

Breaking Sterility: Dealing with Procedural Violations in Healthcare

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Breaking sterility

Dealing with procedural violations in healthcare

By Lauren Simko, BSN, RN, FNP

EXAMPLES OF PROCEDURES requiring strict sterile technique include invasive procedures performed at the bedside, such as urinary catheter insertion, and surgery. A break in sterility can result in infection and seriously harm the patient. Each year 1.7 million patients acquire a healthcare-associated infection (HAI) and almost 100,000 of them die. At least one in five of these infections could have been prevented.¹

Healthcare workers can help prevent infections by performing strict hand hygiene, maintaining proper technique during diagnostic studies and procedures, and speaking up when they observe others violating standard policies and procedures.²

This article discusses how any member of the healthcare team should intervene and advocate for patients when he or she witnesses a breach of sterile technique, even when doing so requires addressing a more senior staff member who's committed a procedural violation.

Examining the impact of breaks in sterility

Patient safety is the most important component of the nurse's daily role, and HAIs are among the most significant patient safety issues.^{3,4} HAIs, defined as infections "acquired as a consequence of a person's treatment by a healthcare provider" are considered to be one of the ten most common causes of death.^{5,6} Of these infections, 35% are attributed to catheter-associated urinary tract infections, 20% are the result of surgical site infections, and 15% are due to pneumonia and bloodstream infections.⁷



Although not every infection is preventable, healthcare providers must recognize how to avoid or reduce the risk of infections in their patients as well as stay up to date on the continual changes in evidence-based practice. According to the World Health Organization, strict hand hygiene is important for reducing infection rates, with healthcare workers' adherence a key component.⁸ Another way to reduce infection rates is to follow strict sterile technique, not only in the OR but at the bedside and in the outpatient setting. Many procedures require sterile technique. Breaks in sterility can result in negative outcomes such as infections, pain, or increased length of hospital stay.⁶ (See *Breaking down the breaks in sterile technique.*)

The importance of conscientious care by every staff member can't be overestimated.⁶ Staff members must recognize how to actively participate in reducing the number of infections in their patients, especially by being cognizant, honest, and able to rectify

the situation if they break sterility in any setting.

Maintaining standards for infection control

In the OR, unforeseen events sometimes cause staff to inadvertently break sterile technique. When one staff member witnesses another worker violating sterility without correcting it, the observing staff member is ethically obligated to address the issue and advocate for the patient.

The fundamental standards of infection control include proper hand hygiene, sterile technique, and appropriate use of sterile barriers such as gloves, gowns, and masks.^{6,9} (See *Beware breaks in sterility.*) In addition to these basic principles, the attitudes, patterns, and practice of OR staff have been linked to maintenance of sterility.¹⁰ For example, some staff members may not speak up and correct someone of higher rank out of fear of exclusion by others postprocedure or difficulty working with that person in the future.

Staff must advocate for the patient who's under anesthesia, be responsible for the actions taking place during the surgery, and remain accountable for any errors. Adjust negative attitudes by offering positive reinforcement in the workplace and provide constant education for those who need it. Requiring staff to adhere to policies and procedures can improve patient outcomes and reduce infection rates.⁶

The following incident illustrates how these elements encourage staff members who witness procedural violations to do the right thing.

An ethical dilemma

A surgical resident approaching the end of his rotations for the year was performing a gynecologic operation that required him to execute part of the surgery while standing and advancing instruments through the patient's abdomen. At the end of the procedure, he was required to execute the surgery through the patient's vagina while he sat on a stool.

Once the resident had completed the first part of the surgery, he was ready to sit down and move on to the next step. Everything was going smoothly until he reached behind himself and put his gloved sterile hand on to the metal stool.

Anyone familiar with sterility knows that objects below the waist, behind the back, or not draped with sterile barriers are considered off limits, nonsterile, and "dirty."¹¹ The resident in question had just broken sterility inadvertently and was about to proceed with the rest of the surgery.

No one in the OR witnessed this breach in sterility except for one new OR nurse intern who'd been watching every action carefully. Still in training, she made sure to observe everything because she was constantly quizzed by her colleagues throughout the procedure.

