducing children’s exposure to contaminated soil would reduce blood lead levels.

So what exactly are parents in Broken Hill, Mount Isa and Port Pirie being told? And what risks are pregnant women and families in the United States being clearly warned about that parents in Australia are not?



CLOWNING AROUND!!



Above: Rusty and Dusty promoting a good message - sharing safe practise around lead with local Port Pirie kindergarten children and Janet McWilliam, for them Manager.

Clowning around? A blog post about teaching Port Pirie kids about ‘safe practises around lead’, despite health experts warning that ‘there is no known level of lead exposure that is considered safe’. tenforthemporthpirie.blogspot.com.au, accessed 6 January 2016

Why do American parents get clearer warnings than Australians?

Emissions from lead mining and smelting activities in Broken Hill, Mount Isa and Port Pirie have been linked to higher levels of lead in local children’s blood.

These blood lead levels exceed the National Health and Medical Research Council’s (NHMRC) new public health intervention level of 5 micrograms per decilitre in about [half of all children in Broken Hill](#) and [Port Pirie](#), as [explained in The Conversation](#) last year.

Lead exposure puts children at risk of significant health effects including developmental, learning and behavioural problems. For example, a [recent study](#) found that children living closest to the Broken Hill mine had lower school test scores and were more likely to be diagnosed with developmental disabilities.

All three cities have online lead health education programs. In Broken Hill, the www.leadnsw.com.au program was developed by a local health clinic and the NSW government. Mount Isa’s website



www.livingwithlead.com.au involves the Queensland government, Mount Isa Mines, and the local council.



A screenshot from Mount Isa’s Living with Lead homepage, which still uses the slogan ‘Living Safely with Lead’. www.livingwithlead.com.au accessed 6 January 2016

In Port Pirie, the SA government and lead smelter operator Nyrstar have [worked together](#) on the Targeted Lead Abatement Program, or www.tlap.com.au. (TLAP’s website is currently down, with a message saying the site has “crashed”.)

As part of our new study, we compared those Australian websites with international best practice, published by the US Centers for Disease Control and Prevention (US [CDC](#)). We found important differences between them.

Like the World Health Organization, the [US CDC plainly states](#): “No safe blood lead level in children has been identified.”

In contrast, at the time of our analysis, *none* of the materials from Broken Hill, Mount Isa or Port Pirie made such a clear statement about lead exposure and harm to children.

As our article went through the peer review process, one page of the Mount Isa website “[About Lead](#)” was updated to include a new statement:

There is no safe level of lead that has been proven not to cause any health problems.

However, that statement is not repeated on other pages, including the one labelled [Mount Isa Children](#), which instead begins with advice to “Wash hands regularly”.

The US CDC also warns parents that the “effects of lead exposure cannot be corrected” and that “even low levels of lead in blood affect children.”



At the time of our analysis, only the Broken Hill site contained comparable information on low-level exposure and the fact that lead can cause permanent damage to children.

Missing warnings for pregnant women and kids at higher risk

All three of the Australian websites left out important risks of lead exposure during pregnancy.

The US CDC has a page specifically on [lead and pregnant women](#), using blunt language to warn women that lead exposure during pregnancy can “put you at risk for miscarriage” and “cause your baby to be born too early or too small”.



From the Broken Hill website, showing when it’s recommended local toddlers get blood tests to check for lead poisoning. [Lead NSW](#)

In contrast, none of the three Australian sites mentioned those crucial risks to babies. (Compare the [clear US advice](#) to that given to pregnant women [in Broken Hill](#) and [Mount Isa](#).)

People can often be affected by lead exposure without showing obvious symptoms. Yet only the Broken Hill materials provided parents with a schedule for when they should have their children’s blood tested for lead exposure.

The US CDC also discusses the fact that racial minorities and low-income families may be at higher risk of lead exposure. Only in Broken Hill were racial differences in blood lead levels discussed, even though higher average blood lead levels have been reported in Indigenous children in both Mount Isa and Broken Hill.

