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Health Care Worker Immunization in Ontario Acute Care Settings

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I have no disclosures

Background / Issue

- health care worker (HCW) immunization protects HCWs from occupational vaccine preventable diseases and helps prevent, control, and manage outbreaks in health care facilities.
- in Ontario, Communicable Diseases Surveillance Protocols (CDSPs) are developed jointly by the Ontario Hospital Association (OHA)/Ontario Medical Association (OMA)/Ministry of Health and Long Term Care (MOHLTC)
  - legislated requirement of the Public Hospitals Act 1990, Regulation 965
  - apply to all people who carry out activities within hospitals
- implementation of and adherence to protocols unknown

https://www.oha.com/labour-relations-and-human-resources/health-and-safety/communicable-diseases-surveillance-protocols

MEASLES SURVEILLANCE PROTOCOL FOR ONTARIO HOSPITALS

Developed by the Ontario Hospital Association and
the Ontario Medical Association
Joint Communicable Diseases Surveillance Protocols Committee

Approved by
The OHA and the OMA Board of Directors
The Ministry of Health and Long-Term Care –
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III. Pre-placement

At the time of hiring, OHS must ask all HCWs for evidence of immunity. Only the following should be accepted as proof of measles immunity.[1,2]

- documentation of receipt of 2 doses of measles-containing vaccine on or after the first birthday, with doses given at least four weeks apart (regardless of year of birth),[2] **OR**
- laboratory evidence of immunity

III. Pre-placement

IV. Continuing Surveillance

No routine continuing surveillance of any HCWs carrying on activities in the hospital is required. Follow-up is required for susceptible female personnel unable to be vaccinated pre-placement due to pregnancy. These HCWs have a responsibility to report to the OHS when they are no longer pregnant. The OHS must ensure that these women are offered measles immunization (i.e. MMR vaccine) when they are no longer pregnant.

Pre-placement requirements, including recommended vaccines and vaccine dosing change over time. HCWs who are not fully immunized may be exposed to measles when patients with measles seek care. A catch up program is recommended, particularly for groups of HCWs at higher likelihood of coming into contact with measles cases, e.g. Emergency Department and Family Practice staff.

III. Pre-placement

IV. Continuing Surveillance

V. Exposure

Measles is a ***highly*** contagious disease spread by the airborne route, i.e., the virus is aerosolized by the patient and can be inhaled and produce disease in susceptible persons. Fit-tested, seal-checked N95 respirators may not provide complete protection for a susceptible person; therefore, a susceptible HCW could still have an exposure to an infectious patient even if wearing a respirator. Exposure to measles is considered significant if it involves sharing the same air space, either simultaneously or for up to two hours afterwards, depending on the number of air changes, as a clinical case of measles.

Any HCW who has a significant exposure to a person who has measles, either in the health care setting or the community, must report this exposure to the OHS.

- Immune HCWs (with evidence of immunity as defined in III above) may continue to work without disruption.
- HCWs who have received one dose of live measles containing vaccine who do not have laboratory evidence of immunity should receive a second dose of measles vaccine (i.e. MMR) if no contraindications exist, and measles IgG should be ordered. **Work restrictions may apply while waiting for**

Project: Objectives

- understand current practice and barriers in acute care hospitals in Ontario related to implementation of, and adherence to, CDSPs
- learn what solutions might be most useful to enhance implementation and adherence

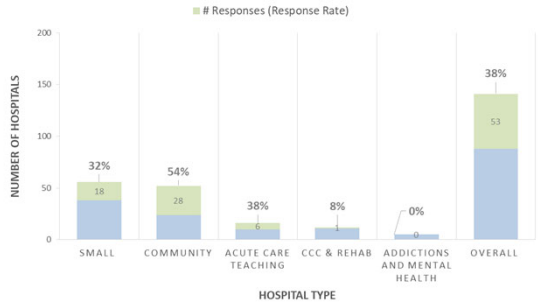
Project: Methods

- hospital survey developed *de novo* by Public Health Ontario, in consultation with the OHA OMA MOHLTC Communicable Diseases Surveillance Protocols Committee
- "demographic" data: hospital size and type, occupational health service (OHS) staffing
- immunization questions focused on Tdap, MMR, hepatitis B and varicella vaccines
- processes for immunizing HCWs, record keeping, HCW immunization rates, management of outbreaks and exposures
- free text responses about barriers and potential solutions to implementing the CDSPs

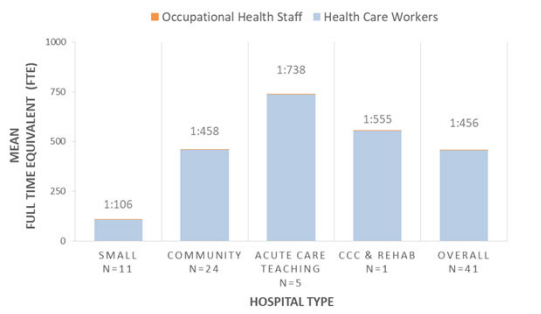
Project: Methods

- survey was piloted among 14 hospitals in June 2018
- final survey disseminated to all Ontario hospitals by the OHA and PHO in September and October 2018
- all OHSs invited to participate, using a web-based questionnaire
- each hospital was asked to respond only once

