

# Evaluation of the Canadian Paediatric Surveillance Program Process and Results

D Grenier, A Medaglia, J Doherty, D MacDonald, J Scott, G Delage, MA Davis  
Canadian Paediatric Society and Health Canada



## CPSP Evaluation Process

### Process

- Followed WHO directives
- Determined clear concise objectives to:
  - provide opportunity for feedback
  - assess scientific and public health worth
  - document strengths and weaknesses
  - identify opportunities for improvement



Grabowsky M, et al. Making surveillance work: Module 1. WHO 2001

### Background Program Materials

- Logic models\* for short- and long-term outcomes on
  - Initiation of a study
  - Surveillance process
  - Impact of information dissemination
- Anonymous surveys\*\*
  - Participants
  - Investigators
  - Steering Committee members
  - Public health professionals

\* Porteous NL, et al. Program Evaluation Toolkit: A Blueprint for Public Health Management; 1997  
\*\* Gazarian D, et al. Evaluation of a National Surveillance Unit; Arch Dis Child; 1999

### CPSP Anonymous Surveys Based on CDC Criteria for Surveillance Systems Attributes

#### CDC Criteria\*

- Simplicity
- Flexibility and timeliness
- Data quality
- Acceptability
- Sensitivity
- Positive predictive value
- Representativeness
- Stability

\* Updated guidelines for Evaluating Public Health Surveillance Systems. CDC MMWR, 2001

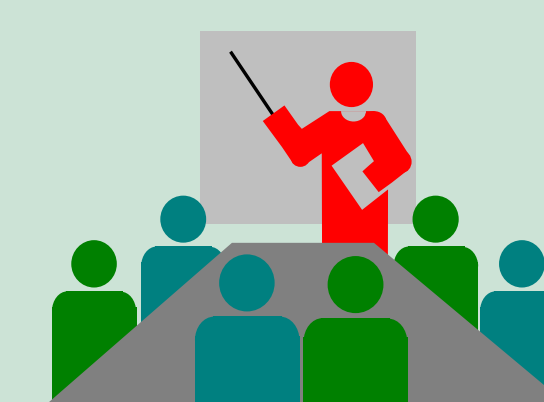
### Evaluation Advisory Group Membership

#### Chair

- Dr. Robert McMurtry
  - Former Assistant Deputy Minister, Health Canada
  - Former Dean of Medicine, University of Western Ontario

#### Members

- Dr. Margaret Berry
  - Neonatologist and CPSP participant
- Dr. Jeff Davis
  - Chief Medical Officer, Wisconsin, USA
- Dr. Philippe Duclos
  - Project Leader, Immunization Safety, WHO
- Dr. Monika Naus
  - Epidemiologist, BC Centre for Disease Control
  - Chair, National Advisory Committee on Immunization



#### Functions

- Reviewed all data independently
- Interviewed key people
- Produced a final assessment summary with recommendations
- Presented evaluation findings to the CPSP Steering Committee and discussed next steps

In the midst of a SARS outbreak in two of the larger provinces

## Survey Feedback

### Participants

#### Simplicity

- 96% returned most or all monthly forms
- 47% reported at least one case
- 22% reported two or more cases
- 80% felt that questionnaire was easy to complete
- 83% said that case-specific information was generally available
- 38% felt it was too detailed/time consuming but were still willing to complete

#### Acceptability

- 83% monthly response rate
- 95% voluntary completion of detailed questionnaire
- 90% had no hesitation in providing clinical information
- 70% felt that 11 conditions under surveillance was an adequate number
- 10% had considered conducting a CPSP study
- 92% would respond by phone/fax for a public health emergency

#### Positive Predictive Value

- Above 70% for 15 studies
- 63% - hepatitis C virus infection
- 22% - hemorrhagic disease of the newborn (HDNB)
  - Acronym confused with hemolytic disease of the newborn

#### Flexibility and Timeliness

- Initial report can be altered within days
- Average implementation time is 10 months
- Specific survey question is an option
- 41% would return form if not postage-paid
- 67% favourable to e-mail/fax response
- 92% would respond by phone/fax for a public health emergency

#### Sensitivity

- CPSP tool
  - 3% knew of a case and returned a blank form
  - 2% knew of a case and did not return the form
- CPSP studies (where alternate case ascertainment sources were available)
  - 100% - acute flaccid paralysis, cerebral edema in diabetic ketoacidosis, Creutzfeldt-Jakob disease
  - 89% - congenital rubella syndrome
  - 16% - hepatitis C virus infection

#### Usefulness

- 80% were aware of CPSP annual Results
- 68% found study protocols useful
- 62% found educational resources helpful
- 17% of clinicians said materials changed their clinical practice

### Study Investigators

- 95% - national ascertainment needed to answer research questions
- 68% - national study possible only with the CPSP
- 94% - CPSP study met their research objectives
- 55% - studies had co-investigators from different centres encouraging collaborative national research

### Public Health Professionals

- 88% - knew of the CPSP
- 86% - were aware of CPSP studies
- Used study results:
  - 70% - for immediate action of public health importance
  - 71% - for guidance in planning, implementation and evaluation
  - 60% - for continuing professional development
  - 47% - to provide basis for future research
  - 32% - to evaluate public policy

### Steering Committee

- 90%-100% were pleased with the CPSP administration
  - Meetings
  - Materials
  - Study inclusion criteria
  - Study proposal review process
  - Investigators' presentations

## Recommendations and Next Steps

### Expert Advisory Group Conclusions

- Exemplary evaluation process
- Robust program unique in Canada
- Strong economical infrastructure
- Well-established national collaborative network
- Rapid real-time reporting rate
- High degree of sensitivity and predictive value

*"CPSP, a gem, a light under a bushel"*  
Dr. Robert McMurtry

### Expert Advisory Group Recommendations and CPSP Next Steps

- Continue essential surveillance on uncommon high impact paediatric diseases and conditions
- Reach out to other health-care professionals
- Explore potentials for quick response to a public health emergency
  - Transfer high-quality study results to relevant target audiences
    - to promote effective use in policy development
    - to provide research evidence-based knowledge for use in decision-making
- Secure long-term financial support
- Persist in essential advocacy role

**The CPSP gratefully acknowledges all program participants and study investigators for their active role in helping to advance research and knowledge on uncommon diseases.**