Patchy advice for parents on kids playing outdoors

Our study also found that incomplete information on the risks of lead in soil, even though soil and dust are major pathways of exposure. Only the Broken Hill materials said that:



many local yards exceed the national soil lead safety level.

While the other cities' websites acknowledged that soil may be contaminated, none of the three contain information on the acceptable Australian standard for lead in gardens (300 milligrams per kilogram) or the percentage of gardens that exceed the standard in each city. They also didn't tell residents how they could get their soil tested to evaluate their family's risk.

Because lead contamination is widespread in Broken Hill, Mount Isa and Port Pirie, and the potential for children to be exposed in their homes, gardens, and play areas is very real, the three websites make many recommendations for reducing children's exposure.

These include intensive interior and exterior cleaning, personal hygiene, gardening, diet and food preparation. But the advice was not consistent across the communities.

For example, in Broken Hill and Mount Isa parents have been advised to let children play in areas with grass or turf cover or to provide a sand pit. But in Port Pirie, no specific advice on children's play areas was given, except to cover bare soil.

Only in Port Pirie were parents advised to wash outdoor play structures. A recent study, however, found playground washing to be of [limited effectiveness](#) for reducing children's lead exposure if contamination is ongoing.

Advice on eating homegrown vegetables also varied. In Port Pirie, children and pregnant women are told not to eat "leafy vegetables like lettuce, silverbeet, cabbage, broccoli and cauliflower". No similar advice was provided in the other communities.

Additionally, some advice on [how to reduce exposure](#) to lead that *is* [supported by research](#) has not been shared with families in all three cities. Two examples include:

Door mats to reduce tracked in lead: this recommendation is supported by research but was only provided in Mount Isa.

HEPA filters for vacuuming: even though both South Australia Health and US EPA recommend the use of HEPA filters on vacuums in communities with lead contamination to minimise the spread of lead dust when vacuuming, this advice was not offered in Broken Hill or Mount Isa. In Port Pirie, HEPA filters were only said to be "preferred."

Canadian expert Dr Bruce Lanphear explains how extremely low levels of toxins including lead can affect a child's brain development.

What needs to happen to make Australian kids safer?

The health education programs in Broken Hill, Mount Isa and Port Pirie currently place the overwhelming burden on parents to keep lead out of their children's bodies, even though they are living in communities with [historical and ongoing contamination](#).

Lead pollution is not a problem that parents can solve on their own. Reducing or eliminating lead emissions, removing children from the sources of exposure, and cleaning up environmental contamination is critical.



Based on our research, we recommend revising the advice to people in all three of these communities so that it is as clear and comprehensive as what is published by the US Centers for Disease Control and Prevention. Parents and pregnant women in Broken Hill, Mount Isa and Port Pirie need to be given *all* of the evidence-based advice about reducing lead exposure.

Those revisions should be led by the NHMRC, as Australia's leading expert health body. And that work should be coordinated across the three cities, so that families aren't given different advice depending on where they live. There should also be rigorous and independent evaluation of these programs to determine if they are effective.

Better lead health education is important. But it is also not a substitute for eliminating lead in children's homes, play areas and gardens.

Keywords:

[Children](#)

[Lead poisoning](#)

[Child wellbeing](#)

[Mining](#)

[Lead](#)

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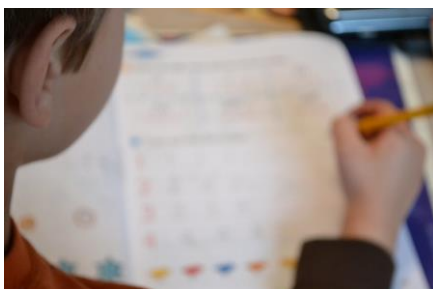
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Children living closest to the mines had the lowest literacy and numeracy scores. Katherine Clark/Flickr

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Reducing lead exposure has health, social and economic benefits. rSnapshotPhotos/Shutterstock

