Quick Hits - Immunizations

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Disclosures

• I have received consultancy fees or speaker honoraria from:
  – Merck
  – Novartis
  – Pfizer

I am a voting member of the National Advisory Committee on Immunization (PHAC) and a past member of the Canadian Pediatric Society Infection and Immunization Committee
Why Bother?

- Impaired defenses predispose patients to an increased risk or severity of vaccine preventable diseases
- Frequent contact with medical environment increases exposure to pathogens
- Vaccination rates are low
Classification of Vaccines

• Live

• Inactivated
  – Protein
  – Polysaccharide
  – Conjugated (protein plus polysaccharide)
Which ones are live?

- Varicella
- MMR
- Rotavirus
- Flumist (don’t use)
- Typhoid
- Oral polio (not used in Canada in decades)
- BCG (stay far, far away)
- Yellow fever (only travel clinic)
There is **NO** down side

All the inactivated or non-live vaccines can do no harm...if the patient is really immune suppressed, they might not get any benefit
But there is no harm
So vaccinate!!!!!!!!!!!!!!!!!!!!!
So just vaccinate them in your clinic.....what ya waitin’ for?
Go see your family doctor.
What disease do you have? I think you should ask your specialist.
Specialists share responsibility with the primary care provider for ensuring vaccination is administered to immunocompromised pts households.
Canadian Immunization Guide

From Public Health Agency of Canada

Overview
The Canadian Immunization Guide is a comprehensive resource on immunization. It was developed based on recommendations and statements of expert advisory committees, including the:

- National Advisory Committee on Immunization (NACI)
- Committee to Advise on Tropical Medicine and Travel (CATMAT)

Who this guide is for
This guide was developed for those with an interest in immunization, including:

- health professionals
- vaccine program decision makers
- other Canadian stakeholders

In this guide
This guide consists of 54 chapters organized into 5 parts. Chapters are updated as new evidence becomes available, and NACI and CATMAT statements are completed. Subscribe for automatic updates when changes are made.

- Acknowledgments
- Introduction
- Part 1: Key immunization information
- Part 2: Vaccine safety
- Part 3: Vaccination of specific populations
- Part 4: Active vaccines
- Part 5: Passive immunization
Canadian Immunization Guide: Part 3 - Vaccination of Specific Populations

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- Immunization of Travellers
- Immunization of Persons New to Canada
- Immunization of Workers

Organization: Public Health Agency of Canada
Updated: see Table of Updates

Related Topics

- Canadian Immunization Guide
- Introduction
- Part 1 – Key Immunization Information
- Part 2 – Vaccine Safety
- Part 4 – Active Vaccines
- Part 5 – Passive Immunizing Agents
Canadian Immunization Guide: Part 3 - Vaccination of Specific Populations

Immunization of Persons with Chronic Diseases

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- Table 1: Vaccination of Persons with Chronic Disease
- Selected References
2013 IDSA Clinical Practice Guideline for Vaccination of the Immunocompromised Host

Lorry G. Rubin¹, Myron J. Levin², Per Ljungman³,⁴, E. Graham Davies⁵, Robin Avery⁶, Marcie Tomblyn⁷, Athos Bousvaros⁸, Shireesha Dhanireddy⁹, Lillian Sung¹⁰, Harry Keyserling¹¹, and Insoo Kang¹²

Correspondence: Lorry G. Rubin (lrubin4@nshs.edu).

It is important to realize that guidelines cannot always account for individual variation among patients. The guidelines are not intended to supplant physician judgment with respect to particular patients or special clinical situations. The Infectious Diseases Society of America considers adherence to these guidelines to be voluntary, with the ultimate determination regarding their application to be made by the physician in the light of each patient's individual circumstances.

An asterisk (*) indicates recommendation for a course of action that deviates from recommendations of the Advisory Committee on Immunization Practices, Centers for Disease Control and Prevention.

