<table>
<thead>
<tr>
<th><strong>Descriptive Definition</strong></th>
<th><strong>Numerator</strong></th>
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<tr>
<td>Percentage of patient population, age 18 and older, with established coronary artery disease (CAD) and elevated low-density lipoprotein cholesterol (LDL-C) who were offered lifestyle advice and lipid-lowering medication.</td>
<td>Number of individuals in the denominator who were offered lifestyle advice and lipid-lowering medication within the past 12 months.</td>
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<tr>
<td><strong>Method of Calculation</strong></td>
<td><strong>Inclusions</strong></td>
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| **Numerator** | • Individual is in the denominator  
• Individual was offered lifestyle advice within the past 12 months  
• Individuals who have one or both of the following:  
  − Individual was prescribed lipid-lowering medication within the past 12 months  
  − Individual has a documented contraindication to lipid-lowering medication |
| **Denominator** | **Exclusions** |
| Number of primary health care (PHC) clients/patients, age 18 and older, with established CAD and elevated LDL-C (that is, greater than 2.0 mmol/L). | None |
| **Inclusions** | PHC client/patient  
Age of individual is at least 18 years  
Individual has a diagnosis of coronary artery disease  
Individual has an LDL-C value greater than 2.0 mmol/L |
| **Exclusions** | None |

**Data Source**
Electronic medical record
### Definitions of Terms

- **A PHC client/patient** is an individual who has had contact with the provider at least once in the past year and has a record with the provider dating back at least two years.
- **Coronary artery disease (with or without angina)**: Examples include clients/patients with prior myocardial infarctions, prior revascularization, angiographically proven coronary atherosclerosis, or reliable non-invasive evidence of myocardial ischemia.\(^1\)
- **LDL-C**: A type of lipoprotein that carries cholesterol in the blood. LDL is considered to be undesirable because it deposits excess cholesterol in the walls of blood vessel and contributes to “hardening of the arteries” and heart disease. Hence, LDL cholesterol is often termed “bad” cholesterol. The test for LDL measures the amount of LDL cholesterol in the blood.\(^2\)
- **Lipid-lowering medication** includes the following classes of drugs: statins, bile acid and/or cholesterol absorption inhibitors, fibrates and niacin.\(^3\)
- **Lifestyle advice for treatment of dyslipidemia** can include education about smoking cessation; a diet low in sodium and simple sugars, with substitution of unsaturated fats for saturated and trans fats, as well as increased consumption of fruits and vegetables; caloric restriction to achieve and maintain ideal body weight; moderate to vigorous exercise for 30 to 60 minutes most (preferably all) days of the week and psychological stress management.\(^3\)

### Interpretation

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

### Indicator Rationale

In 2008, cardiovascular disease (CVD) was the second leading cause of death in Canada, accounting for 21% of all deaths, with an additional 6% caused by stroke.\(^4\) Approximately 8 million Canadians suffer from heart disease, disease of the blood vessels, or are at risk for stroke. Coronary artery disease is one of the most common forms of CVD.\(^5\) The most important risk factor in the development of CAD is elevated cholesterol, specifically LDL-C.\(^6\)

Canadian guidelines focus on total cardiovascular disease risk, using the Framingham Risk Assessment Score.\(^6\) In 2009, the guidelines merged treatment targets for high- and moderate-risk patients and recommend target lipid levels for these two categories of less than 2.0 mmol/L or a 50% reduction in pre-treatment LDL-C. In addition, for men age 50 and older and women age 60 and older in the moderate risk category, where LDL-C does not already indicate treatment, high-sensitivity C-reactive protein (hs-CRP) can be used for risk assessment. In these patients, treatment is indicated when hs-CRP is greater than 2 mg/L.\(^3\)
Guidelines recommend that for high-risk individuals, pharmacological therapy should be considered along with lifestyle changes. In the case of moderate-risk individuals, guidelines recommend implementing lifestyle changes first and then following with medication therapy if treatment targets are not achieved.\(^3\) Recommended lifestyle changes, which also apply to early prevention of atherosclerosis and vascular damage, include smoking cessation, healthy diet and reduction of saturated fats and refined sugars, weight reduction and maintenance, daily physical activity and stress management.\(^3\)

The role of the PHC provider is critical to the health of Canadians who suffer from dyslipidemia and CVD, not only in the diagnosis and pharmacological treatment of the conditions, but in recommending and supporting their patients in the lifestyle changes that are vital to the successful management of dyslipidemia and CVD.

### References


For more information on the PHC indicators, data sources and reporting initiatives, visit CIHI’s website at [www.cihi.ca/phc](http://www.cihi.ca/phc) or send us an email at [phc@cihi.ca](mailto:phc@cihi.ca).