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Vermont's infection prevention network unites long term care, hospitals against MDROs

CDC looking at program as model for other states

By **Gary Evans**, Executive Editor

As infection control and prevention in long term care settings becomes a national priority, a little state may provide some key answers to a big problem: the spread of multidrug resistant organisms (MDROs) across the healthcare continuum. Vermont is on the leading edge of states that are establishing infection prevention collaboratives linking hospitals and long term care facilities.

"It is important to include long term care because you can't just fight infections in one setting—patients move around," says **Patsy Tassler Kelso**, PhD, epidemiologist for infectious diseases at the state department of health in Burlington, and one of the leaders of the Vermont MDRO Prevention Collaborative

Indeed, they don't call them "health care" -associated infections (HAIs) for nothing, particularly when many patients who would have remained in hospitals in the past now are under care in nursing homes. As we recently reported in *Hospital Infection Control & Prevention*, public health officials and infection preventionists are alarmed as methicillin-resistant *Staphylococcus aureus* (MSRA), *Clostridium difficile*, and a host of emerging gram negative bacterial infections threaten patients and residents as they move among and between acute and long term care settings. *(See* HIC*, May 2011, cover.)*

Thus the pressing need for collaboratives like the one in Vermont, which has enacted its program in partnership with the Centers for Disease Control & Prevention. The Vermont collaborative is "absolutely a strategy that we would like to see continue to be adopted in communities," says **Nimalie Stone**, MD, MS, a CDC medical

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epidemiologist specializing in long term care issues. "Healthcare delivery is being pushed into these different settings, patients and residents are moving so much between acute care and long term care. We really want to have a more global approach at a community level to address the problems of HAIs and multidrug resistance because they are manifesting across the continuum of care."

Such collaboratives bring hospitals and nursing homes together in an effort to get front-line staff to share ideas, and particularly to bring acute care infection prevention experience into long term care settings, explains Kelso.

An eye-opening walkthrough

"One of the biggest things that has come out of the project so far in the first six months is communication between facilities," she says. "One of the most telling things was when a [hospital] infection preventionist did a walkthrough at a nearby long term care facility. It was the first time [the IP] had set foot in the facility. Just from walking around, she noticed things like they were using inappropriate dilutions and cotton cloths inappropriately for environmental cleaning."

An easy fix? Not exactly, as it turns out that many long term care settings in Vermont contract out environmental services. "The long term care staff didn't even realize that was going on and when they tried to address that they ran into all sorts of hurdles because it is not even staff that are employed by the facility," Kelso says.

Such cautionary tales and anecdotes may prove instructive as other states contemplate similar collaboratives. However, reams of statistically significant data may prove more elusive, as Vermont has only 14 hospitals—half of them small critical access facilities. The collaborative is comprised of every Vermont hospital—along with one hospital across the border in New Hampshire—and 31 of the state's 40 skilled nursing facilities. A key advantage to using a small state for such a pilot project is that the collaborative could be formed fairly painlessly, but the downside is the numbers generated are understandably small in terms of statistical power.

"We are not seeing a lot of infections, but I think that is really because the volume of patients is so low," Kelso says. "We recognize that it is going to take some time before we can measure any changes in our infection rates."

The participating facilities have been grouped into 13 healthcare "clusters," each comprised of a least one hospital and the local long term care facilities that use that hospital's lab. The idea is that since these facilities care for the same communities, they can

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address MDROs together through such strategies as:

• Active identification and specific management for patients carrying MDROs.
• Use of standardized communication about patients carrying MDROs as they move among facilities.
• Minimizing use of devices and antibiotics that can increase MDRO risk.
• Enhancing infection prevention activities.

Each cluster decides which interventions are feasible in their facilities and works together on implementation, Kelso explains. The year-long collaborative was formally launched in September of last year, with four full-day learning sessions slated over time to allow recurrent face-to-face meetings.

"The third one is happening Friday (May 20) and we hope to continue the in-person meetings going forward," she tells *HIC*. "We are focusing now on antibiotic stewardship and protocols to prevent urinary tract infections (UTIs) at the facilities."

NHSN expanding to include LTC

The state collaborative is also among the first trying to set up electronic data reporting from long term care facilities to the CDC's National Healthcare Safety Network (NHSN) surveillance system. "We are working on the technical challenges with that, and it is going to be something that hopefully helps make this work sustainable," Kelso says.

