

# Quality improvement: A structured daily checklist

## Communication and collaboration improve care

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**P**atient safety and care quality are the primary objectives for hospitals, patients, and their families. Medicare and Medicaid reimbursement practices and the influence of quality indicators have sharpened that focus even more. Hospital-acquired conditions—such as catheter-associated urinary tract infections (CAUTI), hospital-acquired pressure injuries (HAPI), central line-associated bloodstream infections (CLABSI), and falls with injuries—are quality indicators used to measure how well a hospital delivers care. After dealing with a series of CAUTIs on a 21-bed acute-care unit for geriatric patients, we developed a nurse-driven checklist to address quality, safety, and discharge planning.

### Background

In 1999, the Institute of Medicine published *To Err is Human: Building a Safer Health System*, the first in a series of reports focusing attention on quality and safety in healthcare. Since then, hospitals have built adverse event reporting systems, increased technology use to enhance patient safety, and modified strategies to address the alignment of financial incentives with quality indicators. In addition, legislation has been passed that addresses quality in healthcare. For example, Congress passed The Patient Safety Quality and Improvement Act of 2005, which encourages patient safety through confidential reporting of adverse events. As this focus on



patient safety and quality continues to rise, innovative solutions from the bedside are paramount to facilitating consistent care.

In our 21-bed medical-surgical geriatric unit, we focus on our patients' safety and the quality of care we deliver. Interprofessional rounds, which are used throughout the hospital, encourage interprofessional collaboration and may have a positive influence on care quality. Geriatric patients tend to have extensive medical histories and complex social situations that require timely interventions from both care coordination and social work teams. To improve patient care, increase communication and collaboration, monitor patient quality and safety, and ensure a smooth discharge, we established a checklist with the acronym CHIEF O. (See *Daily checklists: The evidence.*)

### Developing the checklist

When designing our checklist, we started with areas of safety and

quality. After a series of CAUTIs and one CLABSI in the summer of 2017, priorities included catheter management, central line care, fall prevention, and pressure injury prevention. Next, we considered what word would be an easy reminder and point of reference during interprofessional rounds to lead nurses through the checklist. After brainstorming and writing down the first initial of all of the quality and safety concerns, we landed on CHIEF. Recent miscommunication around oxygen requirements for discharge prompted the addition of "O" by our team-based physician assistants. This led us to our final acronym, CHIEF O. We implemented the checklist in July 2017.

During daily interprofessional rounds, the resident or physician assistant presents a brief patient history, medical plan of care, and an estimated day of discharge. Team members from care coordination and social work discuss family dynamics and potential barriers to discharge. In addition, food and nutrition team members discuss dietary needs. The nurse goes through the checklist, keeping the following parameters and points of discussion in mind:

**CAUTI**—Does the patient have a urinary catheter; what is the indication and is it still needed?

**HAPI**—Does the patient have a pressure injury or is the patient at risk for pressure injury? If he or she has a pressure injury, has the wound care team seen the patient and made recommendations?

**I.V. access**—Does the patient have peripheral or central line access? If a central line is present, what is the indication and when is the dressing due to be changed?

**Ejection fraction**—Does the patient have heart failure? Is there an order for daily weights and is the daily weights sign posted outside the door? During this section, we also discuss telemetry requirements.

**Falls**—Is the patient at risk for falls, has the MORSE Fall Scale ([ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk-tool3h.html](http://ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk-tool3h.html)) and the TIPS (Tailored Intervention to Promote Safety) sheet\* been printed and posted in the room, and is the bed alarm/interface cord plugged into the wall and functioning?

**Oxygen**—Is the patient getting oxygen therapy? If so, will he or she be going home with oxygen or is titration needed? (See *Case in point*.)

### Quality metrics and outcomes

In the beginning, the nurse manager would prompt nurses through the verbal checklist; after a few weeks, the nurses could complete it without guidance. To track data from shift to shift, we added the acronym to the nursing handoff sheet. Generally, it takes between 1 to 5 minutes to complete the checklist, depending on patient acuity. It's used during interprofessional rounds on all geriatric team-based patients, which is generally about half of our 21 patients. Interprofessional rounds occur Monday through Friday at 10:00 AM, excluding holidays and weekends.

Our results showed an improvement in CAUTIs with no incidents for 10 consecutive months through May 2018. Similarly, a CLABSI in July 2017 was followed by a CLABSI-free 7-month period. (See *Checklist results*.) Unfortunately, a patient developed a CLABSI toward the end of the first quarter in 2018. This was an off-service patient (not on the geriatric service) who wasn't discussed during interprofessional rounds or as part of the

## Daily checklists: The evidence

Checklists are used throughout organizations to facilitate safety, timely discharge, and patient goals. Here's what the evidence tells us about their effectiveness.

- McKelvie and colleagues examined checklist compliance and effects related to patient management plans in a pediatric intensive care unit. Compliance with the checklist was robust at 89.2%, and the checklist affected the plan of care 52.6% of the time.
- A randomized clinical trial within intensive care units found that use of urinary catheters and central lines decreased with a checklist but didn't reduce central line-associated bloodstream infections or catheter-associated urinary tract infections.
- An evaluation of the World Health Organization's Surgical Safety Checklist aimed at reducing complications and improving quality found that it decreased postoperative mortality and complications.
- The implementation of a smartphone-based app checklist used to prompt awareness of potential errors and safety issues showed potential improvements in patient safety.
- A Cochrane Library systematic review examining multiple interprofessional collaborative interventions, such as rounds, meetings, and checklists, found that interprofessional rounds and checklists may improve the use of health-care resources. However, the studies didn't report on patient mortality, morbidity, or complications.

