INTEGRATION OF RESEARCH INTO POLICY: THE QUEBEC EXPERIENCE

Monique Landry, medical advisor, Annecy, September 27th 2017
Disclosures

• None to declare

• This presentation reflects my own opinion and does not engage, in any way, the Quebec MSSS or the Quebec Immunization Committee
Outline

• A quick glance at Quebec’s immunization program and structure
• Recent examples of innovation
• The case study of HPV program
• Conclusion
Canada

• Population: 38 millions
• 10 provinces - 3 territories
• Official languages: French and English

• Quebec: 8 millions
• Birth cohort 90 000
Decision making Process

Government of Québec

MSSS

Treasury Board

Quebec Public Health Institute
Quebec Immunization Committee (CIQ)

Public Health Direction

Regional Public Health (18)
Program implementation:
Public Health (80%) - Physicians (20%)
Comité sur l’immunisation du Québec

- Advisory committee to the MSSS for programs to implement or to modify
- Multidisciplinary with active, liaison and ex-officio members
- Use of Erickson De Wals framework since 2001
- Recommendations reached by consensus
- Broader consultation process
- Provides recommendations on the need of research and program evaluation
MSSS

- Decision-making
- Planning and implementation
- Funding, including for program evaluation and monitoring
  - % of the procurement budget set aside and made recurrent
- Following CIQ recommendations, MSSS decides on project selection, focussing on acceptability, effectiveness and cost-effectiveness
Recent examples of innovation
Pneumococcal vaccination schedule 2 + 1 PCV (2-4-12 months)

• First in the world
• Implemented in December 2004, based on:
  – immunogenicity data
  – results on a case-control study in USA
  – cost-effectiveness study
• Followed by a thorough evaluation and monitoring program including case-control vaccine effectiveness study (still ongoing)
• Program currently under review
Hepatitis B program in school

• Hepatitis B program in grade 4 (9-10 years old) implemented with a schedule of 3 doses in 1994
• Immunogenicity study funded by MSSS with 3 different schedules:
  – Recombivax 0.25 ml at 0, 1, 6 mois (our schedule)
  – Recombivax 0.5 ml at 0, 6 months
  – Twinrix 0.5 ml at 0, 6 months
  High immunogenicity and seroprotection rates for all 3 regimen
• Cost-effectiveness study favorable to HAHB vaccine
• Program changed in 2008 (with the introduction of HPV vaccination)
“Impact” of HAHB vaccine program

- Cases of hepatitis A in children aged 11-17 years old, Quebec, 2000-2016

2000-2007
- 27 cases
  - Before the program

2009-2016
- 15 cases
  - Non eligible cohorts

2010-2016
- 4 cases
  - Eligible cohorts

Source: Dr Vladimir Gilca, INSPQ, communication personnelle
The case study of HPV program
• Licensure of 4-valent HPV vaccine in Canada in 2006
• Schedule, 0, 2, 6 months
• Steps at that time:
  • Recommendations from the experts
  • Planning
  • Implementation
  • Monitoring and evaluation
Scientific recommendation 2007

- Canadian workshop to rank different HPV research questions by their importance:
  
  **2+1 schedule ranked #1**

- Extended CIQ committee (OB-GYN, STI, cancer, anthropology experts)

- Collaboration with industry for unpublished results

- Use of Erickson de Wals framework
  (13 dimensions, such as program goal and objectives, burden of disease, vaccine characteristics, possible strategies, cost-effectiveness, acceptability)
Scientific recommendation 2007

• Studies needed for recommendation
  – Acceptability of physicians and population: showed high support
  – Cost-effectiveness (modeling) studies of different strategies

• A unique schedule was recommended
  – 2 doses at 6 months interval (grade 4)
  – 1 dose at 60 months in needed (grade 9)
  – catch-up in grade 9 with 3 doses
  – vaccine free of charge up to 18 years old
Justification from the experts

• Immunological:
  – Very immunogenic vaccine (much more than natural infection)
  – Immune response at 9-11 years of age especially good (bridging)
  – principle of spacing doses
  – reactivation of immune memory with a booster dose

• Operational:
  – With current HB 2 doses program (grade 4) and Tdap in grade 9
  – Better compliance
Program implementation in 2008

• Extensive consultation before implementation
• Appropriate funding for resources and for monitoring and evaluation
• Quebec Immunization Protocol
• Training +++
• Tools for vaccine providers (school nurses, physicians), parents school boards, etc.
• 1st year uptake:
  – 80% grade 4
  – 81% grade 9
  – 70% 15-17 years old
Program monitoring and evaluation

• Moral responsibility and legal mandate of public health authorities
• Specific mandate given to the Quebec Public Health Institute
• Comprehensive plan on multiple dimensions:
  – Immunological studies and efficacy data (collaboration with Canadian BC colleagues) (for the need of the 3rd dose)
  – Randomized trial Cervarix - Gardasil
  – Vaccine coverage/adverse events surveillance
  – Impact of program on HPV prevalence in 15-26 years old
  – Impact of program on sexual behaviours
Key elements for the successes

• Roles and responsibilities of each stakeholders (researchers, industry, policy makers, academia, vaccine providers) well defined
• Appropriate funding for all stages
• Enhanced collaboration and open communication at each steps
  – preparation of the statement
  – implementation
  – evaluation
Key elements for the successes

- Rigorous methods and transparency lead to confidence in the decision-making process
- Need to adjust when new data comes out:
  - 3rd dose not needed (change in program in 2013)
  - Vaccine coverage down 5 points lead to a study and successes and pitfalls in school programs in 2016
  - New studies to come to identify successful strategies to increase coverage
Conclusion

• Integration of research into policy at all stages is a win-win situation

• Vaccine programs are tailored for our needs.
• Individually driven or organisational?
  Challenge of sustainability always there

• Integration must be institutionalized as much as possible but it does not preclude to have dedicated people around the table.
Thank you! Questions?