**Cause Mapping** is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

## Should Stethoscopes Be Cleaned?

**New study finds that dirty stethoscopes may spread germs**

In a recent study, stethoscopes were tested after they were used to examine patients and most were found to have bacteria on them.

"We have no guidelines to clean our stethoscopes, which has as many bacteria on the diaphragm of the stethoscope as we have on our fingertips."

- Dr. Didier Pittet, "Contamination of Stethoscopes and Physicians’ Hands After a Physical Examination" lead author and the director of infection control at University of Geneva Hospital in Switzerland

### Cause Map

The study looked at the stethoscopes used by three physicians as they examined a total of 83 patients in a Swiss hospital. The researchers found bacteria on the stethoscope after 71 of the patient examinations.

> "We have no guidelines to clean our stethoscopes, which has as many bacteria on the diaphragm of the stethoscope as we have on our fingertips."

Dr. Didier Pittet, "Contamination of Stethoscopes and Physicians’ Hands After a Physical Examination" lead author and the director of infection control at University of Geneva Hospital in Switzerland

### Basic Cause-and-Effect

| Patient Safety Goal Impacted | Potential risk of exposure to bacteria \n| Stethoscopes not cleaned between patients |
|-------------------------------|---------------------------------------------

### Basic Cause-and-Effect

- **Goal Impacted**: Patient Safety
- **Potential Cause**: Potential risk of exposure to bacteria
- **Evidence**: New study found that 71 out of 83 stethoscopes had a higher density of bacteria on their stethoscope than on the back and palm of their hands.

### More Detailed Cause-and-Effect

Stethoscopes are commonly used to listen to a patient’s heart and lungs and they work best when placed directly onto the skin. Stethoscopes may get contaminated from being used on a person with bacteria on their skin and stethoscopes are not necessarily cleaned between uses. Stethoscopes aren’t always cleaned between uses because there are currently no guidelines requiring it.

### Solutions

<table>
<thead>
<tr>
<th>No.</th>
<th>Action Item</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Use disposable covers that are changed between patients</td>
<td>Stethoscopes are generally placed directly onto skin</td>
</tr>
<tr>
<td>2</td>
<td>Clean equipment with an alcohol-based rub or use and change disposable covers</td>
<td>Stethoscopes not cleaned between patients</td>
</tr>
<tr>
<td>3</td>
<td>Require physicians to clean stethoscopes between patients</td>
<td>No requirement to clean small medical equipment between uses</td>
</tr>
<tr>
<td>4</td>
<td>Perform studies to learn more about the risk associated with small medical equipment if it is not cleaned</td>
<td>Few large scale studies have been done</td>
</tr>
</tbody>
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