POLICIES AND PRACTICES TO MAXIMISE HEALTHCARE WORKER INFLUENZA VACCINATION UPTAKE

EXAMPLES FROM AROUND THE WORLD

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Achieving high influenza vaccination coverage rates (VCR) in healthcare workers (HCWs) is an ongoing challenge, both in Australia and globally.

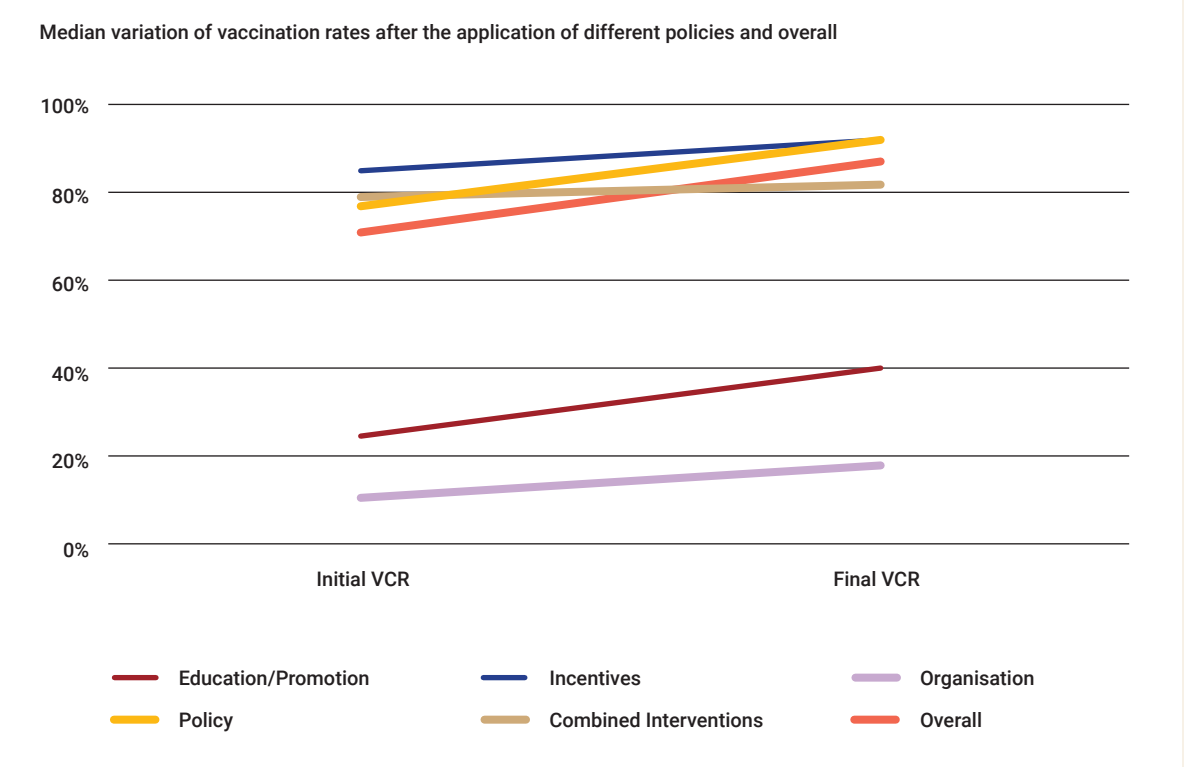
During the recent pandemic, we saw falling rates of HCW influenza VCR in Australia for a number of reasons:

- fewer resources were available to administer flu vaccinations
- influenza was perceived as less of a threat due to a lower number of cases
- the safety of co-administering COVID-19 and influenza vaccinations had not yet been established.

There is much we can learn from the response to the COVID-19 pandemic and the varying HCW influenza vaccination policies across the globe that can help increase influenza VCRs.

A recent review of 32 articles analysed the effectiveness of various interventions to increase vaccination coverage in healthcare facilities around the world. The review highlighted that policy, incentives and approaches combining multiple interventions can increase vaccination uptake above 80%.[1]

This review will focus on these specific areas, and provide examples of how these interventions have been put into practice, both locally and globally.



Adapted from Schumacher S *et al.* 2021.[1]

POLICIES

“There is a moral imperative for HCWs to be immune and for healthcare institutions to ensure HCW vaccination, in particular for those working in settings with high-risk groups of patients.”

MANDATORY POLICIES

According to the Association for Professionals in Infection Control and Epidemiology (APIC), as a profession that relies on evidence to guide our decisions and actions, we can no longer afford to ignore the compelling evidence that supports influenza vaccination for all HCWs. This is not only a patient safety imperative, but also a moral and ethical obligation to those who place their trust in our care.[2]

"There is a moral imperative for HCWs to be immune and for healthcare institutions to ensure HCW vaccination, in particular for those working in settings with high-risk groups of patients. If voluntary uptake of vaccination by HCWs is not optimal, patients' welfare, public health and also the HCW's own health interests are likely to outweigh concerns about individual autonomy: fair mandatory vaccination policies for HCWs might be acceptable."[3]

The unique nature of influenza vaccination, the requirement for annual revaccination, and the beliefs held by some staff members about the safety and efficacy of the influenza vaccine can make mandated vaccination a challenging, but not an insurmountable prospect.

