

# Big Data at PHO: Infectious Diseases

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# Burden and Health Economics

- Objective: To determine **health outcomes** (illness, mortality), **healthcare resource use** and **cost** attributable to infectious diseases (i.e. difference between infected and uninfected).
- Retrospective cohort study:
  - Individuals with infection from laboratory data linked to administrative data held at ICES
  - Matched to similar individuals without infection drawn from Registered Persons Database (propensity scores)
  - Determine difference in outcomes and costs between infected/uninfected
- Meningococcal disease, Tuberculosis, Non-tuberculous mycobacteria, Lyme disease, Hepatitis B virus, *Streptococcus pneumoniae*, West Nile virus

# Vaccination Program Evaluations

- Influenza
- Varicella
- Rotavirus
- Pertussis (CIRN)
- Measles
- Human papillomavirus (HPV)