Visits to the Emergency Department for Conditions That Could Be Managed in Primary Care: In Person and Virtual

Methodology Notes

Canadian Institute for Health Information
Institut canadien d'information sur la santé

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Canadian Institute for Health Information
495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860
Fax: 613-241-8120
cihi.ca
copyright@cihi.ca

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Introduction

These notes provide methodological details for CIHI's new indicators — Visits to the Emergency Department for Conditions That Could Be Managed in Primary Care and Visits to the Emergency Department for Conditions That Could Be Managed Virtually in Primary Care — to support a better understanding and interpretation of the indicator results. These indicators estimate the percentage of visits to the emergency department (ED) for conditions that potentially could have been managed in the community through an in-person appointment or virtually with a primary health care provider.

Primary care has been defined as "routine care, care for urgent but minor or common health problems, mental health care, maternity and childcare, psychosocial services, liaison with home care, health promotion and disease prevention, nutrition counselling and end-of-life care. It is also an important source of chronic disease prevention and management."[1] In the context of these indicators, primary care providers may include family physicians, nurses or nurse practitioners, and other health care professionals found in the community such as dentists, optometrists, psychologists, other allied health professionals and specialists outside the hospital setting.

Virtual care has been defined as "any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care."[2] Virtual care is a relatively new addition to Canada's health care systems, precipitated in part by the COVID-19 pandemic; its role will evolve as technologies improve and as both patients and practitioners determine the right balance of virtual and in-person care. Variation exists across the country in available technologies, as well as in use of and comfort with virtual care. For the virtual care indicator, conditions were included that can be managed with a minimum level of expertise and comfort with virtual care, and with technology that

should be available to most patients and practitioners today. Future iterations of this indicator could focus on a more ideal state that adapts to emerging technologies, best practices, policies and infrastructure to support these advances.

Development of the methodology for these indicators followed CIHI's indicator development cycle. It was informed by a literature review, analyses of available databases and consultations with external stakeholders (e.g., family practice and ED clinicians, policy-makers, academics, various regional and provincial/territorial health system representatives). Details on the data sources, selection criteria and other methodological considerations are described in the following sections. For further information, feedback or questions about the indicator results or definitions, please email hsp@cihi.ca.

Data sources

CIHI's National Ambulatory Care Reporting System (NACRS) is the source of ED data for these indicators. CIHI receives data directly from participating facilities or from regional health authorities or ministries of health. Data collection methods and data standards vary by jurisdiction. There are 3 levels of data submission to NACRS that determine whether data elements are mandatory or optional. Level 3 data is the most comprehensive and contains diagnosis coding based on ICD-10-CA[i] in the Main Problem data element. Diagnosis coding for levels 1 and 2 is based on the Canadian Emergency Department Diagnosis Shortlist (CED-DxS) and is submitted in the ED Discharge Diagnosis data element.

Table 1 shows data coverage by jurisdiction for 2023–2024. Coverage and level of data submission vary across Canada.

i. *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Canada*.

Table 1 NACRS data coverage, 2023–2024

Province/territory	2023–2024 coverage	Submission level	Indicators calculated?
P.E.I.	Partial coverage	Level 3	Yes
N.S.	Partial coverage	Level 3*	Yes
Ont.	Complete coverage (>95%)	Level 3	Yes
Sask.	Complete coverage (>95%)	Level 3	Yes
Alta.	Complete coverage (>95%)	Level 3	Yes
Y.T.	Complete coverage (>95%)	Level 3	Yes
Que.	Complete coverage (>95%)	Level 1	Yes
B.C.	Partial coverage	Level 2	Yes
N.L.	No data	n/a	No
N.B.	No data	n/a	No
Man.	Partial coverage	Level 1†	No
N.W.T.	No data	n/a	No
Nun.	No data	n/a	No

Notes

* Level 1 data submitted by Nova Scotia does not include diagnosis information and is therefore excluded from the calculation; indicator results are based on Level 3 data submission for Nova Scotia.

† Level 1 data submitted by Manitoba does not include diagnosis information and is therefore excluded from the calculation.

n/a: Not applicable.