VCRs of over 95% are commonplace in facilities that have implemented a mandatory influenza vaccination policy. Institutions that have implemented mandatory vaccination benefit from dramatically reduced rates of employee absenteeism and healthcare associated influenza, thereby improving patient safety and reducing healthcare costs.[2]

Australia

Mandating vaccination can be controversial but has recently become more commonplace in Australia as a result of the COVID-19 pandemic. In 2020, a national directive was introduced mandating influenza vaccination for aged care workers and visitors to aged care facilities, however not all jurisdictions have maintained this policy.[4]

Influenza vaccination policy for HCWs still remains a decision for each jurisdiction in Australia, a number of which have introduced mandatory influenza vaccination for those in high-risk positions.

NSW, Australia

In NSW, while highly recommended for all healthcare workers, influenza vaccination is mandatory for those in high risk (Category A) positions such as antenatal, neonatal and paediatric ICU, transplant and oncology wards, multipurpose services and residential aged care facilities.[5]

> WORKERS EMPLOYED IN CATEGORY A - HIGH RISK POSITIONS WHO REFUSE ANNUAL INFLUENZA VACCINATION (OTHER THAN THOSE WITH A RECOGNISED MEDICAL CONTRAINDICATION TO INFLUENZA VACCINE) MUST, DURING THE INFLUENZA SEASON, WEAR A SURGICAL/PROCEDURAL MASK WHILE PROVIDING PATIENT CARE IN HIGH-RISK CLINICAL AREAS OR BE DEPLOYED TO A NON-HIGH RISK CLINICAL AREA.
>
> Source: NSW Government Health. Influenza vaccination information for healthcare workers.[5]

Ahead of this policy being implemented, research undertaken by NSW Health identified that successfully adding influenza vaccination to the current policy directive would require four major issues to be addressed:[6]

(1) providing and communicating a solid evidence base supporting the policy directive

(2) addressing the concerns of staff about the vaccine

(3) ensuring staff understand the need to protect patients

(4) addressing the logistical challenges of enforcing an annual vaccination.

Participation in the VaxTracker program (part of AusVaxSafety) was a measure to provide reassurance of the safety of the vaccine during the implementation phase of the policy. This active surveillance enabled NSW Health to communicate the low rates and profile of common adverse events to HCWs.[7]

VIC, Australia

Policies are constantly evolving, with the Victorian Parliament passing a Bill in 2021 whereby all healthcare workers in public and private hospitals and ambulance services with direct patient contact will be required to be vaccinated, including doctors, nurses, paramedics, dentists, orderlies, cleaners and staff working in public sector residential aged care services.[8]

"We are taking the fight against the flu and other preventable diseases further by making vaccination compulsory for healthcare workers."

MINISTER FOR HEALTH JENNY MIKAKOS

Lessons from COVID-19

The fight against COVID 19 has provided valuable lessons in the prevention and control of nosocomial infections. Never before have we seen such broad coverage of nosocomial infection in the media, public awareness, and widespread change within hospitals in the management of patient triage, visitors, disinfection and cleaning practices, and education around asymptomatic carriage.[9]

The pandemic has seen many jurisdictions mandate and enforce COVID-19 vaccination and attach strong conditions to refusal, including discontinuation of employment.

