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High influenza vaccination uptake in Victorian healthcare workers in 2020

Lyn-li Lim, Alex J Hoskins, Leon J Worth, Katherine C Walker, Ann L Bull, Noleen Bennett

Beard et al.¹ recently reported increases in annual influenza vaccination rates in 2020 for groups funded by the National Immunisation Program. Achieving high uptake of influenza vaccination in health care workers (HCWs) is an important strategy to protect HCWs, patients and staff.^{2,3} Since 2005, annual data regarding overall uptake of vaccination in HCWs have been submitted by Victorian healthcare facilities to the Victorian Healthcare Associated Infection (VICNISS) Coordinating Centre. In response to the COVID-19 pandemic, the 2020 state-wide target for HCW influenza vaccination uptake was set at $\geq 90\%$. Enhanced monitoring was also implemented, including weekly submission of vaccination data to the VICNISS Coordinating Centre. Herein, we report these findings.ⁱ

Facilities provided an estimate of total staff employed at the beginning of the reporting period to establish a denominator. Weekly numerator data (numbers of staff vaccinated, declined, and of unknown vaccination status) were submitted across 22 April – 14 August 2020. Facilities could cease data submission upon achieving the 90% target for vaccination uptake. Data were analysed by facility size (number of employed HCWs), location (metropolitan or rural) and Australian Institute of Health and Welfare (AIHW) peer grouping,⁵ modified to include new hospitals since publication.ⁱⁱ

During the 18-week reporting period, 100 facilities submitted data, representing all Victorian public hospitals. Of these, 75 met the 90% vaccination uptake target by week 6 of the vaccination campaign (Table 1). Smaller facilities had higher vaccination uptake: median uptake in facilities with < 500 , 500–999, and ≥ 1000 HCWs was 98.7%, 96.1% and 94.0% respectively. Median uptake was higher in rural (98.4%) than in metropolitan (89.9%) facilities. By AIHW peer grouping,⁵ median vaccination uptake was lower in 1A and 1B (94.2%) and unpeered (87.6%) hospitals than for AIHW peer groups 2 (97.5%), 3A and 3B (98.5%) and 4 (98.9%). Of 13 facilities that did not achieve the 90% target, the median vaccination uptake was 85.2% and median number of data submissions to week 18 was 12 (range 4 to 18).

It is important to document the high vaccination rates that have been achieved in Victoria in this key target group in a non-mandatory setting. The increased uptake is likely related to multiple factors. In conjunction with public health policy and recommendations for influenza vaccination made within the context of the COVID-19 pandemic, there has been increased recognition of Victorian HCWs as a high-risk

i Consistent with quality assurance activities defined according to National Health and Medical Research Council recommendations,⁴ non-identifiable aggregate data were collated by participating facilities to support quality improvement initiatives. Ethics approval was therefore not required.

ii Group 1A were principal referral hospitals (n = 6) with 24-hour emergency departments (ED), intensive care (ICU), coronary care and oncology units, and offered the full breadth of

outpatient services; Group 1B hospitals (n = 12) had an ICU and ED and offered an extensive range of surgical services excluding cardiac surgery and neurosurgery; Group 2 hospitals (n = 4) provided a large range of surgical services with some providing obstetric services; many had an ED and some had an ICU; Group 3A hospitals (n = 33) had ≥ 15 acute beds and performed some surgery; Group 3B hospitals (n = 13) had ≤ 15 acute beds and performed some minor surgery; Group 4 were very small hospitals (n = 23) that did not conduct any surgery; and unpeered hospitals (n = 9) only provided specialist services.

Table 1. Comparison of Victorian facility characteristics achieving 2020 HCW influenza vaccination target, weekly progressive data over 18 weeks (n = 100)

| Week | Facilities achieving $\geq 90\%$ target | | | | | Facilities achieving $< 90\%$ target | | | | |
|-------------|---|--------------------|--------------------------|------------------|------------------|--------------------------------------|--------------------|--------------------------|------------------|------------------|
| | n = 87 | Size (< 500 staff) | Size (≥ 500 staff) | Location (Metro) | Location (Rural) | n = 13 | Size (< 500 staff) | Size (≥ 500 staff) | Location (Metro) | Location (Rural) |
| | | n = 63 | n = 24 | n = 8 | n = 79 | | n = 2 | n = 11 | n = 11 | n = 2 |
| Week 1 | 33 | 29 | 4 | 1 | 32 | 0 | – | – | – | – |
| Week 2 | 16 | 14 | 2 | 0 | 16 | 0 | – | – | – | – |
| Weeks 3–6 | 26 | 16 | 10 | 1 | 25 | 2 | 0 | 2 | 2 | 0 |
| Weeks 7–10 | 5 | 2 | 3 | 3 | 2 | 4 | 2 | 2 | 2 | 2 |
| Weeks 11–14 | 3 | 1 | 2 | 1 | 2 | 3 | 0 | 3 | 3 | 0 |
| Weeks 15–18 | 4 | 1 | 3 | 2 | 2 | 4 | 0 | 4 | 4 | 0 |

population, with implementation of a vaccination target performance monitor in place since 2014 and the successful implementation of influenza vaccination strategies for HCWs in Victorian public acute hospitals. State targets have increased from 75% to 80% (2018), 84% (2019) and 90% (2020), with sustained increases in vaccination rates reported, 83% in 2018 and 88% in 2019.⁶ Johnson et al. reported on Victorian HCWs in 2017;⁷ at that time, median vaccination uptake for 93 surveyed facilities was 73%. It was noted that about one-third of surveyed facilities had a vaccination requirement within employee contracts and 36% had a mandatory vaccination program. Johnson et al. reported that influenza vaccination strategies used in facilities with higher vaccination uptake included after-hours and weekend access to vaccination sites, education specifically addressing safety concerns, promotion at hospital public forums, and availability of database that allows for real-time feedback.

Our data also highlight possible opportunities for targeted programs to increase vaccination uptake, with potential benefit from enhanced campaigns in larger and metropolitan facilities. Reassuringly, we demonstrate a high overall uptake of influenza vaccination in Victorian

HCWs, with substantial uptake achieved within a short timeframe. In setting national frameworks for reporting of vaccination uptake, high-risk populations such as HCWs should specifically be captured as measures of public health policy implementation and quality improvement within healthcare.

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