Selection of condition lists

The development of the primary care sensitive condition (PCSC) list built on previous work by the Health Quality Council of Alberta (HQCA)[3] and CIHI[4] on the development of a list of family practice sensitive conditions (FPSCs) that used ICD-10-CA codes. FPSCs were originally identified by HQCA as conditions that resulted in a rate of hospital admission that was less than 1%, the premise being that conditions with a very low risk of admission are more likely to be manageable in a primary care setting. CIHI adapted this list for 2014[4] and 2015[5] publications, excluding 2 mortality-related conditions.

For the development of these indicators, the list was renamed to PCSCs to reflect a more inclusive list of practitioners. 9 mental health conditions were added and 1 was removed; no other changes were made, resulting in 173 conditions in the newly validated PCSC list. A subset of the PCSC list containing 97 selected conditions was also developed as the new virtual PCSC (V-PCSC) list. These lists were validated and developed through the following iterative process:

1. A thorough literature review was conducted to better understand the role of virtual care in the health care continuum and to identify potential risks and advantages of its use in primary care. Additionally, the literature to date on avoidable conditions or PCSCs was reviewed to provide insight on factors relevant for case selection.
2. Investigative analyses of NACRS ED data — including Canadian Triage and Acuity Scale (CTAS) scores and admission rates for PCSCs and V-PCSCs, typical lengths of stay and other measures of resource intensity — further informed the inclusion and exclusion criteria for the indicators.
3. A cohort of Patient-Level Physician Billing (PLPB) data provided a snapshot of the conditions currently being managed through in-person and/or virtual primary care.
4. The draft list of conditions was distributed in survey format to clinicians who work in EDs and primary care across Canada. The survey asked clinicians to comment on whether, in most cases, each condition could be treated in a primary care setting and whether it was potentially amenable to virtual primary care. Further iterative discussions with clinical experts took place to finalize the lists.

To incorporate jurisdictions that submit levels 1 and 2 NACRS ED data, an adapted methodology was developed, which includes mapping ICD-10-CA codes to CED-DxS codes where possible. This involved consultation with CIHI's Classifications experts, who provided recommendations on mapping and how to best manage the nuances of the lists when there was no direct mapping available.

Detailed mapping is available in Appendix A of this document.

Risk adjustment

To facilitate comparability across jurisdictions, results are adjusted for age and sex. Further details on the risk adjustment methodology can be found in Section 11 of CIHI's *General Methodology Notes — Clinical Indicators*.[6] The current indicators use the same year of data to calculate the Canadian average. The Canadian average and the risk adjustment coefficients are based on the 6 jurisdictions submitting Level 3 data only. Appendix B in this document provides coefficients for the risk adjustment models.

Caveats and limitations

Data

- CIHI lacks robust pan-Canadian primary care data and therefore has used NACRS ED data as a proxy to help us understand what is happening in the community, as well as in EDs.
- Submission to NACRS is not mandated in all provinces/territories. In jurisdictions where submission is not mandated, there may be partial data coverage.
- Data from Quebec and British Columbia is based on NACRS Level 1 or 2 submission and has the following limitations:
  - The PCSC and V-PCSC lists were developed using the ICD-10-CA diagnosis classification system as the gold standard, but these provinces submit Discharge Diagnosis coded with CED-DxS. An adapted methodology was used that maps from ICD-10-CA to CED-DxS. As such, some PCSC and V-PCSC codes based on CED-DxS may be missing or different from the codes included in the original lists based on ICD-10-CA codes. An analysis on a subset of Ontario data that have both coded shows a sensitivity of 81% and a specificity of 99% for PCSCs.
  - Diagnosis codes are not mandatory; records without a valid diagnosis code are excluded from the indicators, and as such these indicator results may be based on partial data.
  - Results exclude most patients who left the ED without being seen or against medical advice (since they do not have a true diagnosis code). Results from Level 3 provinces/territories suggest that results for the indicator are higher for patients who leave the ED without being seen.
- Since results from Quebec and British Columbia exclude patients who left without being seen or against medical advice, they are underestimated. Results for these provinces should not be compared with results for other provinces/territories or with the national average, and they are excluded from public reporting.
- Consequently, the Canada average and regression coefficients are calculated excluding data from Quebec and British Columbia.

