COORDINARE

phn
SOUTH EASTERN NSW
An Australian Government Initiative

Childhood Immunisation Strategy 2015-18

1. Purpose

Childhood immunisation rates is one of the four National Headline Performance Indicators for PHNs. This document provides a strategy for, and is operationalised by, the Childhood Immunisation Improvement Plan.

The purpose of this document is to review relevant data, identify any themes unique to the South Eastern NSW PHN region (the region), identify key stakeholders, describe an initial approach, and articulate initial priorities to improve immunisation results across the region. Action will be led at three levels of intervention: with general practices; with communities at risk; and with the health system as a whole.

The structure of this strategy draws on the systems approach that is at the heart of COORDINARE's business model. This approach seeks to articulate the thinking, data and evidence of the issues and opportunities to improve across the system as a whole, to focus improvement where it will have the greatest impact.

This document is considered a permanent work in progress. With engagement and ongoing action comes learning, and COORDINARE's strategies will be refreshed accordingly.

2. Why is childhood immunisation important?

The Commonwealth Department of Health notes that since the introduction of childhood immunisation programs in 1932, deaths from vaccine-preventable diseases have fallen by 99% (despite a threefold increase in population).

For immunisation to be effective, the generally accepted goal is that at least 90% of the population must have been fully vaccinated and developed an effective immune response (for some diseases, a rate of greater than 90% is desirable). Above 90%, the population is said to have gained 'herd immunity', where the overall high level of immunity provides protection to those who have not been immunised (which is particularly important for those who are too young for a particular vaccine or perhaps too unwell with another condition).

While the reliability and safety of vaccinations are high, to achieve an effective immunisation rate of 95% it is important to aim for a higher vaccination rate. This provides an additional margin of protection.

Timeliness is also important in immunisation. The childhood immunisation schedule describes the accepted timing of the different vaccinations from birth to 5 years. While overall childhood immunisation rates are generally measured by the rate of completed immunisations at age 5, it is important to aim for high rates across each specified age group to protect children from illness.

3. The broader context for childhood immunisation

Childhood immunisation processes can and should support a broader view of child developmental health and wellbeing. It provides a window into the most critical stage of the life course where wider preventative health needs can be identified.

For some parents immunisation raises concerns over safety and welfare of their children. While most of these fears may be ill-founded the concerns need to be respected and actions should help to create confidence and capability for parents to support the best outcomes for their children.

While the National Headline Performance Indicator for PHNs is focused on childhood immunisation, COODINARE recognises the importance of immunisation across the life course, for example:

- School-based immunisation programs, led in NSW by NSW Health, which include varicella, diphtheria, tetanus, pertussis and HPV
- adult immunisation, such as influenza and pneumococcal vaccination, as a major contributor to better health outcomes and preventing hospitalisation amongst vulnerable populations, particularly the elderly.

COORDINARE will seek to combine a sharp focus on the child immunisation results expected of us with an eye towards the broader system wide benefits that can be achieved from immunisation as part of a comprehensive approach to primary health.

4. Who else holds a stake in childhood immunisation?

General practices

General practices are key local providers of childhood immunisation services. While the proportion of childhood immunisation provided by general practice compared to other providers such as LHD primary and community health services is not known, general practice plays a strong role in maintaining the health of children and their families. For some families, general practice will be their primary source of immunisation, for others they will play a back-up role if appointments are missed at LHD community health centres and as children move towards starting school.

Local Health Districts

Local Health Districts (LHDs) play a substantial role in childhood immunisation, through both their public health and clinical operations functions:

- Public Health Units coordinate a range of activities to support the delivery of immunisation programs, including: monitoring immunisation rates; providing expert advice on the immunisation schedule; monitoring vaccine wastage; coordinating professional education; acting as a link between the NSW Ministry of Health and local immunisation initiatives
- Clinical operations divisions deliver immunisation services including early childhood immunisation largely in a primary/community health setting and in maternity services where the Hepatatis B vaccination is given within 7 days of birth, if this first immunisation is delayed it impacts the ongoing immunisation schedule.

LHDs also play a significant role in broader immunisation activities, including implementing school-based immunisation programs.

LHDs are key partners in planning, delivering and monitoring immunisation improvement initiatives.

Aboriginal Medical Services

Aboriginal Medical Services may be the immunisation provider of choice for some Aboriginal and Torres Strait Islander families. However there may be barriers around the number of nurse immunisers based in AMSs to undertake this service. As well, services in receipt of certain Commonwealth funding for Aboriginal health services are required to report on specified key performance indicators for immunisation. While immunisation may not be delivered by the service, the AIHW collects information via the Ochrestreams reporting portal on the proportion and number of Aboriginal and Torres Strait Islander children who are fully immunised at 1, 2 and 5 years of age.

