



# National Review of Outreach Immunisation Services

Executive summary of final report

**Auckland UniServices Limited**

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**Prepared by:**

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## EXECUTIVE SUMMARY

The Immunisation Advisory Centre (IMAC) was commissioned by Ministry of Health in December 2014 to carry out a National Review of Outreach Immunisation Services (OIS).

### Aims

OIS in place across district health boards (DHBs) were reviewed to inform recommendations on how to improve OIS nationally by making the services more efficient and cost effective. The findings of this review will also inform a review of the Ministry of Health's Services for Children and Young People – Outreach Immunisation Services (OIS) Tier Level Two Service Specification (SS)

### Methods

The review consisted of engaging with stakeholders, reviewing current OIS provision, identifying OIS models, cost effectiveness analysis, and making recommendations. A December 2014 letter from the Ministry of Health to DHBs introduced the review and IMAC followed up the key stakeholders in DHBs and OIS with further detailed explanation. Data collection was undertaken using three different data collection tools.

Firstly, a document review was undertaken of all the OIS contracts that were provided by DHBs. These contracts were reviewed to understand and assess what was required of OIS providers and how the current OIS SS was integrated into the contract.

From this review, the research team in agreement with the Ministry of Health compiled key themes. An online survey was developed from these themes and piloted by IMAC staff then circulated to DHBs and external OIS providers.

A subset of providers was chosen to represent the major characteristics of DHBs OIS and characteristics of the DHBs populations. Interviews were carried out with OIS staff using an interview template designed to provide more in depth knowledge of topics covered in the survey. Additional data around their specific budgets was also requested of all providers that were interviewed. A proxy for *percentage of children immunised by OIS in each DHB* was calculated for the period 1 July 2013 to 30 June 2014 using the total number of children immunised by all the OIS in each DHB as the numerator and the number of children younger than seven years old for that same period from the NIR DHB Registered Population reports for the denominator.

Based on the data collected from the survey and interviews cost effectiveness calculations were carried out for OIS. Costs used for the calculations were for salaries, travel expenses, equipment and materials, training, professional development, continuing medical education, facility/operational overheads, and any other significant relevant costs not included in the prior categories. Calculations included determining the full and unit cost per vaccination. Full cost per vaccination is the total costs for the provider divided by the number of vaccinations. Unit cost per vaccination is the total costs at unit level (excluding batch, product sustaining, and facility) divided by the total number of vaccinations.

## Results

Contract documents were provided by 15 DHBs covering 22 OIS providers. 25 survey responses were received, representing 28 providers from 18 DHBs. One DHB provided a survey response covering several providers.

Interviews were carried out with 28 OIS staff from 15 providers representing 10 DHBs. Cost effectiveness template information was provided by 7 of the 15 providers.

A proxy for *percentage of children less than 7 years old in DHB immunised by OIS* by DHB showed that 4.0% is the average percentage for the 20 DHBs with a range from 0.7% to 14.8%.

For the year ending June 2014 for the ten providers with sufficient data, the cost per OIS referral ranged from NZ\$63 to \$795. When considering staffing, travel, equipment, and materials, the unit cost per vaccination event ranged from NZ\$46 to \$1376. For 2014, averaging across the same ten providers, each referral cost NZ\$360 (median NZ\$256) and each vaccination event cost NZ\$636 (median NZ\$458). Alternatively, summing the total costs for the ten providers and dividing by the total number of referrals and vaccinations, we obtain a cost per referral of \$214 and cost per vaccination of \$378. The difference arises due to the variability in cost structures across each provider.

## Conclusions

### *What works well*

1. The National Immunisation Register (NIR) team co-located with the OIS team
2. OIS co-located with other child health services and/or Immunisation Coordinator
3. The NIR team or other dedicated administration staff intensively processing referrals before passing them on to the OIS
4. Use of well-connected staff with extensive local knowledge, particularly in the Community Health Worker role, to make contact with families
5. Use of IT in the outreach setting to access NIR, hospital records, and enter immunisation data into Practice Management System
6. Automatic referrals of children to OIS as per the MOH guidelines for NIR teams referring children to OIS <sup>1</sup>
7. Adequate team size and effective structures where staff can provide continuity of service to cover leave, professional development, and staff resignations
8. Offering families a drop in immunisation clinic with extended hours, preferably based in the local afterhours services as an alternative before offering home immunisation

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<sup>1</sup> October 2011 MOH National Immunisation Programme email memo to all DHBs

### ***What doesn't work well***

1. Lack of continuity of service of small providers (less than 1 Full Time Equivalent of NV) who have no capacity to cover leave
2. Using staff with nursing qualifications to perform time consuming administrative tasks
3. Excessive administration associated with processing referrals in some services, including paper-based systems and double-handling
4. The current SS reporting template which does not adequately and comparably capture OIS work and allow for benchmarking between OIS
5. Lack of service evaluations of efficiency and client satisfaction
6. Staff having two roles within the same organisation, for example Nurse Vaccinator and Immunisation Coordinator
7. Having too many OIS providers in a DHB

