Process evaluation of the New South Wales Aboriginal Immunisation Healthcare Worker Program

FINAL REPORT

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Abbreviations

ACIR	Australian Childhood Immunisation Register
AHMRC	NSW Aboriginal Health and Medical Research Council
AHW	Aboriginal Health Worker
AIHCW	Aboriginal Immunisation Healthcare Worker
ALO	Aboriginal Liaison Officer
AMIHS	Aboriginal Maternal and Infant Health Service
AMS	Aboriginal Medical Service
FTE	Full-time equivalent
GP	General practitioner
HPNSW	Health Protection NSW
KPI	Key performance indicator
LHD	Local Health District
NAIDOC	National Aboriginal and Islander Day of Commemoration
NCIRS	National Centre for Immunisation Research and Surveillance
PD	Position description
PHU	Public Health Unit

Executive summary

The NSW Aboriginal Immunisation Healthcare Worker (AIHCW) pilot program commenced in July 2012. It provided annual funding for three years for 13 full-time equivalent positions based in Public Health Units (PHUs). The aim of the program was to improve vaccination coverage and timeliness in Aboriginal people, primarily focusing on children. The National Centre for Immunisation Research and Surveillance conducted a process evaluation of the program (based on interviews with PHU Directors, Immunisation Coordinators and AIHCWs) and a review of available documents.

The major strengths of the model implemented in the pilot are well-defined, measurable goals and methods, strong networks and support within Local Health Districts, and employment of additional motivated Aboriginal staff. This in turn translated into investment in strengthening relationships with parents, providers and the community, and a greater capacity to follow up individuals due or overdue for immunisation. The most commonly reported challenges were errors in Australian Childhood Immunisation Register (ACIR) data, especially out-of-date contact details, missing immunisation records and incorrect Indigenous status.

AIHCWs came to their positions with a wide range of skill-sets and qualifications, but sufficient knowledge about immunisation was rare. Training was primarily carried out on the job. Interviewees overwhelmingly reported a substantial improvement in AIHCW knowledge and confidence over the period of the pilot. However, there remains considerable scope for more training.

The development of an AIHCW community has been very valuable for the motivation and skills development of AIHCWs, as has engagement of AIHCWs with local Aboriginal health networks. However, there remains scope to further enhance a culturally supportive workplace environment.

The level of collaboration with external organisations varied substantially around the state. The majority of interviewees stressed that networking with Aboriginal community groups and establishing a profile within the Aboriginal community was a critical component to the success of these positions.

In general, core activities directed at improving coverage initially focused on the follow-up of infants overdue for immunisation. Once this process was well established, activities were expanded to other areas such as follow-up of preschool children, visits to providers,

obtaining information on the births of Aboriginal children, and implementing pre-call systems. Several PHUs identified plans to focus on school children and adults at a later date.

All AIHCWs conducted follow-up of children overdue for immunisations. A majority also provided pre-call advice to parents/guardians of infants before vaccinations were due, using lists of Aboriginal births from local maternity hospitals and other sources. However, only one PHU reported actions to measure and improve under-notification of Aboriginal births.

Promotional activities and networking were seen as a high priority, promoting both immunisation and the role of the AIHCW in the local community. The promotional resources produced by Health Protection NSW are highly valued by PHU staff. However, the stock of resources was insufficient for the duration of the program and only a subset of resources were available electronically on the NSW Health website. PHUs also developed a range of resources for their own use, some of which were quite innovative and could be of use to other PHUs.

Most interviewees viewed the key performance indicators developed for the pilot program as having provided helpful guidance on the priorities and activities of AIHCWs, with appropriate flexibility for different settings.

In conclusion, while there are opportunities for enhancement, interviewees generally expressed great enthusiasm for this program, and pride in the resultant improvements in immunisation coverage, personal development of AIHCWs and engagement with Aboriginal communities.

Recommendations

Recruitment, training and support

1) PHUs should adapt the model position description to suit local requirements.

2) A standardised approach to training for existing and new AIHCWs should be developed.

3) Increase measures to foster an AIHCW community and their integration into the Aboriginal health community, through means such as a buddy system for neighbouring AIHCWs, more face-to-face time for the AIHCW group, and a formal mentoring role for Aboriginal Health Units facilitated at state level.

4) Ensure training in Aboriginal culture for non-Aboriginal staff working with or managing AIHCWs, particularly in metropolitan areas.

Collaborations

5) PHUs should establish an immunisation taskforce with senior Aboriginal representation and/or an Aboriginal immunisation taskforce.

6) Collaborations should be established with as many of the following as possible – the local Primary Health Network, Aboriginal Medical Services, Aboriginal Maternity and Infant Health Services, maternity hospital Aboriginal Liaison Officers, general practitioners, Aboriginal women's groups and men's groups, Aboriginal child playgroups, other Aboriginal community organisations, and local health promotion programs.

Core activities to increase coverage

7) Follow-up of overdue and due children has been and should continue to be a major focus of AIHCW activity.

8) PHUs should aim towards a routine pre-call system supported by complete ascertainment of Aboriginal births.

9) NSW should advocate for improvements to ACIR data quality.

10) Coverage data on Aboriginal adolescents, including data on those not up-to-date, should be made available to PHUs to facilitate follow-up.

11) Contact with immunisation providers should be a priority for AIHCWs, to facilitate more effective use of ACIR and practice software, and optimise the provision of culturally safe environments for Aboriginal clients in clinics.

Promotion of immunisation

12) Increase availability of existing Health Protection NSW promotional resources.

13) New and innovative resources developed by individual PHUs should be shared.

Key performance indicators

14) Changes to key performance indicators that should be considered are: inclusion of adolescents and adults, Indigenous identification, assistance to providers, networking and collaboration, and staff development.

Introduction

Aboriginal children have historically suffered from higher rates of many vaccine preventable diseases (VPDs), and at younger ages, than non-Aboriginal children.(1) Many VPDs have more severe outcomes in younger infants, highlighting the importance of timely vaccination of Aboriginal children. However, vaccination coverage has historically been lower for some milestone ages in Aboriginal compared to non-Aboriginal children in NSW.(2) Timeliness has been consistently poorer in Aboriginal children, with 14% fewer Aboriginal children receiving their third dose of diphtheria-tetanus-pertussis vaccine on time.(2) This has been demonstrated to coincide with an increase in the relative risk of pertussis hospitalisation in Aboriginal children at six to eight months of age.(3) Several vaccines are funded under the National Immunisation Program specifically for Aboriginal people in certain age and risk groups, due to their higher disease rates. However, vaccination coverage has typically been low in these targeted programs. A range of strategies have been shown to be effective in increasing vaccination coverage in various populations in Australia.(4)

In July 2012, the NSW Ministry of Health provided funding for a three-year pilot project to employ Aboriginal Immunisation Healthcare Workers (AIHCWs) in Local Health Districts (LHDs), with the aim of closing the gap in immunisation coverage between Aboriginal and non-Aboriginal children. The National Centre for Immunisation Research and Surveillance (NCIRS) was engaged to conduct an evaluation of this pilot program.