Parents and Carers
It is parents and carers who make the final decision on whether a child will be immunised. Parents and carers must not only agree to the immunisation, they must also enable the process by scheduling appointments and taking their children to clinics or general practices to receive the service. Any initiatives aiming to improve childhood immunisation rates must influence parents' and carers' knowledge of and attitudes to immunisation, as well as reduce any barriers to their participation.

At a national level there are changes to policy that will influence parental incentives and sanctions, including changes next year to funding for assertive drop-out follow-up. As well, the *No Job, No Pay* policy will be amended so that 'conscientious objection' is no longer an exemption from the requirement to have children fully immunised in order to claim government benefits. This measure is in response to the doubling of parents claiming 'conscientious objection' over the past decade. In addition, NSW preschools and day care centres will not allow unvaccinated children to enroll and it is envisaged that other States will follow suit. In the interim NSW still has processes for conscientious objection for enrolment in childcare centres.

Other service providers
A range of other service providers contribute to achieving sound immunisation coverage for children. These include:

- child care centres who monitor immunisation status to ensure that enrolled children are fully immunised
- child and family service providers who work with children at risk of entering the child protection system
- out of home care service providers who place and case manage children who are within the child protection system.

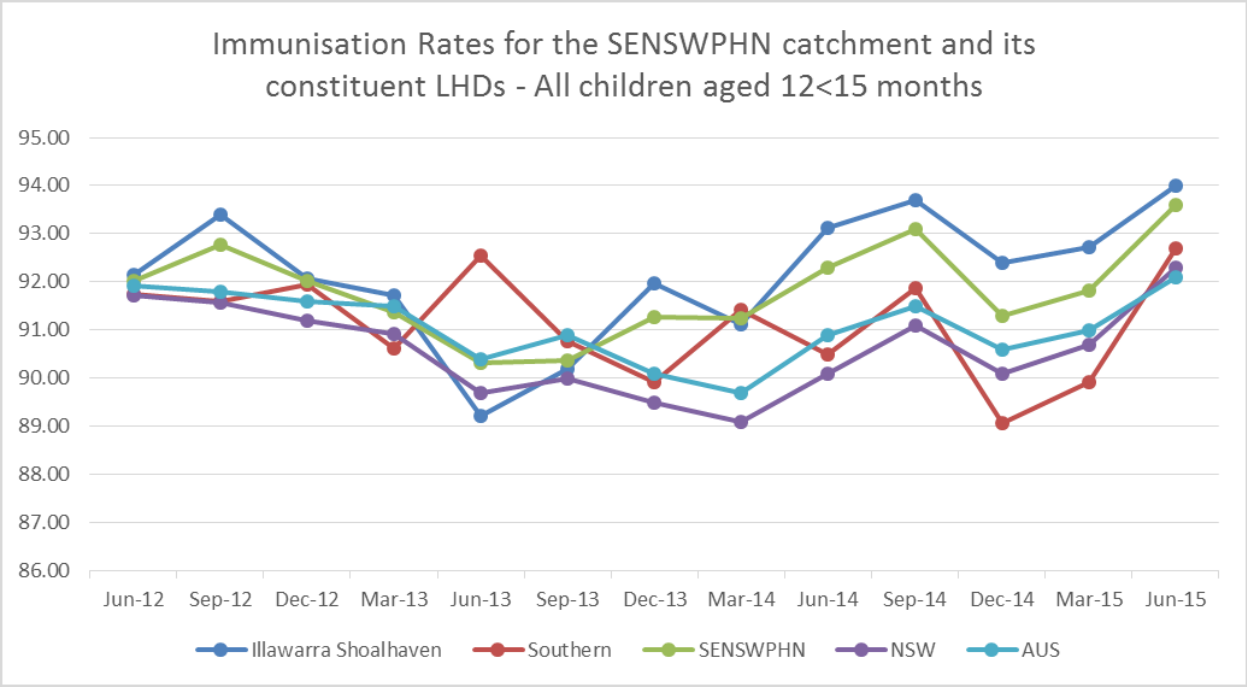
Other services host and/or coordinate immunisation clinics, providing additional points of access to immunisation for parents/carers and their children.

