FAILURE OF NONINVASIVE BLOOD PRESSURE TO AUTOMATICALLY CYCLE AFTER SOFTWARE UPGRADE

Michael Wollenberg, MD; Stephen Robinson, MD
Oregon Health & Science University, Portland, Oregon

While upgrading and standardizing the software on all of our institution's Philips monitors, the wrong configuration was used to clone the anesthesia monitors. Over the course of a few days, 19 of our monitors were reprogrammed to default the NIBP to manual instead of automatic cycling q3min. Most providers recognized a problem and simply adjusted their monitor settings. Twenty-seven cases (of 303 at risk) went for periods of greater than five minutes (up to 27 minutes) without BP cuff recycling or an alternative method of blood pressure monitoring. Nine days passed before an anesthesia provider reported the errant monitor behavior. Retrospective chart review showed that no patient had an adverse outcome related to the monitor failure.

The system wide upgrade was carried out without sufficient communication with the clinical engineers or anesthesiologists familiar with our monitor configuration. Expectations of monitor behavior within our providers exposed the latent programming flaw allowing it to become a patient care flaw. We propose that careful oversight of upgrades by providers familiar with their working environment is necessary to avoid this type of problem. Improved monitor capabilities such as changing display color, dropping the display, or triggering an alarm as data ages may help to alert providers of monitor failure. The presence of monitor capture parameters on anesthesia information systems may provide an additional backup alert. Maintaining a culture that is supportive and responsive to feedback from users may minimize exposure to these types of errors.