The expected eventual expansion of the NHSN to include infections in long term care would be the first true national surveillance system, as infection estimates and mortality figures are typically based on extrapolations of study data. It doesn't take state-of-the-art surveillance, however, to get the oft described picture of a setting in need of more infection control resources, training and personnel.

"The resources available in long term care are very different than those in acute care, where they at least have one FTE devoted to infection control," Kelso says. "In long term care, it's often one hat that a director of nursing or someone else wears, but much less an FTE. They often don't have any specific training in infection control."

Likewise, infection control committees common in hospitals are rare in non-acute settings, so the person scrambling to cover infection control has no in-house source of expertise. The time and staffing constraints have become obvious as the Vermont hospitals and public health officials try to reach their long term care colleagues to discuss infection prevention.

"Just logistically trying to reach someone in the LTC facility is hard," Kelso notes. "Even if you have a time set when you are going to speak to the director of nursing for example, when you make the phone call she may be

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IP in long term care: Part-time, untrained

A `peek and shriek' at VT findings

The Vermont MDRO Prevention Collaborative administered a baseline infection prevention survey developed by the CDC to assess the status of long term care facilities as the project began. Of the some 40 Vermont long term care facilities with skilled nursing beds, 31 responded. Other states are also administering the survey, and a compilation of findings is slated for presentation at an upcoming conference of the Council of State and Territorial Epidemiologists. Preliminary unpublished results from Vermont include the following:

1. What is the highest level of professional training of the individual primarily responsible for the infection control program in your facility?

• CNA 0 (0.0%)
• LPN 3 (9.7%)
• RN 22 (71.0%)
• MD 0 (0.0%)
• No FTEs are dedicated to infection control 5 (16.1%)
• Other (please specify) 1 (3.2%)

2. Has this person received any specific infection control training?

• Certified in Infection Control (CIC) 0 (0.0%)
• State or local training course with certificate 1 (3.2%)
• No specific infection control training 23 (74.2%)
• Other (please specify) 7 (22.6%)

3. Is coordination of infection control this individual's full-time or part-time role?

• Full time 3 (9.7%)
• Part time 28 (90.3%) ■

State lawmakers target infection control in LTC

From NY to Hawaii, a call for action

The Association for Professionals in Infection Control and Epidemiology (APIC) is tracking a growing body of proposed state legislation related to infection prevention in long term care. A selection of state bills proposed this year include the following:

Hawaii: (HB 889) Introduced 1/26/2011. Bill would ensure that state HAI reporting requirements are consistent with federal regulations by requiring healthcare facilities that receive Medicare reimbursement, including long term care facilities, to report information about HAIs to the Centers for Disease Control and Prevention National Healthcare Safety Network (NHSN), and would authorize CDC to grant access to the data by the state Department of Health. (Passed both the House and Senate.)

Illinois: (HB 1096) Introduced 2/4/2011. Bill would require skilled nursing facilities to designate an Infection Prevention and Control Professional to develop and implement policies governing control of infections and communicable diseases. The designated professional would be qualified through education, training, experience, certification, or a combination of these factors. (Pending in House Human Services Committee.)

Kentucky (SB 72) Introduced 1/7/2011. Bill would require all healthcare facilities, including nursing homes, to implement an infection prevention program in intensive care, surgical, and other high-risk units, including strategies to prevent the spread of multidrug-resistant organisms. Facilities would report HAIs through NHSN or a similar data collection system and the health department would make the information publicly available. (Legislature adjourned without acting on legislation.)

Maine (LD 267) Introduced 2/1/2011. Bill would require all nursing homes and intermediate care facilities to perform MRSA screening on all patients upon admission. (Pending in Joint Committee on Health and Human Services.)

Massachusetts (HB 1469) Introduced 1/20/2011. Bill would require a variety of healthcare institutions, including nursing homes, to report their numbers of health care associated infections (HAIs) and medication errors as indicators of nursing care. The facilities would also be required to provide the same information upon request to patients or residents. (A hearing is scheduled before Joint Committee on Public Health on 9/20/2011.)