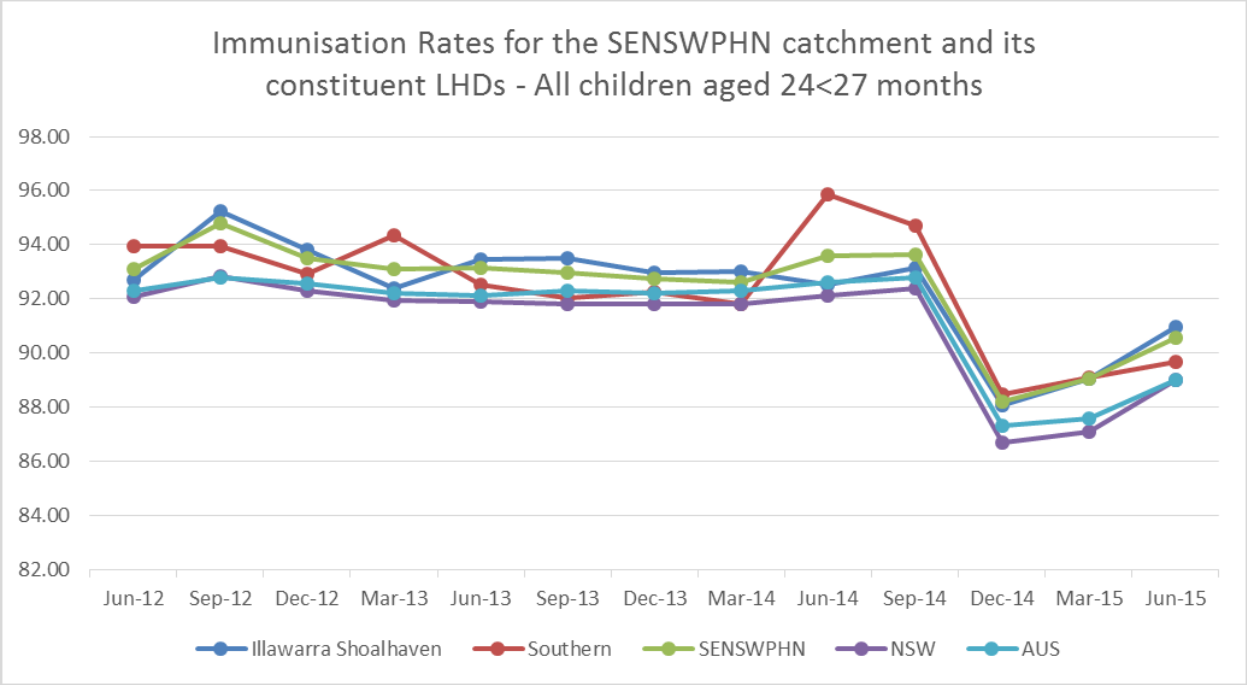
5. What is the data telling us?

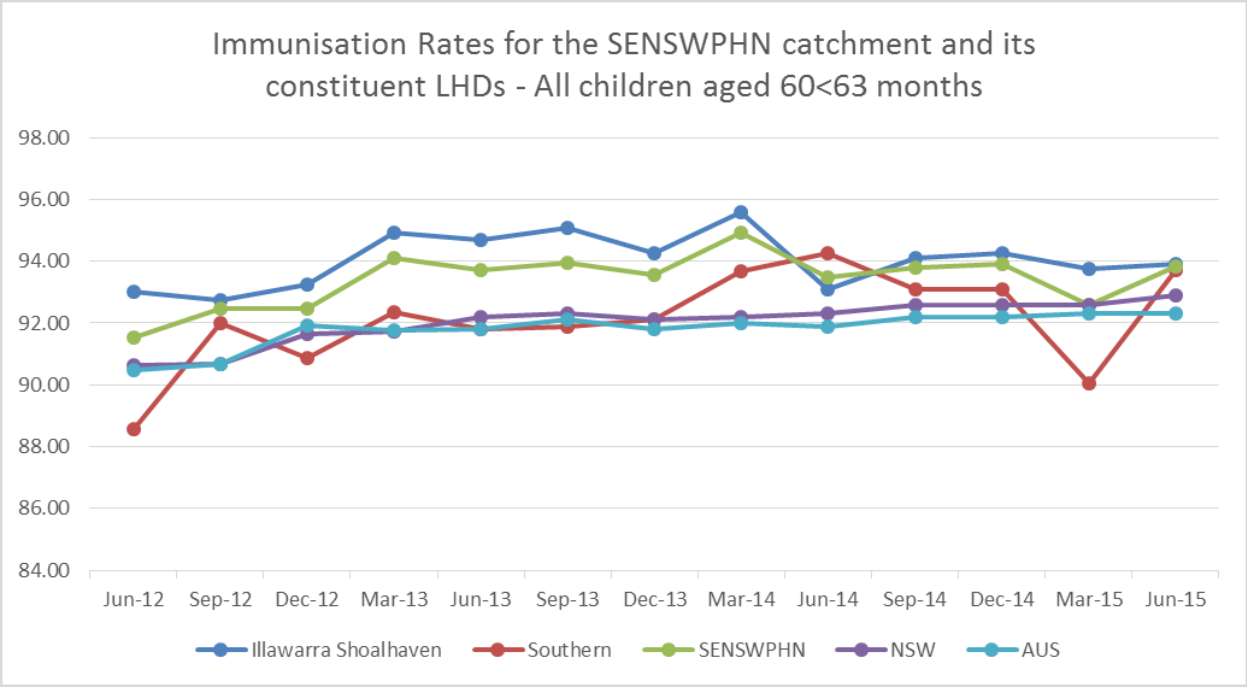
Childhood immunisation data is currently captured and reported through the Australian Childhood Immunisation Register (ACIR), which provides a nationally consistent approach to monitoring immunisation rates. From January 2016 the ACIR will expand to include immunisation records for young people up to age 20, then in September 2016 it will become the Australian Immunisation Register and provide a birth to death coverage of vaccines given by GPs and community clinics. Data is entered by the treating clinician or associated administrative staff member and as such is subject to potential data quality issues due to human error.