- Results based on partial data coverage should be interpreted with caution. Note that provincial/territorial and regional results are based on place of residence; the partial coverage assessment assumes that coverage by place of residence is similar to coverage by place of service.
- Risk adjustment for age and sex facilitates comparability across the country but does not account for all differences between jurisdictions. Therefore, jurisdictions that submit Level 1 and Level 2 data may not be comparable with those that submit Level 3 data.

Reporting

- The indicators are calculated for 8 provinces/territories across Canada (see Table 1). These results are disseminated through CIHI's secure access private reporting tools.
- For public reporting, results are reported at national, provincial/territorial and regional levels.
  - Results for Quebec and British Columbia are not included (see the section above on data limitations).
- Results are suppressed when large numbers of cases are missing. Suppression is applied if either
  - Submission coverage to NACRS is <65% for a jurisdiction or
  - >25% of diagnosis data for a jurisdiction is missing.

Interpretation

- The intent of these indicators is to provide a system-level view of the magnitude of ED visits that potentially could have been managed through primary care, including virtual care, and to shed light on access to primary care in communities. Health system decision-makers and planners can use these indicators to inform health system improvements to better meet patient needs.
- These indicators are not intended to speak to individual scenarios or the appropriateness of a patient's ED visit, influence patient choice, assign blame, penalize patients or deter individuals from visiting the ED.
- Indicator results cannot be interpreted to imply that diverting low-acuity patients will solve the health system challenges that manifest in EDs, nor is it intended to imply that virtual primary care is a replacement for in-person primary care or a stand-alone solution.
- The newly developed V-PCSC list represents the minimum of what could be addressed virtually with the technology and skill sets that most health care providers should have available today to serve most patients most of the time. We expect this list to evolve over time; the indicator methodology will be reviewed and updated regularly.

- Jurisdictional context may influence indicator interpretability and actionability. Examples include differences in the health system infrastructure available to deliver primary care in rural versus urban areas, technical infrastructure such as internet access to fully support virtual care, and other factors such as socio-economic status of patients and associated barriers to access.
- Results shed light on differences across the country and provide an opportunity to learn from others and dig deeper to understand levers for change to improve access to care for Canadians.

Appendices

Appendix A: Mapping of ICD-10-CA codes to CED-DxS codes for PCSCs and V-PCSCs

The following table contains the list of PCSCs (based on ICD-10-CA codes) and the mapped CED-DxS codes, where available. The final column indicates the subset of PCSCs that may be amenable to virtual primary care (V-PCSCs). Note for CED-DxS codes that map onto more than one ICD-10-CA PCSC code: if the ICD-10-CA code beginning with the same 3 characters is a V-PCSC, then the CED-DxS code is a V-PCSC; otherwise, it is not.

Table A1 ICD-10-CA to CED-DxS mapping

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Certain infectious and parasitic diseases				
A07	Other protozoal intestinal diseases	—	—	Yes
A56	Other sexually transmitted chlamydial diseases	A64	Sexually transmitted infection	Yes (for males only)
A59	Trichomoniasis	A64	Sexually transmitted infection	Yes (for males only)
A63	Other predominantly sexually transmitted diseases, not elsewhere classified	A630	Genital Warts	Yes (for males only)
A63	Other predominantly sexually transmitted diseases, not elsewhere classified	A64	Sexually transmitted infection	Yes (for males only)
A64	Unspecified sexually transmitted disease	A64	Sexually transmitted infection	Yes (for males only)
A74	Other diseases caused by chlamydiae	A64	Sexually transmitted infection	Yes (for males only)
B06	Rubella [German measles]	B069	Rubella / German measles	—
B07	Viral warts	—	—	Yes
B08	Other viral infections characterized by skin and mucous membrane lesions, not elsewhere classified	B083	5th Disease	Yes

