'Knowledge translation' keeps treatment current

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Though guidelines for best treatment practices are common, they are only partially effective without standardized, routine exposure to them in clinical practice, according to a study conducted by University of Cincinnati (UC) emergency medicine researchers.

In the study, UC associate professor of emergency medicine Stewart Wright, MD, and his colleagues used national standards for treatment of pneumonia to create clinical guidelines for UC emergency medicine physicians, including an online flowchart and order set easily accessible from emergency room computers. Physicians also received monthly reminders of the treatment guidelines in departmental lectures and e-mails.

In an analysis of patients treated for pneumonia during two periods in 2006 and 2007, Wright found that compliance with the standard pneumonia treatment increased after the online flowchart was instituted. Specifically, the group of patients treated after the flowchart was created received more blood cultures, an increased use of recommended antibiotics cefepime and vancomycin and more frequently had their type of pneumonia documented.

Wright presented the work at the 2010 meeting of the Society for Academic Emergency Medicine, held June 3-6 in Phoenix. The research is part of his focus on the field of knowledge translation, a growing area of research aimed at finding ways to take the best evidence from current literature and implement it to everyday patient care.

Wright says the results show the promise of an intensive implementation strategy for knowledge translation. Since 2004, he has helped to create a center for knowledge translation in UC's emergency medicine department, including about 25 online treatment guidelines, order sets and flowcharts for treatment based on symptoms, diagnosis and guidelines on specific procedures.

"The best clinical guidelines are created from research evidence and patient experience," says Wright. "But transmitting those guidelines to patient treatment requires a significant investment from physicians and educators. It's a continuous effort to try and push people toward the goal and keep moving them. It requires years and years worth of effort."

Wright also presented a workshop in knowledge translation with researchers from Columbia University, the Mayo Clinic and the University of Calgary June 4, giving participants an overview of the field and tools on implementing similar guidelines in emergency care. The session was a shortened version of a three-day course Wright and his colleagues conduct each year, sponsored by a $300,000 grant from the Agency for Healthcare Research and Quality (AHRQ).

But Wright says it's important to continually monitor changes made to clinical practice. In an abstract presented by UC emergency medicine resident Michael Ward, MD, researchers designed an intervention to place an antibiotic needed for treatment of sepsis in the emergency room, instead of routing it through the hospital pharmacy. The hypothesis was that the move would speed up drug delivery to the patient—but results proved it took longer in the new system.

"It was a very unexpected outcome," says Wright. "There's lot of information out there now about quality improvement initiatives and how to get the best care to patients, but if you don't track the results of whatever initiative you do, you can get these unintended negative

consequences."

Provided by University of Cincinnati