In order to encourage timely immunisation, rates are measured for the age groups 12-15 months, 24-27 months and 60-63 months. Data is publicly available by Local Health District, Primary Health Network, State and Nationally. Small area data (eg. LGAs) is not available publicly due to the small numbers and potential for identification, particularly when presented by Aboriginal and Torres Strait Islander status. However, small area data for South Eastern NSW has been viewed and factored into planning conclusions.

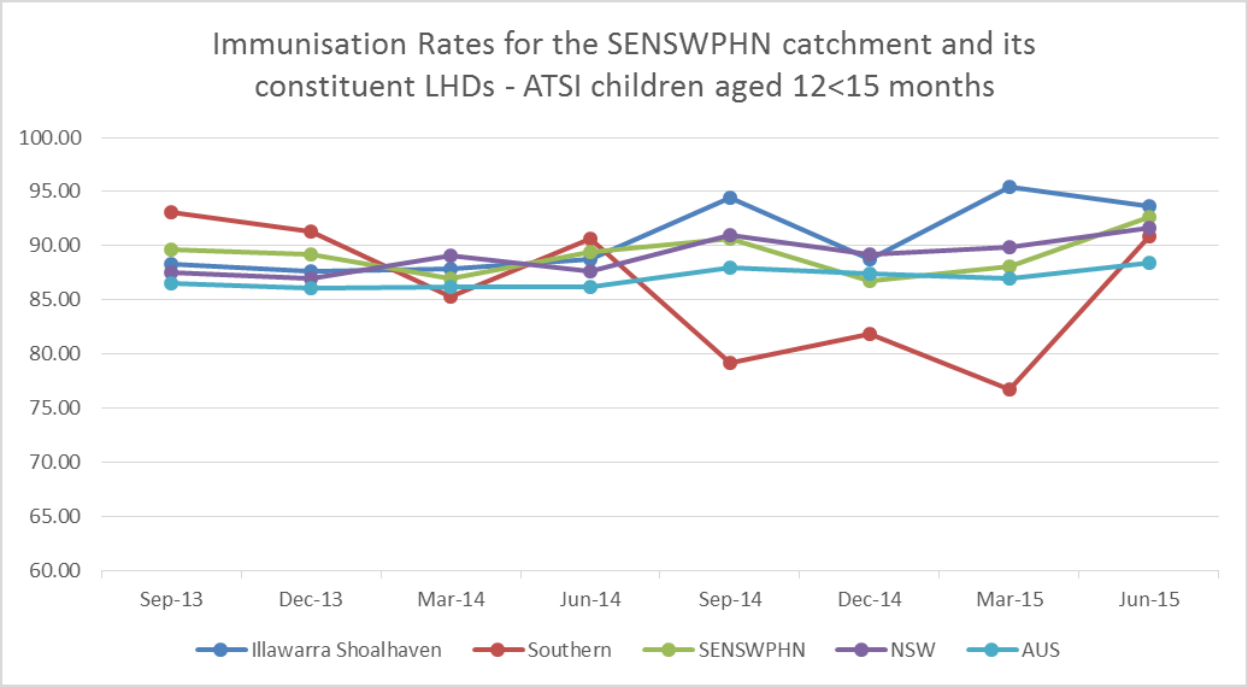
a. Immunisation rates for all children by LHD, PHN, state and nationally

