Title: Improper Disinfection of Stethoscopes

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Keywords:
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References:

Abstract Summary:
Play your part in the battle against nosocomial infections, no matter what your role in healthcare, you can help! We will explain the current policies on disinfecting stethoscopes, as well as new evidence-based practice on the proper disinfection of one of our most frequently used medical tools.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
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<tbody>
<tr>
<td>The learner will be able to verbalize the proper times when a stethoscope should be disinfected.</td>
<td>A stethoscope used by a healthcare provider should be cleaned before and after each patient interaction, and when visibly soiled.</td>
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<td>The learner will be able to verbalize the proper agent used to disinfect a stethoscope versus what agents are not to be used.</td>
<td>Agents that are not as effective in disinfection are Virox wipes, soap and water, hand sanitizer, and chlorhexidine wipes. The proper agent to use in disinfection of stethoscopes is an alcohol wipe.</td>
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<td>The learned will be able to verbalize how to properly disinfect all parts of a stethoscope.</td>
<td>All parts of the stethoscope will need to be disinfected with a 70% isopropyl alcohol wipe before and after each patient interaction</td>
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including the earpieces, the tubing, bell, and diaphragm of the stethoscope.

Abstract Text:

Stethoscopes have been referred to as non-critical items in healthcare (Livshiz-Riven, Borer, Nativ, Eskira, Larson, 2015), with no current protocols for disinfection. Stethoscopes serve as reservoirs for bacteria that contribute to hospital-acquired infections. Studies demonstrate significant percentage of stethoscopes used by healthcare personnel are colonized with bacteria, five to seventeen percent of which were contaminated with methicillin-resistant *Staphylococcus aureus* (MRSA), (Tang, Worster, Srigler, & Main, 2011). Hospital-acquired infections (HAIs) related to MRSA have increased from two percent to 64% from 1974 to 2004 in intensive care units (Russell, Secrest, & Schreeder, 2012). HAIs are responsible for 721,800 infections and 75,000 deaths, according to the Centers for Disease Control and Prevention (CDC), (Centers for Disease Control and Prevention, 2016). Stethoscope disinfection has gone overlooked in an atmosphere where patient safety is a top priority. Most of the common factors that prevented all levels of healthcare professionals from disinfecting their stethoscopes were forgetfulness, lack of available materials, and not having enough time (Thom, Saito, Yanliang, Gnanasuntharam, McGee, Willey, & Borgundvaag, 2014). A survey of healthcare professionals found that most, when they did disinfect their stethoscopes, used an array of products including, alcohol wipes, soap and water, hand sanitizer, and virox wipes (Thom et al. 2014). This same study found that a 70% alcohol pad was most effective in disinfecting stethoscopes (Thom et al. 2014). The healthcare providers that disinfected their stethoscopes between each patient use showed less frequent bacterial growth (Tang et al. 2011). A study in a geriatric hospital ward found that by making alcohol wipes more readily available reduced stethoscope bacterial contamination by 41% and MRSA by 100% after 3 months of implementation (Tang et al. 2011). Boston Children's Hospital conducted a pilot study in which they aimed to increase stethoscope disinfection rates. The disinfection rate among nurses alone increased from 13% to 67% (Zaghi, Zhou, Dionne, Graham, Potter-Bynoe, & Sandora, 2013). For a total cost of 3,758 dollars, they covered six floors and the emergency department with stainless steel baskets, alcohol pads, stickers, and signs to help increase the rate of disinfection (Zaghi et al. 2013). Broken down, that is roughly 17 dollars per patient room. This cost is minuscule compared to treating a HAI. In keeping the values of beneficence and no maleficence, healthcare professionals must foster an environment of safety in every action they take with their patients. Disinfecting a stethoscope between each patient is a small way to have a large impact on the safety of our patients.