

Report on the Activities of the TLAP Committee for 2014

This report summarises the activities of the Targeted Lead Abatement Program (TLAP) Committee in 2014.

In accordance with clause 14 (c) of the TLAP Agreement, it has been prepared in place of an independent review of TLAP activities as agreed by Michael Morley of Nyrstar and Bruce Carter, representing the State of South Australia.

Opening Statement:

The upgrade of the Nyrstar Smelter is expected to significantly reduce emissions of sulphur dioxide and lead. On its own this is expected to result in a significant reduction in blood lead levels in the Port Pirie community.

In parallel with the Smelter upgrade, Nyrstar and the South Australian Government have agreed to further improve this community health outcome and develop a new Targeted Lead Abatement Program (TLAP). The Port Pirie Transformation Steering Committee (PPTSC) - a joint South Australian Government, Nyrstar and Australian Government Committee - overseeing the Redevelopment has endorsed the initiatives set out in the TLAP Report of April 2014. The initiatives were developed by a working party to form the basis of the TLAP. The report recommends that TLAP focus on five sub-programs:

- Subprogram 1 – Decontamination of housing
- Subprogram 2 – Early intervention for young children
- Subprogram 3 – Public Health strategies with the Port Pirie Regional Council
- Subprogram 4 – Community dust suppression
- Subprogram 5 – Stakeholder partnerships

Nyrstar and the State entered in to a TLAP Agreement on 16 May 2014, for the governance arrangements for TLAP.

The working party ceased to operate in May 2014 and the TLAP Committee, the governing body now charged with overseeing and administering the Targeted Lead Abatement Program, was formed in June 2014.

As at 22 February 2015, 81.5 % of Port Pirie children tested (together with surrogate tests) for the period 1 January 2014 to 31 December 2014 have blood lead levels less than the current national health guideline of 10 µg/dL. This is the best result on record. As a result of the redevelopment it is estimated that the percentage of children with blood lead levels below 10 µg/dL will increase to 90% over a 4-7 year period post commissioning. It's estimated this will be further improved by TLAP with around 95% of children below the national guideline over the same period.

TLAP, in enhancing existing community blood lead reduction initiatives, will intensify action to further reduce blood lead levels in children.



Targeted Lead Abatement Program

For the future
we all want.

Members of the TLAP Committee

Julie Mitchell – Chair (Independent)
Gail Bartel – Nyrstar
Jim Tyler – Nyrstar
Andrew Gilbert – Nyrstar (until October 2014)
Adrian Beerworth – Nyrstar (from October 2014)
Dr Kevin Buckett – SA Government (SA Health)
A/Prof Rob Thomas – SA Government (Dept of State Development)
Trish Strachan – SA Government (Dept of Education and Child Development)

Appointment of TLAP Implementation Manager

The position of TLAP Implementation Manager was advertised in June 2014 and was filled in October with the appointment of Ms Dianah Mieglich to the role. A contract has been agreed and Ms Mieglich commenced working in this role in October 2014.

TLAP Port Pirie office established

To assist with the independence of the role, office space, in a suite of professional offices, was secured for use by the TLAP Implementation Manager (TLAP IM). The location, near the Port Pirie CBD and on a busy thoroughfare, provides an independent location for meetings to take place and for the TLAP IM to work from while assisting increasing the visibility of the TLAP brand and role in the community.

Blood Lead Reports for 2014

Key points reported in the release of the most recent data (1 January 2014 to 31 December 2014) are:

- 81.5 % of Port Pirie children tested (together with surrogate tests) in 2014 have blood lead levels less than 10 µg/dL.
- There has been a concurrent decrease of 0.6 µg/dL for children aged 24 months and a decrease of 0.2 µg/dL in the overall geometric mean for the population.
- The number of children with blood lead levels above 20 µg/dL (7 children), decreased by more than half (15 children in 2013).
- The average blood lead level of all children tested has fallen from 8.7 µg/dL in 2005 to 4.5 µg/dL in 2014.
- The average blood lead level in 24 month olds, considered to be the best indicator of population trends, has reduced from 11.6 µg/dL in 2005 to 5.5 µg/dL in 2014.