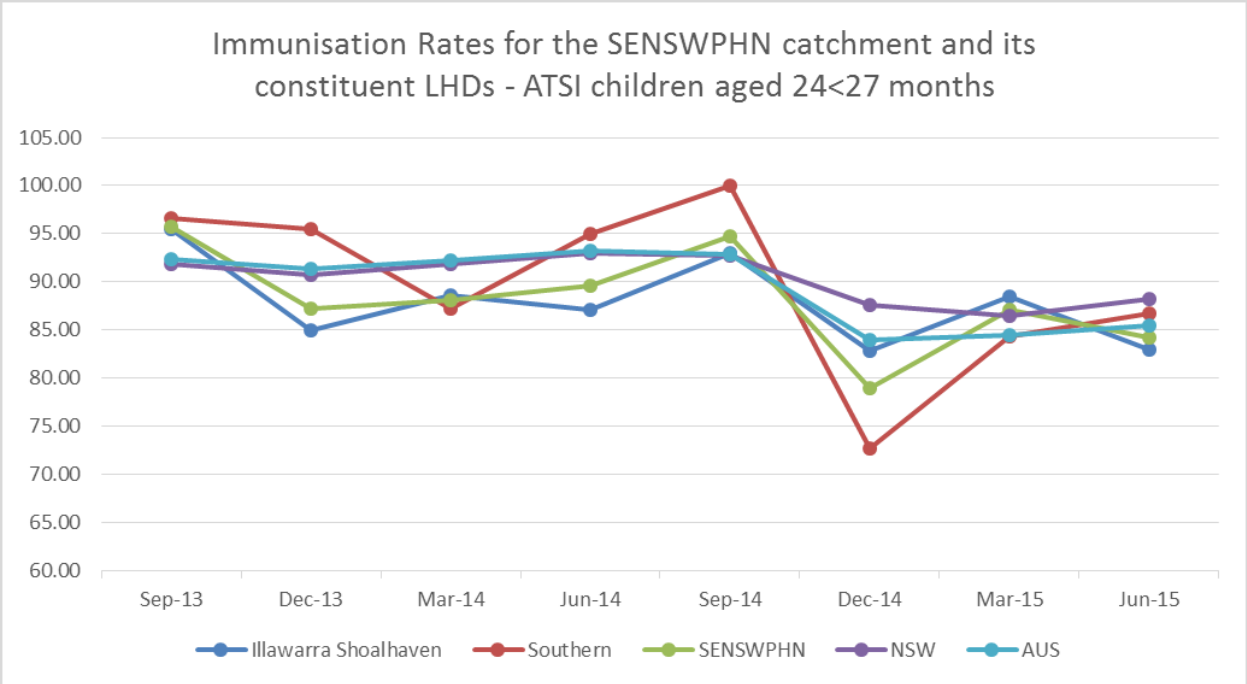

Immunisation Rates for the SENSWPHN catchment and its constituent LHDs - All children aged 12<15 months
95.00
94.00
93.00
92.00
91.00
90.00
89.00
88.00
87.00
86.00
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Illawarra Shoalhaven
Southern
SENSWPHN
NSW
AUS

