Potential indicators for reporting on the quality of primary health care of Canadian children and youth

Indicator from Environmental Scan	Operational Definition	Source	Feasibility With Current Population-based Data Sources in Canada
Indicators of Effectiveness			
Admissions for acute ambulatory care sensitive conditions	Admissions for gastroenteritis/dehydration ,urinary tract infections	1, 2	Feasible using administrative hospital data from CIHI
Rate of perforated appendix	Percentage of children with appendicitis who present with perforation	1, 2	Feasible using administrative hospital data from CIHI
Admissions for chronic ambulatory care sensitive conditions	Pediatric admission rates for asthma, diabetes, and related complications	1, 2, 3	Feasible using administrative hospital data from CIHI
Emergency department (ED) visits	Rate of ED visits per 1,000 population, among children up to age 19	4	Potentially feasible with administrative data sources, in select provinces/territories
Emergency department visits - asthma	Percentage of PHC clients/patients, ages 6 to 55 years, with asthma who visited the emergency department in the past 12 months.	1	Potentially feasible with administrative data sources, in select provinces/territories
Childhood Immunization Coverage - age 2	The percentage of children 2 years of age who had recommended doses of age-specific key vaccines, examples include the following antigens: diphtheria, tetanus and acellular pertussis (DTaP); polio (IPV); measles, mumps and rubella (MMR); H influenza type B (HiB); hepatitis B (HepB), chicken pox (VZV); pneumococcal conjugate (PCV); hepatitis A (HepA); and rotavirus (RV)	1, 3, 4, 5, 6, 7	Potentially feasible using provincial immunization registries or survey data
Childhood Immunization Coverage - age 7	Percentage of patient population, currently age 7, who have received recommended childhood immunizations.	8	Potentially feasible using provincial immunization registries or survey data
Adolescent Immunization Coverage - age 13	The percentage of children 13 years of age who had recommended doses of age-specific key vaccines, by their 13th birthday. Examples include the following antigens: meningococcal, Tdap, tetanus, diphtheria (Td)	4, 5	Potentially feasible using provincial immunization registries or survey data
Human Papillomavirus for Female Adolescents	The percentage of female adolescents 13 years of age who had three doses of the HPV vaccine by their 13th birthday	5	Potentially feasible using provincial immunization registries or public health unit data
Dental sealants for 6-9 year-old children at elevated caries risk	Percentage of enrolled children ages 6-9 at elevated risk of dental caries (moderate/high), who received a sealant on a permanent first molar tooth within the reporting year.	4	Not feasible

Youth who received preventive dental services	Percentage of individuals ages 1 to 20, eligible for services, and who received at least one preventive dental service during the reporting period	4	Not feasible
Child dental morbidity	Mean Decayed, Missing, Filled teeth (DMFT) index for 5 year old children and mean DMFT index for 12 year old children respectively, by socio-economic group when available.	6	Not feasible
Lead Screening in Children	This measure assesses the percentage of children 2 years of age who had one or more blood tests for lead poisoning by their second birthday.	5	Not feasible - currently not a recommended screening procedure in Canada
Appropriate Testing for Children with Pharyngitis	The percentage of children 2-18 years of age who were diagnosed with pharyngitis and dispensed an antibiotic, and received a group A streptococcus test for the episode. A higher rate represents better performance (i.e., appropriate testing).	5	Potentially feasible with EMR data sources
Appropriate Treatment for Children with Upper Respiratory Infection	The percentage of children 3 months-18 years of age who were given a diagnosis of URI and were not dispensed an antibiotic prescription. A higher rate indicates appropriate treatment of children with URI (i.e., the proportion for whom antibiotics were not prescribed).	5	Potentially feasible with registry or EMR data sources
Well-baby visits	Well-Child Visits in the First 15 Months of Life. The percentage of children who turned 15 months old during the measurement year and had from no well-child visits to six well-child visits with a primary care physician during their first 15 months of life;	1, 4, 5	Potentially feasible with provincial administrative data or EMR sources
Well-child visits	Percentage of children ages 3 to 6 who had one or more well-child visits with a PCP during the measurement year.	4, 5	Potentially feasible with provincial administrative data or EMR sources
Adolescent well-care visit	Percentage of adolescents ages 12 to 21 who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year	4, 5	Potentially feasible with provincial administrative data or EMR sources
Well-child visit	Percentage of patient population, currently age 3, who received screenings for congenital hip displacement, eye and hearing problems.	8	Potentially feasible with provincial administrative data or EMR sources
Developmental Screening in the first three years of life	Percentage of children screened for risk of developmental, behavioural, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday	4	Potentially feasible with provincial administrative data or EMR sources
Children with emotional, behavioral, or developmental problems that received mental health care		3	Potentially feasible using administrative, EMR or survey data sources
Follow-up after hospitalization for mental illness	Percentage of discharges for children ages 6 to 20 who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit encounter, or partial hospitalization with a mental health practitioner	4	Potentially feasible with linked administrative admission and outpatient care data sources
Follow-up Care for Children Prescribed ADHD Medication	The two rates of this measure assess follow-up care for children prescribed an ADHD medication:	4, 5	Potentially feasible with administrative data

	(1) Initiation Phase. The percentage of children between 6 and 12 years of age who were diagnosed with ADHD and had one follow-up visit with a practitioner with prescribing authority, within 30 days of their first prescription of ADHD medication; (2) Continuation and Maintenance Phase. The percentage of children between 6 and 12 years of age who had a prescription for ADHD medication and remained on the medication for at least 210 days, and had at least two follow-up visits with a practitioner in the 9 months subsequent to the Initiation Phase.		sources (depending on provincial drug coverage), or EMR data
Indicators of Access			
Child and Adolescent Access to Primary Care Practitioners	Percentage of children and adolescents ages 12 months to 19 years who had a visit with a primary care practitioner	4, 5	Potentially feasible with administrative data sources, survey or EMR data
Children with a medical home		3	Potentially feasible using survey data
Population with a regular primary health care (PHC) provider	Percentage of population, age 12 and older, who reported having a regular primary health care (PHC) provider.	8	Feasible using survey data
Difficulties accessing routine or ongoing PHC	Percentage of population, age 15 and older, who experienced difficulties obtaining required routine or ongoing primary health care (PHC) services.	8	Feasible using survey data
Children with both medical and dental preventive care visits		3	Potentially feasible using survey data

Sources:

1. Pan-Canadian Primary Health Care Indicators, Report 1, volume 1, Canadian Institute for Health Information (2006)
2. Established Child Health Care Quality Measures--AHRQ Quality Indicators. September 2012. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/chtoolbx/measures/measure3.html
3. U.S. Variations in Child Health System Performance: A State Scorecard
4. Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set). Technical Specification and Resource Manual for Federal Fiscal Year 2015 Reporting, March 2015. Centers for Medicare & Medicaid Services.
5. 2015 State of Health Care Quality (HEDIS)
6. Child Health Indicators of Life and Development (CHILD) Project
7. European Community Health Indicators. August 2013
8. Pan-Canadian Primary Health Care Indicator Update Report, Canadian Institute for Health Information (2012)

Abbreviations: CIHI Canadian Institute for Health Information ; PHC: Primary Health Care ; EMR :Electronic Medical Record