Although the nurse intern knew that what the resident had done was wrong and needed to be corrected,

Breaking down the breaks in sterile technique

Breaks in sterile technique can be divided into four types:⁶

- **Type 1—the break is recognized immediately.** For example, a nurse placing a urinary catheter in a patient at the bedside may inadvertently touch an item that isn't sterile. This sometimes happens when a patient moves his or her legs, causing the nurse's gloved hand to touch a "dirty" (or unsterile) object.
- **Type 2—the break is recognized shortly after it occurs.** This type of break may occur when a nurse placing a catheter tries to move the sterile supplies closer and accidentally touches the bedside table. The nurse may realize after pulling the table closer that sterility has been broken.
- **Type 3—the break is recognized later.** Many times, staff in the OR wear two sets of gloves. The double-glove method is another approach to protect patients from infection. The gloves on the bottom layer may be a bright color such as purple or green, and the gloves on the top layer may be white. During the procedure, staff members may not realize that they have a hole in the gloves. Toward the end of a case, when staff members see the bright color showing through the white gloves, they recognize the hole.
- **Type 4—the break isn't recognized at all.** Intuition tells us that not all breaks in sterility are recognized. One example of this type of breach occurs when staff in the OR reach for an item. Each member of the OR staff has an imaginary window of sterility in front of his or her body, generally, the area above the waist and below the top of the chest. Because people are different heights, the area of "sterile air" varies drastically from person to person. Staff members reaching higher or lower for an item may not recognize that they've broken sterility. Similar breaks can occur when they change their position from standing to sitting during a procedure because they're now much lower than before. Staff in the OR may also inadvertently pull a chair in or push glasses up without realizing that they've broken sterility.

she didn't know how to address the issue. She knew that advocating for the patient's safety might lead to an uncomfortable confrontation with the resident, but letting him continue to operate would risk an infection for the patient. The nurse intern knew that she had to come up with the best solution to this dilemma.

Applying ethical principles

To resolve this quandary, the nurse intern had to consider the ethical principles involved, including beneficence, nonmaleficence, justice, autonomy, fidelity, and veracity. Beneficence and nonmaleficence go hand in hand when dealing with patient safety.

Grace defines *beneficence* as “the ethical principle that enjoins health-care professionals to remain focused on their professional goals in providing a good for individuals.”¹² Because employees must provide “good” to their patients, continuing surgery after sterility has been broken isn't beneficent; it harms the patient.

Nonmaleficence means to protect the patient and avoid harm.¹² When one staff member observes another make an error during a surgical procedure or in any other patient-care situation, the first staff member is accountable and obligated to rectify the situation.

Veracity, also known as truth telling, is one of the most important ethical principles for healthcare professionals. Patients have the right to information about their health and their diagnosis so they can make the best and most informed decisions while maintaining their autonomy.¹² Ideally, patients can help make decisions about their treatments and procedures. When patients can't make their own choices because they're anesthetized, the OR team must step up and make the most suitable selection for the patient.

To maintain the ethical principle of veracity, you don't necessarily need to tell the patient about a breach in sterility that's been identi-

Beware breaks in sterility

To avoid the most common breaks in sterile technique that can result in HAIs, follow this advice during sterile procedures:

- Make sure your gown, lab coat, or scrub top never touches any part of the sterile field.
- If you have long hair, keep it pulled back. In the OR, keep your hair covered by a cap or bonnet.
- Keep your fingernails short and don't use artificial nails because long or artificial nails can puncture gloves. Also, long and artificial nails, as well as rings, have been shown to harbor bacteria.
- Don't wear jewelry that can fall into a sterile field or site or bracelets that dangle.
- Never clean a wound from the outside to the inside, which will introduce bacteria to the wound.
- If you inadvertently cut or stab yourself, make sure you don't expose a patient to your blood.
- Never reach over a sterile field, above your head, or below your waist.
- Never walk between two sterile fields. Two scrub personnel wearing sterile gowns should pass face to face.
- If you inadvertently touch something that's not sterile, drape the area or provide a new sterile setup.
- When a sterile drape or gown has been soaked through, reinforce the area with additional sterile drapes or change your sterile gown.
- Ensure that sterile solutions aren't splashed into the sterile area.
- Make sure that equipment has been sterilized correctly—sterility indicator paper identifies equipment that's been sterilized properly.
- Make sure equipment has been packaged properly and has no visible defects or tears.
- Don't open and close doors frequently because this can cause turbulent airflow.

