Efforts to lower health care-associated infections are having success, study finds

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Efforts to lower the incidence of dangerous infections acquired by patients in the hospital or other care settings and a federal strategy to improve those activities are the subject of a series of articles published by the journal *Medical Care*.

Researchers found that a federally sponsored plan to lower health care-acquired infections was successful in addressing the challenges of prioritizing and coordinating strategies. In addition, the plan has been associated with reductions in the rates of health care-associated infection rates, with progress made toward most targets where data are available.

"Much progress has been made in raising awareness of and developing strategies for curbing the life-threatening infections that strike patients too often when they are receiving medical care," said Dr. Katherine Kahn, a leader of the project who is a professor of medicine at the Geffen School of Medicine at UCLA and a senior natural scientist at RAND, a nonprofit research organization. "In order to make even more progress, we need to build our systems of care to be safer within and across hospitals, nursing homes, clinics and community settings."

Infections that strike patients are one of the most preventable leading causes of death in the United States. For example, patients may develop blood infections or infections in wound sites while undergoing treatments for serious illnesses.

The complex nature of modern medicine has made it difficult to control

health care-associated infections. For example, widespread use of antibiotics can lead to increased antimicrobial resistance and invasive medical procedures such as the use of catheters can compromise the body's natural defenses. Although conventional wisdom had been that health care-associated infections were an expected complication of illness, a paradigm shift occurred as evidence showed that many health care-associated infections are preventable.

The U.S. Department of Health and Humans Services in 2009 released a national plan aimed at preventing the infections, outlining numerous strategies to both combat the problem and improve understanding of the infections.

Researchers from RAND and the research group IMPAQ performed an evaluation of the first three years of the National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination, reviewing the structure of the effort as well as the results thus far. Their findings are reported in a series of articles published as a supplement to the February edition of the journal *Medical Care*.

The strategy focuses on evidence-based strategies, such as standardizing the use of hand-washing by health providers and considering both benefits and risks when deciding about the use and duration of treatments such as antibiotics and uses of devices that can help patients heal, but also can compromise the body's natural defenses.

Most of the prevention initiatives have focused on hospital settings, but the action plan has focused attention on efforts in other care settings such as outpatient surgery centers, kidney dialysis centers, and long-term care facilities. Researchers say these efforts have likely contributed to stakeholders' reported perceptions of greater momentum in adoption of strategies to prevent health care-acquired infections.

The national plan has generated clinical, political and financial support for the complex efforts required to eliminate health care-associated infections across federal, regional, state, and local settings. Despite an influx of federal funding to support elimination of health care-acquired infections, researchers say that ongoing dedicated resources will be required to maintain momentum and sustain efforts made to date.

Efforts to curb infections need to continue to be integrated into the ever-expanding field of health information technology and more-robust efforts are needed to improve the basic scientific understanding of hospital-acquired infections, according to the evaluation.

"Continuing efforts will be required to track progress in addressing the most pervasive health care-associated infections, improve understanding of the means of transmission and find new ways to address the problem," said James. B. Battles, a project leader and senior service fellow for patient safety and medical errors with the Center for Quality Improvement and Patient Safety at the federal Agency for Healthcare Research & Quality.

Because future funding for efforts to further reduce hospital-acquired infections is unclear, researchers say it may be best to incorporate the efforts into the overall movement to improve patient safety.

"Embedding the prevention of health care-associated infections in daily work routines and the culture of health care organizations not only builds normative infrastructure, but also improves the likelihood that prevention practices will be sustained and can be used to support accountability and incentives," said Peter Mendel, another project leader and a social scientist at RAND.

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