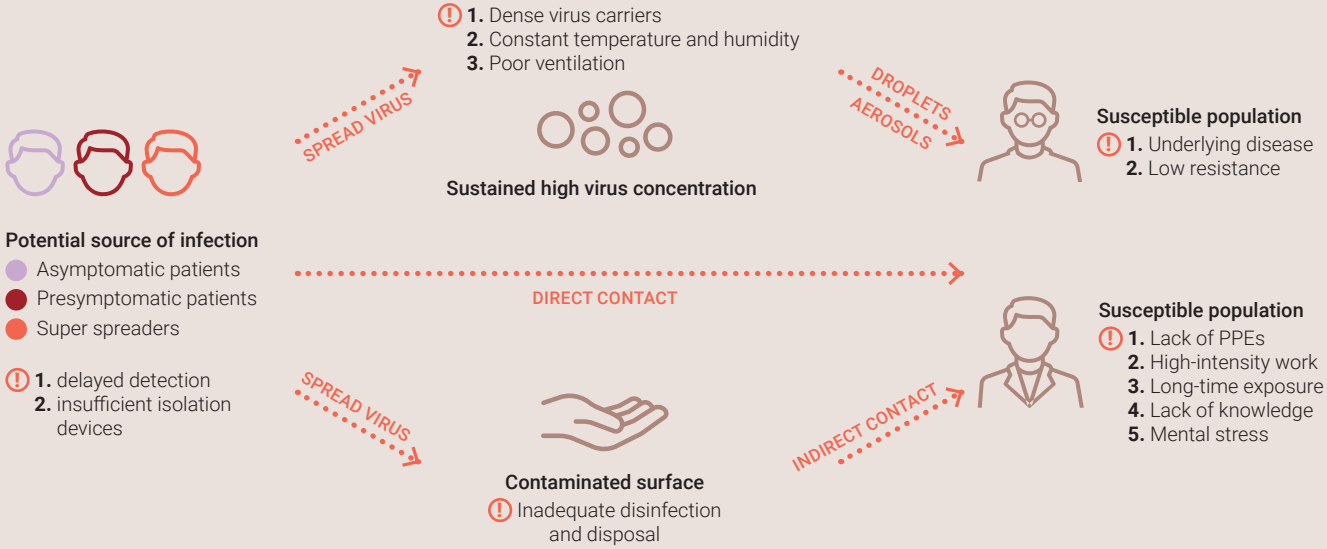
Qld, Australia

In Dec 2021, Queensland mandated COVID-19 vaccination for their entire health workforce as a condition of employment. Visitors to hospitals were also required to be fully vaccinated.[10]

"The vaccine mandates were to ensure protection for patients once Queensland borders opened to the rest of Australia and outbreaks of COVID-19 within the community became inevitable."[10]

Measures such as these will prove important to prevent not just COVID-19, but a broader scope of nosocomial infections in the future.

TRANSMISSION OF COVID-19 IN HOSPITALS AND FACTORS CONTRIBUTING TO THE OCCURRENCE OF NOSOCOMIAL INFECTION



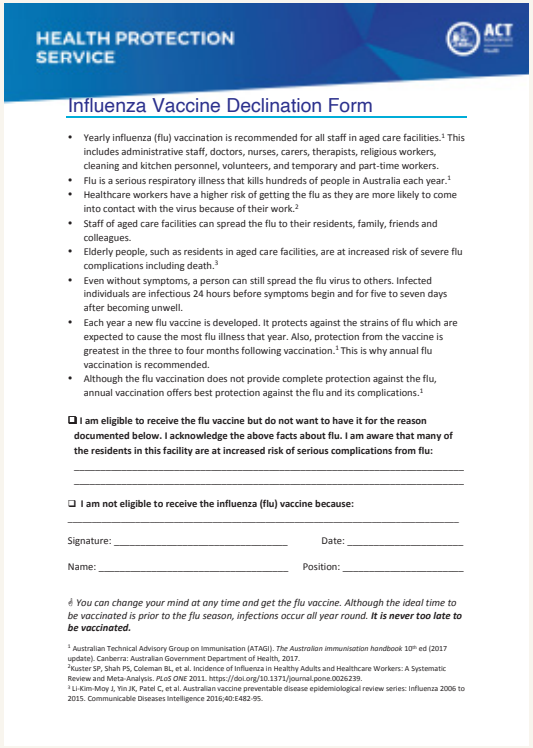
Adapted from DU Q *et al.* 2021.[9] Exclamation marks indicate the factors facilitating the occurrence of nosocomial infection.

ACTIVE DECLINATION POLICY

Declination policies typically require HCWs wishing to decline vaccination to acknowledge risks associated with non-compliance and the rationale for vaccination, before signing a written declination statement. Specific reasons for vaccine refusal can then be assessed and used to inform targeted interventions.[11]

ACT, Australia

An example of a declination form used in some health facilities in the ACT is shown below.[12]



HEALTH PROTECTION SERVICE

ACT Government Health

Influenza Vaccine Declination Form

- Yearly influenza (flu) vaccination is recommended for all staff in aged care facilities.[1] This includes administrative staff, doctors, nurses, carers, therapists, religious workers, cleaning and kitchen personnel, volunteers, and temporary and part-time workers.
- Flu is a serious respiratory illness that kills hundreds of people in Australia each year.[1]
- Healthcare workers have a higher risk of getting the flu as they are more likely to come into contact with the virus because of their work.[2]
- Staff of aged care facilities can spread the flu to their residents, family, friends and colleagues.
- Elderly people, such as residents in aged care facilities, are at increased risk of severe flu complications including death.[3]
- Even without symptoms, a person can still spread the flu virus to others. Infected individuals are infectious 24 hours before symptoms begin and for five to seven days after becoming unwell.
- Each year a new flu vaccine is developed. It protects against the strains of flu which are expected to cause the most flu illness that year. Also, protection from the vaccine is greatest in the three to four months following vaccination.[1] This is why annual flu vaccination is recommended.
- Although the flu vaccination does not provide complete protection against the flu, annual vaccination offers best protection against the flu and its complications.[1]

❑ **I am eligible to receive the flu vaccine but do not want to have it for the reason documented below. I acknowledge the above facts about flu. I am aware that many of the residents in this facility are at increased risk of serious complications from flu:**

_____

_____

❑ **I am not eligible to receive the influenza (flu) vaccine because:**

_____

Signature: _____ Date: _____

Name: _____ Position: _____

☝ *You can change your mind at any time and get the flu vaccine. Although the ideal time to be vaccinated is prior to the flu season, infections occur all year round.* ***It is never too late to be vaccinated.***

[1] Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* 10th ed (2017 update). Canberra: Australian Government Department of Health, 2017.
[2] Kuster SP, Shah PS, Coleman BL, et al. Incidence of Influenza in Healthy Adults and Healthcare Workers: A Systematic Review and Meta-Analysis. *PLoS ONE* 2011. https://doi.org/10.1371/journal.pone.0026239.
[3] Li-Kim-Moy J, Yin JK, Patel C, et al. Australian vaccine preventable disease epidemiological review series: Influenza 2006 to 2015. Communicable Diseases Intelligence 2016;40:E482-95.