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The South Australian town of Port Pirie – home to a historic smelter – has some of the worst reported toxic air pollution in Australia. Photo by Imre Hillenbrand www.universalfocus.com.au

[Australia's dirty secret: who's breathing toxic air?](#)



Unsafe: thousands of Port Pirie children have been poisoned over decades, and yet government after government fails to stop it. Flickr/Viola Ng

[Lead poisoning of Port Pirie children: a long history of looking the other way](#)



[Les Johnston](#)

Appreciate the analysis of health effects of air pollution on residents of these three cities and the effectiveness (or rather ineffectiveness) of regulatory responses. There is a consistent pattern within Australia of failure to address health effects caused by air pollution.



[Donna Green](#)

Associate professor, [UNSW](#)

In reply to [Les Johnston](#)

Yes Les, unfortunately, I'd have to agree - and we are getting further behind the rest of the world on this.



[marianne kidd](#)

In reply to [Donna Green](#)

I grew up under the shade of a lead smelter I also trained as an artist. When I started art school in the mid sixties I was told that as a painter I should consider myself part of the lead industry. The teachers told me that I could inhale it, ingest it and absorb it through my skin. That lead would find its way into my blood stream, my sweat system breast milk and if I were a male, seminal fluids. I also heard that ancient Greeks would use lead to procure abortion (encourage miscarriage) Lead workers at Port Pirie and Broken Hill would surely be placing pregnant spouses at risk of miscarriage if they had unprotected sex with them as the lead laden seminal fluid would come very close to the developing foetus. The lowering of the IQ level of children exposed to lead as infants would no doubt impact on their ability to learn, putting them behind their peers. It seems to me ridiculous that in these days of enlightenment, Living With Lead documents should be replaced by Not Living With Lead documents. The onus should not be on the mother to mop up this mess, and bear the brunt of guilt, while the 'tap is still dripping'.



[Stephen Prowse](#)

logged in via Facebook

It would seem that clean up to reduce lead and eliminate exposure of pregnant women and children is almost impossible. Should they not be living in these cities? Would that mean the end of these cities?



[Donna Green](#)

Associate professor, [UNSW](#)

In reply to [Stephen Prowse](#)

It's a good question that should be answered by the residents themselves.

Anyone planning a family living in a leaded city might have some serious concerns about staying. Unfortunately, some people get trapped if they can't sell their home for example, or feel they wouldn't be able to get work elsewhere.

From the government side, there is a national agreement that 'all Australians' should be equally protected from pollution (Australia's Intergovernmental Agreement on the Environment, signed in 1992, which includes an objective that 'people enjoy the benefit of equivalent protection from air, water and soil pollution ... wherever they live'.)

It seems that some Australians are more 'equal' than others.



[Sue Ieraci](#)

In reply to [Donna Green](#)

The problem is, Donna, there will never be total equality between Australians. There can't be.

As an inner city dweller, I endure much higher pollution and much higher costs for housing than most rural and remote area dwellers, but much better access to health care and public transport. As a professional, I have a better income and lifestyle than people who exist on pensions.

We also know that there is strong correlation between socioeconomic status and health status.

So, we need to look at overall influences on pregnancy outcomes and child development.

According to the CDC's 2010 publication on lead and pregnancy (<http://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf>), the best recent information about lead in pregnancy comes from Mexico City, and confirms that there is a strong relationship between lead levels and outcomes:

“The strongest evidence to date is a prospective study of pregnant women in Mexico City, which addressed most of the deficiencies of the prior studies and demonstrated a statistically significant dose-response relationship between maternal blood lead levels (average 11.0 µg/dL) and risk for spontaneous abortion (BorjaAburto et al. 1999). Odds ratios for spontaneous abortion for the blood lead groups 5-9, 10-14, and >15 µg/dL were 2.3, 5.4, and 12.2, respectively, in comparison to the reference group (<5 µg/dL) (p for trend = 0.03) with an estimated increased odds for spontaneous abortion of 1.8 (95% CI = 1.1–3.1) for every 5 µg/dL increase in blood lead. In another study of pregnant women (N = 207) from Mexico City (mean BLL 6.2 µg/dL), a 0.1% increment in the maternal plasma-to-blood lead ratio was associated with a 12% greater incidence of reported history of spontaneous abortion (p = 0.02) (Lamadrid-Figueroa et al. 2007)”

This information is readily available.

