Publicly Funded Immunizations vs NACI Recommendations while Preparing for Travel
## DISCLOSURE STATEMENT

<table>
<thead>
<tr>
<th>Type of relationship</th>
<th>Modest (less than 10K)</th>
<th>Significant (greater than $10K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Consulting Fees/Honoraria</td>
<td>Please specify organization name</td>
<td>Please specify organization name</td>
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<tr>
<td>B - Speaker’s Bureau</td>
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<tr>
<td>C - Equity Interests/Stock Options/Royalty</td>
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<tr>
<td>Income/Non Royalty Payments</td>
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<tr>
<td>D - Officer, Director, Or In Any Other Fiduciary</td>
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<tr>
<td>Role</td>
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<tr>
<td>E - Ownership/Partnership/Principal</td>
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<tr>
<td>F - Research Grants/Educational Grants</td>
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<td>G - Fellowship Support</td>
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<tr>
<td>H – Salary</td>
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<tr>
<td>I - Intellectual Property Rights</td>
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<tr>
<td>J - Other Financial Benefit</td>
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</table>

There are no relationships to disclose

X
Objectives

1) Describe the NACI process for making immunization recommendations
2) Review the MHSAL process for setting eligibility criteria
3) Develop an Approach to NACI recommended but uninsured immunizations while preparing for Travel
The MB Immunization Program

- Provides approximately 1 million government-funded immunizations to approximately 1.25 million Manitobans through 1,000 health care providers.
- Uses a ‘mixed provider model’ with physicians, nurse practitioners, pharmacists and public health nurses.
How is MB’s Schedule Set?

1. Health Canada (BGTD) approves vaccine
2. Canada’s National Advisory Committee on Immunization (NACI) makes recommendation and produces statement
3. MHSAL CDC applies DeWals Framework, which focuses on effectiveness, safety and cost-effectiveness
4. MB’s Provincial Vaccine Advisory Committee (PVAC) reviews evidence and makes a MB-specific recommendation
5. Ministerial and/or Treasury Board approval is sought
   - Balanced with competing provincial and programmatic priorities
Vaccine Procurement

- Vaccine procurement falls under provincial jurisdiction (as opposed to federal).
- MB participates in the national procurement process through PSPC, the FPT committee is VSWG.
- PSPC negotiates with industry for vaccine specific national contracts, on behalf of the participant provinces and territories.
- Vaccines are shipped directly from manufacturer to MB’s vaccine warehouse for further distribution to health care providers.
Inventory Management

- Cold chain management and monitoring.
- Forecasting quantity of vaccines purchased/year, based on past usage/historical trends.
- Monitor health care provider ordering practices to ensure compliance with MHSAL eligibility criteria.
Vaccine Safety

- Passive surveillance with provider initiated AEFI reporting
- Medical Review of all AEFI by regional MOH
- Expert Specialist Review of all serious AEFI
- Causality Assessment of select serious AEFI
- IMPACT: Active Surveillance through Children’s Hospital
- Ongoing federal/provincial/territorial collaboration through Vaccine Vigilance Working Group

Initially MIMS only contained information for those born on or after January 1, 1980 but by 1990, it recorded immunizations for all children aged 18 and under. In 2000, adults immunizations were added to the registry.

MIMS now records immunizations for all Manitobans registered with MHHLs.

Coverage rates are ascertained using MIMS and reminder letters are generated at the population level.

Panorama is being implemented across the province and will effectively replace MIMS.
Vaccine Program Evolution

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**Inflammation**
(redness and swelling of the liver)

**Cirrhosis** (severe scarring that may affect the way your liver functions)

**Fibrosis** (scarring of the liver)

**Liver cancer**
Meningococcal Disease
HPV Disease
Pneumococcal Disease
The Committee to Advise on Tropical Medicine and Travel

- An expert advisory body that assists PHAC with travel health-related advice for travellers and health care professionals.
- Provide recommendations relating to the prevention and treatment of infectious diseases and other health hazards that may be encountered by Canadian travellers outside of Canada;
The National Advisory Committee on Immunization

- Provides the Public Health Agency of Canada with ongoing and timely medical, scientific, and public health advice relating to immunization.
- People administering the vaccine should also be aware of the contents of the relevant product monograph(s).
- Recommendations for use and other information set out herein may differ from that set out in the product monograph(s) of the Canadian manufacturer(s) of the vaccine(s). NACI members and liaison members conduct themselves within the context of the Agency’s Policy on Conflict of Interest, including yearly declaration of potential conflict of interest.
NACI is a national advisory committee of experts in pediatrics, infectious diseases, immunology, medical microbiology, internal medicine and public health.

Works with staff of the Centre for Immunization and Respiratory Infectious Diseases of the Public Health Agency of Canada to provide ongoing and timely medical, scientific and public health advice.