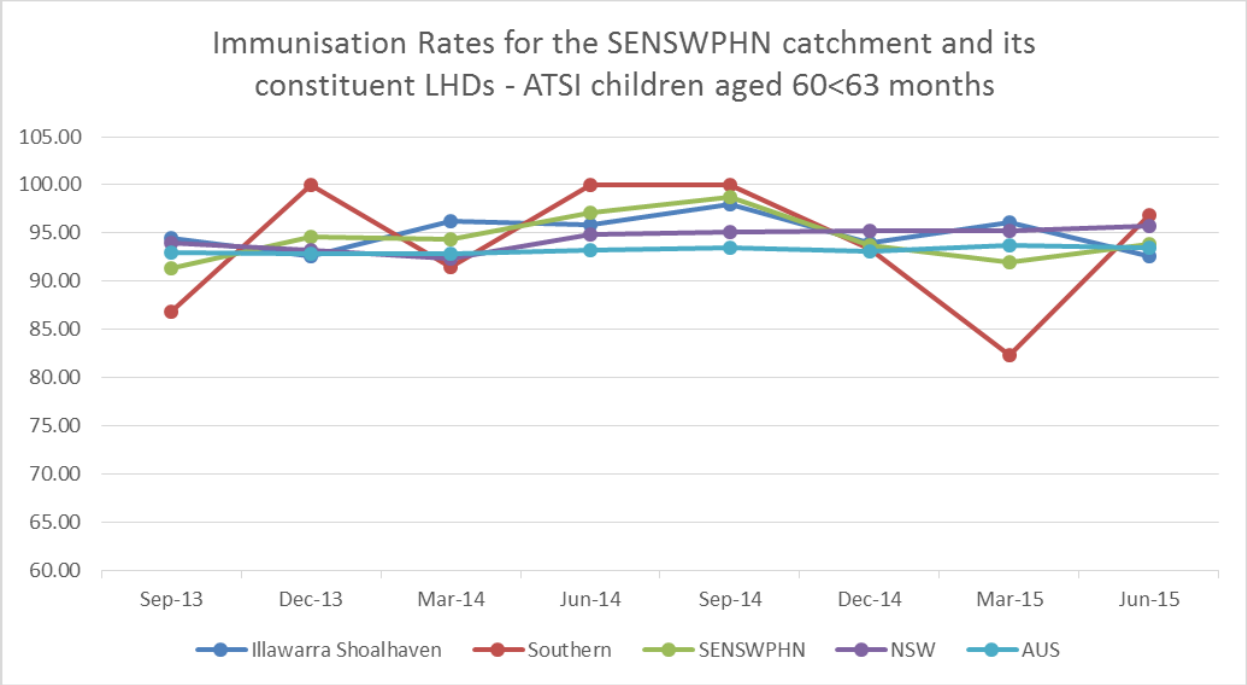

Immunisation Rates for the SENSWPHN catchment and its constituent LHDs - All children aged 24<27 months
98.00
96.00
94.00
92.00
90.00
88.00
86.00
84.00
82.00
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Illawarra Shoalhaven
Southern
SENSWPHN
NSW
AUS



b. Immunisation rates for Aboriginal and Torres Strait Islander children by LHD, PHN, state and nationally




Immunisation Rates for the SENSWPHN catchment and its constituent LHDs - ATSI children aged 24<27 months
105.00
100.00
95.00
90.00
85.00
80.00
75.00
70.00
65.00
60.00
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Illawarra Shoalhaven
Southern
SENSWPHN
NSW
AUS


Immunisation Rates for the SENSWPHN catchment and its constituent LHDs - ATSI children aged 60<63 months
105.00
100.00
95.00
90.00
85.00
80.00
75.00
70.00
65.00
60.00
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Illawarra Shoalhaven
Southern
SENSWPHN
NSW
AUS

c. Some preliminary conclusions drawn from the data

1. **Continued need to lift immunisation participation rates and effectiveness of immunisation service responses:** Trend data show immunisation rates are relatively static (or possibly slightly declining). We need to work with our partners in educating parents, helping mobilise communities and improve information for our provider networks.

2. **Vaccination delay and low rates at the 24-27 month milestone**: The region is moderately successful in getting the first year's immunisation complete (93.6%) but this drops in the second year to around 90.6%. This may point to a drop off in effective parental awareness or barriers to timely participation at this life stage. It points to opportunities to address this and improve the effectiveness of our service and drop out response.

3. **Large geographical variation**: Some localities are already achieving rates of over 95% while other localities are achieving in the mid to low 80s. It is important to understand the causes of this variation and help lift performance at both LGA and practice level. This will also include working with the Public Health Units to promptly respond to local outbreaks of vaccine preventable illness – e.g. whooping cough.

4. **Relatively low and variable rates for Aboriginal children:** It is important to work with our Aboriginal communities, AMSs, LHDs and provider partners to sustainably lift this rate, again with an emphasis on the year two drop out period and to reduce geographic variation.

5. **Patterns of unexplained variation over time:** The data shows periods when immunisation rates decline broadly across whole regions. Possible causes suggested include slow-downs in supply, power supply effects on cold chain management or impact of seasonal factors. Changes in data definitions are also important to understand: for example, the consistent decline in the immunisation rate at 24-27 months for the December 2014 quarter was due to a change in the schedule requirement for full immunisation. We need to understand, anticipate and mitigate these variations where possible.

6. **Responding to needs of specific high risk populations**: While the data shows the differential in immunisation for Aboriginal and Torres Strait Islander children, with rates for the first and second year milestone being lower than for all children across South Eastern NSW, further work is required for an understanding of potential differentials for other communities eg. new arrivals who may not have a history of immunisation.

6. What are the issues at a general practice level?

There are a number of issues at a general practice level including:

- lack of clarity over delineation of responsibility for childhood immunisation between GPs and community clinics
- inconsistency of regular monitoring of immunisation status amongst practice population
- need to develop more robust recall and reminder systems
- cold chain management and vaccine wastage (eg. $117,000 in past year in Southern NSW region)
- working with parental/carer concerns about the safety of immunisation, particularly those who are vaccine objectors.
- the ACIR data base has a range of issues impacting usability, functionality and reliability of the data with confusion around if there is any follow up with parents with immunisation reminders.

