

Public health impacts of CPSP studies

1996 to 2005

During 10 years of surveillance, the CPSP participants have reported a total of 2,816 confirmed cases. Important public health impacts of study results are illustrated below.

1996 Congenital rubella syndrome

Findings: Rare with 10 cases over 10 years, mostly in non-immunized women

Public health impact: Need to maintain universal and targeted immunizations

1997 Acute flaccid paralysis

Findings: Documentation that Canada is polio-free

Public health impact: Obligation to report to the WHO polio eradication program

1998 Subacute sclerosing panencephalitis

Findings: Rare with two cases over four years

Public health impact: Need to maintain universal immunization against measles and rubella

1999 Cerebral edema in diabetic ketoacidosis (DKA)

Findings: High mortality rate of 23%

Public health impact: Prevention of DKA remains key, as cerebral edema is already present before initiation of therapy

2000 Hemorrhagic disease of the newborn

Findings: Very low rate of 0.22 per 100,000 live births

Public health impact: Supports CPS statement for intramuscular vitamin K as the gold standard

2001 Necrotizing fasciitis (NF)

Findings: Varicella was the most frequent factor of Group A streptococcal-related NF

Public health impact: Supports National Advisory Committee on Immunization statement for universal childhood varicella immunization

2002 Neonatal herpes simplex virus (HSV) infection

Findings: Significant mortality rate of 15.5%

Public health impact: Majority of cases being HSV-1 reinforces need for an HSV-1 and HSV-2 effective vaccine

2003 Vitamin D deficiency rickets

Findings: Over 100 children identified, majority were darker skinned and exclusively breast fed

Public health impact: Supports CPS statement for vitamin D supplementation of all exclusively breast-fed children

2004 Baby walkers

Findings: Confirmation that injuries are still occurring

Public health impact: Contributed to Health Canada's mandatory total ban on baby walker sales in April 2004

2004 Infant bath seats

Findings: Confirmation of injuries and drownings

Public health impact: Supported Health Canada's advisory on drowning hazard of infant bath seats in April 2005

2005 Lap-belt syndrome

Findings: High morbidity with 25% of children left paraplegic

Public health impact: Supports CPS advocacy that all provinces/territories adopt proper child restraints in motor vehicles and booster seat legislation

"It is an important mechanism for surveillance of human health and well-being of one of the most vulnerable populations in Canada, our children. The CPSP has done very well in regard to its current objectives."

Robert McMurtry, MD, Professor of Surgery, University of Western Ontario

"We were struck that such an inexpensive program could have such Canada-wide support from paediatricians. It is a good mechanism for finding low-frequency, high-impact conditions that otherwise would be quite difficult to identify."

Margaret Berry, MD, Neonatologist, The Montreal Children's Hospital



Public Health Impacts of CPSP Studies 2005 to 2011

Acquired demyelinating syndromes (ADS) of the central nervous system

- **Findings:** Optic neuritis was the most common presentation
- **Public health impact:** Supports the need for increased awareness that ADS could be a first manifestation of multiple sclerosis

Medium-chain acyl-coenzyme A dehydrogenase deficiency

- **Findings:** High efficiency of newborn screening programs to detect asymptomatic patients
- **Public health impact:** Supports early detection to allow for simple preventive measures (e.g., avoidance of fasting, prompt management of acute illnesses)

Congenital myotonic dystrophy (CMD)

- **Findings:** Neonatal mortality rate of 18%; CMD being a disorder of muscle immaturity, complication-free prolonged ventilation can result in improvement in strength and hypotonia state
- **Public health impact:** Reinforces the need for greater awareness, screening in pregnancy and genetic counselling, as 58% were index cases for the families

Non-type 1 diabetes mellitus

- **Findings:** Number of new cases of paediatric type 2 diabetes was higher than expected; 95% were overweight/obese; important regional differences were identified
- **Public health impact:** Supports CPS and PHAC efforts in promoting healthy active living

Early-onset eating disorders

- **Findings:** Incidence of 2.6 per 100,000 children five to 12 years of age
- **Public health impact:** Supports CPS statement for use of growth charts to assist early detection

Renal stone disease associated with melamine-contaminated products

- **Findings:** No cases found in Canada
- **Public health impact:** Demonstrates added value of the CPSP to conduct enhanced surveillance of emerging public health concerns, quickly and inexpensively

Head injury secondary to suspected child maltreatment

- **Findings:** High mortality rate of 12%; over half involved infants were less than six months of age
- **Public health impact:** Supports the need for more programs to prevent abusive head injuries

Severe iron-deficiency anemia (IDA)

- **Findings:** Nearly 200 confirmed cases, many with significant morbidity; risk factors included prolonged bottle-feeding and excessive cow's milk intake
- **Public health impact:** Supports the need for nutrition counselling to prevent IDA

Injuries associated with baby products

- **Findings:** Strollers involved in 63% of the 90 reported incidents
- **Public health impact:** Supports Health Canada's advisory warning about amputation/laceration hazard posed by strollers with hinge mechanisms

Travel-related illnesses in paediatric travellers who visit with friends and relatives abroad

- **Findings:** Enteric fever, malaria, diarrheal diseases and hepatitis A comprised 75% of the cases; most parents did not seek pre-travel advice
- **Public health impact:** Supports the need for education and provision of anticipatory guidance on pre-travel advice