Aims

1) Describe the range of activities carried out by NSW AIHCWs

2) Assess the effectiveness of support and training provided

3) Review key performance indicators (KPIs) and suggest changes as required

Methods

Data collection was by mixed methods, including stakeholder interviews and review of available documentation.

- Face-to-face interviews were conducted by NCIRS Aboriginal staff (Telphia Joseph and Brendon Kelaher) with AIHCWs between February and May 2015. AIHCWs also completed a survey prior to the interview.
- Telephone interviews were conducted by Stephanie Knox and Rob Menzies between February and May 2015 with:
    - Public Health Unit (PHU) Directors and Immunisation Coordinators, one joint interview for each PHU
    - Key staff of Health Protection NSW (HPNSW)
- All relevant available documentation was reviewed.

Stakeholder questionnaires

Interview questionnaires were based on previous national immunisation program evaluations. Targeted questionnaires for the face-to-face and telephone interviews were developed for three stakeholder groups: PHU Directors/Immunisation Coordinators; AIHCWs; and HPNSW.

The online survey that AIHCWs completed prior to the face-to-face interview included questions on Aboriginal identification; staff resources; follow-up with parents/guardians of Aboriginal children overdue for vaccination; building partnerships; promotion to immunisation providers/coordinators and other groups; and AIHCWs' role and experience of the program.

The face-to-face and telephone interviews were based on questionnaires that included open and closed questions on the following topics:

Activities to promote immunisation

- What activities have been conducted by AIHCWs?
- What proportions of resources have been allocated to targeting young infants, children, adolescents and adults, respectively?
- What activities and priority have been allocated in 2015 to childhood influenza vaccination?
- Categorise the activities by effectiveness, using the perceptions of interviewees, and data where available.

- What have been the most important contributors to achieving the objectives of the AIHCW program?
- What have been the most significant obstacles to achieving those objectives?
- Is accreditation to vaccinate an important requirement to achieve those objectives?

Recruitment, training and support

- Have there been difficulties in recruitment and retention of AIHCWs and if so how could this be alleviated?
- What AIHCW full-time equivalent resources have been available at each LHD over the period of the pilot?
- Have the levels of support and training provided to AIHCWs been sufficient? What other measures, if any, are needed?

Key performance indicators

- Assess compliance of LHDs with KPIs established for the project.
- Are the KPIs helpful, and do they require adjustment?

Results

Interviews

Face-to-face interviews were conducted with 15 AIHCW staff, including one who had recently resigned. Interviews were not conducted for two other AIHCW positions which were vacant at the time of evaluation.

Telephone interviews were conducted with all 12 PHU Directors and 12 Immunisation Coordinators, and two key HPNSW staff.

Program summary

This was a three-year pilot project, from July 2012 to June 2015, with the aim of improving immunisation coverage and timeliness in Aboriginal children through community liaison, promotion of immunisation, and follow-up of Aboriginal children due or overdue for vaccination. The positions were embedded in PHUs, with support and supervision provided by the PHU Immunisation Coordinator. The budget was $1.3M annually for 13 full-time equivalent (FTE) positions. Positions were allocated across LHDs based on Aboriginal population size with an additional loading for large remote areas. Funds included related on-costs and expenses.

The development of the program was assisted by an advisory group consisting of representatives from the NSW Aboriginal Health and Medical Research Council (AHMRC), NSW Aboriginal Health Branch, LHD Aboriginal health managers, and Immunisation Coordinators from urban and rural PHUs. This advisory group approved the funding and other components of the program, including KPIs, a model position description, a six-monthly report/workplan template, and guidelines on working with Aboriginal communities. State-wide advertising materials were developed by HPNSW, with advice provided by AIHCWs, Aboriginal Health Branch and AHMRC. HPNSW held monthly teleconferences with PHU Immunisation Coordinators, at which it was recommended that each LHD establish an immunisation task force with Aboriginal representation.

Recruitment, training and support

Recruitment

Local administrative delays associated with creating the new AIHCW positions caused frustration in some LHDs. Eleven AIHCWs were recruited by mid-2013. Once positions were advertised, difficulties in obtaining or retaining suitable candidates were limited to three PHUs that were allocated less than one FTE position at a particular location. Directors and Immunisation Coordinators at these PHUs confirmed that the difficulties centred around the part-time nature of the positions. However, one PHU had difficulty recruiting even when part-time positions were combined into one FTE position. No difficulty was experienced recruiting or retaining AIHCW staff in the eight PHUs that housed one or two FTE positions. Of the total 13 FTE positions, seven had uninterrupted employment during the three-year period. PHU Directors and Immunisation Coordinators were happy with their AIHCW's performance in all but one instance.

Each of the PHUs which experienced recruiting difficulties developed alternative strategies that have either been successful, or are considered likely to be successful. These strategies included combining two part-time positions to create one FTE position, using the funds to purchase time from one or more existing positions, and in one instance recruiting non-Aboriginal people.

> *Being only [<5] days a week, does make a position quite difficult to recruit to, for the simple fact that the wage that was allocated is not a particularly high wage.*

The model position description (PD) specified Aboriginality and the Aboriginal Health Worker (AHW) award, but otherwise was very flexible. However, some PHU Directors and

Immunisation Coordinators considered more flexibility to be preferable. Deviations from the model PD, such as the employment of Aboriginal registered nurses or non-Aboriginal staff, were pursued in some situations after consultation with HPNSW.

Summary and recommendations – recruitment

The time taken to fill AIHCW positions, and their retention rate, appear satisfactory. In most instances the recruiting delays were not related to the nature of the AIHCW program. While the state-wide model did not fit as well in a minority of LHDs with lower Aboriginal population numbers or a limited identifiable Aboriginal community, such difficulties seem to have been largely resolved.

Recommendation: PHUs should adapt the model position description to suit local requirements.

