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How HAIs Lead to Direct, Indirect and Unintended Hospital Costs

By Shannon Barnet

Roughly 1.7 million hospital-associated infections occur annually in acute-care hospitals which result in tens of thousands of patient deaths and cost billions of dollars to the healthcare system.

"We have to get to the bottom of why it is that we keep having the number of drug-resistant healthcare-associated infections that are currently reported" Lynn White, MD, said during a webinar hosted by Becker's Hospital Review.

Dr. White is a practicing anesthesiologist in Colorado and the president of Patient Shield Concepts, a company dedicated to the prevention of infections, and the inventor of SuctionShield, a unique oral suction tip holster that reduces cross-contamination.

According to Dr. White, the estimated direct medical cost of HAIs is around $10 billion annually, not including cost-shifting to private payers. Including cost-shifting, HAIs may cost closer to between $35 billion and $45 billion for acute-care hospitals annually. The total direct, indirect and nonmedical social costs of HAIs are estimated at around $96 billion to $147 billion annually, including loss of work, legal costs and other patient factors.

Dr. White broke down the costs of HAIs — including catheter-associated urinary tract infections, central line-associated bloodstream infections, surgical-site infections, ventilator-associated pneumonia, Clostridium difficile infections and methicillin-resistant Staphylococcus aureus — even further into the following categories:

Direct Medical Costs

Some of the components of direct medical costs include hospital admissions, increased length of stay and patient mortality that results from.

Highlighted below are the excess costs per patient of several common HAIs as compared to patients without an HAI:

- CAUTI — $1,000 extra

per patient

- CDI — $11,000
- SSI — $20,800
- VAP — $40,000
- CLABSI — $45,800

"If you were to take all of these costs and average them across the hospital and across every patient, with or without an HAI, it would amount to a surcharge of $1,100 per patient admitted to the hospital," said Dr. White.

The excess costs of HAIs increase substantially among patients who also contract MRSA. For instance, a patient with an SSI and MRSA costs the hospital roughly $42,000 more than a patient without an HAI, and a patient with comorbid CLABSI and MRSA costs $58,500 extra.

HAIs also typically lead to longer lengths of stay for patients, which is another factor that drives up costs. The average length of stay for a patient without an HAI is roughly five days.

Highlighted below is the number of extra days for which HAI patients are typically hospitalized.

- CDI — 3.3 extra days
- CLABSI — 10.4 extra days
- SSI — 11.2 extra days
- VAP — 13.1 extra days

Again, MRSA can skyrocket costs by increasing the length of stay for SSI patients by 23 extra days and CLABSI patients by 15.7 extra days.

Under the Patient Protection and Affordable Care Act, CMS can also penalize hospitals for high infection rates by tying reimbursements to factors influenced by infections, such as readmissions, mortality rates and patient satisfaction scores. Hospitals can also be penalized for improper reporting or failing to report to CMS' Inpatient Quality Reporting Services.

Indirect HAI Costs

CMS no longer reimburses hospitals for care provided to a patient who contracts an HAIs, which will impact many hospitals' bottom lines.

In 2014, it was predicted 2,225 hospitals would lose roughly $227 million in withheld compensation, ranging as high as $1 million in losses to some hospitals annually. In 2015, the penalty increases and reimbursement changes are predicted to cost a 300-bed hospital $1.3 million annually.

Indirectly, HAIs lead to a considerable financial burden and even bankruptcy for many patient families, as well as costs for medical malpractice cases and hospital liability.

Unintended costs of HAIs

By aggressively treating HAIs and misusing antibiotics, hospitals now have to combat costly multidrug resistant organisms. MDROs lead to unnecessary tests on newly admitted patients, longer lengths of stay and higher patient mortality rates. ■