

Dec 13, 2018, 09:21am

How Dirty Is That Stethoscope? There Are Bacteria That Can Cause Disease.....



What's on that stethoscope?

Roxette and D.H.T. sang, "listen to your heart." But if a stethoscope is used to do so, what bacteria may be calling for you?

Determining the types of bacteria found on stethoscopes was the goal of a study just published in the journal *Infection Control and Hospital Epidemiology*. The abbreviation for this journal is ICHE, which many readers pronounce "itchy." While this study may not make you feel itchy, it could make you feel a little icky.

That's because DNA testing done by a team from the University of Pennsylvania Perelman School of Medicine found lots o' bacteria on stethoscopes used by doctors, nurses, and respiratory therapists in an intensive care unit (ICU). This wasn't just the fun-loving, "

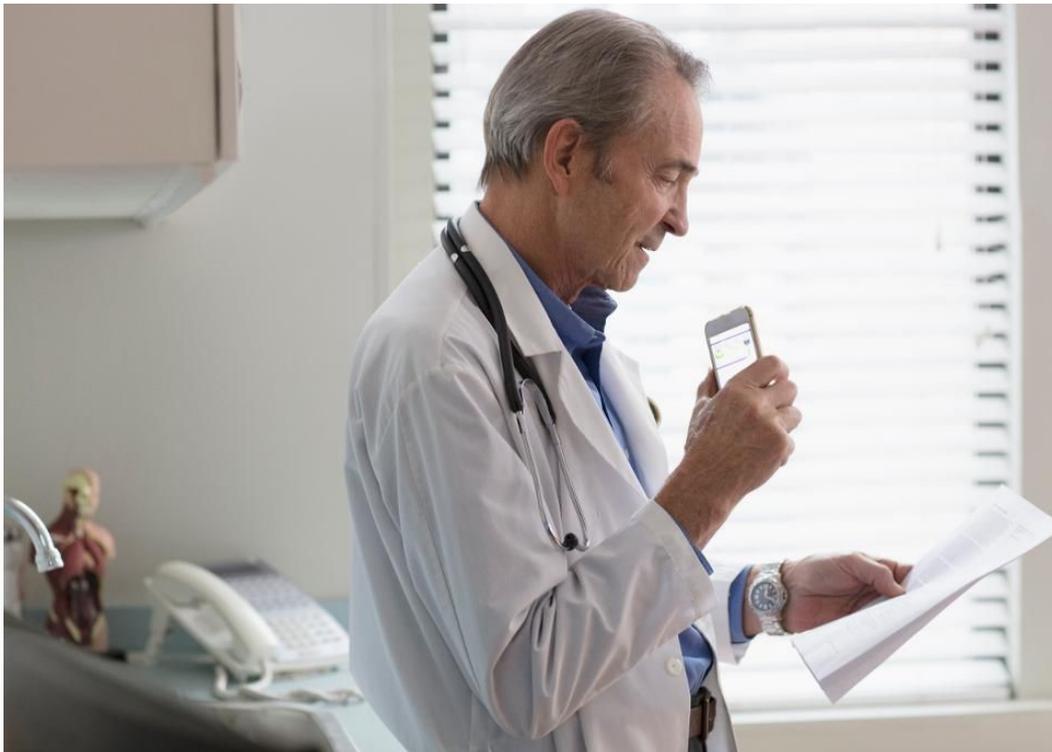
I'm OK, you're OK," Barney-type of bacteria. The researchers detected a number of different bacteria types that could cause bad healthcare-associated infections (HAI), such as *Staphylococcus aureus*. That's not the kind of bacteria that you want hanging around people in the ICU who are very sick and have weakened immune systems.

Of those tested, the stethoscopes with the most bacteria on average were the twenty carried around by doctors, nurses, and respiratory therapists and repeatedly used on different

patients. The twenty disposable single-use stethoscopes in patient rooms had comparatively less bacteria. However both types of used stethoscopes had much more bacteria than the ten clean new stethoscopes that were tested.

Did cleaning these used stethoscopes with hydrogen peroxide wipes, alcohol swabs, or bleach wipes get rid of the unwanted bacterial groupies? Somewhat, but not down to the bacterial levels of spanking new clean stethoscopes.

Are these results really that surprising? In a word, no. In two words, no, no. This certainly wasn't the first study to show that stethoscopes can be covered with bacteria that can cause disease. Just look at the titles of earlier published studies such as "[Predictors of Heavy Stethoscope Contamination Following a Physical Examination](#)" and "[What's Growing on General Practitioner's Stethoscope?](#)"



Previous studies have shown that white coats, neckties, and smartphones can also be covered in disease-causing bacteria.

Plus, as previous studies, [such as this one published in the American Journal of Infection Control](#), have demonstrated, doctors and other health professionals frequently forget to clean their stethoscopes or use cleaning techniques that are not every effective.

What's new about this "itchy" study is that it used molecular analysis to more extensively profile the diverse gangs of bacteria that can live on stethoscopes. Such gangs included *Staphylococcus*, *Pseudomonas*, *Acinetobacter*, *Clostridium*, *Enterococcus*, *Stenotrophomonas*, and *Burkholderia* species, all of which could cause disease.

What's the scope of this stethoscope issue? Well, healthcare-associated infections (HAIs) continue to be a big problem, as in around \$20 billion in healthcare costs each year big. [As the Centers for Disease Control and Prevention \(CDC\) indicates](#), somewhere between 5% and 10% of all hospitalized patients in the U.S. end up getting some kind of HAI. Each year in U.S. hospitals, there are approximately 1.7 million HAIs and 99,000 deaths from HAIs.

It is unclear how many of these HAIs are caused by dirty stethoscopes. It can be difficult to pinpoint a stethoscope as the cause of an HAI, because frankly there are a lot of bacteria-covered things in the hospital. For example, [a systematic review previously published in ICHE](#) summarized the results of 72 studies that demonstrated common items in the health care settings, such as white coats, neckties, stethoscopes, and mobile electronic devices, are often contaminated with potentially disease causing germs such as *Staphylococcus aureus*, including methicillin-resistant *S. aureus*, gram-negative rods, and enterococci.

This calls for better and more effective ways to clean stethoscopes and help health professionals to do so. For example, [a study published in the American Journal of Infection Control](#) suggested that a stronger chemical, chlorhexidine, be used to clean stethoscopes. Other studies have looked at [the use of ultraviolet light](#). Moreover, [health professionals may need more time in between patients](#) to make sure that their equipment is clean. In the meantime, if a doctor, nurse, or health professional is about to use a stethoscope on you, you may want to ask if it has been adequately cleaned first. After all, since that stethoscope may go on your chest, there are things that you may want off your chest.



Bruce Y. Lee