

# THIRD HAND VECTOR

Opinion Editorial Series from  
Clinical Experts in the COVID-19 Era



PROTECTING YOUR PATIENT – OP ED #6

## Hearing is Believing

By Dr. Alan Maisel

For years, hospital infection control committees have endorsed the integration of single-use or “patient dedicated” stethoscopes as a means to mitigate stethoscope contamination. Support for these stethoscopes arose because disinfecting diaphragms between every patient as a standard of care was simply viewed as untenable in high workflow environments. While, conceptually, single-use stethoscopes seemed a reasonable alternative in high acuity care, in practice their use has been costly in three important ways:

1. Single-use stethoscopes cross-contaminate and remain a vector for infection. More aptly named “single-patient” stethoscopes, they remain in the patient’s room and are used by every clinician who examines that patient. Whittington et al. demonstrated that these stethoscopes are unprotected from pathogens, exposed to contaminants in the patient’s room, and handled by many clinicians. The diaphragms become and remain contaminated,<sup>1</sup> thus defeating their value in infection prevention.



*“...stethoscope cross-contamination should be prevented with an aseptic and high-fidelity barrier that is aseptically applied to our personal stethoscope diaphragms...”*

2. Single-use stethoscopes cross-contaminate at both ends of the stethoscope. The earbuds of single-use stethoscopes become contaminated as they move in and out of the ears of multiple clinicians, essentially sharing the contents of one clinician’s ears with the next examining clinician’s ears<sup>1</sup> – and so on.
3. Single-use stethoscopes compromise our examination of the patient. Stethoscopes are incredibly fundamental tools; literally functioning as our third hand in evaluating patients. In high acuity care we rely on the ability to leverage heart, lung, and abdominal sounds to identify and manage clinical pathologies. The sound dampening of these inferior products is obvious to anyone who has used them; they confound accurate diagnosis and compromise patient management.<sup>2</sup>

As infection prevention efforts intensify, and as effective auscultation remains essential for clinical care, it is time to reduce reliance on “single-patient” stethoscopes. Instead, stethoscope cross-contamination should be prevented with an aseptic and high-fidelity barrier that is applied in a touch-free fashion to our personal stethoscope diaphragms – to protect our patients, ourselves and the effectivity of our most valued clinical tool.



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*Third Hand Vector* series spotlights the clinician’s third hand and the risks that contaminated stethoscopes pose to clinicians, patients, and healthcare systems. The series features leading experts in infection control, patient care, and quality measures raising awareness of the importance of aseptic barriers in reducing transmission of infectious diseases.

1. Whittington AM. Bacterial contamination of stethoscopes on the intensive care unit. *Anaesthesia*, 2009, 64: 620–624.
2. Mehmood M. Comparing the auscultatory accuracy of health care professionals using three different brands of stethoscopes on a simulator. *Medical Devices: Evidence and Research* 2014;7 273–281.