Source: Hopper WR, Moss R. Common breaks in sterile technique: clinical perspectives and perioperative implications. *AORN J*. 2010;91(3):350-364.

fied and corrected. Staff may believe that correcting a coworker is confrontational and may result in an argument, but at the end of the day, every staff member in the OR should have the same priority—the patient.

Follow the Nursing Code of Ethics

Nurses base their practice on the Code of Ethics for Nurses with Interpretive Statements.¹³ This code sets forth ethical and professional responsibilities and duties for nurses to follow.

Nine provisions of the code discuss professionals' obligations. One facet of the first provision explains professional relationships between colleagues. The nurse should maintain a respectful relationship with other staff members while fulfilling his or her commitment to the patient. Upholding integrity, collaborating with staff, providing quality care, resolving conflict, and negotiating

with team members are all parts of provision 1.5.¹³

When staff members witness other workers performing a work task incorrectly, they may worry that confronting their colleagues will cause friction. But professionals must remember that resolving conflict is part of the code, and patient care comes before all other issues.

Provision three covers the concepts of “addressing impaired practice” and “acting on questionable practice.”¹³ The Code of Ethics, facility policy and procedure, and federal, state, and local laws guide the nurse and support his or her decisions in addressing unethical and illegal practices.

Fear of confronting the healthcare provider who's acting improperly shouldn't be an issue for the nurse. He or she needs to protect the patient by intervening at the time and by reporting inappropriate actions or tasks to suitable parties of higher

influence according to the facility's policies and procedures. The nurse is obligated to follow the institution's guidelines for reporting incidents through patient safety reports as well as reports for the risk management department. A nurse who chooses to ignore unacceptable actions is accountable for those actions.

Making the right choice

In the case described above, the nurse intern who witnessed a breach in sterility was faced with the choice of speaking up about this error or keeping quiet. Before her OR training, the nurse intern had seen another surgeon break sterile procedure and had told a staff member. Unfortunately, the staff member had told the nurse intern not to make a "big deal" about the incident and the surgeon continued to operate.

In this new situation, the nurse intern had received training that had provided her with a better understanding of the issue. She'd been educated about the potential outcomes of "dirty" technique and was also extremely unhappy with the outcome of the previous situation.

The nurse intern remembered that her actions should be guided by the Code of Ethics for Nurses, as well as the policies and procedures of her institution. This time she decided to speak up, address the error, and advocate for her patient.

Before the surgical resident touched any surgical instruments or proceeded with surgery, the nurse intern said, "Excuse me, doctor. What size gloves do you wear?" The resident was caught off guard by this questioning and asked, "Why?" She replied, "I saw you touch your chair with your hand, so I wanted to get you a new pair of gloves before you proceeded." After a moment's pause, the resident answered, "Size nine, and thank you." After he'd applied new gloves, he continued with surgery and the nurse intern received looks of approval from other members of the team.



The foundation for infection prevention includes appropriate hand hygiene and use of sterile barriers such as gloves, gowns, and masks.

Related issues

Accountability is defined by Grace as "the responsibility of the professional for making sound clinical judgments, anticipating foreseeable harms, and being answerable for actions."¹² Everyone involved in surgical procedures is accountable for the actions and possible errors that take place behind closed doors. The staff member who breaks sterility or makes another mistake needs to consider what another reasonably prudent person would do in the same situation. That professional is liable for the procedural results and patient outcomes. The staff member who witnesses inaccuracies in surgery should advocate for the patient on the OR table.

A related issue is **medical negligence**, which occurs when a health-care worker performs or fails to perform the necessary standard medical treatment, resulting in harm to the patient.¹⁴ **Patient neglect** occurs when staff members fail to correct their errors. If, for example, the surgeon is unaware of a mistake, the

colleague who observes the error is expected to advocate for the patient.

Speaking up for patients

Nursing requires compassion, respect, and attention to every detail. Defending patients' rights can be challenging, but nurses must make every attempt to do so, even if that means confronting fellow employees. ■

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