Training and support

The positions were designed to be embedded in PHUs with training and orientation the responsibility of the PHU. HPNSW organises annual two-day face-to-face Immunisation Workshops. Both days are attended by AIHCWs and Immunisation Coordinators with one day focusing on AIHCWs and the other on broader immunisation matters (also attended by PHU Directors). The workshops include talks on using the Australian Childhood Immunisation Register (ACIR) and vaccine preventable diseases, and presentations from AIHCWs about their activities. There are also six-monthly teleconferences for AIHCWs and Immunisation Coordinators, which mostly involve AIHCWs sharing their experiences. An electronic mailing list has been established to support communication by AIHCWs.

Skills and qualifications of new AIHCW recruits

Although a Certificate III course is normally a requirement for AHWs, formal qualifications were not a requirement for AIHCW positions.

One FTE position was filled utilising part-time contributions from three non-Aboriginal workers – two midwives and one surveillance officer – well known in their local healthcare setting. All other positions were filled with Aboriginal staff, mostly with extensive experience working with Aboriginal families and communities in government departments, Aboriginal Medical Services (AMSs), PHUs or hospitals. At the time of recruitment, 13 of 15 AIHCWs had qualifications in the health field – four of these were registered nurses, two of whom were qualified immunisers. Other staff had completed enrolled nursing courses, diplomas, Bachelors or Masters degrees, and/or Certificate III/IV courses. Two AIHCWs did not have a

background in health but were well known in their Aboriginal community. Six AIHCWs started or completed health-related courses after commencing employment, with the support of their PHU.

Almost all AIHCWs required substantial on-the-job training in the content areas of immunisation, vaccine preventable diseases and use of the ACIR and other relevant databases, along with introductions to staff in relevant local services including Aboriginal Health Units, AMSs and hospital maternity units. Most PHU Directors and Immunisation Coordinators acknowledged the particular importance of AIHCWs establishing relationships with local Aboriginal healthcare staff.

Eight of nine AIHCWs who answered the relevant online survey question felt they had a good understanding of their role and seven knew what is needed to improve immunisation coverage rates in Aboriginal people. However, responses about whether respondents had received enough training were more mixed, with 3/9 agreeing that they had received enough training, 2/9 indicating they had not received enough training and 4/9 neutral on the topic of training. Respondents gave positive feedback on the quality of any on-the-job training they had received.

> *Oh they … gave me a lot of reading and a lot of paperwork, and if I ever have any issues, I've only got to ring them, they're only a phone call away and they are really, really good.*

Further training needs

Most PHU Directors and Immunisation Coordinators agreed that a standardised approach to training would be useful for both new and existing AIHCWs, covering:

- *The Australian Immunisation Handbook*
- Immunisation schedule, including catch-up schedules
- Vaccine preventable diseases
- Adverse events
- Myths and realities
- Administrative skills such as mail merge letters and writing research proposals
- Health promotion (including ways to engage parents/carers)
- Use of ACIR and other databases

Many PHU staff expressed the view that a centrally coordinated training program would optimise efficiency of this process. The majority of AIHCWs also expressed the desire for their training to lead to formal qualifications. In terms of external training, the Aboriginal

Health College based in NSW and the Aboriginal Heath Council of South Australia provide culturally appropriate accredited courses for AHWs. These institutions provide a range of Certificate III and IV courses, which run for one year and are delivered in six face-to-face blocks with additional work-based assessment. However, all currently available AHW courses have relatively little immunisation content and so do not provide a sufficient level of training in immunisation for the AIHCW positions. Discussions with providers of current AHW Certificate courses about the possibility of including more in-depth modules on immunisation may be useful. The Training and Support Unit for Aboriginal Mothers, Babies and Children (TSU) at the Health Education and Training Institute provides a range of culturally-appropriate training and support for Aboriginal Maternal and Infant Health Service (AMIHS) staff, including workshops, conferences, e-learning modules and support for professional networks. Other staff working with AMIHS staff are in some circumstances eligible to attend events organised by the TSU. Discussion with TSU about the possibility of AIHCWs participating in relevant training and development activities may be useful. Immunisation-specific courses such as the Vaccines in Public Health workshop, run annually by NCIRS, may also be appropriate for some AIHCWs.

Mentorship, collegiality and cultural safety

PHU Directors and Immunisation Coordinators reported that both the teleconference and face-to-face meetings were extremely helpful for AIHCWs. Several suggested that more face-to-face time, including time where AIHCWs could interact just with each other, would be valuable. Peer support was also highly valued. In PHUs with two FTE positions, the AIHCWs worked closely together, regardless of whether they were in the same or a different physical location, and this was seen as very beneficial for both the AIHCWs and the PHU.

One PHU set up a formal mentorship arrangement for their AIHCW with the local Aboriginal Health Unit. A state-wide agreement for Aboriginal Health Unit mentorship of AIHCWs may be possible, as this is reported to have occurred for other health programs.

AIHCW respondents were divided on the extent that cultural safety is a barrier to immunisation for Aboriginal people – four of 13 respondents agreed with this statement and two disagreed, with the remainder neutral.

Feedback from AIHCWs on their relationships with PHU staff was mostly extremely positive. Six of seven AIHCW respondents to the relevant online question reported that PHU staff had involved the AIHCW in designing the program, for example, identifying gaps in the provision of immunisation services to Aboriginal people. However, three AIHCWs, all from metropolitan areas, expressed contrary views, which centred around perceived restrictions

on networking activities with local Aboriginal community groups, and an overemphasis on office-based work, predominantly follow-up of overdue children by phone or letter.

> *… [PHU] management does not have an understanding of how to approach [the local Aboriginal] community … there is too much expectation too quickly [from community liaison activities].*

> *If you're not out there doing it, people don't know that you're there and you're not gaining trust. Because … when I first started ringing [parents], they wouldn't be bothered even picking up.*

The feedback suggested a lack of adequate understanding among staff at these metropolitan PHUs about the importance of the AIHCW's community standing, and how this needs to be achieved and maintained. Aboriginal cultural training is likely to be particularly useful in metropolitan areas, where Aboriginal communities are proportionately smaller and relationships between the PHU and Aboriginal community less well established.

Summary and recommendations – training and support

HPNSW staff and PHU Directors and Immunisation Coordinators overwhelmingly reported a substantial improvement in AIHCW knowledge and confidence over the period of the pilot. Nine of 13 AIHCW respondents agreed or strongly agreed that their PHU and HPNSW had provided good support for the program. AIHCWs came to their positions with a wide range of skill-sets and qualifications, and extensive on-the-job training was generally required. There remains scope for a more standardised approach to training of existing and new AIHCWs.

