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Patient Safety and Pathogen Control

THE INCREASING ROLE OF SUPPLY CHAIN MANAGERS

We're all a little more aware and in touch with infection control procedures as a result of the recent Ebola outbreak in Africa and its spread to other parts of the world.

As supply chain managers become more involved in the selection of appropriate infection control supplies and equipment, they're relying on HealthTrust for decision-making support and clarity on supplier offerings. Here's some background on Ebola for the supply chain to consider, along with recommendations for tightening up infection control practices.

Examining Hospital-transmitted Pathogens

Disease outbreaks seem to be happening more frequently—due partly to better reporting of events. Paradoxically, the real risk to the public stems from the rise of institutional healthcare. Whenever infectious disease sufferers are placed near uninfected but otherwise ill people in a hospital, the chance of transmission is increased.

Ebola, like most multi-drug resistant microbial organisms (MDROs), is not transmitted through the air but by physical contact with infectious particles. Ebola is a small but powerful virus. Studies show the LD50

(the dose of virus that will kill 50 percent of infected populations) is between 1 and 10 viral particles, which can infect anyone if it comes into contact with mucosa via ingestion. However, there are important distinctions between Ebola and other MDROs.

Methicillin-resistant *Staphylococcus aureus* (MRSA), for example, also has a low LD50 but, unlike Ebola, it can be found in hospitals. In fact, MRSA can be found almost anywhere—public gyms, schools, military barracks and some workplaces—as well as in the nasal passages of an estimated 1 in 20 hospital admissions. To cause an infection, MRSA needs to penetrate the skin or mucosa; consequently, patients with central lines or catheters in place and those intubated on a ventilator are at higher risk of infection.

Most of these pathogens are transmitted by physical contact. Fortunately, eradication can be done with surface disinfectants. Ebola requires a very strong chloride bleach solution, while MRSA can be killed with alcohol solutions or other less-caustic disinfectants. Infection control procedures for MDROs are significant, but Ebola deserves extreme precautions.

The fear factor around Ebola is high, while many MDROs elicit a less visceral reaction. However, the amount of people infected with MDROs is five times higher than Ebola and the cost associated with those infections is significant for every hospital. Hospital-acquired infection rates are now being publicly reported, and relative rates are being used to adjust reimbursement.

Pitfalls to Avoid

While Ebola is a focal point of attention and action currently, it's important for supply chain managers to expand the scope of consideration and assist in the development of a resource- and supply-enabled infection control strategy that covers infrastructure, processes and supplies. Commercially available options include point-of-care solutions as well as more comprehensive

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programs. It is up to supply chain managers to ensure that changes have multiple positive outcomes, rather than reactively filling an apparent capability gap.

7 Key Recommendations for the Supply Chain

1 Engage your hospital epidemiology and infection control team.

The roles of hospital epidemiologists (HEs) and infection control professionals (ICPs) may need deeper consideration and possibly greater resource allocation. Without a doubt, HEs and ICPs are crucial components of modern healthcare infrastructure. Unfortunately, budget cuts and relatively low event rates have left many hospitals with limited defenses in the event of an outbreak. Infection control is a boundary-breaking endeavor; everyone from the environmental services worker to the top hospital leader has a part to play in increasing patient safety. Supply chain managers are pivotal resources in coordinating team formation and solution evaluation. The value analysis process in infection control can be conducted relatively quickly, especially if the organization has prioritized the effort.

2 Engage suppliers with solutions in infection control. Suppliers in this space largely comprise distributors that provide gowns and facial protection. However, specialized testing and molecular diagnostics suppliers have workflow and consulting arms that can provide excellent recommendations—sometimes as a value-added service. If a contract exists with these suppliers, supply chain managers should request additional services and periodic consulting on workflow and patient care procedures.

3 Investigate HE and ICP society recommendations. The Association for Professionals in Infection Control and Epidemiology (www.apic.org) and the Society for Healthcare Epidemiology of America (www.shea-online.org) promote best practices. These societies are also prime resources for recommendations and suggested solutions. Supply chain managers should assign a team member to develop a coherent understanding of the supply components of an effective infection control strategy.

4 Engage IT and Quality. Increasingly, healthcare IT systems and some stand-alone solutions offer features that help streamline data collection workflow and formulate appropriate responses. The vice president of quality is likely driving the adoption and updating of these solutions. It is important for supply chain managers to assist in the contracting and planning process for these options.

5 Talk to the clinical laboratory. Procedures for surveillance and therapeutic drug monitoring start and stop in the clinical laboratory. Lab budgets are strained, so laboratory managers will sometimes delay implementation of a new technology until physician orders rise to a certain level. Because many technology



suppliers offer rental options, the acquisition process can be shortened if supply chain managers set parameters that avoid constraints and delays that come with the capital budget planning cycle. Today, agility in hospital epidemiology and infection control is required, and supply chain managers can provide that flexibility.

6 Don't forget about the medical office building. Healthcare is a continuum, with patients flowing between care settings quickly and frequently. Infection control in the medical office building, rehab center and beyond is something that is infrequently discussed, but necessary. If your organization has responsibility for supply and support services, consider engaging this stakeholder group. Providing them with infection control training and assistance can also enhance the perceived value of the central facility.

7 Engage HealthTrust. HealthTrust has specialized clinical practice teams with a broad view of approaches to solving hospital epidemiology and infection control challenges. Supply chain managers have direct access to HealthTrust staff and would benefit from accessing the resources provided as part of your relationship.

Note: Members can view links to Ebola-related resources assembled by HealthTrust by visiting the member portal. •