

 **Ministère de la Santé et des Services sociaux**
Public Health Directorate

INTEGRATION OF RESEARCH INTO POLICY: THE QUEBEC EXPERIENCE

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

Québec 

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

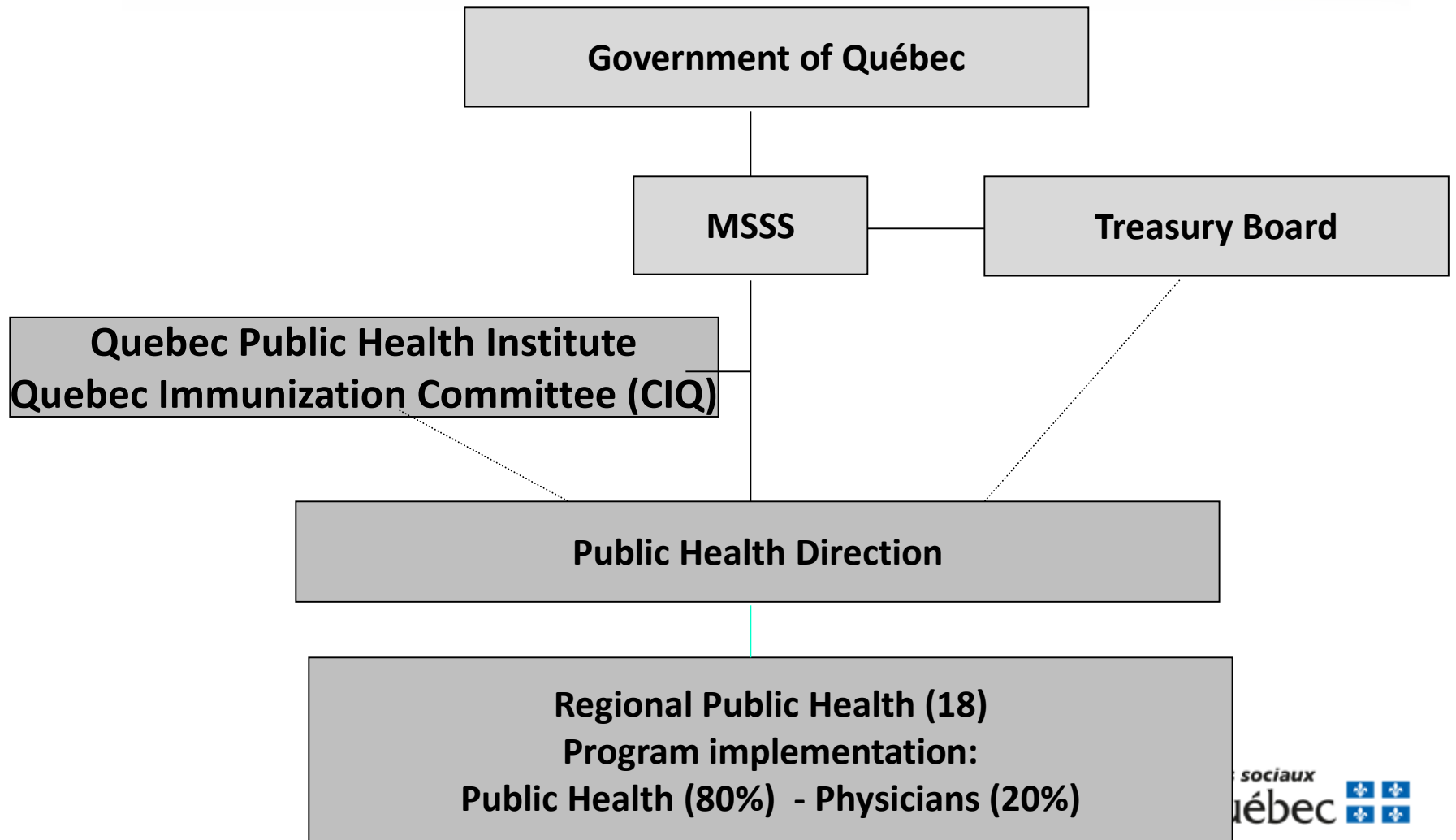
Canada

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



- Quebec: 8 millions
- Birth cohort 90 000

Decision making Process





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)

