

Study unites medical staff across borders for global catheter audit

October 25 2016, by Mark Smith

Nearly everyone who has either visited someone or been admitted to a hospital has either seen or had a peripheral intravenous catheter, the small plastic devices inserted in the front of your hand or arm to help medical and nursing staff easily administer medicines and fluids into your body. The devices are so common that patients are routinely given one when they're admitted, regardless of whether or not medical staff intend to use them. But despite their usefulness, for many patients they can cause irritation, serious swelling and even life-threatening infections.

"Nearly 60 % of [patients](#) who go to hospitals require peripheral catheters or cannulas, but despite their commonality the failure rate for these devices is quite high," says Evan Alexandrou, from the School of Nursing and Midwifery.

"If it would be any other product it would be pulled from the shelf."

To help figure out exactly why peripheral intravenous catheters are so prone to failure, Evan Alexandrou decided to enlist the help of medical professionals working in hospitals around the world to conduct an audit of the devices. Outside North America and Europe there is very little no data on how they are being used, meaning this was a unique chance to gather information and help make a difference to patients. In total, hundreds of doctors and nurses from over 50 countries joined the study, measuring aspects such as where the cannulas were placed, how many had been used, and whether they had caused adverse affects through

their use.

"For the study, the first step was to go to the clinical coalface, to see how these devices are managed all around the world. We asked clinicians to visit patients in their hospitals and undertake a clinical assessment on the peripheral intravenous catheters, from where they was placed, their size, the type of dressing, and whether there were clinical signs of inflammation, which we know that is a precursor to failure," he says.

The preliminary results uncovered by the team highlighted the vulnerability of the devices.

"What we found was that if you go to any hospital around the world, one in ten patients using a catheter will have an inflamed blood vessel, and that 1 in five patients had a soiled or loose dressing, also known to be a precursor for inflammation and infection. We also found for example nearly 15% of patients had the device, but there was no clinical reason for it to be apart from a contingency."

For now, the research team is analysing the results further to determine how hospitals can re-examine their practices to help protect patients from unnecessary harm.

"What we now need to do is look at these results and see what we can do to fix these problems. People are vulnerable in hospitals, and while they're incredibly useful, catheters can cause unnecessary complications for patients. This study should go some way to helping hospitals and medical professionals as they provide clinical care."

More information: The One Million Global Catheters Study
2014-2015: www.omgpivc.org/

Provided by University of Western Sydney

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