Source: ACT Government Health.
Influenza Vaccine Declination Form.[12]

WA, Australia

In Western Australia, each staff member must provide documented consent, declination, or confirmation of having received the influenza vaccination elsewhere.[13]

Staff members of WA health system entities must complete the HCW eForm (available via HealthPoint) by 30 June each year, to either:
- consent to the influenza vaccination
- decline the influenza vaccination, or
- state that they have already received the influenza vaccination elsewhere in that calendar year.

Source: Government of Western Australia Department of Health.
Staff Member Influenza Vaccination Policy.[13]

Vic, Australia

A study in Victoria identified that direct engagement of HCWs opting to decline vaccination with immunisers (as compared to online declination) was associated with higher vaccination uptake.[14]

Vaccination program component	<75% vaccine uptake (n=30)	≥75% vaccine uptake (n=23)
Declination process		
Via direct communication with immunisers*	60.0	91.3
Via indirect methods (e.g. online)*	63.3	30.4
Reason for declination is recorded	46.7	60.9

*p<0.05 when high and low vaccination uptake facilities compared

Adapted from Johnson SA *et al.* 2017.[14]

TARGET SETTING AND INCENTIVES

“If you can’t measure it, you can’t change it.”

TARGET SETTING

"If you can't measure it, you can't change it."

VCR targets are important to quantify the extent of change needed and set tangible goals. These targets may be framed as KPIs, with their attainment tied to funding and other incentives. Public reporting of VCRs in relation to targets can help create accountability. Reported data can also provide valuable insights into specific demographic groups that may require further attention, for example people of a particular ethnicity, age, occupation or location.

From a global perspective, the World Health Organization has recommended a 75% target for influenza vaccination coverage among HCWs.[15]

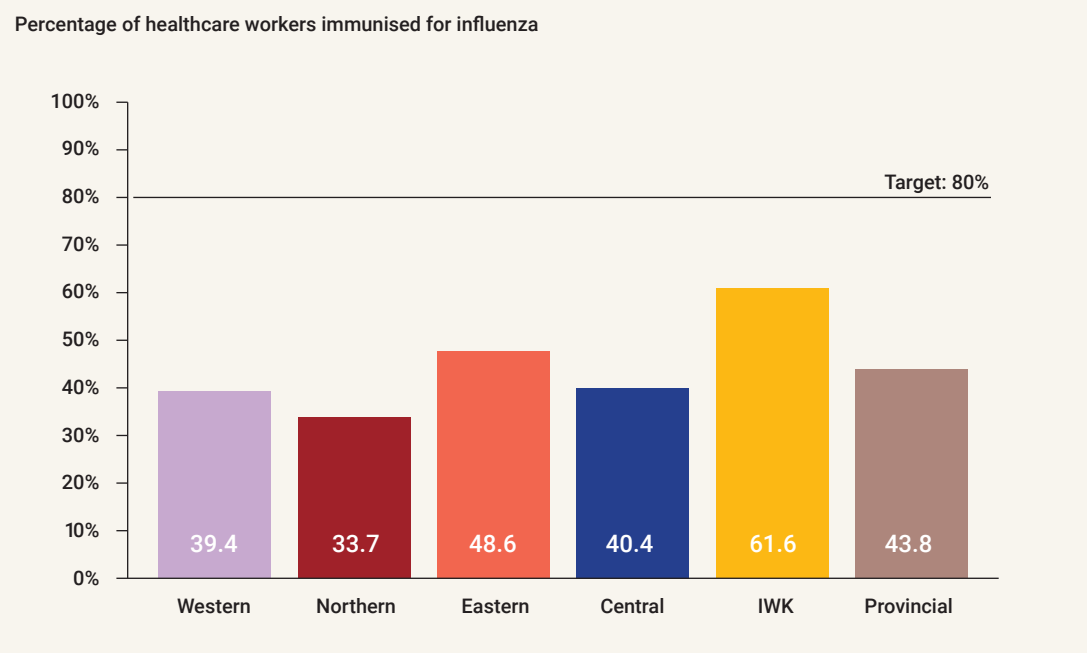
Without a national vaccination coverage rate target for HCWs in Australia, some jurisdictions have established their own. In response to the COVID-19 pandemic, the 2020 state-wide target for HCW influenza vaccination uptake in Victoria was set at ≥ 90%.[16]

Republic of Ireland

In Ireland, the uptake of seasonal influenza vaccine amongst HCWs in hospitals and long-term/residential care facilities has been monitored during each influenza season since 2011–2012. The initial target uptake rate was set at 40%. Vaccine uptake by HCWs has improved since the commencement of monitoring, from 18.1% in 2011–2012 to 58.9% in 2019–2020. For the 2019-2020 influenza season, the national uptake target in Ireland was raised to 75%.[15]

Canada

Canada has a national VCR target for HCWs, which is set at 80%, however attainment of this target continues to be challenging. In Nova Scotia for example, VCRs varied across the province, and between health facilities.