Recommendation: A standardised approach to training for existing and new AIHCWs should be developed.

The development of an AIHCW community has been very valuable to date. Suggestions to further develop this include more face-to-face time, perhaps including 'AIHCW only' sessions. AIHCWs have worked together extremely well where there is more than one per LHD or PHU. A more formal 'buddy' system may have merit, especially for new recruits, but also possibly for adjoining LHDs.

Recommendation: Increase measures to foster an AIHCW community and their integration into the Aboriginal health community, through means such as a buddy system for neighbouring AIHCWs, more face-to-face time for the AIHCW group, and a formal mentoring role for Aboriginal Health Units facilitated at state level.

Recommendation: Ensure training in Aboriginal culture for non-Aboriginal staff working with or managing AIHCWs, particularly in metropolitan areas.

Collaborations

Establishing at least one collaborative project to improve timely vaccination was a requirement for each AIHCW, as specified in the KPI document. PHUs were encouraged by HPNSW to foster relationships with local AMIHS staff and establish an immunisation taskforce with Aboriginal representation.

Two PHUs had excellent collaborative arrangements in their LHDs. One had organised three-monthly AIHCW visits to all AMSs and some Aboriginal maternity services in the LHD. Pre-call or reminder follow-ups were then used to encourage parents to use those services. This arrangement was facilitated by early high-level consultation between the LHD, community controlled health sector and others. The other PHU established separate Aboriginal and non-Aboriginal immunisation taskforces. The Aboriginal taskforce consisted of representatives from the PHU, AMIHS, AMS, Centrelink, police, and hospital Aboriginal Liaison Officers (ALOs). This group established priorities and projects, with an advisory group underneath which, at the time of interview, consisted of the PHU Director and general practitioner (GP) and Medicare Local representatives, and had a more practical focus.

One excellent example of a project arising from this taskforce was the establishment and maintenance of a well utilised outreach immunisation clinic, which involved the local AMIHS, Aboriginal Health Unit, two AMSs and public health nurses from local baby clinics. Another is the Young Black & Ready program run by the Benevolent Society that helps prepare preschool children for school. The AIHCW assists by checking ACIR records to ensure that children are fully immunised, and cleaning ACIR data as needed.

Many AIHCWs have collaborated with their local AMS and participated in activities such as providing information to parents who are waiting at immunisation clinics, assisting in the cleaning of ACIR data, advocating for transport and immunisation, ‘healthy pit stop’ planning before immunisation visits and help on the day. Close the Gap workers were also mentioned as useful collaborators.

Many not-for-profit organisations and programs, such as Brighter Futures, Stronger Foundations, Sustaining Families and Young Black & Ready, have been approached by AIHCWs to explore opportunities for working together.

Level of implementation

All 13 AIHCWs who completed the online survey reported building partnerships across a range of organisations and services. All reported building partnerships with other AHWs and AMIHSs. Most respondents had built partnerships with their Medicare Locals, private medical practices, community health services, AMSs and other Aboriginal community services.

However, directors and Immunisation Coordinators in three PHUs indicated they had either not commenced collaborating on immunisation with their local AMS, or collaboration was very limited. Another three LHDs have no AMS within their borders.

Although not specifically asked about an immunisation taskforce, a taskforce was mentioned by staff of four PHUs, one of which had previously established a taskforce coordinated by the Medicare Local which had ceased operating.

Concerns were expressed regarding the loss of Medicare Locals, as they were seen as enthusiastic and valuable collaborators.

Summary and recommendations – collaborations

The level of collaboration external to the PHU varied substantially around the state. Collaboration should be regarded as a key component of the AIHCW role, although there will be limitations, especially in areas that have less than one FTE position.

Recommendation: PHUs should establish an immunisation taskforce with senior Aboriginal representation and/or an Aboriginal immunisation taskforce.

Recommendation: Collaborations should be established with as many of the following as possible – the local Primary Health Network, AMS, AMIHS, maternity hospital ALOs, GPs, Aboriginal women's groups and men's groups, Aboriginal child playgroups, other Aboriginal community organisations, local health promotion programs.

Core activities to increase coverage

Indigenous identification

Improving Indigenous identification is included in the KPI document and is therefore a requirement for AIHCWs. Activities reported included putting pamphlets and posters in GP and AMS clinics, raising the issue at LHD or community meetings, personally advocating with providers, parents and school students, correcting errors on the ACIR, and liaising with

maternity hospital ALOs and other staff to improve identification and ensure access to complete information on all births.

Best practice in the area of Indigenous identification is exemplified by the Hunter/New England PHU area.(5) They conducted an audit of babies recorded as Aboriginal in two datasets – ObstetriX (completed by midwives) and CHIME (completed at hospital admission). The results confirmed under-identification, and led to a program to improve identification in health services. Relatively complete identification by maternity units now underpins their main strategy to improve timeliness, based on pre-call.

Of 13 AIHCWs who completed the online survey, all had raised Aboriginal identification as agenda items at professional meetings and workshops, particularly with Medicare Locals and AMSs. Nine AIHCWs indicated that they collaborated with Aboriginal communities to encourage self-identification of Aboriginal people to health providers, for example at National Aboriginal and Islander Day of Commemoration (NAIDOC) week and Close the Gap events. Eight AIHCW respondents reported that they used and promoted existing strategies, most commonly being undertaken by Medicare Locals. Eight indicated that they undertook other activities to improve Aboriginal identification for immunisation. These activities were mainly around improving identification in general practice and improved reporting of Indigenous status to Medicare using the Medicare Aboriginal Enrolment Form. Six AIHCWs worked with hospitals to improve Aboriginal identification. Only one AIHCW indicated that training on Indigenous identification was run by themselves or the PHU. In PHUs which had not been particularly active in this area, the most common reason was that they were prioritising the follow-up of overdue children, especially in areas with less than one FTE position.

Major focus of AIHCW activities

Follow-up of overdue children

The follow-up of infants less than 12 months of age who were due or overdue for vaccination using 11A ACIR reports was the highest priority activity for nearly all PHUs. The 11A reports are line listings of children, including names, contact details and Indigenous status. They are generated by PHUs and staff can select the number of days due (<1 month after due date) or overdue (>1 month after due date), by postcode or provider, and a range of dates of birth. Following the end of the GP Immunisation Incentive Scheme, there was a period when providers could not produce lists of their own overdue clients, and several PHUs indicated that they generated lists for AMSs and other providers during this period.