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Certain infectious and parasitic diseases (continued)				
B08	Other viral infections characterized by skin and mucous membrane lesions, not elsewhere classified	B084	Hand, foot and mouth disease	Yes
B09	Unspecified viral infection characterized by skin and mucous membrane lesions	B09	Exanthema, viral	Yes
B30	Viral conjunctivitis	H109	Conjunctivitis	Yes
B35	Dermatophytosis	—	—	Yes
B36	Other superficial mycoses	—	—	Yes
B37	Candidiasis	B379	Candidiasis	Yes
B65	Schistosomiasis [bilharziasis]	B839	Pinworms / Helminthiasis	—
B80	Enterobiasis	B839	Pinworms / Helminthiasis	Only for ICD-10-CA
B82	Unspecified intestinal parasitism	B839	Pinworms / Helminthiasis	—
B83	Other helminthiases	B839	Pinworms / Helminthiasis	—
B85	Pediculosis and phthiriasis	B852	Lice / Pediculosis	Yes
B86	Scabies	B86	Scabies	Yes
Neoplasms				
C44	Other malignant neoplasms of skin	C449	Neoplasm of skin	—
D04	Carcinoma in situ of skin	C449	Neoplasm of skin	—
D16	Benign neoplasm of bone and articular cartilage	D369	Benign tumor unspecified site	—
D17	Benign lipomatous neoplasm	D369	Benign tumor unspecified site	—
D22	Melanocytic naevi	D369	Benign tumor unspecified site	—
D23	Other benign neoplasms of skin	D369	Benign tumor unspecified site	—
D24	Benign neoplasm of breast	D369	Benign tumor unspecified site	—
D29	Benign neoplasm of male genital organs	D369	Benign tumor unspecified site	—
D36	Benign neoplasm of other and unspecified sites	D369	Benign tumor unspecified site	—
Endocrine, nutritional and metabolic diseases				
E07	Other disorders of thyroid	—	—	Yes
E29	Testicular dysfunction	—	—	Yes
E53	Deficiency of other B group vitamins	—	—	Yes
E61	Deficiency of other nutrient elements	—	—	Yes
E78	Disorders of lipoprotein metabolism and other lipidaemia	—	—	Yes

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Mental and behavioural disorders				
F17.3	Mental and behavioural disorders due to use of tobacco, withdrawal state	—	—	Yes
F41.0	Panic disorder	—	—	Yes
F41.9	Anxiety disorder, unspecified	F419	Anxiety disorder	Yes
F45.8	Other somatoform disorders	—	—	Yes
F51.4	Sleep terrors	—	—	Yes
F51.9	Nonorganic sleep disorder, unspecified	—	—	Yes
F52.2	Failure of genital response	—	—	Yes
F80.9	Developmental disorder of speech and language, unspecified	—	—	Yes
F95	Tic disorders	—	—	Yes
Diseases of the nervous system				
G43	Migraine	G439	Migraine	Yes
G56	Mononeuropathies of upper limb	G560	Carpal tunnel syndrome	—
Diseases of the eye and adnexa				
H00	Hordeolum and chalazion	—	—	Yes
H01	Other inflammation of eyelid	—	—	Yes
H04	Disorders of lacrimal system	H579	Eye and adnexa disorder	—
H10	Conjunctivitis	H109	Conjunctivitis	Yes
H11	Other disorders of conjunctiva	H113	Conjunctival hemorrhage	—
H11	Other disorders of conjunctiva	H579	Eye and adnexa disorder	—
H15	Disorders of sclera	H579	Eye and adnexa disorder	—
H18	Other disorders of cornea	H189	Corneal disease	—
H43	Disorders of vitreous body	H431	Vitreous hemorrhage	—
H43	Disorders of vitreous body	H439	Vitreous body disorder	—
H57	Other disorders of eye and adnexa	H571	Ocular pain	—
H57	Other disorders of eye and adnexa	H579	Eye and adnexa disorder	—
Diseases of the ear and mastoid process				
H60	Otitis externa	H609	OE - Otitis externa	Yes
H61	Other disorders of external ear	H612	Wax in ear	Yes
H61	Other disorders of external ear	H939	Ear disorder, other	Only for ICD-10-CA
H65	Nonsuppurative otitis media	H669	OM - Otitis media	—
H66	Suppurative and unspecified otitis media	H669	OM - Otitis media	—
H68	Eustachian salpingitis and obstruction	H939	Ear disorder, other	—

