Avoidable Admissions: COPD

OECD: COPD Hospital Admission Rate

Rate of hospital discharges of people age 15 and older with a primary diagnosis of chronic obstructive pulmonary disease (COPD), per 100,000 population

(Age–sex-standardized to 2010 OECD standard population)

Method of Calculation

\[
\frac{\text{Number of hospital discharges (age 15+) with the most responsible diagnosis of COPD}}{\text{Population (age 15+)}} \times 100,000
\]

Rates are age–sex-standardized to the 2010 OECD standard population using the direct method of standardization.

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Criteria</th>
<th>ICD-10-CA v. 2009 Codes</th>
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</table>
| Inclusions | • Admissions to an acute care facility  
• Age at admission 15+  
• Records with the most responsible diagnosis of COPD  
• Records with the most responsible diagnosis of bronchitis (J40)  
• Canadian resident | • J410, J411, J418, J42, J430, J431, J432, J438, J439, J440, J441, J448, J449, J47 with diagnosis type = MRDx  
• J40 with diagnosis type = MRDx AND J41, J43, J44, J47 in any other diagnosis field |
| Exclusions | • Transfers from another institution  
• Pregnancy, childbirth and puerperium (MCC 13)  
• Newborn and other neonates (MCC 14)  
• Same-day or day-only admissions (length of stay less than 24 hours)  
• Invalid or missing gender or age  
• Invalid admission or discharge date and time |
### OECD: COPD Hospital Admission Rate (cont'd)

#### Denominator

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Inclusions</strong></td>
<td>• Population age 15+</td>
</tr>
<tr>
<td><strong>Exclusions</strong></td>
<td>• None</td>
</tr>
</tbody>
</table>

#### Provincial Considerations

Records are chosen based on the patient’s place of residence.

**Data Source**

**Numerator:** Discharge Abstract Database, 2011–2012, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, 2011, ministère de la Santé et des Services sociaux du Québec.

**Denominator:** Post-censal population estimates released by Statistics Canada for July 1, 2011.

**Notes**

There are some differences in diagnosis and coding between asthma and COPD among OECD countries. For example, “chronic asthmatic bronchitis” is classified as “other chronic obstructive lung disease” (COPD) in ICD-10-CA v. 2009, while it is classified as “asthma” in ICD-9-CM. Therefore, ICD-10-CA v. 2009 codes apply a broader definition of COPD and a narrower definition of asthma compared with ICD-9-CM codes.

**Interpretation**

A low rate for this indicator can be interpreted as a positive result.

**Indicator Rationale**

“Chronic conditions like asthma and chronic obstructive pulmonary disease (COPD) are either preventable or manageable through proper prevention or primary care interventions. Proper management of these chronic conditions in primary care settings can reduce exacerbation and costly hospitalisation. Hospital admission rates serve as a proxy for primary care quality, so high admission rates may point to poor care co-ordination or care continuity. They may also indicate structural constraints such as the supply of family physicians.”

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### Glossary of Terms

**Most responsible diagnosis (MRDx) or diagnosis type (M)** is the diagnosis or condition that can be described as being most responsible for the patient’s stay in hospital.

**ICD-10-CA** is the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada.

**Major clinical category (MCC)** is a concept used within CIHI’s Case Mix Group+ (CMG+) methodology. MCCs are used to broadly categorize patients into clinical categories.
References