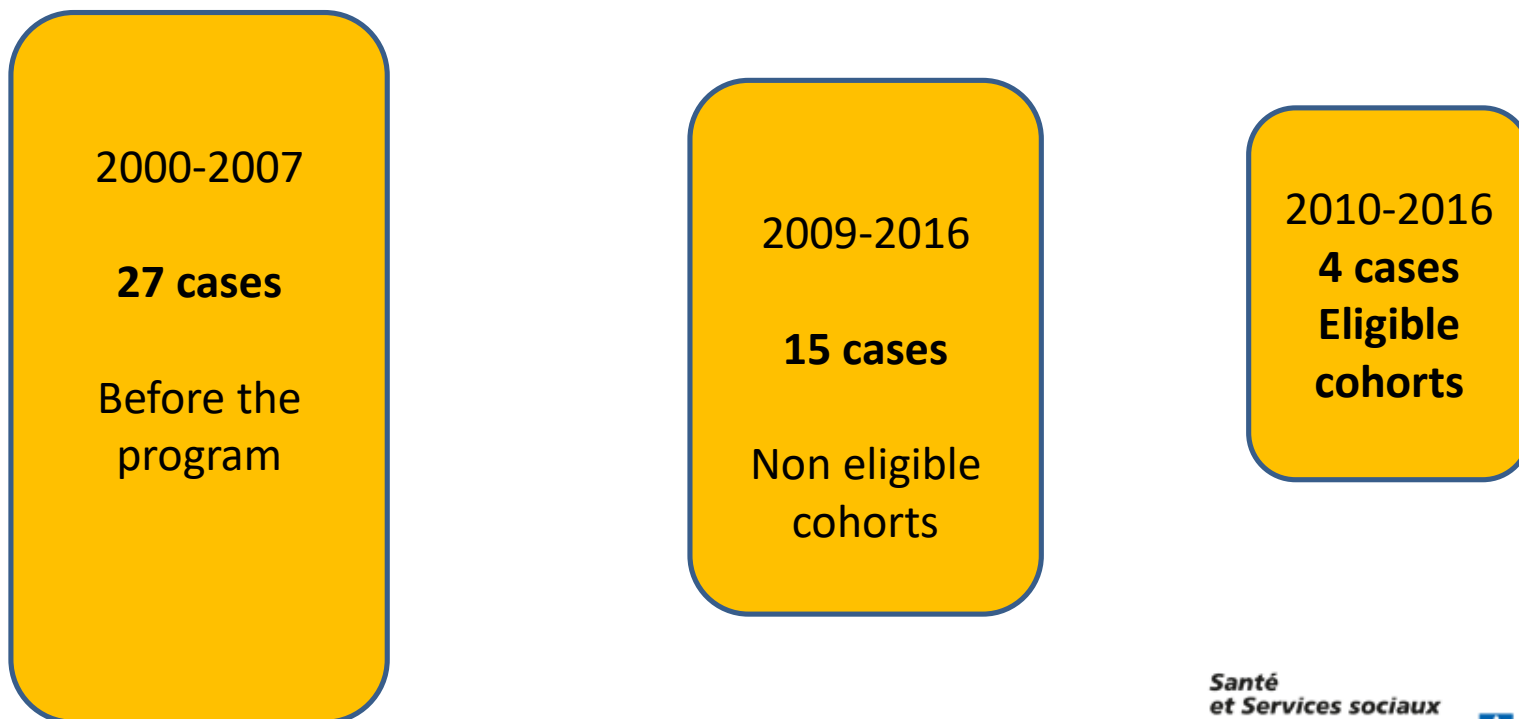
- First in the world
- Implemented in December 2004, based on:
 - immunogenicity data
 - results on a case-control study in USA
 - cost-effectiveness study
- Followed by a thorough evaluation and monitoring program including case-control vaccine effectiveness study (still ongoing)
- Program currently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





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

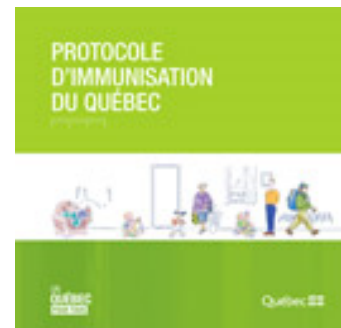
} Extended
schedule

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 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



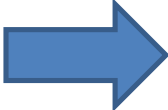
Key elements for the successes

- 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?