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Diseases of the ear and mastoid process (continued)				
H69	Other disorders of Eustachian tube	H939	Ear disorder, other	—
H72	Perforation of tympanic membrane	H729	Perforation tympanic membrane	—
H73	Other disorders of tympanic membrane	H939	Ear disorder, other	—
H74	Other disorders of middle ear and mastoid	H939	Ear disorder, other	—
H91	Other hearing loss	H919	Hearing loss	—
H92	Otalgia and effusion of ear	H920	Otalgia	—
H93	Other disorders of ear, not elsewhere classified	H931	Tinnitus	—
H93	Other disorders of ear, not elsewhere classified	H939	Ear disorder, other	—
Diseases of the circulatory system				
I78	Diseases of capillaries	—	—	—
Diseases of the respiratory system				
J00	Acute nasopharyngitis [common cold]	—	—	Yes
J01	Acute sinusitis	J019	Sinusitis, acute	Yes
J02	Acute pharyngitis	J029	Pharyngitis, acute	Yes
J06	Acute upper respiratory infections of multiple and unspecified sites	J069	URTI	Yes
J30	Vasomotor and allergic rhinitis	—	—	Yes
J31	Chronic rhinitis, nasopharyngitis and pharyngitis	—	—	Yes
J32	Chronic sinusitis	J329	Sinusitis, chronic	Yes
J34	Other disorders of nose and nasal sinuses	—	—	Yes
Diseases of the digestive system				
K00	Disorders of tooth development and eruption	K089	Teeth / Gums disorder	Only for ICD-10-CA
K01	Embedded and impacted teeth	K089	Teeth / Gums disorder	—
K02	Dental caries	K029	Dental caries	—
K04	Diseases of pulp and periapical tissues	K047	Dental / Periapical abscess	—
K05	Gingivitis and periodontal diseases	K089	Teeth / Gums disorder	—
K07	Dentofacial anomalies [malocclusion]	K0769	TMJ - Temporomandibular joints	—
K08	Other disorders of teeth and support structures	K0887	Toothache	—
K08	Other disorders of teeth and support structures	K089	Teeth / Gums disorder	—
K13	Other diseases of lip and oral mucosa	K137	Oral mucosa disorder	—

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Diseases of the skin and subcutaneous tissue				
L01	Impetigo	L010	Impetigo	Yes
L20	Atopic dermatitis	L309	Dermatitis / Eczema	Yes
L21	Seborrheic dermatitis	L211	Seborrheic infantile dermatitis	Yes
L22	Diaper [napkin] dermatitis	L22	Diaper rash	Yes
L23	Allergic contact dermatitis	L259	Dermatitis, contact	Yes
L24	Irritant contact dermatitis	L259	Dermatitis, contact	Yes
L25	Unspecified contact dermatitis	L259	Dermatitis, contact	Yes
L28	Lichen simplex chronicus and prurigo	—	—	Yes
L29	Pruritus	L299	Pruritus	Yes
L30	Other dermatitis	L309	Dermatitis / Eczema	Yes
L42	Pityriasis rosea	L42	Pityriasis rosea	Yes
L43	Lichen planus	—	—	Yes
L50	Urticaria	L509	Urticaria	Yes
L55	Sunburn	—	—	Yes
L57	Skin changes due to chronic exposure to nonionizing radiation	—	—	Yes
L60	Nail disorders	L600	Ingrown nail	Yes
L60	Nail disorders	L609	Nail disorder	Yes
L63	Alopecia areata	—	—	Yes
L65	Other nonscarring hair loss	—	—	Yes
L70	Acne	—	—	Yes
L71	Rosacea	—	—	Yes
L72	Follicular cysts of skin and subcutaneous tissue	L739	Follicular disorder	Yes
L73	Other follicular disorders	L739	Follicular disorder	Yes
L74	Eccrine sweat disorders	—	—	Yes
L81	Other disorders of pigmentation	—	—	Yes
L82	Seborrheic keratosis	—	—	Yes
L84	Corns and callosities	L84	Corns and callosities	Yes
L85	Other epidermal thickening	—	—	Yes
L90	Atrophic disorders of skin	—	—	Yes
L91	Hypertrophic disorders of skin	—	—	Yes
L92	Granulomatous disorders of skin and subcutaneous tissue	—	—	Yes

