Interventions to reduce urinary catheter use: it worked for them, but will it work for us?

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In most hospitals, four steps are required to remove a urinary catheter: the physician recognises the patient has a catheter in place; the physician realises the catheter is no longer necessary; the order is written to remove the catheter; and the nurse removes the catheter. Interventions to prompt removal of unnecessary urinary catheters by expediting these steps are primarily of two types: ‘reminders’ which function to simply remind that a urinary catheter is in place and should be removed if unnecessary and ‘stop orders’ which prompt nurses or physicians to remove catheters based on criteria, such as 24–48 h after surgery or when the patient no longer meets other clinical criteria. These interventions can be implemented using a range of technology, as complex as a computer-generated reminder or stop order initiated with each catheter order, or as simple as printed post-procedure order sets with stop orders, sticker reminders on charts or catheter bags, a mandatory daily verbal reminder from nurses to physicians of catheterised patients, or as a reminder on a checklist used daily on rounds. These interventions can be directed at either physicians or nurses, with nurse-directed interventions ranging from requiring nurses to remind physicians to order catheter removal to nurse-empowered stop orders enabling nurses to remove catheters that do not meet appropriate criteria, without requiring an additional physician order. Consequently, there are many options to consider when designing an intervention to facilitate removal of unnecessary catheters, with success demonstrated using all of these options.

The article by Janzen et al. describe what sounds like a simple intervention to increase physician awareness of unnecessary catheters by educational sessions, posters, and encouraging nurses to remind physicians to remove the catheters—all of which could be expected
to be low-cost, low-resource-requiring interventions that could be implemented anywhere. Yet, perhaps the most important aspect of this intervention’s success is that the daily review of catheter necessity occurred as an addition to routine daily face-to-face communication between the nurse and physician at the bedside for general medicine ward patients. In many hospitals, such routine daily bedside nurse–physician conversations and use of a checklist to review complication prevention are more typical of intensive care unit (ICU) teams, but less commonly seen on general wards where communication between nurse and physician may occur primarily through means of chart orders and pages.

Routine face-to-face communication at the bedside between nurses and physicians has the potential to facilitate catheter removal in several aspects. Because the conversation occurs at the patient’s bedside, it is less of a challenge to recognise the patient has a urinary catheter in place by checking under the sheet, which addresses the first step in getting catheters out. It may be easier to re-assess the indication for the catheter in the patient’s presence and discuss feasibility using catheter alternatives, which can vary by patient characteristics such as genitourinary anatomy, mental status, and whether the patient can be safely turned routinely. Face-to-face communication increases accountability for the catheter, and has the potential to address nurse reluctance to remove catheters when related to lack of confidence in assessing catheter need. Therefore, although Janzen et al describe the reminder intervention as a simple daily review of catheter use and recommended reminder by nurses to physicians, the success of this intervention may reflect its implementation in the context of an established routine of daily bedside conversation, rather than expecting physicians or nurses to review independently, or nurses to contact physicians outside of existing routine interactions to remind them about catheter removal.

Janzen et al deserve to be congratulated because they focused on one of the most important tasks in preventing CAUTIs (removal of unnecessary catheters), but also because the design of their intervention was appropriate with strong potential for success in the context of their environment (eg, established face-to-face bedside communication). Yet, readers are cautioned that implementation of catheter reminders can be more challenging in other environments. Considering methods to facilitate behaviour change, communication and accountability in addition to implementing the specific reminder intervention is critical for success. For example, implementing a unit policy that requires daily review of catheter necessity or an electronic reminder to physicians or nurses to consider removing a catheter may be less successful than in Janzen et al because of less structure in expectations of when this review would occur and how physicians and nurses should communicate about catheter removal or uncertainty about catheter alternatives, supporting the default of the catheter remaining in place.

Adding a reminder intervention to a pre-existing bedside communication between physicians and nurses (similar to adding an item to a daily checklist used in ICU rounds) may be the ideal circumstance to employ a reminder. In this setting, the reminder is targeted to the correct clinicians making decisions for the patient that day, the topic is reviewed when other clinical assessments and decisions are made impacting the necessity of the catheter, and it is not as easy to ignore when incorporated into the routine for all patients. Interventions that serve to remind about catheter presence or prompt catheter removal have the potential to succeed using either high or low technology strategies, if implemented in an environment that supports the clinical review and communication required to facilitate removing catheters.

In environments without routine face-to-face bedside communication between nurses and physicians, catheter stop orders that require action by physicians or nurses may facilitate the four steps required to remove catheters better than reminders alone. Nurse-empowered stop orders that allow nurses to remove catheters by criteria without requiring a physician order have potential to bypass the first three steps required to remove the catheter. However, the success of nurse-empowered stop orders is highly dependent upon nurse comfort with the autonomy to assess catheter need and also the resources and leadership provided to reduce the temptations to use indwelling catheters. Nurse-to-patient ratios may influence the temptation to use catheters to manage incontinence because non-catheter alternatives may require more bedside tasks and time. Nursing comfort and enthusiasm for alternatives to indwelling catheters is an important contributor to the success of interventions to reduce catheter use. Interventions can be impeded by physician behaviour, particularly if physicians do not support nursing efforts to reduce catheter use. Therefore, another important aspect of the environment that influences the success of a catheter-reducing intervention is the specific patient safety culture, including the level of respect between nurses and physicians, along with their willingness to try new strategies and prioritisation of preventing complications among the day’s tasks. Although rarely assessed or described in intervention studies, the patient safety culture in which the intervention is implemented is a key component of its success and generalisability to other settings.

The implementation of catheter reminders and stop orders is also facilitated by the use of dedicated personnel to review, remind and reinforce the recommendations to remove unnecessary urinary catheters. In some studies, this task is performed by a specific nurse (eg, ‘Foley catheter nurse’) or team (eg, ‘catheter patrol’) who review whether the
reminders or stop orders to prompt removal of unnecessary urinary catheters can be powerful interventions, particularly when employed in an environment that facilitates the communication and
behaviour changes required to encourage catheter removal. The impact of a catheter reminder or stop order can range from an intermittent but quickly forgotten prompt to an invaluable lever that repeatedly expedites catheter removal, by increasing awareness of unnecessary catheters to start a cascade of actions while capitalising on effective streams of communication and staff readiness to change. When reading the next study demonstrating success in reducing unnecessary catheter use, instead of asking will it work for your team, think about why it worked for their team and how your environment could be prepared to maximise the intervention’s effect. Fortunately, support and expertise31–33 are readily available for diagnosing and optimising environments to implement interventions to reduce catheter use and CAUTIs.

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