Adapted from Nova Scotia. Healthcare Worker Influenza Immunization.[17] **IWK**: Izaak Walton Killam Hospital for Children.

New Zealand

In 2018, an 80% VCR target was introduced for HCWs employed by District Health Boards (DHBs) across the country. Since setting the target VCR, vaccination rates have risen to 77% in 2020. In NZ, the VCR for each DHB, and for each occupation group are reported on and shared publicly.

Recent data has highlighted midwives as the occupation group with the lowest VCR, while doctors and nurses exceeded the target of 80% with the highest coverage rate.[18]

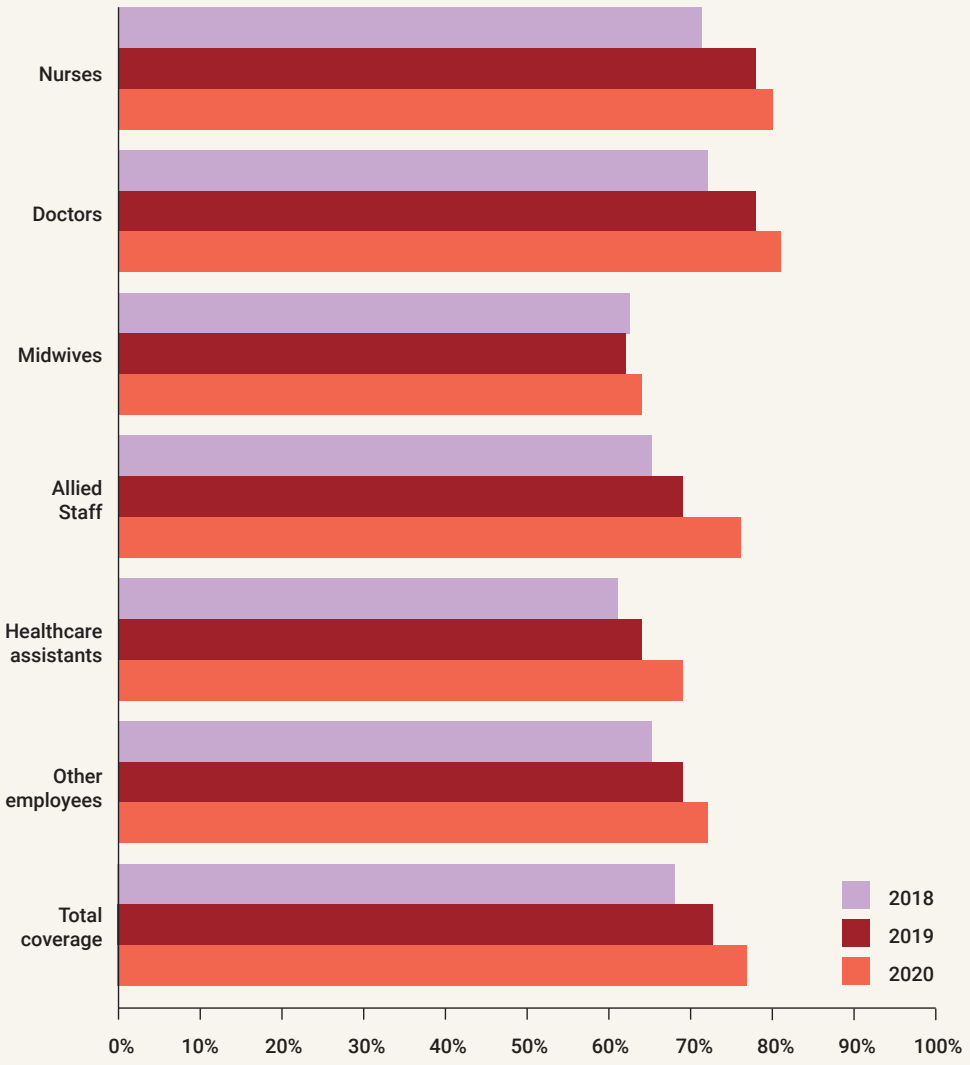
United States

In 2010, only 55.8% of HCWs in the US were vaccinated against influenza. As part of the Healthy People 2020 initiative, the US Office of Disease Prevention and Health Promotion set a target VCR of 90% by 2020. Over the course of this initiative, VCR in HCWs was reported overall, but was also broken down by demographics including gender, age, ethnicity, level of education, marital status, and obesity status, to identify any groups with low uptakes that may need to be specifically targeted. While the 90% target was not reached, the CDC estimated an overall VCR of 80.5% in the 2019/20 influenza season.[19,20]

United Kingdom

The UK government has set an uptake ambition of 85% for frontline HCWs over the 2021/22 influenza season. They consider that this high ambition reflects the importance of protecting against influenza and should be regarded as the lowest threshold to achieve.[21]

