

## **Indicator:** Chronic Obstructive Pulmonary Disease (COPD) Hospitalization for Canadians Younger Than Age 75

**Data Years:** 2001 to 2012

**Indicator Description:** Age-standardized rate of hospitalization due to COPD for patients younger than age 75 (per 100,000)

**Rationale:** COPD is a leading cause of morbidity and mortality in Canada.<sup>1, 2</sup> COPD is largely attributable to smoking, and it has been estimated that approximately 80% of COPD deaths are related to smoking.<sup>3</sup> For persons with COPD age 74 and younger, the disease may be considered an ambulatory care sensitive condition (ACSC) because timely and effective primary health care can usually prevent the onset of health complications and related hospitalizations.<sup>4</sup> Therefore, higher rates of COPD hospitalizations are thought to reflect poorer access to appropriate and effective primary health care.<sup>5, 6</sup>

**Data Sources:** Discharge Abstract Database (DAD) and Hospital Morbidity Database (HMDB), Canadian Institute for Health Information

**Income Disaggregator:** Neighbourhood-level income from the Postal Code Conversion File Plus, Statistics Canada

**Denominator Description:** Total population younger than age 75 based on the 2001 and 2006 census counts, with linear-based extrapolation to derive population estimates for between-census years, as well as for 2011 and 2012<sup>i</sup>

**Numerator Description:** Total number of separations from acute care hospitals (including discharges, sign-outs and transfers) for COPD for patients younger than age 75

Inclusions:

1. Age at admission younger than 75
2. Admission to an acute care institution

Exclusions:

1. Newborn, stillbirth or cadaveric donor records
2. Records where the sex is not recorded as male or female
3. Records with death discharge
4. Records with invalid postal code or unassigned income information

**Method of Age-Standardization:** Direct age-standardization to the Canada 2011 standard population

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i. Population counts are available upon request ([cphi@cihi.ca](mailto:cphi@cihi.ca)).

**Age Groupings for Standardization:** 0–4; 5–9; 10–14; 15–19; 20–24; 25–29; 30–34; 35–39; 40–44; 45–49; 50–54; 55–59; 60–64; 65–69; 70–74

**Geographic Assignment:** Patient’s province of residence according to postal code in the database

**Geographic Coverage:** All provinces and territories

**Interpretation:** Lower rates are desirable.

**Case Selection Criteria:**

Descriptor	ICD-10 Codes	ICD-9 Codes (Quebec, Manitoba)	Qualifier
<b>COPD</b>	J41, J42, J43, J44, J47	491, 492, 494, 496	Most Responsible Diagnosis
	J10.0, J11.0, J12–J16, J18, J20, J21, J22	466, 480, 481, 482, 483, 484, 485, 486, 4870	Most Responsible Diagnosis when a secondary diagnosis of J44 (ICD-10) or 496 (ICD-9) is also present

**Notes**

Quebec: ICD-9 is used for years prior to 2006.

Manitoba: ICD-9 is used for years prior to 2004.

**Percentage Missing Due to Income:**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Percentage Missing*</b>	1.6	1.7	1.6	1.6	1.7	1.5	1.5	1.3	1.4	1.4	1.6	1.6

**Note**

\* Percentage missing refers to the proportion of hospital separation records for this indicator that are missing or have invalid postal code information for patient’s place of residence and are therefore excluded from analyses based on neighbourhood-level income quintiles.

**Data Source Descriptions:**

*Discharge Abstract Database:* The DAD is a national-level database that captures administrative and clinical information from inpatient separation records (discharges, deaths, sign-outs and transfers) from acute care hospitals within a fiscal year (April 1 to March 31) from all provinces and territories in Canada, with the exception of Quebec. Selected day surgery, rehabilitation, psychiatric, long-term care and other data is also captured in the DAD.<sup>7</sup>

*Hospital Morbidity Database:* The HMDB captures administrative, clinical and demographic information on inpatient separation records from acute care hospitals across Canada (including Quebec). Data sources include the DAD and the ministère de la Santé et des Services sociaux du Québec.<sup>8</sup>

## References

1. Statistics Canada. Table 102-0552: Deaths and mortality rate, by selected grouped causes and sex, Canada, provinces and territories. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1020552&tabMode=dataTable&srchLan=-1&p1=-1&p2=9#F1>. Updated January 27, 2014.
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3. Rehm J, Baliunas D, Brochu S, et al. *The Cost of Substance Abuse in Canada*. Ottawa, ON: Canadian Centre on Substance Abuse; 2006.
4. Caminal J, Starfield B, Sánchez E, Casanova C, Morales M. The role of primary care in preventing ambulatory care sensitive conditions. *Eur J Public Health*. 2004;14:246-251.
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6. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457-502.
7. Canadian Institute for Health Information. Discharge Abstract Database (DAD) metadata. [http://www.cihi.ca/CIHI-ext-portal/internet/en/document/types+of+care/hospital+care/acute+care/dad\\_metadata](http://www.cihi.ca/CIHI-ext-portal/internet/en/document/types+of+care/hospital+care/acute+care/dad_metadata). Updated 2014. Accessed February 2, 2015.
8. Canadian Institute for Health Information. The Hospital Morbidity Database (HMDB). [http://www.cihi.ca/cihi-ext-portal/internet/en/document/types+of+care/hospital+care/acute+care/hmdb\\_metadata](http://www.cihi.ca/cihi-ext-portal/internet/en/document/types+of+care/hospital+care/acute+care/hmdb_metadata). Updated 2014. Accessed February 2, 2015.