

One in five physicians unaware their patients have central venous catheters

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One in five physicians was unaware a hospitalized patient had a central venous catheter, which is commonly used for laboratory monitoring or to administer life-saving treatments such as IV delivery of antibiotics, nutrition, and other medications.

Surprisingly, attending physicians were least likely to know of the device's presence, followed by interns and residents, according to the new research led by the University of Michigan and VA Ann Arbor Healthcare System. The findings appear in the *Annals of Internal Medicine*.

While the benefits of such catheters have been widely-touted, research also shows that these devices may lead to life-threatening, hospital-acquired complications, including bloodstream infections. The longer they are left in, the higher the risk.

"We know that [central venous catheters](#) are invaluable for the safe and comprehensive care of some hospitalized patients, but just as they are helpful they can be harmful," says lead author Vineet Chopra, M.D., M.Sc., a hospitalist and assistant professor of Internal Medicine at the U-M Medical School and research scientist at the VA Ann Arbor Healthcare System.

"The key to preventing complications is to remove devices when they are no longer necessary, but that requires knowing they are there in the first place. Our findings suggest that patient safety may be jeopardized if

medical providers don't improve their practices regarding device awareness."

Catheter-related bloodstream infection is a common cause of healthcare-associated infection. Many patients who acquire such infections require extended hospital stays and increased overall treatment costs. Central venous catheters may also cause the formation of blood clots, some of which can be fatal. Both infections and clots can be prevented by removal of catheters that are no longer necessary.

The study included 990 patients and interviews with more than 1,000 medical providers at three [academic medical centers](#) in the U.S. Attending physicians and hospitalists in general medicine services were twice as likely to be unaware of the presence of a central venous catheter compared to interns and residents.

Critical care physicians were most likely to know which patients had a device in place and awareness was better among specialties that used central venous catheters more often, such as cardiology and oncology. Lack of awareness was greatest for peripherally inserted central catheters (or, PICCs) which are often placed by specially trained nurses or interventional radiologists.

"Across all of our sites, awareness of catheters varied based largely on who was asked, with attending physicians – who are most entrusted with [patient care](#) – least likely to be aware their patient had a catheter," Chopra says.

"These findings have important [patient safety](#) and policy implications for health systems nationwide because they suggest that removal of clinically unnecessary catheters may be limited by lack of awareness by providers, especially in non-intensive care settings."

More information: "Do clinicians know which of their patients have central venous catheters? A multi-center observational study," *Annals of Internal Medicine*, Vol.161, Number 8, Oct.21, 2014.

Provided by University of Michigan Health System

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