Details on the ACIR were frequently incorrect, including out-of-date contact details and missing vaccinations and Indigenous status. AIHCWs frequently reported spending a

substantial amount of their time correcting contact details with information obtained from previous immunisation providers, hospital records, or direct contact at community events. They also often corrected ACIR details on vaccinations and Indigenous status directly online rather than relying on providers to make those corrections. One respondent suggested that a common software solution for NSW would assist, extracting births from multiple sources, eliminating duplicates and facilitating pre-call messages, with linkage to the ACIR if possible.

> *It's not peculiar to this program, the school program's another example, the tobacco program's another … So, there are these major public health initiatives that would benefit, I think, from a universally available information system to support the worker or the people who are doing it, and that could capture in a consistent way the information that's important for tracking the programs.*

Direct contact with parents was regarded as the single most effective activity of AIHCWs. Parents of overdue children were contacted by mail, telephone or text message. All 10 AIHCWs who answered an online question on this subject indicated that they made direct contact with parents about overdue children, while five indicated that contact was also made by AMSs and four by GPs. Facebook was suggested as a potential way of communicating with parents, given the difficulties with maintaining contact details.

Several AIHCW respondents noted that sending a text message or letter before phoning meant phone calls were more likely to be answered and the parent was less defensive. Cold calls from PHU phones, where the phone numbers often appear to the recipient as blocked, were often not answered. Provision of a mobile phone by the PHU may be necessary, as some AIHCWs were using their own phones. Where possible, face-to-face contact was made at clinics, other community services or home visits. Telephone or face-to-face contact was an opportunity to discuss the importance of immunisation, any barriers parents faced and the role of immunisation in receipt of Family Tax Benefit and other payments.

One PHU reported that recording these activities (i.e. numbers followed up, numbers with incorrect details corrected, etc.) was useful for staff to see evidence of their work and impact.

Pre-call notices

Apart from ACIR 11A reports, PHUs could maintain their own lists of Aboriginal births from maternity hospitals for the purpose of sending pre-call messages that vaccinations were due. Seven of 10 AIHCW respondents reported that they had a strategy of contacting parents of Aboriginal children before the child was due for a vaccination. Initial contact, either face-to-face or by phone or letter, was made before pre-call notices were sent.

One PHU concentrated on pre-call notices as their primary strategy. This was done in the context of a program to maximise identification of Aboriginal babies, personal contact with parents, and a software program to send SMS messages before vaccinations were due. Once this was operating well, the need for follow-up of overdue children using 11A reports declined.

Enabling of providers

One PHU focused almost exclusively on providers. AIHCWs would visit all providers on a rotating schedule, providing lists of overdue children and checking ACIR records of those children. AIHCWs also provided education about use of the ACIR in the clinic and notification of vaccinations, about culturally safe environments, and about the need to establish the Aboriginality of clients. A user guide was developed which is given to clinic staff to show them how to use the ACIR. Developing rapport with providers, helping them use the ACIR correctly and correcting ACIR data errors were the only ways open for AIHCWs to reduce the number of new errors appearing on the ACIR.

For other PHUs, work with providers focused mainly on those with large numbers of Aboriginal clients and those in low coverage areas. Most AIHCWs provided specific advice to providers on using practice computer software to generate reminders for parents of children overdue for vaccinations. The majority of AIHCWs reported undertaking general education activities for immunisation providers on Aboriginal health, culture and the need for timely vaccination, including promotion of 'Respecting the difference: an Aboriginal cultural training framework for NSW Health' or informally through conversation wherever possible. Half of AIHCW respondents provided advice to providers on the identification of Aboriginal children on the ACIR. While many AIHCWs had very positive relationships with private providers, some reported reluctance by some providers to engage with Aboriginal immunisation, leaving it to the AIHCW to deal with follow-up of overdue children, ACIR data cleaning, etc.

Age groups

As reflected in the KPIs, the main focus of the AIHCW positions during the pilot period was intended to be infants, achieving measurable improvements in timeliness in the first year of life. This was to be achieved primarily through improving LHD and immunisation provider systems, as attitudes to immunisation among Aboriginal people were seen as generally positive.

> *Most of the parents that we've spoken to, our understanding is they actually all intend to get their children vaccinated so I don't think there's*

been any appetite for not vaccinating their children. So it's largely a timeliness thing if they aren't getting done on time or a data recording error.

This was reflected in feedback from AIHCWs, PHU Directors and Immunisation Coordinators. Almost all interviewees indicated that the focus of activity was infants, followed by preschool children, particularly following up those overdue for vaccination. Community activities such as NAIDOC stalls covered all ages, and adult influenza and pneumococcal immunisation also often featured. Contact with schools to raise awareness, encourage Indigenous identification, or chase up missing consent forms, either directly or through Aboriginal education officers, was mentioned by a small number of PHUs. There appeared to be a progression of activities where, once the follow-up of overdue children was established, attention turned to other activities such as visiting providers, obtaining information on Aboriginal births and pre-call activities. Several PHUs mentioned that they planned to eventually target school children and adults. Most PHU Directors and Immunisation Coordinators thought that the focus on infants and children was appropriate and consistent with expectations of HPNSW, especially while a coverage gap still exists. However, extension to older age groups in future was considered desirable, particularly now that recurrent funding has been approved. Targeting adolescents and adults is more complicated due to the lack of good data, which was one reason some PHUs gave for not engaging more with adult immunisation. PHUs had not received any coverage data on Aboriginal adolescents from the state school program database. AMIHSs should be able to assist PHUs with any future focus on maternal immunisation.

… some adults in the community have asked, 'Well you do a lot for the kids, what about us?'

Ineffective activities

Most PHU Directors and Immunisation Coordinators did not recall any specific activities conducted by AIHCWs that were ineffective. Of those who did recall ineffective activities, one that was mentioned was a mass mail-out which achieved little response, possibly due to the use of official letterhead which may have provoked suspicion among parents. There was also one report of the effectiveness of an AIHCW being compromised by local Aboriginal community politics.

Summary and recommendations – core activities to improve coverage

There appeared to be a progression of activities conducted by AIHCWs, with the initial focus on follow-up of overdue infants and then, when that was running well, attention turned to other activities such as visiting providers, obtaining information on Aboriginal births and pre-call activities. Several PHUs mentioned that they planned to eventually target school children and adults.

