



# Infections: Interpretation of *This* Versus *That*

**Purpose:** The results of a recent reabstraction study and subsequent data quality reviews have revealed some discrepancies with the coding of infections. It is important to determine whether

- An infection has been confirmed or ruled out;
- An infection is present on admission or acquired following admission; and
- A patient has an active infection or is a carrier of an infective organism.

Assignment of the correct ICD-10-CA codes and accurate diagnosis typing are crucial to providing quality data that will be used for improving outcomes for patients. The health information management professional must have a thorough knowledge of the coding standards and always apply that knowledge to each and every case. Failure to do so results in unreliable data. The following table provides some assistance in discerning some common situations surrounding the coding of infections whereby interpretation of *this* versus *that* will result in different code selections and diagnosis typing.

## Coding of infections: Interpretation and considerations

This	That	Considerations
Methicillin-resistant <i>Staphylococcus aureus</i> ( <b>MRSA</b> ) infection	Methicillin-sensitive <i>Staphylococcus aureus</i> ( <b>MSSA</b> ) infection	<p>With an <b>MRSA</b> infection, treatment with methicillin will not be effective since the bacteria is <b>resistant</b> to methicillin. For an <b>MRSA</b> infection, it is mandatory to assign ICD-10-CA codes to identify (a) the site of infection, (b) the infectious microorganism and (c) the specific drug resistance (in this case, U82.1 <i>Resistance to methicillin</i>), and to always apply the diagnosis cluster to link the codes.</p> <p>With an <b>MSSA</b> infection, treatment with methicillin will be effective since the bacteria is <b>sensitive</b> to methicillin. For an <b>MSSA</b> infection, U82.1 <i>Resistance to methicillin</i> is <b>not</b> assigned.</p>





## Tip for Coders

This	That	Considerations
<p><b>Confirmed</b> The infection has been verified based on various factors such as physical examination, laboratory testing, diagnostic imaging and clinical input.</p>	<p><b>Ruled out</b> The infection has been excluded based on various factors such as physical examination, laboratory testing, diagnostic imaging and clinical input.</p>	<p>There must be documentation of a <b>confirmed</b> infection by the physician/primary care provider in order to assign a code. When symptoms present, patients are often put on established infection control protocols prior to confirmation of an infection, such as when a patient has diarrhea and a <i>Clostridium difficile</i> (<i>C. difficile</i>) infection is suspected. This is a precaution to ensure that the potential infection is contained in the event that the patient tests positive for the infection.</p> <p>If the infection is <b>ruled out</b> on initial testing, a code is not assigned for the infection. The patient does/did not have the infection.</p> <p>Further information is available in a <a href="#">Public Health Agency of Canada fact sheet on <i>C. difficile</i></a>.</p>
<p><b>Infection</b> A microorganism is present on or in the body causing illness.</p>	<p><b>Carrier</b> A microorganism is present on or in the body without causing illness.</p>	<p>Care must be taken to ensure that documentation of any microorganism — and in particular any drug-resistant microorganism (DRMO) — is classified appropriately either as a confirmed infection or as carrier status. Remember that documentation by the physician, nursing staff or infection control staff may be used for mandatory code assignment of a <b>carrier</b> of a drug-resistant microorganism. However, there must be confirmation by the physician/primary care provider in order to assign a code for an active <b>infection</b>.</p>
<p><b>Pre-admit comorbidity</b> A significant condition that is present prior to or on admission.</p>	<p><b>Post-admit comorbidity</b> A significant condition that develops after admission.</p>	<p>The timeline of a condition must be considered when applying the correct diagnosis type to any comorbidity. For infections, the presentation of symptoms and the timing of the testing are important considerations. For example, when a patient presents with symptoms of an infection and blood cultures that were taken in the emergency room or on day 1 of admission are positive, this is indicative of a pre-admit comorbidity even if the infection is not documented until later (sometimes days later) by the physician/primary care provider. Conversely, if the patient starts to deteriorate or to show signs of a new condition after admission, it is reasonable to consider this a post-admit comorbidity. Each case must be looked at individually and steps taken to carefully review the documentation to ensure the correct diagnosis typing.</p>



## Tip for Coders

This	That	Considerations
<p><b>Post-intervention condition</b> A condition or symptom that is not attributable to another cause that arises during an uninterrupted, continuous episode of care within 30 days following an intervention (including transfers from one facility to another) or a condition where a cause/effect relationship is documented, regardless of timeline.</p>	<p><b>Not a post-intervention condition</b> A condition or symptom occurring in the post-intervention period of 30 days that is attributable to another cause, including</p> <ul style="list-style-type: none"> <li>• A condition that represents a worsening of the very condition being treated;</li> <li>• An exacerbation of a pre-existing condition; and</li> <li>• A condition that is due to another cause.</li> </ul>	<p>When determining whether a condition is a <b>post-intervention condition</b>, the documentation must be carefully reviewed in order to ensure that the condition was not present prior to the intervention or that the condition was not attributable to another cause.</p> <p>Here's an example: The patient suffers a gastrointestinal (GI) bleed due to an antral ulcer on day 1 following an intervention. The GI bleed is attributable to another cause and is <b>not a post-intervention condition</b>.</p>

Remember that laboratory results are **not** used for code assignment. A positive blood culture does not always mean that an infection is present. The diagnosis must be documented (as stated in the table above).

The following resources are also available to assist the health information management professional:

- CIHI's education products
- Coders' Resource Page
- eQuery Tool
- Canadian Coding Standards
- CIHI's website ([cihi.ca](http://cihi.ca))