Responses by Hospital Type

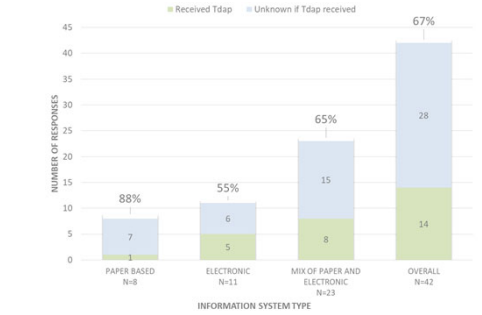


OHS Staff to Health Care Worker Ratios (n=41)

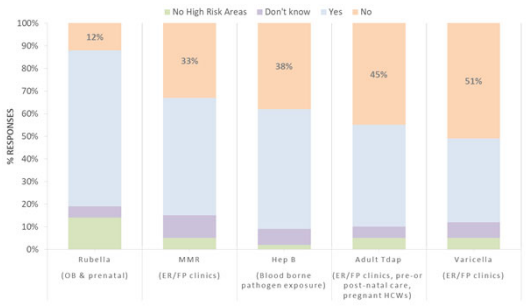


Proportion of Hospitals with a Process for Verifying Immune Status of New Hires and Existing Staff (Tdap) (n=43)

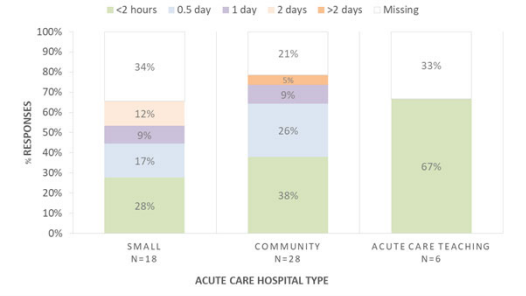
Proportion of HCWs Who Have Received Tdap, by Type of Information System (n=42)



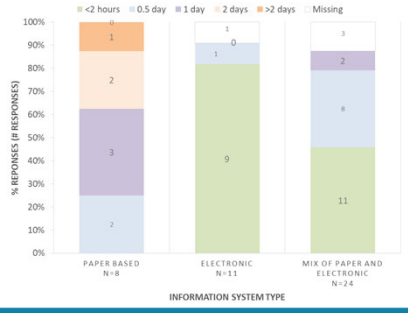
Catch-up Programs for High Risk Areas, by Vaccine (n=42)



Time Required to Access HCW Immune Status Information (Outbreak or Post-Exposure), by Hospital Type (n=52)



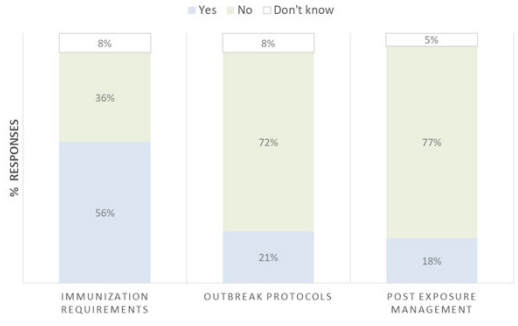
Time Required to Access HCW Immune Status Information (Outbreak or Post-Exposure for pertussis), by Information System (n=43)



Solutions and Barriers to Accessing HCW Immune Status

1. Comprehensive electronic information systems (n=12)
2. Access to immunization records from public health (n=11) / other health care facilities (n=5)
3. Sufficient staffing and administrative support with standardized process (n=7)
4. Mandated immunization requirements for employment (n=6)
5. Resistance from existing staff when protocol immunization requirements change (n=2)
6. On-site laboratory testing for immunity (n=1)
7. Vaccine hesitancy in HCWs (n=1)

Challenges Adhering to CDSPs (n=39)



Reducing CDSP Implementation Challenges

Immunization Requirements

- mandate complete immunization record as a condition of employment (6 responses)
- dedicate time for catch-up of all staff
  - *"Required hours and hours of time, letters, warning letters, threats of discipline, grievances, etc."*
- evaluate staff when they come in for fit-testing

Outbreak Management

- partner proactively with infection control (ICPs)
- *"education and support by managers to gather data"*
- outline process clearly in policies

Post Exposure Management

- *"documented communication program between OHS and IPAC"*

Summary

We identified key challenges to implementing CDSPs, and gaps in process to ensure HCWs are protected:

1. OHS staffing is variable by hospital type – no standard exists
2. Comprehensive electronic records are essential for timely access to HCW immune status
3. Ideally, HCW immunization history would flow freely between health care facilities and public health
4. Robust communication and partnership with IPAC

Our results provide a starting point for exploring feasible solutions to the challenges of HCW immunization, and identifying priority areas for future improvements