Social Impact Assessment (SIA)

To gain an increased understanding of the social demographics within the Port Pirie community which in turn would assist with the delivery of the subgroup programs, the TLAP Working Group commissioned Quigley & Watts Ltd to undertake a Social Impact Assessment of the proposed initiatives which were under consideration within the subgroups. The scope of the study focussed on three TLAP sub-programs (early intervention, legislation and policy and community education).

A number of focus areas were identified and included (but not limited to):

- Enhancing formal and informal partnership;
- Understanding the different target audiences (particularly high needs clients);
- Coordination between services and sharing information;
- Refocused messaging using a 'social marketing' framework, that is, listening to the needs and desires of the target audience and building the program from that information.

The recommendations from the SIA were considered by the Working Group in the design and implementation of the TLAP objectives.

Summary of the work undertaken within the 5 sub-programs in 2014

Sub-Program 1 - Broad-scale decontamination of housing

Lead dust in houses is a major pathway for lead exposure by children in Port Pirie. Previous efforts at broad-scale decontamination of lead from houses have delivered short term benefits for significant financial costs. This work was carried out in the 1980s but was abandoned as it was found that the houses were rapidly re-contaminated.

If broad-scale contamination of housing is to be effective, it should only be considered post-commissioning when emissions are substantially reduced.

The TLAP Committee will further investigate this activity following redevelopment of the site.

Sub-Program 2 - An enhanced early intervention program that intensifies existing intervention measures to improve the ability and resources for agencies to work with families.

Sub-program 2 defines the key target group for this sub-program as children aged 0-2 years, pregnant women and those children at greatest risk with blood lead levels above 20 µg/dL. The enhancement of the preventative program, which the Environmental Health Centre (EHC) delivers, will focus its efforts to reduce lead exposure before children reach 2 years of age while their blood lead levels are likely to be more responsive to interventions that reduce lead exposure.

The Environmental Health Centre sits under the auspices of the Public Health SA Directorate of the South Australian Department of Health.

A Memorandum of Administrative Arrangement has been established between Public Health Services and Country Health SA (CHSA) to outline the partnership principles that facilitate Dr Kevin Buckett, the SA Health representative on the Committee, representing CHSA and EHC on the TLAP Committee.

The immediate priorities of subprogram 2 are:

- Appointment of additional caseworker resources at the EHC to focus on Early Intervention.
- Appointment of EHC TLAP Coordinator to EHC.
- Social research to better understand the circumstances and motivation of families in the target demographic who are not engaging effectively with the EHC and develop new more effective ways to co-design services with families in Port Pirie.
- The continuation of cleaning and hygiene programs that reduce exposure and blood lead levels particularly at childcare centres and kindergartens that provide daily care for children in the target age group.
- The continuation of the TLAP funded nutrition/breakfast programs in schools, kindergartens and childcare centres.

These actions will underpin subprogram 2, providing the foundation for the actions required to achieve the aims of the program.

In terms of the additional caseworker resources at the EHC, CHSA does not currently have the resources to fund these additional positions and given the anticipated importance of these roles to deliver the objectives of subgroup 2, funding will be made available via TLAP.

A formal Funding Agreement between Nyrstar and the SA Government on behalf of CHSA that sets out the mechanism for funding these roles is near completion. Position descriptions have been developed for two additional the Case Workers and a TLAP Coordinator (Project Manager) and recruitment for these roles has commenced. It is anticipated that the recruitment phase will be completed in early 2015 with the appointment of the successful candidates to the positions.

Increased engagement of EHC clients

The Australian Centre for Social Innovation (TACSI) has been contracted by TLAP to identify opportunities to improve EHC services and service delivery.

TACSI was established in 2009 with seed funding from the South Australian Government, with the vision of creating a national centre of excellence in social innovation that could be a catalyst for widespread change. In addition to their own programs, TACSI are now working with many organisations to build their internal innovation capability and increase their impact.

