

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Live Virus Vaccination in Hospital, Hospice, Nursing Home, and Long-Term Care Settings: Guidelines

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Research Questions

What are the evidence-based guidelines regarding live virus vaccination in the hospital setting?

Key Findings

One evidence-based guideline was identified regarding live virus vaccination in the hospital setting

Methods

A limited literature search was conducted by an information specialist on key resources including Medline, Embase, CINAHL, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were live virus vaccination and viral shedding. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2012 and July 19, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

| | |
|---------------------|--|
| Population | Hospital inpatients, patients being admitted to hospital, and residents of hospice, nursing homes, or long-term care facilities |
| Intervention | Live virus vaccination (i.e., measles, mumps, rubella [MMR]; varicella; rotavirus) in the hospital, hospice, nursing home, or long-term care setting |
| Comparator | Not applicable |
| Outcome | Guidelines |
| Study Design | Evidence-based guidelines |

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Normally, health technology assessment reports, systematic reviews, and meta-analyses are presented first; however, in reports where guidelines are primarily sought, the aforementioned evidence types are presented in the appendix

One evidence-based guideline¹ was identified regarding live virus vaccination in the hospital setting

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One guideline¹ by the Medical Advisory Committee of the Immune Deficiency Foundation addressed concerns regarding transmission of infectious agents to immunodeficient patients from healthy individuals shedding live vaccine-derived organisms. Four recommendations were brought forth by the committee including proper education about vaccinations and the critical need for immunodeficient patients to receive vaccinations at the appropriate time to reduce future infection risk.¹ Additionally, it was recommended that live viral and bacterial vaccines be avoided in all patients with significant T and B cell deficiencies, particularly in infants who have decreased immune systems and who are at higher risk of infection.¹

References Summarized

Guidelines and Recommendations

1. Medical Advisory Committee of the Immune Deficiency Foundation, Shearer WT, Fleisher TA, et al. Recommendations for live viral and bacterial vaccines in immunodeficient patients and their close contacts. *J Allergy Clin Immunol.* 2014 Apr;133(4):961-966.
[PubMed: PM24582311](#)

Appendix — Further Information

Systematic Reviews

2. Greenwood KP, Hafiz R, Ware RS, Lambert SB. A systematic review of human-to-human transmission of measles vaccine virus. *Vaccine*. 2016 05 17;34(23):2531-2536. [PubMed: PM27083423](#)

Additional References

3. Cortese MM, Parashar UD. Prevention of rotavirus gastroenteritis among infants and children recommendations of the advisory committee on immunization practices (ACIP) (*Report no. 58 (RR02)*). Washington (DC): Morbidity and Mortality Weekly Report (MMWR) of the Centers for Disease Control and Prevention (CDC); 2009: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5802a1.htm>. Accessed 2019 Aug 8.
4. Cono J, Casey CG, Bell DM. Smallpox vaccination and adverse reactions: guidance for clinicians (*Report no. 52(RR04)*). Washington (DC): Morbidity and Mortality Weekly Report (MMWR) of the Centers for Disease Control and Prevention (CDC); 2003: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5204a1.htm>. Accessed 2019 Aug 8. See: *Introduction*