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Position Paper

Enhancing Influenza Vaccination Uptake in Children Under 5 years in Australia in 2024

Introduction

Influenza is a potentially life-threatening respiratory infection particularly for children under 5 years, making vaccination a critical preventive measure. It is a highly contagious viral infection that can cause severe illness including pneumonia and death.

According to the Australian Immunisation Handbook 2023, infants and children aged <5 years have a higher risk of hospitalisation and increased morbidity after influenza.¹ This is true for all children, not just those with pre-existing medical conditions.¹ Children aged under 5 years old have been identified as an at-risk-population where in the 2023 Australian Influenza Surveillance Report, there were 2,042 notifications per 100,000 population recorded.²

To address this concern, health authorities recommend to parents that all children aged 6 months to 5 years old, should be vaccinated against influenza to help avoid these terrible complications and reduce spread in the community. The influenza vaccines are supplied free by the Australian Government under the National Immunisation Program (NIP).

In 2022- 2023, the influenza season in Australia began unexpectedly early compared to recent years. Whilst influenza activity levels were higher than average the winter surge was a shorter season with a large peak of laboratory-confirmed influenza notifications in early June. Notifications substantially decreased in July and remained lowish until the end of the season.² The COVID-19 national healthcare advice suggested best hygiene practices reduced the spread of influenza across all ages.

Even the healthiest of children are at risk of serious complications from influenza. Parents and carers today are advised that the modern influenza vaccinations are not live vaccines, are safe and the most effective way to protect children from serious illness. Despite the strong evidence and NIP recommendations, the influenza vaccine rates remain poor at 28% coverage and there is an urgent need to increase influenza vaccination rates among children under 5 years in Australia.³

The Immunisation Coalition (IC) is planning an Influenza launch in March 2024. “NOW IS THE TIME” for your influenza vaccination - So Act Now.

This position paper outlines strategic recommendations to increase and sustain influenza vaccination uptake in this vulnerable age group using the 5As framework of Awareness, Activation, Access, Acceptance, and Affordability.⁴ It is critical that the children of today remain healthy adults of tomorrow.

Background and Significance

Children under 5 years around Australia face a higher risk of hospitalisation and increased morbidity from influenza. This risk is substantial for all children, not just those with pre-existing medical conditions. Disparities in hospitalisation rates are evident between Aboriginal and non-Aboriginal children. Aboriginal children under 4 years of age are hospitalised due to influenza complications at more than twice the rate of non-Aboriginal children.⁵

Other factors impacting children under 5 years are that their immune system is still developing and they are generally susceptible to picking up germs that cause infections. This is exacerbated when children are in regular close proximity to others such as kindergartens, day care and child community centres, and are more likely to catch an illness and spread itself from person to person.

Another simple reason is the fact that children are being exposed to new environments and new pathogens, or germs, that they haven't experienced before consequently picking them up. A change in temperature in environments can also play a contributing role to children picking up germs. In 2023, we saw an increase of confirmed laboratory cases in 0-4 years by 17.62% possibly a result of low vaccinations in this cohort and changes in weather patterns as reported in the [national communicable disease surveillance dashboard](#)⁶. The IC welcomes more work to be done in this area.

The IC makes frequent reference to the NIP schedule for influenza age-appropriate vaccination. In children aged 6 months to less than 9 years of age in the first year of administration, it states to “give 2 doses a minimum of 1 month apart. One dose annually in subsequent years”. Specific material about that issue should be developed and circulated to providers so that the first year of vaccination is not confused with annual vaccination thereafter.

Comparison to the USA

In the USA, the influenza season is generally around the beginning of November extending into April-May however the influenza activity began early October in 2022/23, earlier than most previous seasons. The season had a severe impact among child and adolescent hospital presentations compared with previous seasons.

The elevated incidences of influenza associated with hospitalisation were children aged <5 years and higher for children and adolescents aged 5–17 years. Early influenza was reportedly in circulation before many children and adolescents had been vaccinated which may have contributed to the high hospitalisation rates during the 2022–23 season.

Interestingly, approximately 18.3% of children were vaccinated for influenza compared with previous seasons ranging between 35.8% – 41.8%. The Center for Disease Control and Prevention (CDC),

recommends that all persons aged ≥ 6 months without contraindications should receive the annual influenza vaccine in October.⁷

To analyse each season, indicators are used to calculate the type of season experience. The CDC classifies each influenza season's severity using three indicators.