So, shouldn't information for affected families include a broad discussion of all the factors that affect health outcomes? And, rather than the “there is no known safe level” mantra, it makes more sense to explain that there is, indeed, a strong relationship between blood levels and outcomes. Thus, minimising exposure by evidence-supported methods can minimise the impact, leaving families with some control over their lives, rather than being given scary messages.



[Marie Ange](#)

Just unacceptable. It involves money, lots of it, hence we close our eyes to the problem. It does affect children. Look at the results from the schools in these areas for proof. Fly in fly out workforce?



Donna Green

Associate professor, [UNSW](#)

In reply to [Marie Ange](#)

Yes, Marie, in light of the Flint scandal in the US -

<http://www.theatlantic.com/politics/archive/2016/01/what-did-the-governor-know-about-flints-water-and-when-did-he-know-it/423342/> - something to be concerned about..



Gaye Heroine

logged in via Facebook

consider Borroloola, where wandering stock had to be destroyed because of lead contamination, and locals are now afraid to eat fish from the river that has become a dump for the lead mine.

<http://www.ntnews.com.au/news/national/locals-petition-for-glencore-mine-closure/news-story/ccc75fa6f86762c72232a6be14c5d26a>



Donna Green

Associate professor, [UNSW](#)

In reply to [Gaye Heroine](#)

Yes, you are completely correct, and there's some new research going on there now - another 'out of sight out of mind' place, terrible.



Hugh McColl

Hugh McColl is a Friend of The Conversation

The history of the creation of the lead mining and refining industry (and others) means that state governments have been hand-in-glove with corporations from the outset. So if a town is co-located with a mine/refinery site and is understandably if not inevitably contaminated, then responsibility seems to fall on



government since it 'allowed' the town to be there. And of course if government 'discovers' too much contamination then its actions might threaten the viability of the corporation. That seems to explain why government is extremely reluctant to conduct continuous screening of infants and parents in towns or parts of towns that are likely polluted with dangerous stuff like lead.

We are fortunate that lead is no longer used in petrol in Australia because inner city areas used to have massive residues which are slowly subsiding to more or less negligible levels. But some cities still have new lead fallout from exports of ores and unfinished product. Most lead ores from Mount Isa and surrounding district are exported through Townsville's port and we know that lead escapes from the transport and ship loading systems into the city of Townsville (the port is upwind in the middle of town). Constant criticism has forced the Queensland government to increase monitoring and pressure corporations to upgrade facilities (covered rail wagons, dust reduction strategies, vegetated verges, sealed transfer systems) and this has helped but there is no monitoring of blood lead levels in infants in Townsville - even though we know for sure that particular residential suburbs, urban parks, schools and play areas have lead residues in their soils - leads with unique fingerprints from western Queensland. In the past couple of years we know for sure that short term spikes in lead-in-dust levels have occurred in Townsville but we don't know why. Industry seems to want government to only know enough to be able to assess compliance - and no more. Governments don't want children to be contaminated by lead but are reluctant to find out if it is happening. Perhaps all of us are complicit in this 'blind eye' approach?



[Sarah Glass](#)

Do we know whether, given we now mostly use unleaded petrol, there is any lead pollution in areas other than the three mentioned??

Is Diesel unleaded?? Is leaded petrol still in use??

A Catalyst program a few weeks ago outlined the stats in the US of violent crimes and showed how they had gone up and up through last century and then down and down after unleaded petrol was introduced. Very interesting.