TACSI conducted a workshop in May 2014 funded by CHSA to give EHC, allied agencies and key stakeholders exposure to their methods and the potential benefits of new approaches to engagement of the target audience.

A submission was made to the SA Health Human Research Ethics Committee to enable this project to progress – further information has been requested by the Committee to finalise its consideration in 2015.

Strategies to create positive change for children at high risk of lead exposure in Port Pirie, particularly for those families with complex needs that have children at high risk of lead exposure who engage lightly or do not currently engage with the program will be developed. Strategies to engage families with children in the target group who are not high risk but who won't/don't engage with the EHC will also be developed.

It is expected that TACSI's innovative and successful methods of engagement and research will allow targeted training to be delivered to SA Health staff to enable them to better understand their clients and what they value using contextual research tools.

Together TACSI and SA Health staff will develop a *Business Model Canvas for Change* for new/improved service delivery models and a framework to deliver the prototypes.

Improved data management

- Early in the TLAP planning process it became apparent that the current EHC means of data management was not sufficient to meet the stringent reporting demands that TLAP would require.
- SA Health IT specialists will be working closely with EHC staff to either upgrade or replace their existing data management system with the functionality required to capture the data needed to evaluate TLAP interventions and track children's blood lead reductions.

Resources for reducing time spent by children in highly contaminated environments - Caseworker interaction

A key component of Early Intervention will include extra case workers. They are the first point of contact for EHC and TLAP and they build trust with the families at risk. They encourage behavioural changes within the home to reduce lead exposure of children. This is expected to be the most effective strategy for blood lead reduction.

Subsidised Childcare

- Increasing the EHC's subsidised childcare strategy (financial support to access childcare) was well supported as a means of intervention. Exposure to lead is substantially reduced by removing a child from a contaminated home environment and providing a safer environment for children for long periods of time. Improving the clarity about the benefits and disadvantages of childcare and investigating preferred childcare options was suggested by participants in the SIA to maximise uptake of the service provided.
- Having different and a greater number of childcare placement options to offer families were seen as a useful extension to this strategy.

- As a starting point for this strategy, the TLAP Committee needs to have a better understanding of the current childcare situation in Port Pirie, what capacity there is (if any for expansion) and what factors need to be considered in the formation of an enhanced childcare Strategy.
- To this end, the Committee briefed childcare consultant Dr Brenda Abbey about the research required and a proposal has been developed and approved.
- It is expected that Dr Abbey's engagement will take place early in 2015.

Subsidies for home modifications to reduce lead exposure

- Increasing the EHC's capacity to provide home modifications to reduce indoor dust and lead exposure of children is seen as an important option for families where other exposure-reduction interventions have not been effective.
- Interim guidelines have been developed and will be further refined once input from the TACSI research is available.
- It is expected that the improved scope of the TACSI study along with input from EHC staff and the appointment of the ECH TLAP Coordinator will develop comprehensive guidelines for use in the determination of accessing TLAP funds for home modifications.

Head lease for Housing SA Stock

- The TLAP partnership with Housing SA aims to meet the requirement to relocate an anticipated 5 families per year for approximately 3 years from private rental properties that are in poor condition and located in high lead risk areas of Port Pirie into houses which are well sealed, have good landscaping and are located in lower lead risk areas of Port Pirie.
- An early priority for 2015 is to formally agree the provision of such housing and the mechanism by which it will be made available via Housing SA.
- This initiative will only be used as a last resort when all other interventions fail.
- It will only focus on families at greatest risk and will be voluntary.

Sub-Program 3 - Policy assistance to boost capacity for Port Pirie Regional Council (PPRC) to fulfil its role and responsibilities as the local public health authority

Following the Smelter Redevelopment, emissions of lead will significantly decline and legacy lead accumulated over many years in the form of dust will become a more predominant source of lead exposure for children in the Port Pirie Community. TLAP has identified that the *South Australian Public Health Act 2011* (the Act) may contain additional means to reduce legacy lead exposure through public health planning in local government.