Abstract

An international panel of experts prepared an evidenced-based guideline for vaccination of immunocompromised adults and children. These guidelines are intended for use by primary care and subspecialty providers who care for immunocompromised patients. Evidence was often limited. Areas that warrant future investigation are highlighted.
Influenza

• All >6 months heme or solid tumors **GIVE**
• Only exception is pts getting anti-B cell antibodies or induction and consolidation for leukemia (only because it likely won’t work, but no harm)
Pneumococcal

• Primary series 4 doses 2, 4, 6 and 12-15 mo
• If between 12 and 24 mo, need 2 doses, 8 weeks apart
• Those over 24 mo need one dose
• PCV 13, 8 weeks later, PPV 23
• If pt already got PPV23, wait one year, then PCV 13
All Other Inactivated

• Give during maintenance all routine vaccines, but don’t count them as valid doses...

• I write in my chart but not in the yellow card
Once done chemotherapy

- Three months after last chemo, start giving routine schedule
- If anti-B cell antibodies, wait 6 months
• Everyone should be up to date for all vaccines. The only one they can’t get is oral polio.

STRONG recommendation for a flu shot
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<th>Fiche d'immunisation</th>
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<td><strong>Date de naissance:</strong></td>
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<td><strong>Health Card Number</strong></td>
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<tr>
<td>Vaccin administré par</td>
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<tr>
<td>nom et numéro de tel. du médecin</td>
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Montreal Children’s Hospital

- 2640 high risk children vaccinated
- 1912 family members vaccinated
- Running for 5 years, first funded by MOH, now by Hospital Foundation, open M-F, 8-4, vaccine is MOH funded, seasonal, will vaccinate all comers

J Merckx, J. Vaccine. 2016 Feb 3;34(6):750-6
BC Children’s has one too!!!!
Oncology at CHOP

- The influenza immunization rate increased by 20.1% to 64.5%
- Similar changes were noted across all cancer types, with highest rates of immunization in leukemia/lymphoma patients (86.8%) and lowest in patients after stem cell transplant (66.7%)
Implementation

1. Family education: vaccine handouts in clinic waiting rooms

2. Health informatics: daily lists of outpatients due for immunization were generated from the electronic medical record and sent automatically to triage staff and nurses

3. Outpatient clinic: patients due for vaccination were given colored wristbands to alert providers

4. Inpatient: vaccine order was built into admission order set

5. Provider education: staff education was provided at conferences on screening of patients, vaccine ordering, and documentation of refusals/contraindications.

Freedman J Pediatrics. 2015 Feb;135(2):e540-6
Has your child been immunized against influenza?

INFLUENZA
Influenza ("the flu") is a highly contagious respiratory infection. It spreads through close contact with others and contaminated surfaces.

CHILDREN AT HIGH RISK
At greatest risk of influenza-related complications are healthy children 6 to 59 months of age, and children with chronic health conditions such as:
• Cardiac or pulmonary disorders, including asthma or cystic fibrosis
• Diabetes and other metabolic diseases
• Cancer and other immune-compromising conditions due to disease, therapy or both
• Kidney disease
• Anemia or blood disorders, including sickle cell, thalassemia
• Neurologic or neurodevelopmental conditions, including seizure disorders and developmental delay in children
• Morbid obesity; and
• Children age 6 months to 18 years undergoing treatment for long periods with acetylsalicylic acid

PREVENT THE SPREAD OF INFLUENZA BY IMMUNIZING YOUR CHILDREN
Influenza immunization is recommended for all healthy children 6 to 59 months of age, children with chronic health conditions, and for people who are capable of spreading influenza to those at high risk, including health care providers, household contacts and people who provide essential community services.

Annual immunization is an effective and safe way to prevent the spread of influenza and its complications.

Talk with your child’s health care provider about immunizing your child against influenza.

For more information, visit immunize.ca

Reference:
Take Home Points

• These children are at high risk
• Slip through the cracks of the system – primary care are often not comfortable – often hospital is their ‘home’
• Chronic patients are at the hospital weekly/monthly
• Parents and children will comply if hospital care team advocates strongly
• Parents and children should be immunized
UNLESS someone like you cares a whole awful lot, nothing is going to get better. It's not.

—The Lorax