[Donna Green](#)

Associate professor, [UNSW](#)

In reply to [Sarah Glass](#)

Yes, legacy lead - especially in inner city areas from leaded petrol is still certainly an issue. As with house paint. If you are concerned, you can get your soil tested for free. Check out:

<http://research.science.mq.edu.au/vegesafe/>



[Hugh McColl](#)

[Hugh McColl is a Friend of The Conversation](#)

In reply to [Sarah Glass](#)

Sarah, I have seen some graphs produced by the Queensland EPA showing the decline in lead levels adjacent to a main road in inner Brisbane since (if I remember correctly) the early 1990s when lead was no longer added to petrol. At that place the lead contamination was down into the almost unmeasurable levels but it had been quite high for decades beforehand. Of course a measurement of lead in (say) sand in a playground does not tell us much about the likely blood lead levels in children who use the playground. Also, the type of lead (lead sulphate, lead oxide etc) may indicate different levels of 'bioavailability' - lead as a pure metal as in fishing tackle sinkers is not particularly threatening. Yet lead in paint on older buildings may be quite dangerous in certain conditions. I don't think lead is used in any petrol in Australia now (it is still used in a very few countries) nor is it used in diesel although that fuel has other issues, including particulates.

The point I tried to make in my earlier comment was that in places where we know there are ongoing new lead-in-dust issues (including those mentioned in the article but in several others Australia-wide) there is no systematic state government assessment other than what is seemingly very basic, half-hearted and transient 'spot checks' to ensure that industry is minimally compliant with barely adequate, sometimes outdated standards. If we were serious about lead pollution we would be trying harder. Clearly, we are not very serious at all.



[Matthew Dornan](#)

Research Fellow, [Australian National University](#)

Thanks for the article.

Any views on whether the source of lead matters for health outcomes? My understanding is that high lead levels in these 3 cities (and indeed, in many backyards in Sydney) are especially dangerous given their origins from mining/smelting/manufacturing processes. In contrast, many rural areas in the NSW southern tablelands (incl. suburbs in Canberra) have high lead levels due to naturally occurring gossans, but these are considered less dangerous due to lower bioavailability. Has your research looked at the source of lead?



Donna Green

Associate professor, [UNSW](#)

In reply to [Matthew Dornan](#)

Yes Matthew, this is a good point. This is one argument that the companies try to make about these lead cities, but research by Mark Taylor (and colleagues) has shown that this is not correct. If you check his articles in the Conversation, and peer reviewed literature (if you have access) you can see this is the case.



Sally Male

Researcher in Engineering Education, [University of Western Australia](#)

Thank you for the article on this important topic. I have some basic questions relevant to concerned families please. How can families have the soil in their yards tested, and do fruit and vegies grown in lead-contaminated soil contain lead?

Additionally, is lead exported through Fremantle Port? The WA Government plans to privatise the Port. How important is control of lead exports in the negotiations? WA has already had a major disaster with lead exported at Esperance.



Donna Green

Associate professor, [UNSW](#)

In reply to [Sally Male](#)

Absolutely, anyone anywhere in Australia can get their soil tested. check out: <http://research.science.mq.edu.au/vegesafe/>

[*LEAD Action News Editor's note:* and anyone in Australia can purchase a LEAD Group Kit, collect their own samples of soil, paint, dust, water, etc, and have them tested by a NATA-accredited lab and receive a report with the results, from The LEAD Group. Go to www.lead safeworld.com/shop]

You are correct about the Esperance disaster, you might be interested to read: A tale of two towns: Observations on risk perception of environmental lead exposure in Port Pirie and Esperance, Australia <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1366&context=medpapers>



Donna Green

Associate professor, [UNSW](#)

In reply to [Sally Male](#)

Also, lead tends to accumulate on leaves (from fall-out in air) rather than come up through the plant itself. See <http://www.extension.umn.edu/garden/yard-garden/soils/lead-in-home-garden/>



David Thackrah

logged in via Facebook

Reports of lead pollution in Port Pirie go back about 50 years. There has never been any intention of anyone authority or person eliciting the obvious solution. Move the town either north or south. The wind pattern is west to east, if we can recall the nuclear fission fallout from the criminal atomic tests at Monte Bello Islands and later Maralinga. Re-locating Kalgoorlie seems prospective. The super-pit is moving toward the top of Hannan Street. I was told the plan is to have a micro New York City at Kambalda but there is a zinc processor there to the west ? Maybe a plan could be created for Broken Hill and Mt. Isa along the lines of suggesting Kalgoorlie be re-located.