1. The percentage of all outpatient visits for influenza-like illness, defined as fever plus cough or sore throat, is obtained from the U.S. Outpatient Influenza-like Illness Surveillance Network.
2. Rates of laboratory-confirmed influenza hospitalisation are estimated through the Influenza Hospitalisation Surveillance Network.
3. The percentage of all deaths due to influenza is calculated from National Vital Statistics System death registry data.

For each severity indicator, a percentile intensity threshold is calculated from a distribution based on the geometric mean of peak weekly values in previous seasons. The seasonal severity is classified as low, moderate, high, or very high.⁷

Immunisation is a key public health strategy, with several vaccine-preventable diseases now rare due to high childhood immunisation rates, traditionally $\sim 95\%$,⁵ yet under 5 years influenza is just 28%.¹ The National Notifiable Disease Surveillance System ([NNDSS](#)) coordinates data on over 70 diseases that present a risk to public health in Australia. This helps us identify trends in diseases, assess the impact of disease control programs and develop policies to reduce the impact of these diseases including influenza. The Australian Immunisation Register (AIR) is a national register that records vaccines given to all people in Australia via:

1. The NIP program
2. Through school programs
3. Private market

AIR data highlights the need for action, with over 800,000 influenza doses administered in 2020, down to less than 500,000 in 2023.⁸

From 2020 to 2023, the data on influenza vaccinations for children under 5 years in Australia reveals a pattern of fluctuation. In 2020, vaccination rates peaked with over 822,000 doses administered. This peak was followed by a significant drop in 2021, where only around 428,000 vaccinations were recorded. There was a slight increase in 2022, but the numbers fell again in 2023. This pattern indicates inconsistent vaccination rates over these years, with a notable decline from the 2020 peak in subsequent years.^{7,8} It's important to note that during this time COVID-19 was active and there was little influenza circulating hence we saw less uptake of influenza vaccinations.

Vaccination Coverage Rate (VCR) varies by jurisdictions and by indigenous status, so best practices and lessons learnt need to be shared across jurisdictions. There needs to be a specific focus on our First Nations communities which can be executed with the assistance of our 31 [PHNs](#) in Australia.

For all children under 5 years of age, VCR ranged from 23.9% in Queensland to 50% in the Australian Capital Territory. A case study for the Australian Capital Territory is mentioned in Section 5 of this paper.⁵

In examining influenza vaccination rates for children aged 6 months to under 5 years across Australian jurisdictions, notable differences are evident. The Australian Capital Territory leads with a 50% coverage

rate, significantly above the national average of 28.3%. In contrast, New South Wales and Victoria report lower rates, at 26.8% and 32.0% respectively. Queensland and South Australia show similar rates, with Queensland at 23.9% and South Australia at 28.0%. Coverage in Western Australia and Tasmania is reported at 27.3% and 32.9%, while the Northern Territory's rate is 32.2%, close to the national average. These figures highlight substantial regional disparities in vaccination coverage across Australia.⁵ For First Nations people, VCR ranged from 16.7% in South Australia to 36% in the Northern Territory.⁵

The influenza vaccine coverage rates for Aboriginal and Torres Strait Islander children between 6 months and under 5 years reflect a range of responses in different jurisdictions. The Northern Territory, leading the way, has achieved a coverage rate of 36%. This stands in contrast to New South Wales and Victoria, where the rates are more modest at 18.4% and 21.7%, respectively. Further, Queensland reports a coverage of 16.8%, while South Australia is slightly higher at 16.7%. Meanwhile, Western Australia and Tasmania both present rates around the 27.0% and 19.6% marks, respectively. Notably, the Northern Territory exhibits the highest regional coverage at 36.0%, underscoring the variability in vaccination efforts across the country. Collectively, these figures coalesce to a national average coverage of 19.7% for this demographic, indicating significant room for improvement in several regions.⁵

The IC continues to engage with multiple stakeholders to support, advocate and improve the uptake of influenza vaccination in vulnerable populations.

The current National Immunisation Strategy (NIS) for Australia 2019 to 2024 has no specific mention of Under 5 years influenza, as the program was only introduced during this period.⁸ As this population has the lowest VCR of all recommended groups for influenza vaccination, the next iteration of the NIS should have specific strategies to address the low VCR in Under 5s.