### ***Gaps/barriers/challenges***

1. Small scale OIS providers having short term contracts with the threat that the contract will be finishing
2. DHB Planning and Funding staff providing management rather than governance of OIS contracts and staff
3. CYF care children not being immunised during Gateway checks and CYF staff often being very slow to respond
4. Children being entered on to the NIR with no nominated provider information identified
5. Some general practice processes impeding children being fully immunised, such as deferring immunisations due to minor illnesses, and missing opportunities to immunise when children visit the practice for other appointments
6. General practices often have limited times during practice hours when they will immunise

### ***Additional benefits from OIS***

1. The potential to improve health literacy in specific areas by offering health promotion and education during the post vaccination observation period
2. Ensuring the child is accessing appropriate Well Child, dental, and general practice services
3. The potential to intensively support re-engagement with general practice
4. Taking time with families to overcome fear of vaccination, utilising effective pain mitigation strategies

### ***Areas where some providers can make significant improvements***

1. Minimising staff costs by utilising the lowest cost staff suitable to carry out work; for example finding families, and checking contact and immunisation information
2. Improve access to services by expanding times and days when OIS immunise
3. By considering the use of other localities, particularly EDs and After Hours services where families are familiar with going, allowing longer opening hours to reduce the number of more costly home vaccinations
4. Improved management and processes for dealing with referrals before staff visit homes

## Recommendations

### *Models of OIS provision*

We recommend two national models of OIS provision that are based on four principles.

#### Four principles

1. The aim is to have every child enrolled with and fully immunised in general practice
2. The priority for the post vaccination observation period is ensuring enrolment with child health services and family violence screening
3. Secondary care have an important role to play in providing opportunistic vaccinations
4. Placement of student nurses with OIS can be mutually beneficial to student and OIS

#### **Model 1- For large<sup>2</sup> urban areas with a very high volume of referrals**

We recommend:

1. A stand-alone service with referrals received only via the NIR team as per MOH guidelines for timing of referrals to OIS
2. Evening immunising every week and regular weekend immunising and regular weekend and evening clinics at an after-hours centre and EDs
3. Direct read-only access by a few staff to hospital patient records, NHI lookup and NIR
4. Any increased funding to be used for extra staffing resources, directed primarily into administration and Community Health Workers processing referrals and locating families prior to immunisation visits
5. OIS closely integrated with NIR team and Immunisation Coordinator to provide clinical expertise

#### **Model 2 – For remaining urban/rural areas**

We recommend:

1. OIS co-located with NIR team and/or other child health services and/or Immunisation Coordinator
2. Referrals received from NIR team as per MOH guidelines for timing of referrals to OIS, and other sources but all referrals must go through standard NIR information checking process
3. Staff from co-located services are used to cover staff absences
4. Strong relationships with other health and social service providers in the area to facilitate finding children
5. Close relationship with the Medical Officer of Health
6. Consideration is given to the potential for secondment of other available vaccinators to OIS during quieter times for other services, such as during school holidays, to support the OIS in specific extra work, for example a focus on 4 year old immunisation

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<sup>2</sup> Where DHB Pop of children 0-4 years is greater than 20,000 as shown in 2013 Census district health board tables <http://www.stats.govt.nz/Census/2013-census/data-tables/dhb-tables.aspx>

### ***Additional issues to be addressed***

Regardless of the model of OIS, we recommend that, based on the above findings, the Ministry of Health considers actions to address some OIS specific issues and wider systems issues as listed below when reviewing the OIS Tier Level Two Service Specification. This may also improve immunisation coverage. Potential solutions to these issues are provided in Tables 27 and 28.

#### **OIS specific issues**

- Delays in children being referred to OIS
- Children referred to OIS who are already up to date with immunisations
- OIS staff not having direct read only access to the NIR while working in the community
- OIS staff not having direct read only access to hospital databases or National Health Index (NHI) database
- OIS must set up their own methods/networks to find missing children
- Parents won't attend GP for immunisations but don't want children immunised in their home
- Small OIS are not able to benefit from economies of scale so any increase in funding can help
- Large OIS are processing large number of referrals with current funding
- Skilled staff doing work that a person on lower skill level could do
- Isolation of OIS staff can lead to waste of resources where each OIS spend times developing their own processes
- Difficulty in judging the efficiency of an individual OIS and benchmarking OIS
- CYF staff are often slow to respond to OIS requests for assistance

#### **Wider system issues**

- Newborns who are not enrolled with a GP
- Missed opportunities to immunise in primary and secondary care
- Barriers at the general practice when parent attends for immunisation
- Children in CYF care are time consuming to immunise because of parental consent issues

#### **Service Specifications**

Throughout the process of the review, reference has been made with the current Tier Two Service Specifications. These specifications have been assessed in relation to the OIS delivery and recommendations have been made for future service specifications. These can be found in Appendix 9.

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