DHB HEALTH CARE WORKER INFLUENZA IMMUNISATION COVERAGE BY OCCUPATION 2018-2020



Source: New Zealand Government. Ministry of Health. 2020 DHB .[18]

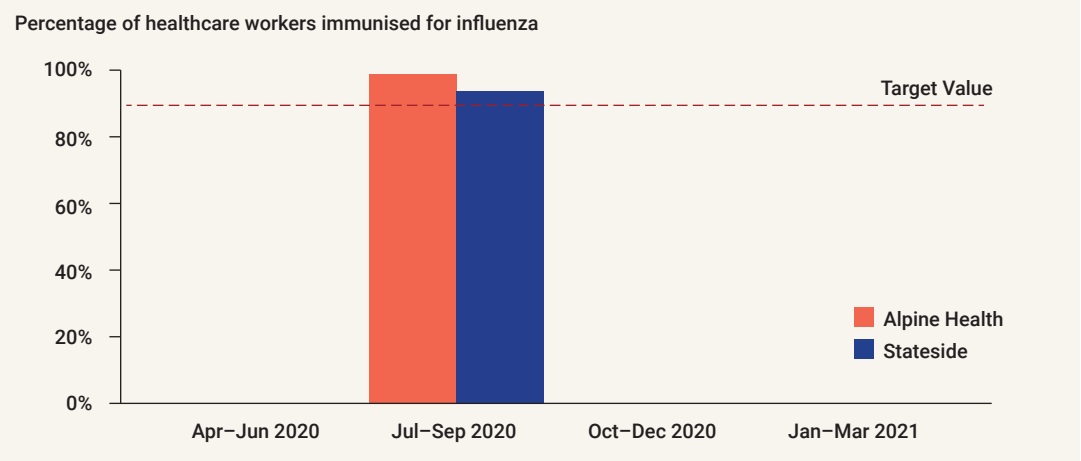
INCENTIVES

Vaccination incentives play a positive role when combined with other elements in multifaceted vaccination campaigns. It may be worth comparing the cost of incentives to achieve the desired vaccination rate with the cost of influenza-related absenteeism.[1]

Incentives can provide a more acceptable alternative to vaccination mandates. The implementation of an incentive-based "choice architecture" that nudges behaviour of HCWs toward vaccination has been successful in raising VCR. Messaging that clearly frames the positives and negatives of influenza vaccination and presents it as a decision HCWs are empowered to make, requiring a commitment to that decision, and providing material and social incentives for compliance can help alleviate cognitive biases that may oppose HCWs to influenza vaccination.[22]

Vic, Australia

Safer Care Victoria include an influenza VCR as one of the KPIs in their Statement of Priorities. The achievement of these KPIs are linked to funding, providing a strong incentive to meet the established benchmarks. At the end of September each year, the VCR of each healthcare service in Victoria are published online and compared against the target VCR and the state-wide average.[23]



Source: Victorian Agency for Health Information (VAHI). Infection prevention and control.[23]

United Kingdom

The UK NHS encourages incentives or rewards to recognise their staff's contribution to the health of others when receiving the influenza vaccine. Vaccination coordinators are encouraged to be creative, noting that less expensive incentives, such as displaying VCR by team to encourage competition, can also be effective.

> *"A small treat can have a big impact. Even something as simple as a sticker to show they have had their jab can be worn as a sign of pride and signal to others that they should have the flu vaccination."*

It is important to ensure any reward fits in with the values and culture of the organisation and has the approval and support of the board or overseeing body.[24]

England

During the 2020/21, NHS England established the Commissioning for Quality and Innovation (CQUIN) framework for influenza vaccination in front-line clinical staff. This framework rewards organisations that achieve staff uptake above 70% on a sliding scale, with those organisations achieving 90% VCR and above receiving maximum payment.[25]

Staff flu vaccinations

SCOPE

Services: Acute, community, mental health, ambulance.

Period:

Q1 Q2 Q3 Q4

DATA REPORTING AND PERFORMANCE

Monthly provider submission (between September and March) to PHE via ImmForm. See: Guidance

Data will be made publicly available approximately 6 weeks after each quarter.

Performance basis: Whole Period. Quarterly reporting not suitable due to cumulative nature of measure. See Section 3 for details about the basis for performance and payment.

PAYMENT BASIS

Minimum: 70%

Maximum: 90%

Calculation: Whole period %

DESCRIPTION

Achieving an 90% uptake of flu vaccinations by frontline staff with patient contact.

NUMERATOR

Of the denominator, those who receive their flu vaccination.

DENOMINATOR

Total number of front line healthcare workers between 1 September 2020 and February 28th 2021.