7. What are the issues for communities at risk?

There are a number of issues for communities at risk including:

- perception of cost (ie. absence of bulk-billing) as a barrier
- ineffective or inappropriate recall and reminder systems
- inconvenient scheduling
- limited self-management (eg. low use of immunisation reminder apps)
- lengthy wait if child misses scheduled appointment at community health clinics
- misinformation leading to conscientious objection
- lack of awareness of the importance of timely immunisation
- inability to attend scheduled clinics (eg. transport, other family responsibilities, work responsibilities)
- transient populations lacking consistent service relationships
- recent arrival to Australia leading to lack of awareness of local immunisation schedule and potential barriers to service access
- inconsistency of health service access for children who are at risk of entering the child protection system
- under-developed health literacy with regard to immunization
- Factors contributing to social and economic disadvantage such as homelessness and mental health issues

8. What are the issues at a system level?

There are a number of issues including:

- impact of poor data quality on reported immunisation rate
- inconvenient scheduling of clinics at community health
- variation in the quality of recall and reminder systems from community health clinics and general practices
- lengthy wait if child misses scheduled appointment at community health clinics or potentially in general practice
- variation in workforce availability eg. nurse immunisers
- lack of joint planning
- lack of clarity around pathways for immunisation including clarity of role between state-funded primary care services and general practice

a. What are the workforce issues?

In order to provide vaccination independent of a GP's written instructions, a registered nurse must undergo suitable training to become an Authorised Nurse Immuniser. Ensuring sufficient supply of Authorised Nurse Immunisers is one way to expand the reach of immunisation programs, particularly for communities at risk. Endorsed enrolled nurses who have undergone suitable training may also administer vaccines, on written instruction from a GP and under supervision of an RN. The current supply and spread of Authorised Nurse Immunisers across the region requires further investigation.

b. What are the options for eHealth?

The transition in 2016 of the Australian Childhood Immunisation Register to the Australian Immunisation Register, providing a birth to death record of immunisation events, will allow significant improvement in tracking and management of immunisation across patient populations. With robust registers of immunisation, general practices and other immunisation providers are able to case-find children who have missed their scheduled immunisations, for example.

There are currently a number of smartphone apps that allow members of the public, especially parents and carers, to track and self-manage immunisation appointments. It appears that the apps are not widely known and there is potential to expand their reach and impact.

9. What are our immunisation priorities?

The Department of Health has not set PHN targets against the National Headline Performance Indicator of childhood immunisation rates. The Department is currently developing a PHN Performance Framework which may become the vehicle for setting PHN targets.

In the meantime, based on analysis of the data and consultation with stakeholders, COORDINARE has adopted the following priorities and targets for childhood immunisation:

1. Meet or exceed the previous year's results at a PHN level:
    a. for all age groups
    b. at 12-15 months
    c. at 24-27 months
    d. at 60-63 months

2. Exceed the previous year's results at a PHN level for Aboriginal and Torres Strait Islander children:
    a. for all age groups
    b. at 12-15 months
    c. at 24-27 months
    d. at 60-63 months

3. Reduce the variation in immunisation rates:
    a. between age groups, by exceeding the previous year's rate at 24-27 months
    b. between LGAs, by exceeding the previous year's rate of the 3 worst-performing areas.

10. What action will achieve our goals?

Three broad levels of intervention have been identified, which align with the COORDINARE business model and the needs identified from an analysis of the data, clinical expertise, community and stakeholder feedback.

Intervention level 1:
Engage General Practice to improve practice immunisation rates and timeliness.

Overarching objective:
Collaborate with practices to identify their own immunisation rates and improve on this figure through practice engagement and quality improvement initiatives.

Intervention level 2:
Facilitate targeted interventions for families and children at risk of missing timely immunisation.

Overarching objective:

Review data sets, investigate local drivers and identify pathways for consumers to support improvement of immunisation rates, targeting Aboriginal and Torres Strait Islander children and families, other vulnerable groups and selected local government regions.

Intervention level 3:
Facilitate system-level improvement to make on-time immunisation easier.

Overarching objective:
Collaborate with stakeholders to identify the systematic barriers affecting immunisation rates and identify opportunities for leadership within partner agencies for sustainable change.