Respondents stressed that personal contact by the AIHCW with parents, either to provide a reminder of a due or overdue vaccination or to discuss immunisation, was the most effective activity conducted by the AIHCW. All AIHCWs interviewed indicated that they did this, and the main focus was infants less than 12 months of age. However, contact was sometimes delegated to an AMS or other provider. The ACIR 11A reports were central to the process of contact with parents. Of the 10 AIHCWs who responded to the question, seven indicated that they also provided pre-call notices before vaccinations were due, using lists of Aboriginal births from local maternity hospitals and other sources at the LHD. Eight reported some activities at hospitals such as putting up posters, giving out brochures and talking to people. However, action to measure under-notification of Aboriginal births and institutional measures to improve it appear to have been conducted in only one LHD. A substantial amount of time was spent following up contact details, as those on the ACIR were frequently out-of-date. Errors on the ACIR were regarded as a major problem in almost all PHUs, especially missing vaccinations but also incorrect recording of Aboriginality.

Recommendation: Follow-up of overdue and due children has been and should continue to be a major focus of AIHCW activity.

Recommendation: PHUs should aim towards a routine pre-call system supported by complete ascertainment of Aboriginal births.

Recommendation: NSW should advocate for improvements to ACIR data quality.

Recommendation: Coverage data on Aboriginal adolescents, including data on those not up-to-date, should be made available to PHUs to facilitate follow-up.

Recommendation: Contact with immunisation providers should be a priority for AIHCWs, to facilitate more effective use of ACIR and practice software, and optimise the provision of culturally safe environments for Aboriginal clients in clinics.

Promotion of immunisation

Almost all AIHCWs were involved in promotional activities of some sort. AIHCWs, PHU Directors and Immunisation Coordinators regarded these activities as very important for promoting both immunisation and the role of the AIHCW.

Resources

NSW had planned to have a wide range of promotional materials available for AIHCWs to use. However, due to the rapid start-up of the program, resources were developed and distributed later, in 2013 and 2014. Resources included brochures, posters, bags, drink bottles, fridge magnets, crayons, colouring sheets and tattoos (see **Appendix 1**). A set of resources are also available in electronic form on the NSW Health website (http://www.health.nsw.gov.au/immunisation/Pages/default.aspx), including the 'Save the date' app, 'Save the date' brochures and posters, and brochures and posters about the childcare immunisation requirements and maternal pertussis vaccination. These resources are highly valued by PHU staff, although printed resources were reported to be frequently out of stock.

Ten of 13 PHUs indicated that they had produced their own promotional materials, either before or during the tenure of the AIHCW (listed in **Table 1**). Five AIHCWs reported that they or other staff had been involved in developing local materials for promoting Aboriginal immunisation. Materials developed by AIHCWs were mainly designed for use at AMSs, child health centres and hospital maternity wards. Some of these are new or innovative types of resources that could be of benefit to other LHDs, including reminder postcards that contain the vaccination schedule and Aboriginal art, a brochure introducing the AIHCW and their role, a YouTube video, and fridge magnets that include the baby's photo.

Table 1: Resources developed by PHUs

(nominated by Aboriginal Immunisation Healthcare Workers, PHU Directors and Immunisation Coordinators)

PHU/LHD	PHU resources
Nepean Blue Mountains	Tea towels (given after flu shot) Pens, clappers, brochures, posters taken to NAIDOC Banners at NAIDOC, Q&A brochures in plain language, tattoos, ribbons, tea towels, hand clappers, developed for NAIDOC but taken to other organisations
Liverpool	Previous AIHCW designed a schedule brochure ACIR cheat sheet for parents
North Sydney	None
Wollongong	Sends letters not promotional material
Northern NSW	'Be deadly, be wise, let's get our children immunised' brochure. ACIR guide, t-shirts, banners, fridge magnets
Mid North Coast	'Be deadly, be wise, let's get our children immunised' brochure
Western NSW/Far West	'Be deadly, be wise, let's get our children immunised' adapted from North Coast brochure Immunisation bags for NAIDOC adapted from South Coast Produced an ACIR generator Would like to develop a postcard for GPs to send to parents
Randwick	None Only generic letter
Hunter New England	Engaged graphic designer to develop logo artwork 'Immunisation saves lives' Use on email signature Stick on letters sent to parents to identify that it is an Aboriginal Health letter Backpacks with logo and school pencil packs
Central Coast	Poster and other locally developed materials No – rely on existing materials produced by others, no need for more materials
Southern NSW/ Murrumbidgee	Brochure developed by previous position holder Brochure for new mothers with local Aboriginal art work
Western Sydney	'Life's journey with immunisation' poster, four-year-old birthday card reminders, brochures on immunisation for parents of one-month-old infants 'Immunisation is not just for kids' adults' brochure produced in collaboration with Medicare Locals
Sydney	Video, postcard reminders

Blue text = responses by PHU Directors/Immunisation Coordinators

Promotional activities

Participation in promotional activities was seen as very important, to raise the profile of the AIHCW and find out about other community activities, as well as to promote immunisation. Presence at NAIDOC week celebrations was common, as well as the state-wide Aboriginal Rugby League Knock-out competition. AIHCWs maintain stalls, distribute resources and may be accompanied by nurse immunisers, especially in the influenza vaccination season. Visits to local childcare services, preschools, schools, playgroups and other community groups were regarded as very important.

Of AIHCW respondents to online questions about promotional activities, 9/10 had discussed barriers to immunisation with parents, 7/8 with GPs and 5/6 with Aboriginal health services. Materials were distributed to AMSs (8/9), other child health services (8/9), maternity wards (6/8) and antenatal classes (6/8). Education sessions were held for AHWs (8/10), parents (6/10), individual immunisation providers (4/9), Aboriginal community groups (4/10) and Medicare Locals (4/9).

Accreditation for AIHCWs to vaccinate

The majority of PHU Directors and Immunisation Coordinators thought the role of the AIHCW was not to vaccinate, but to work with communities and individuals to promote the better use of existing vaccination services. In some areas the client numbers or distances were so great that one person could not vaccinate all those requiring vaccination. Adding vaccination to the range of existing AIHCW tasks would require additional resources.

> *We don't want to start replacing general practice as the place to go for kids' normal vaccinations.*

However, a minority of PHU Directors and Immunisation Coordinators thought that accreditation of AIHCWs to vaccinate could be useful, including staff from the two PHUs where the AIHCW was a nurse able to vaccinate. This was said to help raise the profile of the position (e.g. during outreach activities). Some AIHCWs felt limited in what they could achieve when they could only encourage people to be vaccinated at some later stage. In areas where there is a shortage of immunisation providers or of providers that bulk bill, such as some remote areas, this can be a particular issue.