ACCESSING SUPPORT NHSE&I POLICY LEAD

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Supporting documents
ImmForm Guidance

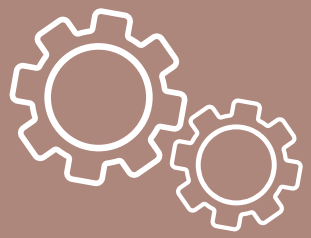
Green Book

NICE Guideline NG103

EXCLUSIONS

- **Staff working in an office with no patient contact**
- **Social care workers**
- **Staff out of the provider for the whole of the flu vaccination period (e.g. maternity leave, long term sickness)**

Source: NHS England. 2020/21 CQUIN.[25]



COMBINED INTERVENTIONS

Most HCW influenza vaccination programs do not focus on one key intervention but rather, employ strategies that utilise multiple interventions, including policy, incentives, education and promotion, and organisational changes.[1]

United Kingdom

NHS trusts are required to self-assess their influenza vaccination program using a best practice checklist which includes components from four key strategic areas (see figure below). The checklist is published with the public board papers at the beginning of the influenza season, driving accountability. This process also aligns vaccination program implementation plans across the country. As shown below, this includes appointment of a vaccine champion from the hospital board, incentives, which are agreed upon by the hospital board, and weekly measurement and celebration of success.[26]

Vic, Australia

One large institution, employing over 8,000 staff over 32 facilities increased VCR from ~45% in the years prior to the campaign, to a VCR of ~80% over six active campaign years, without implementing a mandatory vaccination policy. These campaigns were multifaceted and included the implementation of a mandatory declination form with a KPI of 95% documentation, holding managers accountable for employee vaccination status, dedicated vaccination coordinators and nurses and a walk-in vaccination clinic, visible support and promotion of the campaign by the hospital executive, promotional stickers, posters and intranet communications, an intranet page containing educational and promotional material, and prizes for wards that achieved the target VCR.[27]

United States

A 1,100 bed, two-hospital facility created a task force, led by the Infection Prevention Department, incorporating representatives from the Employee Health, Pharmacy and Nursing Departments to boost VCR. The task force implemented a policy that required documentation of vaccination decision (consent, declination, attestation of vaccination elsewhere, or exemption), and vaccination stations were set up at entrances to the facility. Vaccinated employees were asked to display their status by wearing a badge that said "I'm vaccinated because I care". Employees without a badge, regardless of vaccination status, had to wear a mask. Compliance was considered in staff performance evaluations, and a target employee vaccination rate (>75%) was included as a metric in the annual employee bonus program. These combined interventions raised VCR from 57–72% in the three years prior to the campaign to a sustained VCR over 90%.[28]

A	Committed leadership	Trust self-assessment
A1	Board record commitment to achieving the ambition of vaccinating all frontline healthcare workers	
A2	Trust has ordered and provided a quadrivalent (QIV) flu vaccine for healthcare workers	
A3	Board receive an evaluation of the flu programme 2020 to 2021, including data, successes, challenges and lessons learnt	
A4	Agree on a board champion for flu campaign	
A5	All board members receive flu vaccination and publicise this	
A6	Flu team formed with representatives from all directorates, staff groups and trade union representatives	
A7	Flu team to meet regularly from September 2021	
B	**Communications plan**	
B1	Rationale for the flu vaccination programme and facts to be published – sponsored by senior clinical leaders and trades unions	
B2	Drop in clinics and mobile vaccination schedule to be published electronically, on social media and on paper	
B3	Board and senior managers having their vaccinations to be publicised	
B4	Flu vaccination programme and access to vaccination on induction programmes	
B5	Programme to be publicised on screensavers, posters and social media	
B6	Weekly feedback on percentage uptake for directorates, teams and professional groups	
C	**Flexible accessibility**	
C1	Peer vaccinators, ideally at least one in each clinical area to be identified, trained, released to vaccinate and empowered	
C2	Schedule for easy access drop in clinics agreed	
C3	Schedule for 24 hour mobile vaccinations to be agreed	
D	Incentives	
D1	Board to agree on incentives and how to publicise this	
D2	Success to be celebrated weekly	

Source: Gov.uk. Department of Health & Social Care.[26]

CONCLUSION

There is much we learn from how jurisdictions in Australia uniquely manage their HCW influenza vaccination programs and from the countries who have a more unified approach. All are trying to achieve the same goal – protecting HCW and patients from influenza.

The COVID-19 pandemic has changed the landscape, with mandatory vaccination policies becoming more commonplace. It has also placed a spotlight on nosocomial infections and the reliance the healthcare system has on our HCW being fit for work. The value of vaccination has never been more apparent, from an individual level up to our economy as a whole.

