

A new approach to patient safety proactively addresses common health care system successes

May 8 2018

Clinical researchers at Nationwide Children's Hospital have published one of the first health care studies to examine how behavior aligned with Safety II concepts impacts patient safety. Safety II is a novel approach to patient safety that focuses on why processes perform correctly in high-performing units, as opposed to its predecessor, Safety I, which focuses on why processes fail.

Published online today in the journal *Pediatrics*, the study analyzed the Pediatric Intensive Care Unit (PICU) at Nationwide Children's to identify factors in a hospital microsystem and its individuals that led to more reliable performance and increased ability to handle unusual or unexpected situations while delivering patient care.

Currently, most hospitals use Safety I, which focuses on retrospectively evaluating errors after they occur. Through Safety I, identified system problems are fixed to prevent a similar error from reoccurring. This approach does not prevent future errors unrelated to the "fixed" problem, and does not allow for error avoidance under unusual circumstances. Units that operate using Safety II behaviors are characterized by individuals and systems that are proactive in preventing errors. It is believed that this is one of the first studies to outline how Safety II principles can be implemented in a pediatric hospital setting.

"High-complexity, high-risk environments demand flexibility and

resilience among their individuals to avoid errors, and our PICU exemplifies that," said Jenna Merandi, Pharm.D., MS, CPPS, medication safety officer at Nationwide Children's and co-author of the study. "We wanted to understand how the PICU used Safety II concepts to achieve its remarkably low adverse drug event (ADE) rate."

Clinical researchers conducted multidisciplinary focus groups with PICU staff, using open-ended questions to determine how they established safety in their unit. Qualitative analysis of the transcripts identified system characteristics and behaviors that contributed to low ADE rates in the PICU, and 19 common themes within four key domains were identified.

The key domains included individual characteristics; relationships and interactions; structural and environmental characteristics; and innovative approaches. The themes identified in the first three domains are typically observed in Safety I and are adaptable for use in Safety II. The themes within the innovative thinking and approaches domain appear to be uniquely applicable to Safety II: relying on teamwork if something novel is considered; team response to challenging circumstances; skepticism; and bringing atypical approaches from other microenvironments (out-of-box thinking).

"Moving forward, we want to use Safety II to understand how to apply resilience engineering into a health care system, and more testing needs to be done by implementing Safety II in other hospital units in order to achieve that understanding and broaden our program," said Thomas Bartman, MD, PhD, associate medical director of quality improvement at Nationwide Children's and co-author of the study. "For example, we plan to trial end-of-shift debriefing sessions to capture how individuals and systems respond to the unexpected and pass that learning to the next shift."

As an institution that prioritizes [patient safety](#) and reducing patient errors, Nationwide Children's adoption of Safety II aligns with Zero Hero: the safety program established in 2009 that focuses on the hospital's public goal to achieve zero preventable harm.

"Safety II does not replace Safety I, but it is a new approach in addition to the old 'finding and fixing' model of addressing patient safety concerns," said Richard J. Brill, MD, FAAP, MCCM, chief medical officer at Nationwide Children's. "Optimistically, it has the potential to take patient [safety](#) to a whole new level."

Provided by Nationwide Children's Hospital

Citation: A new approach to patient safety proactively addresses common health care system successes (2018, May 8) retrieved 4 May 2024 from <https://medicalxpress.com/news/2018-05-approach-patient-safety-proactively-common.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--