Janice Russell

Another example of big mining and gov't not keeping Australians informed of health effects of mining.

All these health problems and any cost of mitigating them should be added to the REAL COST of mining. Would we then be inclined to dig up our country and sell it to whoever at a cost that doesn't reflect the true cost of its production. Our minerals are sold off at prices that do NOT cover the real costs and we are left to carry those costs of increased educational, medical and social problems, not the big miners



Geoff King

It's all thanks to the greedy companies who are making blood money from suffering people.

No difference than Hardy industries and the others who were dealing in their death product: Asbestos. When it was proven in 1918 that asbestos caused lung cancer and other cancers.



Thanks to conservative governments who believe that removing red tape from business is the way to go. Just look what happened in the United States of Amnesia where states gave big business free reign to do what they wanted: Factory explosions, poisoning the drinking water.



[Hugh McColl](#)

[Hugh McColl is a Friend of The Conversation](#)

In reply to [Geoff King](#)

“Greedy companies” maybe, but “conservative governments” removing red tape is not an explanation for the situation in Port Pirie, Mt Isa or Broken Hill. Pretty sure these mining/smelting towns are and always have been highly unionised Labor towns although they may have been within larger National Party electorates. Don’t worry, blind eyes have bipartisan support because mining towns bring royalties to state governments to spend in state capitals. State governments have to spend a fortune to get public servants (nurses, police, emergency services, child protection and, ironically, EPA officers) to live and work in these places - there’s no way governments are going to talk up pollution and environmental degradation.



John Toth

‘Rusty & Dusty’

How about “Leadly & Deadly”?



[Eddy Schmid](#)

Quote, “Why do American parents get clearer warnings than Australians?” End Quote. Really? I’m curious, as to where the author of this article obtains their information from regarding America, as clearly, that information is totally out of kilter with the reality. For example, try reading this article; State of emergency in US city after water poisoned. Flint has faced a lead-saturated drinking water “disaster” affecting almost 100,000 residents over the past 18 months. Ryan Rifai <http://www.aljazeera.com/news/2015/12/state-emergency-city-water-poisoned-151229165652041.html> 07 Jan 2016 Clearly, hundreds of people, including children have been IREPAIRABLY damaged by this lead pollution that the city KNEW OF, and the E.P.A. there, also were very much aware of. Pray tell, were those parents warned of the danger to themselves and their kids, as implied in this article ?????



[Sue Ieraci](#)

In reply to [Eddy Schmid](#)

I wondered the same thing, Eddy, but the answer seems to lie in the authors' study that is referenced.

The paper is here: "Misled about lead: an assessment of online public health education material from Australia's lead mining and smelting towns"<http://ehjournal.biomedcentral.com/articles/10.1186/s12940-015-0085-9>

The title of the paper reveals a major limitation of the study - it only looks at on-line information. The authors describe their methodology thus: "We used qualitative content analysis to evaluate the accuracy and comprehensiveness of online lead health education information provided to residents of the three cities."

In other words, they read stuff and evaluated it against a list of criteria they had developed.

The obvious limitation with this study is that it only looked at specific on-line information sites, and did not consider the multitude of other sources of information - from health care professionals to the wealth of research available on-line.

Clearly lead exposure is a significant public health issue, and as much as possible should be done to minimise exposure. For that reason, petrol and paint have been de-leaded, making a significant reduction to exposure. People living in high-exposure towns need all the accurate information they can get, but this fairly simple, limited analysis does not seem to add anything.

More pertinent areas for exploration would be whether residents are aware of relevant, evidence-based information, whether blood lead levels are falling, and whether health outcomes are improving.