Childhood vaccination policies exclude influenza, which fuel parents and providers to consider other childhood vaccinations as essential while influenza is optional. These include:

- 95% target for 1, 2 and 5 yrs olds (excludes influenza)
- No Jab no Pay and No Jab no Play policies (exclude influenza)

Current Challenges and a Strategic Framework for Improvement

A multi-faceted approach is needed adopting the 5As methodology as was identified in the recent [Grattan Institute Report](#)⁹ These include:

Awareness and Education:

Parental awareness about the importance of under 5 influenza vaccination varies, leading to suboptimal uptake. Currently, only 39% of parents are aware of the Under 5 influenza vaccination program and have concerns about vaccine safety and effectiveness.¹⁰ Healthcare providers also need to be made aware of the seriousness of influenza in children, as these cases are often not seen in primary care.

Recommendations

- Work with the newly established Australian Centre for Disease Control (Australian CDC) in collaboration with the Immunisations Coalition to launch the official Influenza Season in 2024.
- Introduce an annual influenza season start date with a Health Care provider (HCP) webinar including the CMO, a paediatrician and parent of a child hospitalised with influenza to highlight the seriousness of influenza in children.
- Implement coordinated communications to HCPs via peak bodies such as RANZCOG, Australian College of Midwives, PHNs, RACGP, AMA, APNA, PSA, Guild, NCIRS & National Indigenous Immunisation Coordinator, Maternal and Child Health Centres.
- Develop and launch a coordinated nationwide public awareness campaign targeting parents and caregivers, with input from stakeholders including State and Federal Governments, Peak Bodies and Patient Associations.
 - Utilise platforms like social media, television, and radio to reach a broad audience.
 - Create a bank of patient case studies to highlight the seriousness of influenza in under 5s and a positive vaccination experience with a child Under 5 in the media.
- Collaborate with parent influencers to spread messages about the importance of influenza vaccination for children under 5 years.
- Engage with the community through partnerships with preschools and child care centres and utilise local community leaders to amplify the impact of vaccination initiatives.

Activation:

Healthcare provider engagement is crucial - they need to know how important their recommendation is in driving uptake, and that parents expect it. 95% followed their doctor's advice and 87% trusted that their HCP would advise them about influenza vaccination.

Recommendations:

- Outline a launch date to healthcare providers via a CMO letter and provide VCR data mid season as a reminder of the need to recommend vaccination to this vulnerable population.
- Include under 5 influenza in the Practice Incentives Program (PIP) in addition to 65yrs+, diabetes and chronic obstructive pulmonary disease (COPD).
- Set overdue rules for Under 5 influenza in the AIR i.e. any child without a influenza vaccine in the AIR on the 1st May to help PHNs and practices identify and target overdue children.
- Set specific VCR targets for under 5 influenza vaccination similar to other childhood vaccinations (95%).
- Implement reminder systems in healthcare settings:

- to prompt healthcare professionals to discuss vaccination during scheduled vaccination appointments ie, 6mth, 12mth, 18mth and 4 years.
- to reach parents or caregivers directly via SMS, email or post.
- Train healthcare providers on effective communication strategies to discuss the safety and benefits of paediatric influenza vaccination with parents.
- Fund Nurses to give the influenza vaccine under the NIP. Service should be compulsorily bulk-billed, like COVID-19 MBS items to ensure equity of access and facilitate practice to set up influenza nurse-run immunisation clinics.

Access & Policy:

Australia's vaccination infrastructure must be accessible in order to reach all communities, especially those with limited access to healthcare facilities.

Queensland introduced Under 5 influenza vaccination in pharmacy in 2023 and administered 2500 vaccines (3% of NIP funded vaccines administered to this cohort). The number of vaccines administered to this cohort is anticipated to increase as community awareness of the service expands. 17% of parents have reported difficulties in securing vaccination appointments.¹

As of 1 November 2023, the [Pharmaceutical Society of Australia](#) (PSA) introduced influenza vaccines that can now be administered by pharmacists to individuals aged 5 years and above. Queensland is unique as it permits pharmacist immunisers to administer the influenza vaccine to individuals of all ages including those under 5 years of age.¹²

Recommendations:

- Ensure under 5s have access to influenza vaccinations from pharmacists (e.g. pharmacists located in pharmacies and GP practices)
- Expand vaccination locations including community centers and pop-up clinics.
- Extend clinic hours to accommodate diverse schedules and working parents.
- Implement mobile vaccination clinics to reach remote or disadvantaged communities.
- Provide educational tools to assist pharmacists offering immunisation to children under 5 years.
- Integrate influenza vaccination into routine paediatric health checks such as Maternal and Child Health Centre.