This subprogram will provide support to the PPRC to build their capacity to be proactive and to capture the community development opportunities associated with the Redevelopment. Collaboration and information sharing between TLAP stakeholders will benefit exposure-reduction strategies such as community dust management.

The TLAP Committee initiated a workshop (to be attended by representatives from the TLAP Committee, Nyrstar, PPRC and SA Government) which will be held in early February 2015 to further investigate the Act and other legislation for tools that could be used to reduce legacy lead exposure.

The workshop will also enable TLAP to evaluate the extra resources needed by PPRC that will complement the TLAP program. The workshop will also produce expectations and guidelines for improved coordination between South Australian Government agencies and local government concerning implementation of legacy lead abatement strategies.

Sub-Program 4 - Dust suppression on-site and in the community in conjunction with a program of cleaning of public spaces.

After 125 years of continuous smelter operations, lead contamination in Port Pirie is wide-spread with exposed soil and dust deposition being a significant source of lead exposure to children from birth to 4 years in the community. Public spaces can be reservoirs for lead bearing dust that can mobilise and become a source of lead exposure to young children.

By removing or stabilising legacy lead in Port Pirie, the risk of lead exposure for this group can be reduced. The specific focus for subprogram 4 will be;

- Continuation of current dust suppression initiatives in the community and the identification of additional initiatives.
- In partnership with the PPRC, enhance dust management in the community to reduce risk of lead exposure. This includes the purchase of a new street sweeper with a \$200,000.00 contribution from the TLAP Budget.
- Explicit guidelines have been developed for the use of the street sweeper to maximise its impact in the community.

Sub-program 4 is focussed on the management and mitigation of lead-contaminated dust in Port Pirie. Lead contaminated dust is a significant exposure pathway to young children and its effective suppression assists in the achievement of low levels of lead in blood.

A key component of the subprogram includes dust suppression and the decontamination of facilities and equipment potentially handled by children. Open area dust suppression and mitigation including greening and sealing programs are undertaken in collaboration with the Port Pirie Regional Council (PPRC) and are focussed on the areas of highest soil contamination as mapped by the SA Department of Health. Routine washing of children's play equipment in public areas is likewise focussed on areas of greatest risk with higher washing frequency in areas of greatest contamination.

In 2014 an additional community cleaning program was implemented, the focus of which is to clean public seating/spaces in the CBD closest to the smelter and bus shelter seating, all of which through testing had proven to be an exposure pathway.

The focus in 2015 will continue to be on decontamination whilst a longer term greening, sealing and soil remediation program for Port Pirie is developed with the PPRC. The commissioning of the new TSL Smelter in 2016 is expected to reduce air-borne lead emissions from the Smelter by at least 50% which will greatly reduce the potential for recontamination of remediated areas.

Funding for onsite environmental reduction initiatives at the Nyrstar Smelter

Sub-program 4 is additionally concerned with industrial cleaning and maintenance activities at the Port Pirie Smelter to assist in reducing lead emissions from the Smelter and dust fall-out on Port Pirie. This contribution leverages on independent site managed lead mitigation strategies which in combination resulted in historical low lead emissions from the Smelter in 2014. This initiative is separate to the capital works program required for the Smelter Redevelopment.

Accordingly a request from Nyrstar for TLAP funding to replace cladding on particular external conveyer systems was supported by the TLAP Committee. It was acknowledged that the maintenance planned would significantly and immediately reduce emissions from the Nyrstar site.

The Total Installed Cost (TIC) was AUD \$309,000. The scope of this work included installation of replacement cladding on the CV06 gallery, CV03 gallery, Transfer Tower 1, Transfer Tower 2 and the Co-Treatment shed. It also included an upgrade in material to a longer lasting cladding product that will not corrode as quickly as the existing material.

Sub-Program 5 -Development of stakeholder partnerships and engagement programs to enhance delivery of the sub-programs and to ensure all groups in the community are communicated to and engaged in the most appropriate and effective way.