Most AIHCWs agreed that Aboriginal immunisers would be valued by local Aboriginal communities and likely to be successful, especially in outreach services. AIHCWs envisaged that Aboriginal immuniser positions would be separate from the current AIHCW positions.

Summary and recommendations – promotion of immunisation

Promotional activities and networking were seen as a high priority, promoting both immunisation and the role of the AIHCW in the local community.

The promotional resources produced by HPNSW are highly valued by PHU staff.

Accreditation to vaccinate is not a necessary component of the role of AIHCW. However, where registered nurses with accreditation to vaccinate have been appointed to AIHCW positions, this capacity has been seen as an advantage.

Recommendation: Increase availability of existing Health Protection NSW promotional resources.

Recommendation: New and innovative resources developed by individual PHUs should be shared.

Key performance indicators

KPIs were provided at the start of the program. They included seven process indicators and two outcome indicators as shown in **Table 2** below.

Table 2: Key performance indicators

Preamble: The principles for the follow-up of Aboriginal children reported as overdue by ACIR (endorsed by AHMRC and NACCHO) must be complied with at all times in the follow-up of Aboriginal children.*
Process KPIs
Recruit to Aboriginal Health Worker (Immunisation) position/s within three months of project commencement
Submit a 12-month project workplan to the NSW Ministry of Health within three months of recruitment of Aboriginal Health Worker (Immunisation) position/s that must include innovative strategies to increase timely Aboriginal immunisation and could also include strategies to improve Aboriginal identification and target communities of known low coverage
Establish at least one local collaborative project with stakeholders to facilitate improved timely vaccination coverage of Aboriginal children
Submit written six-monthly project progress reports to the NSW Ministry of Health and local service providers, including Aboriginal Community Controlled Health Organisations (ACCHO) or equivalent, and local Aboriginal Health Partnerships, Aboriginal Reference Groups or Aboriginal Advisory Groups
Attendance of Aboriginal Health Workers (Immunisation) at a face-to-face state-wide training day at least annually
Number and proportion of listed providers contacted for the follow-up of Aboriginal children overdue for vaccination using the ACIR 11A Report
Number of direct contacts made with parents/guardians of Aboriginal children due or overdue for vaccination via face-to-face, telephone, SMS or letter
Outcome KPIs
Annualised increase in the proportion of LHD-resident Aboriginal children defined nationally as fully immunised at 8 months of age (60 days after scheduled third dose of DTPa), 14 months of age (60 days after the first dose of MMR vaccine) and 4 years and 2 months of age (60 days after scheduled second dose of MMR)
Continue to reduce the disparity in immunisation coverage at 12 months of age between Aboriginal and non-Aboriginal children

* National Aboriginal Community Controlled Health Organisation

The AIHCWs found the KPIs useful.

> *And they were also good, not only in framing it for us, but they were also good to be able to show the person who filled the position, to give them an idea of what the expectations of the position were.*
>
> *I've got these handy to me all the time, like I've written over them …*

The vast majority of PHU Directors, Immunisation Coordinators and AIHCWs considered the KPIs to have been a useful guide to activities to be conducted by AIHCWs in the early stages of the program, and that they included the flexibility required to implement the program in a range of settings. Several commented that the KPIs should be revised in light of the program maturing and obtaining recurrent funding. Commonly suggested changes were:

- Add efforts to improve Indigenous identification
- Add adolescents and adults (although direct outcome KPIs may be difficult due to the absence of good data)
- Add providing assistance to AMSs, other providers and in areas of low coverage
- Add staff development, such as additional training, presenting at meetings and conferences
- Include any increased requirements for travel, training or mentoring in future in KPIs
- Be more explicit about the importance of networking and collaboration activities
- The requirement to specify the 'numbers of contacts made' has not been very helpful and is rarely reported on.

There is also the need to acknowledge that there are likely to be relevant activities that are outside any formal list of KPIs.

> *As an Aboriginal health worker I know I always work outside my KPIs and my scope of practice. In there, there's not anything about correcting Medicare or the patient's name or anything either, liaising with community services, holistic approach regarding immunisations as well.*

Summary and recommendations – key performance indicators

The KPIs were reported by the vast majority of PHU Directors, Immunisation Coordinators and AIHCWs as having been effective in providing helpful guidance to PHUs on the priorities and activities of AIHCWs. They were also reported as having had the required flexibility for

the different settings across the state. However, a review would be appropriate with the commencement of recurrent funding from July 2015.

Recommendation: Changes to KPIs that should be considered are: inclusion of adolescents and adults, Indigenous identification, assistance to providers, networking and collaboration, and staff development.

Strengths and challenges

Strengths

The AIHCW initiative is clearly popular among all groups of interviewees. Strong support for the program came even from staff of the small number of PHUs where the program has been least successful.

> *… we're very, very happy that it's continuing, because it's a very useful and effective use of resource and money.*

Many factors were mentioned as important contributors to the success of the program.

- Clearly stated and focused goals, and means of attaining those goals, including via the six-monthly work plans and KPIs

  The measurable outcomes have fed enthusiasm for the program as progress could be clearly demonstrated.

  > *… the thing that's really made this a wonderful success is that it's a very targeted program … [people] knew exactly what they were supposed to be doing …*

- Already existing networks, functionality and skills available in PHUs

- Strong support for the program from all levels, including PHU Directors and other agencies within LHDs such as Aboriginal Health Units and AMSs

  > *And we took this issue to [senior stakeholders in the LHD] and actually spoke through the program, pre-call program, before we introduced it, and they were very supportive from the word go. We still give regular feedback to this oversight committee, and I think that's an important part of the structure – that there is this accountability built in."*

- Motivated and dedicated Aboriginal staff, with the time available to devote to the program, and skills in working with local Aboriginal communities to gain their support

  I think them being identified positions has been immeasurably an important part of that. I think it sends a very strong message that we're interested in working with Aboriginal communities and that we see a great deal of benefit in having Aboriginal people work with us to do that …

  Eight of 10 respondent AIHCWs agreed or strongly agreed that AIHCWs have had a positive impact on uptake of immunisation by Aboriginal people.