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Diseases of the musculoskeletal system and connective tissue				
M18	Arthrosis of first carpometacarpal joint	—	—	Yes
M20	Acquired deformities of fingers and toes	—	—	—
M22	Disorders of patella	M229	Patellar disorder	—
M53	Other dorsopathies	—	—	—
M67	Other disorders of synovium and tendon	—	—	—
M70	Soft tissue disorders related to use, overuse and pressure	M702	Olecranon bursitis	—
M70	Soft tissue disorders related to use, overuse and pressure	M704	Prepatellar bursitis	—
M70	Soft tissue disorders related to use, overuse and pressure	M706	Trochanteric bursitis	—
M75	Shoulder lesions	M751	Rotator cuff syndrome	—
M75	Shoulder lesions	M752	Bicipital tendinitis	—
M75	Shoulder lesions	M754	Impingement synd shoulder	—
M75	Shoulder lesions	M755	Bursitis of shoulder	—
M75	Shoulder lesions	M759	Shoulder lesion	—
M76	Enthesopathies low limb excluding foot	M765	Patellar tendonitis	—
M76	Enthesopathies low limb excluding foot	M766	Achilles tendonitis	—
M76	Enthesopathies low limb excluding foot	M779	Tendonitis, unspecified	—
M77	Other enthesopathies	M779	Tendonitis, unspecified	—
M85	Other disorders of bone density and structure	—	—	—
M92	Other juvenile osteochondrosis	M9499	Cartilage disease	—
M94	Other disorders of cartilage	M940	Costochondritis	—
M94	Other disorders of cartilage	M9499	Cartilage disease	—
Diseases of the genitourinary system				
N34	Urethritis and urethral syndrome	N341	Nonspecific urethritis	Yes
N60	Benign mammary dysplasia	N649	Breast disorder	—
N62	Hypertrophy of breast	N649	Breast disorder	—
N63	Unspecified lump in breast	N63	Breast lump	—
N64	Other disorders of breast	N649	Breast disorder	—
N72	Inflammatory disease of cervix uteri	—	—	—
N89	Other noninflammatory disorders of vagina	N899	Noninflammatory vaginal disorder	—
N91	Absent, scanty and rare menstruation	—	—	Yes
N94	Pain and other conditions associated with female genital organs and menstrual cycle	N946	Dysmenorrhea	—
N97	Female infertility	—	—	Yes

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Pregnancy, childbirth and the puerperium				
O92	Other disorders of breast and disorders of lactation associated with pregnancy and the puerperium	—	—	—
Certain conditions originating in the perinatal period				
P37	Other congenital infectious and parasitic diseases	—	—	—
P78	Other perinatal digestive system disorders	P789	Perinatal GI disorder	Yes
Congenital malformations, deformations and chromosomal abnormalities				
Q10	Congenital malformations of eyelid, lacrimal apparatus and orbit	—	—	—
Q66	Congenital deformities of feet	—	—	—
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified				
R05	Cough	R05	Cough	Yes
R21	Rash and other nonspecific skin eruption	R21	Rash	Yes
R30	Pain associated with micturition	R300	Dysuria	Yes
R36	Urethral discharge	R36	Urethral discharge	Yes
R71	Abnormality of red blood cells	—	—	Yes
Factors influencing health status and contact with health services				
Z00	General examination and investigation of persons without complaint and reported diagnosis	—	—	Yes
Z02	Examination and encounter for administrative purposes	Z027	Issue of medical certificate	—
Z09	Follow-up examination after treatment for conditions other than malignant neoplasms	Z094	Cast check / Fracture follow up	Yes
Z09	Follow-up examination after treatment for conditions other than malignant neoplasms	Z099	Follow-up exam unspecified Tx	Yes
Z11	Special screening examination for infectious and parasitic diseases	—	—	Yes
Z12	Special screening examination for neoplasms	—	—	—
Z13	Special screening examination for other diseases and disorders	—	—	—
Z20	Contact with and exposure to communicable diseases	Z209	Contact communicable disease	Yes
Z23	Need for immunization against single bacterial diseases	Z299	Prophylactic measure	—