[Marianne Sullivan](#)

Associate Professor of Public Health, [William Paterson University](#)

In reply to [Sue Ieraci](#)

Thanks for your comment, Sue. Qualitative content analysis is a well-established and recognized research method that was appropriate for the question we were asking in this study, which essentially was, what are parents in the three communities being told about lead's health effects, sources and pathways of exposure and strategies for reducing exposure, from the three local programs that have been specifically established to educate residents on these issues. We compared what residents were being told in these communities to international best practice where possible.

Of course there are other sources of information out there, and we discuss this in the paper, but we think that the materials that have been specifically developed for lead health education in these communities should



clearly and accurately communicate health risks and provide parents with all possible evidence-based strategies for reducing risk.

As for the questions you raise, “whether residents are aware of relevant, evidence-based info...”, etc., these are quite pertinent. That is why we recommend rigorous and independent evaluation of lead education programs in these communities.



[Paul Rogers](#)

Australia has, historically, lagged well behind the USA in many environmental health policies and standards. The US Environmental Protection Agency has set an ambient air quality standard of 0.15 mcg/cu.m for lead. Australia’s standard is 0.5 mcg/cu.m, three times less stringent.

Another example – sulphur dioxide, US 75 ppb, Aus 200 ppb (1 hour).

The USA banned DDT and most organochlorine insecticides in the early seventies. Australia took at least another 15 years to implement similar action despite some samples of breast milk so exceeding the DDT (and other) food standards that it would have been rejected as a ‘safe’ food.

Richard Doll (Sir) had the evidence for the carcinogenicity of asbestos in his seminal 1955 medical journal publication. We did nothing for about 30 years, costing thousands of lives from mesothelioma and related lung cancers, and mounting.

Neither Labor or Liberal governments seem to be able to get serious about national environmental health policy standards and action. The NHMRC is just about useless in this regard, and often their working groups are populated with industry apologists or medicos who have little training in, or understanding of the environmental health sciences.



[marianne kidd](#)

In reply to [Paul Rogers](#)

Of course the powers that be have known the effects of lead poisoning for hundreds of years, smelters go into established towns foisted on communities who become captive, unable to move as house prices tumble. Deluded by authorities that ‘its not that bad’ easy to succumb. But let’s not forget that hand in hand with lead might go cadmium arsenic selenium and other cancer causing goodies not to mention sulphur di-oxide and tri-oxide the combined effect of which does incalculable harm. Living with lead is not living at all really. Of course there is now a community living with the residual contamination from a smelter removed, land remediated (though still contaminated) with smelter land now being sold off as housing blocks...and so the sad story goes on, and how many Lead processing plants are called Zinc plants...



Henry GRAY

Henry GRAY is a Friend of The Conversation

There needs to be total transparency and absolute honesty in disclosing the likelihood of environmental dangers to the health of children and families.



Rosalie Schultz

logged in via Facebook

Worrying is that children are both the monitors of the safety of the environment and the victims of inadequate environmental safeguards.

At least they are testing fingerprick blood and they don't need venepuncture. Mt Isa has a testing schedule so all the kids are supposed to have blood test at age 12 and 18 months and 2, 3 and 4 years. It seems that the other risk sites have unpublished protocols, based on the test result. How do you explain that to your 3 year old?

According to this NHMRC statement, a blood lead level over 10 microgram per decilitre must be notified to the public health authorities in some states, but not in SA, ACT or NT. According to the Living with Lead Mt Isa website, Queensland planned to reduce the threshold for notification to 5 microgram per decilitre so that NHMRC intervention level is the same level at which there is a legal requirement for notification. What about national notification requirement at the agreed level for action – 5 microgram per decilitre?

But what action is possible? The only recommendation is for more of the same urging kids and parents to act in ways that have not been shown to be effective. Unless the blood lead level reaches 45 microgram per decilitre, there is no medical action.

Following this recommendation authorities consider the exposed children and their families responsible for not following recommendations. However it is government and industry who cause and profit from the problem.

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