Nevada (SB 419) Introduced 3/28/2011. Bill would require that medical facility employees who are authorized to administer controlled substances receive annual training for safe injection practices.

New Jersey (A 3808) Introduced 2/17/2011. Bill would require nursing homes to report all incidents of methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant enterococcus (VRE) to the Department of Health and Senior Services. (Pending in Assembly Health and Senior Services Committee)

New York (AB 4969) Introduced 2/9/2011. Bill would prohibit healthcare coverage plans, including Medicaid, from reimbursing for treatment of preventable hospital-acquired infections. (Pending in Assembly Health Committee.)

NY (AB 5576) Introduced 2/23/2011. Bill would amend state law to make it a crime for a healthcare provider to reuse a syringe when the action results in the infection of a patient with a communicable disease. (Pending in Assembly Codes Committee)

North Carolina (H 474) Introduced 3/24/2011. Bill would require all adult care homes to implement a written infection control policy. All adult care home medication aides would be required to receive training in infection control and safe injection practices. (Passed House 4/28/2011.)

NC (H 809) Introduced 4/6/2011. Bill would require healthcare facilities to report all HAI data to the state Department of Health and Human Services and the NHSN. The bill would also establish an HAI advisory committee, direct HHS to establish an HAI surveillance program, charge facilities a fee for implementation of the program, and require them to test patients for MRSA within 24 hours of admission in certain cases. (Pending in House Committee on Health and Human Services.)

Pennsylvania (SB 495) Introduced 2/11/2011. Bill would require the state Department of Health to publish a consumer guide on the nursing home performance of every nursing home in the state, which would include information on the number of deficiencies pertaining to infection control. (Pending in Senate Public Health and Welfare Committee.) ■

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admitting or discharging a resident because some staff members are out. Or she's pushing the drug cart or something and she just can't speak to you."

Further evidence of the infection control challenge in long term care was found in a baseline infection prevention survey developed by the CDC. Vermont and other states are using the survey to establish baseline levels, and predictably, partial data shared by Kelso showed obvious staffing and training needs. (*See related story, p 63.*)

For example, one survey question assessed the level of infection control training of the person responsible for the program in the long term care facility. "There were 31 responses and zero said they had had someone certified in infection control," Kelso says. "Twenty-three (74%) had no specific infection control training."

Indeed, the recurrent reports of the lack of staff, training and other infection prevention components in long term care have prompted proposed laws in several states. (*See related story, p. 64*.)

"There is pending legislation in Illinois to require an infection preventionist in long term care," says **Deborah Patterson Burdsall**, MSN, RN-BC, CIC, corporate infection preventionist for Lutheran Life Communities, Arlington Heights, IL. "I am very much in favor of it personally. I think that it would give support to get appropriately trained [staff] or at least more training for the people who are responsible for infection prevention in long term care."

Introduced Feb. 4, 2011, Illinois (HB 1096) bill would "require skilled nursing facilities to designate an Infection Prevention and Control Professional to develop and implement policies governing control of infections and communicable diseases. The designated professional would be qualified through education, training, experience, certification, or a combination of these factors." The bill is currently in committee, but given the surge of infection rate reporting laws after a few states put them on the books, it is reasonable to expect other states will attempt legislative solutions in LTC.

"There is a lot of dialogue going on, and personally I think that it is a positive step in increasing professionalism in long term care and making it clear that infection prevention is a specialized body of knowledge," Burdsall says.

Asked if the bill could go so far as to require someone on site with true licensure—certified in infection control (CIC), she says, "I doubt they will go that far in this bill, it does not say that. It is basically an emphasis on training, but I think those are some of the finer points that are being worked out in terms of what it is going to require."

Transfer form improves communication

One of the features of the Vermont collaborative that shows immediate promise for widespread adoption is use of a one-page form to eliminate longstanding communication breakdowns when patients and residents move between acute and long term care. (*See form p. 66*) The form includes the patient/resident's MDRO status and other pertinent information related to infection prevention. Thus, the receiving facility can take appropriate precautions to reduce the risk of transmission. For extra emphasis, Vermont has printed the form on bright orange paper.

"This bright-colored form goes right at the front of the chart now, so communication is much more readily apparent," Kelso says. "Because often when a patient goes back and forth a three-inch thick chart goes with them, and somewhere buried in there on a piece of paper may be information, for example, on carriage of MRSA."