Active participation by the community in initiatives to reduce lead exposure and children's blood lead levels in Port Pirie has been a key success factor over the last 30 year, particularly so since 2006. This success has been largely due to increasing awareness and engagement of blood lead reduction programs by the community. The community lead reduction strategies to date have been driven by the EHC and Nyrstar.

A variation to the approach of engagement, particularly gaining a better understanding of the target group is critical to increasing the number of children being tested and for implementing early intervention strategies if required. However, the continued participation and support of the community in home environment and broader lead exposure-reduction initiatives will also be critical to deliver ongoing reductions in children's blood lead levels.

- Existing messaging from previous campaigns has positive aspects however it is expected that relevance and reach may need to be modified to deliver maximum impact to specific demographic groups.
- The messaging about the positive aspects of the Redevelopment will be aimed at those living outside Port Pirie to assist in changing the negative image of the community.
- It is recognised that early intervention initiatives will require specific demographic targeting and greater levels of interaction with the community. Aspects of the research which TACSI undertakes will inform this.

During 2014 subgroup 5 focussed on growing the awareness of TLAPs goals and objectives with key stakeholder groups and individuals and what future changes will be seen in the community to deliver those goals and objectives.

- A briefing to the EPA Board was undertaken by TLAP representatives, Julie Mitchell, Rob Thomas and Gail Bartel.
- Detailed briefings have been held with: Local State & Federal Members of Parliament, PPRC Senior Management Team, Department of Education & Child Development representatives, EHC, Regional Development Australia Yorke & Mid North and the EPA Board.
- In Ms Mieglich's initial round of community outreach since commencing the TLAP IM Role, she has identified an appetite for community ownership of the initiatives which the TLAP program seeks to deliver.
- It is particularly important that community understanding and its expectations of TLAP initiatives are professionally managed to guarantee ongoing participation and enthusiasm.
- The updated website will position TLAP as the next step to continue to implement initiatives in the community to further drive down blood lead levels.
- SA Health publishes regular reports about the trends in Port Pirie Children's blood lead levels. Frequently asked questions and their answers can be found at this link: <http://www.sahealth.sa.gov.au/wps/wcm/connect/88587500451b83738cf2dc005ba75f87/FAQ-TestingAndReportingPtPirieChildren%27sBloodLeadLevels-Aug2014.pdf?MOD=AJPERES&CACHEID=88587500451b83738cf2dc005ba75f87>
- The *Community Action Network delivering outcomes* (CANdo) is an action group made up of between 12 and 15 community representatives working together to promote the aims of TLAP.
- The group actively looks at ways to identify and implement different projects in the community that will help reduce blood lead levels and improve the reputation of Port Pirie outside of the community. Their ongoing participation in, and support for community lead reduction initiatives will be a critical resource for TLAP in the community.

SUMMARY

In 2015 the TLAP Committee will build upon the foundation elements of the formative work of the second half of 2014. The embedding of the key new positions to both the EHC and the PPRC will be pivotal in the success of the broader program deliverables in subprograms 2 & 4.

The goodwill of the community continues to be an essential requirement in attaining the goals TLAP is aiming for. Community support for lead abatement initiatives in the past will continue to be built upon to convey salient messages not just in the local Port Pirie community but more broadly.

Equally so, the willingness of key stakeholders to engage, participate and 'own' lead abatement strategies, especially the EHC and Department of Education & Child Development sites has been fundamental in achieving the blood lead reductions achieved to date.

In terms of key partnerships in the community, we envisage a strong and productive relationship with the PPRC. A new level of collaboration will be reached with the placement of an additional resource in Council. This relationship is critical on the ultimate success of Subprogram 3.

Similarly with the EHC, which has been engaged in the blood lead issue in Port Pirie for over 30 years, the TLAP Committee will focus on the further development of the relationship that already has strong foundations with both Nyrstar and SA Health.



Julie Mitchell
Chair (Independent)
6 March 2015