- Building relationships with providers, parents and the community

  The effectiveness of AIHCWs depends on building relationships, including with AHWs, Aboriginal community organisations and event organisers. This may require some travel to meet face-to-face, especially in areas of low coverage and remote and under-serviced communities. It also requires having the time to discuss the importance of immunisation with parents, and helping them with access to other services.

  It does make a big difference when you do know your communities and the networking. When they're all in place – there hasn't actually been obstacles whatsoever.

- Having access to lists of due (pre-call) or overdue (ACIR 11A reports) children, allowing individual follow-up with parents, AMSs and GPs

  This process was very effective, as was the 'Save the date' app. Follow-up included helping GPs with ACIR data cleaning.

Challenges

Although feedback was generally positive, there were several issues that were frequently mentioned as serious obstacles to achieving the aims of the AIHCW program.

- ACIR data quality

  This was the most frequently reported obstacle, particularly out-of-date contact details, missing vaccinations and Indigenous status. This was contributed to by a lack of understanding among some GPs about the ACIR and their medical software. Under-identification of Aboriginal births is another, related challenge.

ACIR is just ridiculously bad and I mean it's not ACIR's fault half the time, it's the transmission of data from general practice to ACIR which is a problem … find that a reasonable number of people are actually up to date when ACIR says they're not, so.

- Staff recruitment and retention.

  Finding suitably skilled people has been a challenge in some PHUs, as the job requires two different but complementary skill-sets – community networking and working with databases.

  Yeah it's a pretty broad job description with a lot of different tasks, and to make one person have to do all those different tasks, I mean it's difficult.

- Changes in individual staff or organisational structure in important local organisations such as AMSs and Medicare Locals (particularly the decision to abolish Medicare Locals and create Primary Health Networks in their place)

- Particular challenges of remote areas, with the large distances Aboriginal families have to travel to access providers, particularly ones they feel comfortable to use or that bulk bill.

Summary and recommendations – strengths and challenges

The key components of the model implemented in the pilot are regarded as strengths and should continue. These include well-defined, measurable goals and methods; strong networks and support within LHDs; motivated Aboriginal staff; investment in strengthening relationships with parents, providers and the community; and follow-up of due and overdue individuals.

ACIR data quality has been identified as a major challenge to program effectiveness, and NSW should advocate for for improvements to ACIR data quality, as noted above.

Conclusions

The major strengths of the model implemented in the pilot are well-defined, measurable goals and methods, strong networks and support within LHDs, motivated Aboriginal staff, investment in strengthening relationships with parents, providers and the community, and follow-up of due and overdue individuals. The most commonly reported challenge was errors

in data on the ACIR, especially out-of-date contact details, missing immunisations and incorrect Indigenous status.

While there are opportunities for improvement, the general tone of feedback was of great enthusiasm for this program across the state, and pride in its achievements, the improvements in coverage, working with Aboriginal communities and the personal development of the AIHCWs.

> *It's one of the most exciting parts of public health service in [this LHD], I'm thrilled to see the real value added, and the benefit to the community I think is going to be found, not only in the short term, but in the long term. It's one of the real initiatives that New South Wales Health should be patted on the back for. And it's a project we're all immensely proud of.*

> *Yeah, I think it's been a really positive addition to the team. I think it's been really good. And it's raised the profile of doing Aboriginal focused activities in the public health unit, not just within the immunisation team but I think across the public health unit. So I think it's had some ripple on effects.*

References

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Appendix 1: Resources developed by Health Protection NSW

Bag

Colour white

Draft artwork


VACCINATE WITHOUT DELAY
TO HELP KEEP DISEASE AWAY
SAVE THE DATE
TO VACCINATE
immunisation.health.nsw.gov.au
NSW
GOVERNMENT
Health

Drink bottle

Draft artwork

FRONT

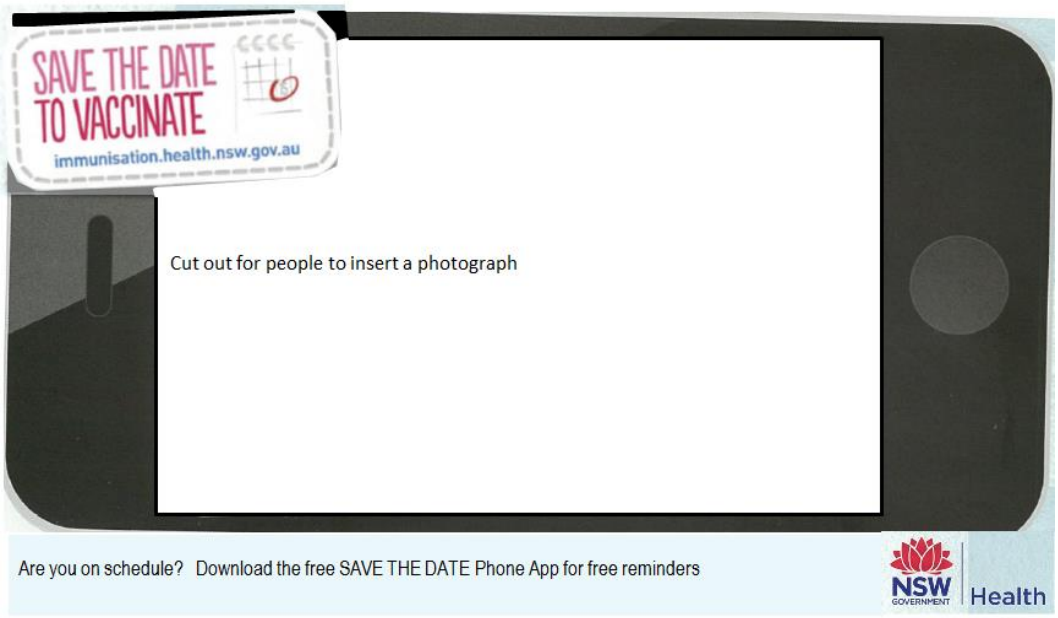
BACK


Download the handy SAVE THE DATE Phone App or print a Personalised Schedule at immunisation.health.nsw.gov.au
DOWNLOAD APP FOR...
IPHONE
ANDROID

Photo frame fridge magnet

A5 full colour

Designers briefed on a similar design to this mock-up draft artwork



Crayons

Branding on packaging and crayons

Designers briefed to adapt this image

Tattoos

38mm x 38mm

Designers briefed to use this logo

2 x A5 Colouring sheets (black and white)

Designers briefed to use red headed girl with pig tails and the message: 'for our whole mob to feel fine…' and an image of the boy (examples below)