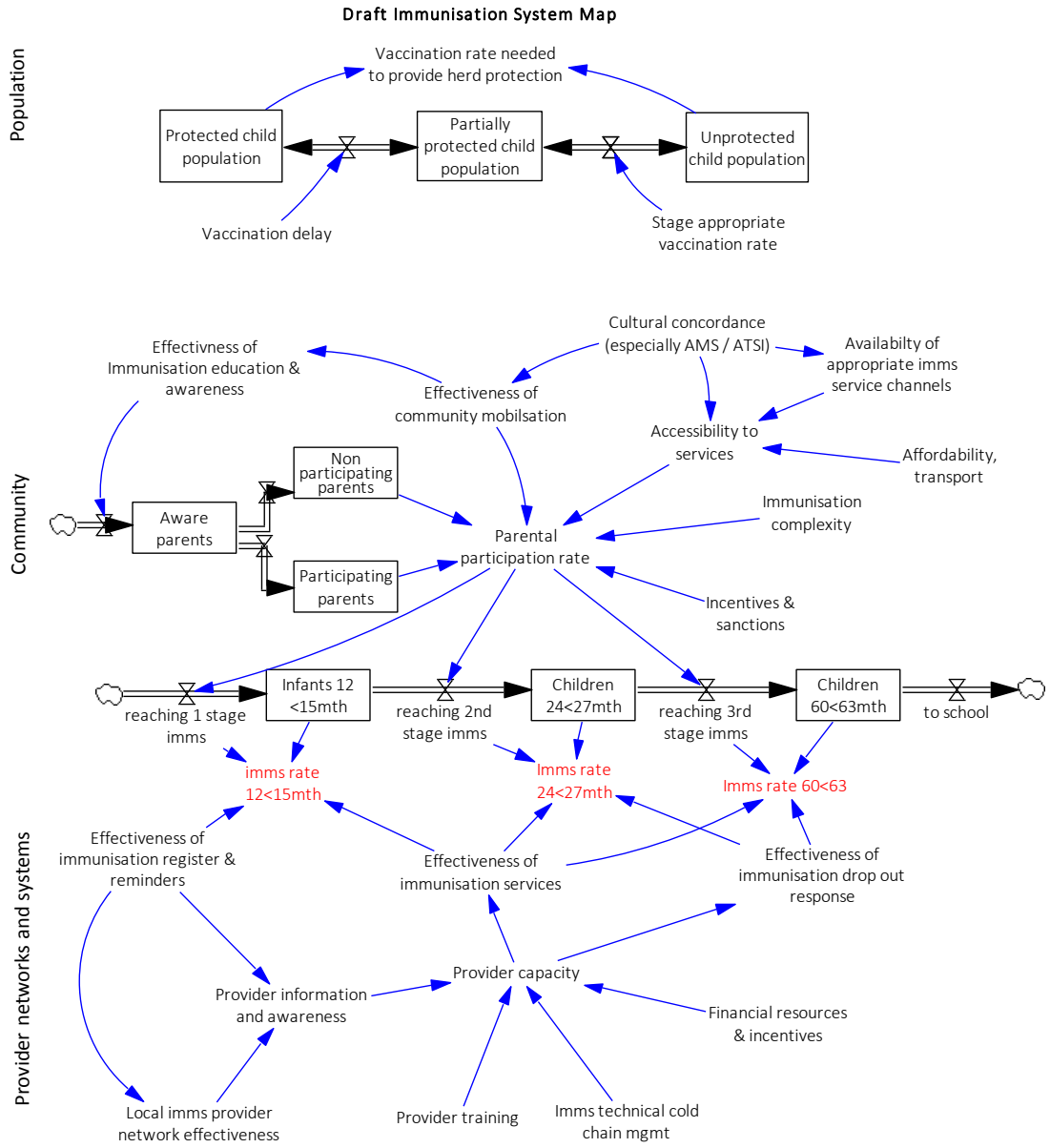
The intervention levels and their overarching objectives are further broken down in the COORDINARE **Immunisation Improvement Plan**, outlining activities, timeframes and measures to enable clarity of purpose and accountability.

APPENDIX 1: System logic / results pathway

Immunisation rates are driven by a complex interaction of factors at the level of communities, influences on parental participation and by the effectiveness of a network of services and providers.

COORDINARE is committed to supporting effective system change across all three levels, using data, evidence and local experience to guide and coordinate effective action.

As a starting point for dialogue, the following maps out some of the important influence points that have been identified in the 'immunisation system' of South Eastern NSW.



COORDINARE's overall population level impact is shown at the top of the map; the aim is to maximise the protected child population to the level that provides effective herd immunity.

Within this COORDINARE is concerned to maintain of lift the immunisation rate as measured at the three intervals shown in red.