NACI makes recommendations for the use of vaccines approved for use in humans in Canada, including the identification of groups at risk for vaccine-preventable diseases for whom vaccination should be targeted. NACI knowledge syntheses, analyses and recommendations on vaccine use in Canada are included in published literature reviews, statements and updates. NACI recommendations are also published in the Canadian Immunization Guide.
Levels of Evidence Based on Research Design

- **I** Evidence from randomized controlled trial(s)
- **II-1** Evidence from controlled trial(s) without randomization.
- **II-2** Evidence from cohort or case-control analytic studies, preferably from more than one centre or research group using clinical outcome measures of vaccine efficacy.
- **II-3** Evidence obtained from multiple time series with or without the intervention.
- **III** Opinions of respected authorities, based on clinical experience, descriptive studies and case reports, or reports of expert committees.
Quality (internal validity) Rating of Evidence

- **Good**: A study (including meta-analyses or systematic reviews) that meets all design-specific criteria well.
- **Fair**: A study (including meta-analyses or systematic reviews) that does not meet (or it is not clear that it meets) at least one design-specific criterion but has no known "fatal flaw".
- **Poor**: A study (including meta-analyses or systematic reviews) that has at least one design-specific "fatal flaw", or an accumulation of lesser flaws to the extent that the results of the study are not deemed able to inform recommendations.
Grading of Recommendations Assessment, Development and Evaluation

- **A**: NACI concludes that there is **good** evidence to recommend immunization.
- **B**: NACI concludes that there is **fair** evidence to recommend immunization.
- **C**: NACI concludes that the existing evidence is **conflicting** and does not allow making a recommendation for or against immunization; however other factors may influence decision-making.
- **D**: NACI concludes that there is **fair** evidence to recommend against immunization.
- **E**: NACI concludes that there is **good** evidence to recommend against immunization.
- **I**: NACI concludes that there is **insufficient** evidence (in either quantity and/or quality) to make a recommendation, however other factors may influence decision-making.
Recommendation 1: NACI concludes that there is good evidence, on an individual basis, to recommend in immunocompetent adults aged 65 years and older not previously immunized against pneumococcal disease, the use of PNEU-C-13 vaccine followed by PNEU-P-23, for the prevention of CAP and IPD caused by the 13 pneumococcal serotypes included in the conjugate vaccine. (NACI recommendation grade A).
Recommendations for immunocompetent individuals provided have been developed to guide protection at the individual level. In developing these recommendations, NACI has not considered other public health aspects of immunization, which will be addressed in a forthcoming statement.
Public Health Aspects of Immunization

- These are the broad and include:
  - Immunization strategy (5Ws)
  - Cost-effectiveness
  - Acceptability, feasibility, and evaluability of program,
  - Research questions,
  - Equity, ethical, legal and political considerations.
Make a difference
### Manitoba’s Routine Immunization Schedule for Infants and School Ch (2016)

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>2 Months</th>
<th>4 Months</th>
<th>6 Months</th>
<th>12 Months</th>
<th>18 Months</th>
<th>4-6 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTaP-IPV-Hib</td>
<td>♦</td>
<td>♦</td>
<td>♦</td>
<td></td>
<td></td>
<td>♦</td>
</tr>
<tr>
<td>Pneu-C-13 ^</td>
<td>♦</td>
<td>♦</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td>♦</td>
<td>♦</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMRV</td>
<td></td>
<td></td>
<td></td>
<td>♦</td>
<td></td>
<td></td>
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<tr>
<td>Men-C-C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>♦</td>
<td></td>
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<tr>
<td>Tdap-IPV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>♦</td>
</tr>
<tr>
<td>Influenza</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vary each year</td>
</tr>
</tbody>
</table>

♦ = A single dose given with one needle.

^ = Children with high-risk medical conditions and those living in First Nations communities should be immunized at 2, 4, 6 and 18 months.
<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Grade 4</th>
<th>Grade 6</th>
<th>14-16 years</th>
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</thead>
<tbody>
<tr>
<td>Men-C-C *</td>
<td>♦</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B **</td>
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<td>♦♦</td>
<td></td>
</tr>
<tr>
<td>HPV ***</td>
<td></td>
<td>♦♦</td>
<td>♦♦</td>
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<tr>
<td>Tdap</td>
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</tr>
<tr>
<td>Influenza</td>
<td></td>
<td>Vary each year</td>
<td></td>
</tr>
</tbody>
</table>

♦ = A single dose given with one needle.

• The Grade 4 program ends after 2016/17 school year to Grade 6 in September 2019.

** From September 2017, the hepatitis B vaccine will be given as 2-doses in Grade 6 to children born ≥ 2006. Children born between 1989 and 2005 would have been part of the 3-dose hepatitis B program provided in Grade 4. Individuals born between 1989 and 2005 who missed the school program may be caught up with the 3-dose schedule.

*** Effective September 2016, the HPV vaccine will be offered to boys and girls in Grade 6, as well as to boys in Grade 8 or 9 as part of a 3-year catch-up program (born between 2002-2004).
# Manitoba’s Routine Immunization Schedule for Infants and Children (1996)

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>AGE AT VACCINATION</th>
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<tr>
<td></td>
<td>2 Months</td>
</tr>
<tr>
<td>DPT</td>
<td>♦</td>
</tr>
<tr>
<td>Polio</td>
<td>♦</td>
</tr>
<tr>
<td>Haemophilus b</td>
<td>♦</td>
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<tr>
<td>MMR</td>
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<tr>
<td>Td</td>
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</tbody>
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¹ The dose is omitted if OPV is used exclusively
² Beginning September 1997, a second dose of MMR was to be required