

The Q-Net™ Monthly

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'ER': ESSENTIAL READING

Two papers authored by this newsletter's editor were published recently. "What is disinfection, sterilization?" appears in *Gastrointestinal Endoscopy* [August 1999;50(2):301-303]. Published in the current issue of *Gastroenterology Nursing* [July-August 1999;22(4)] is a commentary in response to *Newsweek's* March 1, 1999 article, "Do scopes spread sickness?"

Q-Net '98



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What is 'Q-Net'?

Q-Net is a technology-assessment network of questions and answers. Its newsletter is *The Q-Net™ Monthly*.

Q-Net's main goal is to encourage the infection control and endoscopy communities not only to ask good questions but also to demand succinct and well referenced responses.

Q-Net addresses the needs of both the health care provider whose goal is to provide the best care possible, and the patient who deserves affordable quality health care.

Reusing Single-Use Items

Discussion of the results of a national survey

Last year this newsletter published a questionnaire to assess current practices in infection control and endoscopy. The results of this questionnaire were presented in this newsletter's April-May (1999) issue. This month's issue, which discusses the reuse of single-use items, is a continuation of the discussion of this survey's results, which appeared in last month's issue.

Outsourcing, reuse of single-use items: Outsourcing is defined as the practice of a health care facility contracting a commercial company to reprocess (ie, clean and sterilize) medical instruments. Nine (6%) of the 146 respondents to Q-Net's survey, the results of which were published in this newsletter's April-May 1999 issue, reported that their facility outsourced at least one type of instrument. This relatively low percentage was less than anticipated and may reflect the public's uncertainty about outsourcing's safety and effectiveness.

Often associated with outsourcing is the practice of reusing single-use (disposable) items. Realizing that an opportunity may exist to reduce costs without reportedly increasing the risk of patient injury, health care facilities are weighing the merits and shortcomings of both outsourcing and reusing single-use items. In general, outsourcing companies market themselves as commercial facilities

better equipped than hospitals to effectively reprocess medical instruments for reuse.

Almost 45% (65 of 146) of the respondents to Q-Net's survey reported reusing single-use items, a practice that is becoming more widespread and a frequent topic of conversation, despite it being considered anathema by many infection control and risk management departments. This result is in general agreement with other published reports (*Investor's Business Daily*, 9-15-1999; *US News and World Report*, 9-20-1999).

Single-use items that are resterilized for reuse are often divided into two categories, based on the risk to the patient: Items that were opened but *not* used on a patient, and items that were opened and used previously on at least one patient. Debates that address the repackaging, reesterilization and reuse of single-use items need to clarify which of these two categories is being discussed.

To be sure, the risk of patient injury associated with these two categories is not the same. In general, *unused* disposable items that were reesterilized because their original packaging was opened would be expected to pose a lower risk of patient injury (and no risk of cross-infection) during reuse than reesterilized items that have been used previously and likely have come in contact with another patient's blood and tissues. Depending on the type of item, both categories may be associated with the risk of device malfunction during reuse.

While Q-Net's data would appear to be reliable, they, like the data of another recently published survey,¹ might underestimate the number of facilities that reuse single-use items. Because of the legal liabilities associated with this practice,

facilities might be disinclined to admit openly and freely that they reuse single-use items.

Proponents of reusing single-use items cite its cost savings and the lack of reports documenting an increased risk of patient injury as justification for its practice. They add that some items may be labeled as disposable (eg, orthopedic bits and burs), not necessarily because multiple uses will pose a safety risk, but because a manufacturer may deem it too expensive to collect the data required to label the same item for more than one use.

None of the survey's 65 respondents reported that reusing a single-use item had injured a patient. Nevertheless, while this practice may not be reported to increase the risk of patient injury, many of the procedures during which single-use items are reused are typically performed on an out-patient basis. And since careful and prospective monitoring and investigating of the morbidity of patients undergoing out-patient procedures is arguably inadequate, claiming that reusing single-use items is safe merely because of the paucity of reports demonstrating its association with adverse patient outcomes may be amiss. As asserted by opponents of this practice, the possibility exists that reusing single-use items poses a greater risk of cross-infection and other patient injuries than reported.

Of course, the risk of patient injury is not the only concern roused by reusing single-use items. Respondents to Q-Net's survey reported that patients were *not* usually informed when a disposable device was reused during a procedure. Because this practice *may* increase the risk of patient injury, ethical questions, such as whether the health care facility is obliged to formally inform the patient whenever a single-use item is reused, warrant asking. Also, 15 (23%) respondents reported that their facility billed the same for procedures that reused single-use items as those that used only new (unused) disposable items, even though the value of a reused device may be significantly less than a new one. (Due to legal concerns, this number of respondents may too underestimate the actual number.) This billing practice also raises some obvious legal and ethical issues that warrant further discussion.

Respondents reported using several different methods for reprocessing single-use items. Ethylene oxide (EtO) gas was the most frequent response (n=18). Liquid chemical sterilants (LCSs) represented a significant number of the responses (n=15), which raises concern. Many types of disposable items that are reused (eg, biopsy forceps, cardiac catheters) are *critical* devices that require sterilization. Due to their unique physical properties, LCSs are associated with a significantly lower sterility assurance level ("SAL") than pressurized steam and EtO and are generally labeled to achieve disinfection. Using LCSs to reprocess critical devices (high-level disinfection of laparoscopes and arthroscopes appears to be safe) may be inadequate and may place the patient at an unnecessarily higher risk of infection. Moreover, many types of disposable devices are complex in design, precluding contact of the

LCS with all of the instrument's internal surfaces, further increasing the risk of cross-infection.

Conclusions: Several conclusions can be drawn from the results of Q-Net's survey. While some practices in endoscope reprocessing have changed during the past several years, others have not. In general, infection control measures appear to have increased during the past decade. Today more facilities than in the early 1990s: (a) steam autoclave biopsy forceps; (b) use filtered (0.2 micron) water, instead of tap water, to rinse endoscopes; and (c) terminally rinse the endoscope's channels with 70% alcohol, followed by forced air, to facilitate drying before storage. Marking a noteworthy watershed for infection control education, Q-Net's survey suggests that today fewer facilities than a decade ago modify their standard disinfection procedure to reprocess endoscopes used on patients suspected of being contaminated with HIV or another bloodborne pathogen.

One possible exception to an overall trend toward an increase in infection control measures during the past decade is the growing practice of reusing single-use items, which almost half of Q-Net's 146 respondents reported performing. Although reusing many types of single-use items has not been documented to increase the risk of patient injury, the possibility exists that injuries associated with this practice occur more frequently than reported, as current methods of patient surveillance are, in general, lacking. Finally, the results of Q-Net's survey appear to be reliable, as they are in agreement with a recently published survey.¹

References

1. Cheung et al. *Gastrointest Endosc* 1999;50:362-8.

Thank you for your interest in this newsletter. *I have addressed each issue to the best of my ability. Respectfully, the Publisher: Lawrence F. Muscarella, PhD. Please return completed survey to:*

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