ICD-10-CA code and description		CED-DxS code and description (populated where there is valid mapping)		V-PCSCs
Code	Description	Code	Description	
Factors influencing health status and contact with health services (continued)				
Z24	Need for immunization against certain viral diseases	Z299	Prophylactic measure	—
Z25	Need for immunization against other viral diseases	Z299	Prophylactic measure	—
Z26	Need for immunization against other infectious diseases	Z299	Prophylactic measure	—
Z27	Need for immunization against combinations of infectious diseases	Z299	Prophylactic measure	—
Z29	Need for other prophylactic measures	Z299	Prophylactic measure	Yes
Z30	Contraceptive management	Z309	Contraceptive management	Yes
Z31	Procreative management	—	—	Yes
Z32	Pregnancy examination and test	—	—	—
Z41	Procedures for purposes other than remedying health state	—	—	—
Z45	Adjustment and management of implanted device	Z459	Adjustment implanted device	—
Z46	Fitting and adjustment of other devices	Z459	Adjustment implanted device	—
Z47	Other orthopaedic follow-up care	—	—	—
Z48	Other surgical follow-up care	Z488	Surgical aftercare evaluation	—
Z51	Other medical care	Z5188	Medical care, other	—
Z53	Persons encountering health services for specific procedures, not carried out	—	—	—
Z56	Problems related to employment and unemployment	—	—	Yes
Z64	Problems related to certain psychosocial circumstances	—	—	Yes
Z70	Counseling related to sexual attitude, behavior and orientation	—	—	Yes
Z76	Persons encountering health services in other circumstances	Z760	Issue of repeat prescription	Yes
Z92	Personal history of medical treatment	—	—	Yes

Notes
— Not applicable.

Appendix B: Regression coefficients

Table B1 Regression coefficients for PCSC indicator by year

Risk factor	2022–2023	2023–2024
Intercept	-1.6678	-1.6613
Male (vs. female)	-0.0357	-0.0312
Age 2–9 (vs. 25–44)	0.7190	0.6065
Age 10–17 (vs. 25–44)	0.0792	-0.0086
Age 18–24 (vs. 25–44)	0.0934	0.0439
Age 45–64 (vs. 25–44)	-0.1582	-0.1538
Age 65+ (vs. 25–44)	-0.6000	-0.6109

Table B2 Regression coefficients for V-PCSC indicator by year

Risk factor	2022–2023	2023–2024
Intercept	-2.1554	-2.1542
Male (vs. female)	-0.1283	-0.1252
Age 2–9 (vs. 25–44)	0.7772	0.6406
Age 10–17 (vs. 25–44)	0.2274	0.1373
Age 18–24 (vs. 25–44)	0.2043	0.1287
Age 45–64 (vs. 25–44)	-0.3441	-0.3419
Age 65+ (vs. 25–44)	-0.8943	-0.8803

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help@cihi.ca

CIHI Ottawa
495 Richmond Road
Suite 600
Ottawa, Ont.
K2A 4H6
613-241-7860

CIHI Toronto
4110 Yonge Street
Suite 300
Toronto, Ont.
M2P 2B7
416-481-2002

CIHI Victoria
880 Douglas Street
Suite 600
Victoria, B.C.
V8W 2B7
250-220-4100

CIHI Montréal
1010 Sherbrooke Street West
Suite 511
Montréal, Que.
H3A 2R7
514-842-2226

cihi.ca

59857-0924