TOP TEN WAYS TO IMPROVE PATIENT SAFETY
Making Health Care Safer II: An Updated Critical Analysis of the Evidence for Patient Safety Practices

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The Agency for Healthcare Research and Quality published a report in March 2013 that comprehensively reviews the effectiveness of more than 100 patient safety interventions. The panel identified 10 strategies that are “strongly encouraged,” and recommended that healthcare organizations implement them within the next three years. Current use of these practices varies widely depending on the safety strategy, but the report’s authors say it is clear that implementation is far from universal.

1. Improve hand hygiene compliance.
The link between dirty hands and the transmission of health care-associated infections has strong backing in epidemiological literature, and the importance of hand hygiene has been touted by the World Health Organization, the Joint Commission and the Centers for Disease Control and Prevention. Yet rates of hand washing are low, averaging 39%, with many doctors and nurses underestimating the activity’s safety value. Research shows that effective hand hygiene initiatives improve knowledge of when to clean and how to clean, require demonstration of the knowledge, ensure that alcohol-based rub and gloves are available at the bedside, and guarantee that compliance is monitored continuously.

2. Use barrier precautions to stop the spread of infections.
Along with hand hygiene, barrier precautions are key to reducing the 1.7 million health care-associated infections that occur in the U.S. each year, which the CDC says kill about 99,000 patients annually. When a patient has a serious nosocomial infection such as vancomycin-resistant Enterococcus, health workers should wear gowns and gloves when providing care. They should use dedicated disposable equipment and follow the encounter with immediate hand hygiene. A care bundle including barrier precautions has been shown to cut the spread of VRE from 21% to 9% in intensive care units.

3. Implement care bundles to prevent central line-associated bloodstream infections (CLABSIs).
Using barrier precautions also is an element in the steps that dramatically can cut the rate of CLABSIs. When placing central venous or peripherally inserted central catheters, health professionals should wear caps, masks, sterile gowns and gloves, and a full body drape should be placed on the patient. About 250,000 bloodstream infections occur each year in the U.S., and these infections can triple hospital stays from seven to 21 days. Bloodstream infection rates in ICUs fell by nearly 60% between 2001 and 2009 thanks to wider use of a prevention protocol bundle first implemented statewide in Michigan. In addition to barrier precautions, the care bundle calls for hand hygiene, cleaning the patient skin with chlorhexidine, avoiding the femoral site for catheter insertion and removing unnecessary catheters.
4. Use real-time ultrasonography when placing central lines.

Another patient harm linked to central venous catheters is difficulty with inserting the lines correctly. Relying on the anatomic “landmark” approach to determine where the underlying vein is located, health professionals often need multiple attempts to place the catheter successfully. The frustrating process leads to complications and higher infection rates.

Using portable ultrasound machines to get a real-time, two-dimensional view while placing the catheter has been shown in randomized trials to lower infection rates and improve other outcomes. Research shows for every 1,000 patients, ultrasonography-guided central-line placement helps avoid 90 complications.

5. Use protocols to reduce catheter-associated urinary tract infections (CAUTIs).

CAUTIs are the most common type of health care-associated infection, with 1 million cases in the U.S. each year. The most important step in preventing CAUTIs is to reduce use of indwelling urinary catheters. At least 21% of catheters are placed in patients inappropriately — for example, as a substitute for extra nursing care — and they are often left in long after they are needed. Physicians and nurses should be reminded daily about catheter use through IT systems, sticker reminders or other methods. Another intervention is an automated stop order issued 24-48 hours after admission or surgery. Letting nurses use electronic systems to suggest removal to physicians also can help. Research shows these interventions can cut CAUTIs rate by more than half.

6. Employ preoperative checklists to reduce surgical complications.

The estimated death rate directly due to inpatient surgery in industrialized countries ranges from 0.4% to 0.8%, with major complications occurring as often as 17% of the time. The most well-known surgical safety checklist is one devised in 2008 by WHO, which cut mortality rates from 1.5% to 0.8% at sites in industrialized nations and developing countries. The checklist also helped reduce the surgical complications rate from 11% to 7% over six months involving nearly 4,000 procedures.

The checklist prompts communication among members of the surgical team to confirm elements such as the patient’s identity, the surgical site and type of procedure, anticipated problems, administration of antibiotic prophylaxis and the correct sponge count upon completion.

7. Improve venous thromboembolism prophylaxis (VTE).

Between 350,000-600,000 Americans develop deep vein thrombosis (DVT) each year. The condition, which commonly affects the legs, can lead to pulmonary embolisms (PE) that kill more than 100,000 Americans annually. DVT and PE together comprise VTE. Medical and mechanical interventions can prevent VTE. Low-dose unfractionated heparin and low-molecular weight heparins are effective. So are compression stockings and pneumatic compressing devices. One key to improving use of these prophylactic interventions is health information technology that helps identify patients at higher risk for VTE. Automated alerts for patients with documented risks can help increase VTE prophylaxis ordering rates from 20% to 80%, research shows.
8. Use preventive intervention care bundles to cut rates of ventilator-associated pneumonia (VAP-VAE).

Pneumonia linked to endotracheal intubation accounts for 25% of ICU infections and is responsible for half of intensive care antibiotic use. Research shows that preventive intervention care bundles can cut rates of ventilator-associated pneumonia by as much as 40% among adults and children. These steps include elevating the head of the patient’s bed by more than 30 degrees, putting holds on sedation — called “sedation vacations” — to help wean patients off mechanical ventilation, cleaning the mouth with chlorhexidine, and using subglottic suctioning endotracheal tubes to reduce the pool of secretions in the tube cuff.

9. Avoid hazardous drug abbreviations.

About 15,000 medication errors a year have been linked to using abbreviations such as “u” for “unit” and “q.d.” instead of “once daily.” Starting in April 2004, the Joint Commission required hospitals to ban these and other commonly used abbreviations that jeopardize medication safety. Studies done around the time the ban went into effect found that hospitals were able to cut use of hazardous medication abbreviations from about 20% to 3% through education and follow-up with doctors who used the shorthand prescription lingo. Implementation of computerized physician order entry systems also can help eliminate the vestiges of this problem.

10. Use multicomponent interventions to prevent pressure ulcers.

About 2.5 million Americans develop bedsores each year, and about 60,000 patients will die from complications related to pressure ulcers acquired in U.S. hospitals. One bundle of preventive care measures has reduced pressure ulcers by 90% at a large health system, from a rate of 5.7% of patients to less than 0.5%. The bundle, dubbed SKIN, calls for continual assessment of the skin of at-risk patients, regular turning of these patients, management of incontinence to prevent soiling that can contribute to bedsores, and nutritional assessment for malnourishment that can enable the ulcers. Commitment from healthcare executives is essential to implementing proven interventions. For a lot of this work, attitude seems to make such a big difference. You need leadership that conveys that the extra effort is worth it.

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