References: 1. Schumacher S *et al. Infection* 2021;49:387–99. **2.** Association for Professionals in Infection Control and Epidemiology (APIC). APIC Position Paper: Influenza 3. Vaccination Should Be a Condition of Employment for Healthcare Personnel, Unless Medically Contraindicated. Available at: https://apic.org/Resource_/TinyMceFileManager/Advocacy-PDFs/APIC_Influenza_Immunization_of_HCP_12711.pdf. Accessed November 2021. **3.** Galanakis E *et al. Euro Surveill* 2013;18(45):pii=20627. **4.** Australian Government Department of Health. FAQs. Flu vaccination requirements for aged care facilities. Available at : https://www.health.gov.au/sites/default/files/documents/2020/06/coronavirus-covid-19-restrictions-on-entry-into-and-visitors-to-aged-care-facilities.pdf. Accessed November 2021. **5.** NSW Government Health. Influenza vaccination information for healthcare workers. Available at: https://www.health.nsw.gov.au/Infectious/factsheets/Pages/influenza-vaccination-for-hcw.aspx. Accessed October 2021. **6.** Leask J *et al. NSW Public Heath Bulletin* 2010;21(9–10):243–47. **7.** Cashman P *et al. Vaccine* 2019;37(18):2427–29. **8**. Parliament of Victoria - Mandatory vaccination of healthcare workers Bill 2020 HYPERLINK «https://www.premier.vic.gov.au/making-vaccination-mandatory-healthcare-workers» Making Vaccination Mandatory For Healthcare Workers | Premier of Victoria. **9.** Du Q *et al. Int J Mol Med* 2021;47(4):31.doi:10.3892/ijmm.2021.4864. **10.** Trajkovich M. Vaccine mandate for Queensland health workers, new rules for home quarantine. November 10, 2021. Available at: https://www.9news.com.au/national/vaccine-mandates-introduced-for-all-queensland-health-workers-new-rules-for-home-quarantine-introduced/7c0919eb-7889-4eb2-a390-1928ce62fa29. Accessed November 2021. **11.** Surtees TC *et al. Vaccine* 2018;36(14):1804–07. **12.** ACT Government Health. Influenza Vaccine Declination Form. Available at: https://health.act.gov.au/sites/default/files/2019-03/1.8%20Declination%20form.pdf. Accessed November 2021. **13.** Government of Western Australia Department of Health. Staff Member Influenza Vaccination Policy (Effective from 30 March 2020). Available at: https://ww2.health.wa.gov.au/About-us/Policy-frameworks/Public-Health/Mandatory-requirements/Communicable-Disease-Control/Immunisation/Staff-Member-Influenza-Vaccination-Program-Policy. Accessed October 2021. **14.** Johnson SA *et al. Aust N Z J Public Health* 2017;41(5):545–46. **15.** O'Lorcain P *et al. Vaccine* 2021;39(40);5954–62. **16.** Lim, L et al High influenza vaccination uptake in Victorian healthcare workers in 2020 Commun Dis Intell (2018) 2021 https://doi.org/10.33321/cdi.2021.45.37 Epub 22/7/2021Accessed October 2021. **17.** Nova Scotia. Healthcare Worker Influenza Immunization. Available at: https://novascotia.ca/dhw/hsq/public-reporting/hcw-data.asp. Accessed November 2021. **18.** New Zealand Government. Ministry of Health. 2020 DHB Health Care Worker Influenza Immunisation Coverage. Available at: https://www.health.govt.nz/system/files/documents/pages/2020-dhb-health-care-worker-influenza-immunisation-coverage-feb21.pdf. Accessed October 2021. **19.** Office of Disease Prevention and Health Promotion. Immunization and Infectious Diseases. IID-12.13 Increase the percentage of health care personnel who are vaccinated annually against seasonal influenza. Available at: https://www.healthypeople.gov/2020/data-search/Search-the-Data?nid=6361. Accessed October 2021. **20.** Centers for Disease Control and Prevention (CDC). Influenza Vaccination Coverage Among Health Care Personnel — United States, 2019–20 Influenza Season. Available at: https://www.cdc.gov/flu/fluvaxview/hcp-coverage_1920estimates.htm. Accessed October 2021. **21.** Gov.uk. Department of Health & Social Care. The national influenza immunisation programme 2021 to 2022. 17 July 2021. Available at: https://www.gov.uk/government/publications/national-flu-immunisation-programme-plan/national-flu-immunisation-programme-2021-to-2022-letter. Accessed October 2021. **22.** Dubov A, Phung C. *Vaccine* 2015;33(22):2530–35. **23.** Victorian Agency for Health Information (VAHI). Infection prevention and control. Available at: https://vahi.vic.gov.au/quality-and-safety/infection-prevention-and-control. Accessed October 2021. **24.** NHS UK. Incentives and rewards. Available at: https://www.england.nhs.uk/increasing-health-and-social-care-worker-flu-vaccinations/incentives-and-rewards/. Accessed October 2021. **25.** NHS England. 2020/21 CQUIN. Available at: https://www.england.nhs.uk/nhs-standard-contract/cquin/cquin-20-21/. Accessed October 2021. **26.** Gov.uk. Department of Health & Social Care. Appendix H: healthcare worker flu vaccination best practice management checklist. 28 July 2021. Available at: https://www.gov.uk/government/publications/national-flu-immunisation-programme-plan/appendix-h-healthcare-worker-flu-vaccination-best-practice-management-checklist. Accessed October 2021. **27.** Marshall C *et al. Infect Control Hosp Epidemiol* 2019;40:389–90. **28.** Drees M *et al. Infect Control Hosp Epidemiol* 2015;36(6):717–24.

Abbreviations DHB: district health board; **HCW:** healthcare worker; **KPI:** key performance indicator; **PPE:** personal protective equipment; **VCR:** vaccination coverage rate.

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