Acceptance:

Vaccine hesitancy or misconceptions among parents can hinder acceptance of under 5 influenza vaccination. Also vaccine fatigue and misinformation has been exacerbated following the COVID-19 pandemic.

Recommendations:

- The IC collaborates with the federal and state governments, and with healthcare professionals to build trust and provide accurate information to the public.
- Engage more with researchers and social scientists e.g. The Vaccination Insights project - the first systematic national surveillance of drivers of under-vaccination in Australia. (NCIRS' Social Science Unit is coordinating this project, working closely with the Murdoch Children's Research Institute and the University of Sydney's Social and Behavioural Insights in Immunisation research group.)
 - Develop targeted communication strategies to address concerns and misconceptions about the influenza vaccine.
 - Provide clear, evidence-based information on vaccine safety and efficacy through various media channels. This includes better utilising sharing knowledge about resources (SKAI).
- Offer counselling services in healthcare settings for hesitant parents to discuss their concerns with trained professionals.
- Organise workshops and seminars for healthcare providers to update them on the latest vaccination guidelines and practices including vaccination technique and managing anxiety.

Affordability:

Financial barriers may prevent some families from prioritising influenza vaccination for their young children, so these need to be addressed.

Recommendations:

- Ensure awareness that influenza vaccine is free of charge under the NIP for children including in pharmacy from the 1st January 2024.
- Investigate policies that subsidise transportation costs for low-income families to access vaccination clinics.
- Consider easier access to influenza vaccines for parent(s) or carer(s) with children under 5 years to encourage immunisation.

Case Studies and Best Practices

Australian Capital Territory Health often achieves the highest VCR for children under 5 years in Australia at 50%. This is a result of a number of initiatives including a comprehensive communications campaign including social media, radio adverts and print material. They also maintain close relationships with maternal & child health government clinics who vaccinate a third of all children in the Australian Capital Territory.

Initiatives less common in other jurisdictions which were undertaken by Australian Capital Territory Health included:

- Sending a reminder postcard each year to households of children under 5
- Working with their local PHN to run a influenza education session for all providers at the beginning of the season and sending a letter midway through the season to share VCR progress
- Distributing Under 5 influenza pack to childcare and preschools

At this time, the IC who's mission of educating and advocating for all-of-life Australians would like to highlight the importance of creating public awareness regarding influenza vaccination for under 5 years and indigenous communities and the role governments and healthcare practitioners (HCPs) play to provide best practices.

Monitoring, Evaluation, and Adaptation

There is a need to establish a robust system to monitor and evaluate the effectiveness of implemented strategies. Regularly assess vaccination rates through AIR data, awareness levels, and community feedback to adapt and optimise interventions. This could be achieved by:

1. Monitoring VCR mid-season and analysing VCR by postcode, demographic etc, to identify trends and better target marketing and resources
2. Ongoing market research with parents to determine behaviour and attitudes
3. Ongoing market research with HCPs to identify intention to recommend influenza vaccination to parents of children under 5 years

Public Communication

The IC understands the importance of communication on influenza vaccinations to be clear, simple and easily understood within all communities. It is important that governments at all levels emphasize that influenza is serious at any age particularly children under 5 years. Vaccine hesitancy and safety concerns have been conveyed in a recent national survey. It found that 42% overall did not believe influenza was serious enough to warrant having a influenza vaccine and a further 37% were concerned the vaccine will present a risk to their healthy child.¹⁰

To improve the VCR in the future, technology could play a pivotal role in communication to parents. This could simply be done via SMS (via AIR) or by letter as done for other childhood immunisation vaccines. Consistent and frequent messaging working alongside government messaging is key to educating the public via numerous media platforms both in print and online.

Preventions

It's not possible to predict who will catch the influenza or develop complications, but many risk groups are well recognised and vaccination remains the most effective and safest tool to protect [children from influenza](#). The IC stresses the need to improve vaccination uptake via parent education and national awareness campaigns.

Conclusion

The Immunisation Coalition welcomes the engagement of all government levels and key stakeholders regarding recommendations within this position paper in order to protect our vulnerable children from influenza. Increasing the influenza vaccination rate among children under 5 years is essential for their health and the health of the broader community.

This comprehensive strategy, addressing access, awareness, affordability, activation, and acceptance, aims to significantly increase and sustain under 5's influenza vaccination uptake in Australia. By combining more collaborative approaches amongst stakeholders, aligning childhood vaccination policies and fostering community engagement, we can build a healthier and more resilient future for our youngest population.

Sincerely,



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