### Case in point

Mrs. Bennett\* is a 91-year-old woman who experienced an unwitnessed fall with no injury. Her mental status is altered—she's alert to person and place but disoriented to time (she states that it's 1980). A Montreal Cognitive Assessment reveals moderate cognitive impairment. She has lower-extremity edema. Her medical history includes hypertension and heart failure with an ejection fraction of 51%. Mrs. Bennett's CHIEF O checklist at rounds shows:

**C:** Urinary catheter in place, failed void trial (three attempts); outpatient urology follow-up.

**H:** No pressure injuries.

**I:** Peripheral I.V. in place; no central line.

**E:** Ejection fraction 51%, daily weights, strict input and output. Daily weight sign posted on door. Telemetry monitoring in place.

**F:** High fall risk: Bed alarm activated and interface cord attached/working.

**O:** 2-L nasal cannula oxygen requirement for discharge.

During interprofessional rounds, the team discusses Mrs. Bennett's need for outpatient follow-up for several failed void trials. The nurse validates education of urinary catheter infection-prevention techniques to the patient and family, and peripheral (not central) access is confirmed. The physician assistant endorses the need for daily weights, and the sign is placed outside the room. In addition, the patient no longer requires telemetry monitoring, and the order is discontinued. The nurse confirms the patient's fall risk and reaffirms safety checks for the bed alarm and interface cord. The team discusses the patient's home oxygen requirement of 2 liters. Mrs. Bennett, currently on 4 liters, will require oxygen titration before discharge.

\*Name is fictitious.

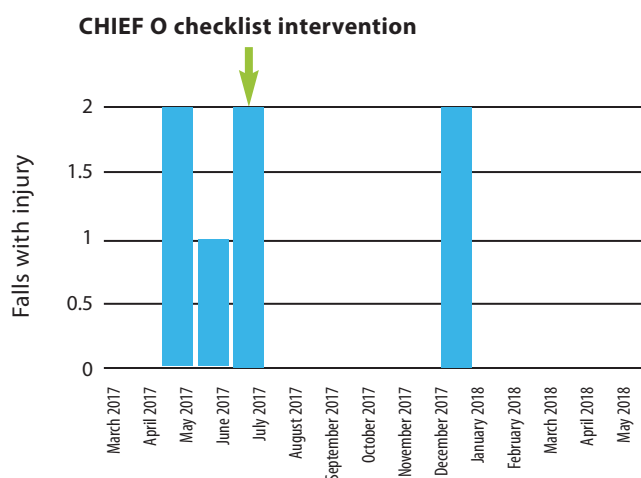
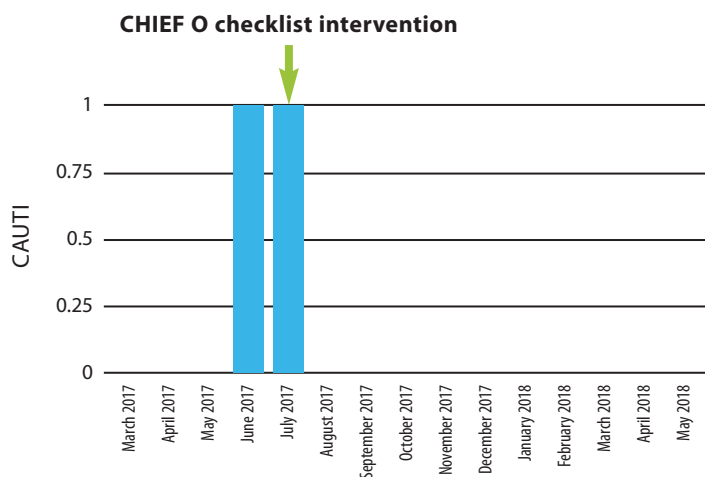
checklist. This particular CLABSI highlights the need for interprofessional rounds with all patients.

### Lessons and conclusions

Interprofessional collaboration is a vital component in the delivery of

## Checklist results

Implementation of the CHIEF O interprofessional checklist in our acute-care unit for geriatric patients has resulted in improved patient safety. The results related to catheter-associated urinary tract infections (CAUTI) and falls with injuries are shown below.



high-quality care in our dynamic healthcare environment. Before developing the CHIEF O checklist, our interprofessional rounds lacked a consistent focus on quality and patient safety. With the checklist, nurses report feeling more empowered to question whether a urinary catheter is medically indicated. By encouraging nurses and providers to discuss the indications for urinary catheters and central lines, we've realized the positive impact of interprofessional care.

After a recent spike in HAPIs in the first quarter of 2018, the CHIEF

O checklist has helped shape discussions on wound care consults and recommendations, as well as the use of a prophylactic foam dressing. Although a recent systematic review of prophylactic pressure injury dressings concluded that few vigorous studies exist in this area, the studies we analyzed found these dressings can be useful in preventing pressure injuries and saving money. Using our CHIEF O checklist, we are steadfast in our resolve to address our recent increase in HAPIs.

As medical science evolves to address the challenges of patient

complexity, so must our focus on patient safety and care quality. Implementing the CHIEF O checklist has increased our interprofessional care, appears to have decreased our infection rates with CAUTIs and CLABSIs, and has helped to empower our nurses to advocate for their patients' safety. ★

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\*Each day, the nurse prints out the TIPS sheet, which is automatically populated with prevention images based on the results of the falls assessment. Options include: has a history of falls, needs assistance from one or two people, bed or chair alarm turned on, assistive devices needed, or has an I.V. pole.

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