The simplicity of the approach is somewhat analogous to the checklists that have dramatically reduced bloodstream infections during central line insertion. "When you don't have that communication across the continuum you lose some of the information that could help outbreak management," Stone says. "That is a huge benefit of partnering these facilities that share patients with one another. If you create lines of communication and they start working more closely together, patient care will improve because providers will have more knowledge of what they have done in the previous setting as they are taking over the care of that person."

It is also important to relay any new findings back to the other institution, which may be unaware of the source or etiology of the infection. "They may fail to recognize a link with subsequent cases," Stone says. "It is a bidirectional responsibility. You want to make sure the other facility and public health are aware."

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Original concept and form developed by Utah HAI Working Group/ Courtesy of Utah State Dept of Health.

Inter-facility Infection Control Transfer Form

This form must be filled out for transfer to accepting facility with information communicated prior to or with transfer

Please attach copies of latest culture reports with susceptibilities if available

Sending Healthcare Facility:

Patient/Resident Last Name	First Name	Date of Birth	Medical Record Number
		___/____/_____	

Name/Address of Sending Facility	Sending Unit	Sending Facility phone

Sending Facility Contacts	NAME	PHONE	E-mail
Case Manager/Admin/SW			
Infection Prevention			

Is the patient currently in isolation? □ **NO** □ **YES**

Type of Isolation (check all that apply) □ **Contact** □ **Droplet** □ **Airborne** □ **Other:** _____

Does patient currently have an infection, colonization OR a history of positive culture of a multidrug-resistant organism (MDRO) or other organism of epidemiological significance?	**Colonization or history** *Check if YES*	**Active infection on Treatment** *Check if YES*
Methicillin-resistant Staphylococcus aureus (MRSA)		
Vancomycin-resistant Enterococcus (VRE)		
Clostridium difficile		
Acinetobacter, multidrug-resistant*		
E coli, Klebsiella, Proteus etc. w/Extended Spectrum B-Lactamase (ESBL)*		
Carbapenemase resistant Enterobacteriaceae (CRE)*		
Other:		

Does the patient/resident currently have any of the following?

- ☐ Cough or requires suctioning
- ☐ Diarrhea
- ☐ Vomiting
- ☐ Incontinent of urine or stool
- ☐ Open wounds or wounds requiring dressing change
- ☐ Drainage (source)_____
- ☐ Central line/PICC (Approx. date inserted ___/___/_____)
- ☐ Hemodialysis catheter
- ☐ Urinary catheter (Approx. date inserted ___/___/_____)
- ☐ Suprapubic catheter
- ☐ Percutaneous gastrostomy tube
- ☐ Tracheostomy

Is the patient/resident currently on antibiotics? □ **NO** □ **YES:**

Antibiotic and dose	**Treatment for:**	**Start date**	**Anticipated stop date**

Vaccine	**Date administered (If known)**	**Lot and Brand (If known)**	**Year administered (If exact date not known)**	**Does Patient self report receiving vaccine?**	
Influenza (seasonal)				○ yes	○ no
Pneumococcal				○ yes	○ no
Other:_____				○ yes	○ no

Printed Name of Person completing form	**Signature**	**Date**	**If information communicated prior to transfer: Name and phone of individual at receiving facility**

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One of the first proven models of this kind of approach was a successful effort to prevent vancomycin-resistant enterococci (VRE) in the Siouxland region of Iowa, Nebraska, and South Dakota in the 1990s. The effectiveness of widespread collaboration in eradicating infections was hailed at the time as the results were published in the *New England Journal of Medicine*.[1] One of the key lessons of the paper was the emphasis on communication between facilities about VRE "before patient transfer," but the practice was not widely adopted and now a different, more dangerous set of pathogens are underscoring the same message.

CMS mum, but leads HHS working group

Some observers think the growing involvement of the Centers for Medicare and Medicaid Services (CMS) in HAI prevention will ultimately link such communication to reimbursement, making long term and acute care collaboratives part of the pay-for-performance landscape.

Everything is probably on the table at this point because, as we reported last issue, the long term care setting has been chosen as the top priority in the next phase of the Department for Health and Human Services (HHS) Action Plan to Prevent HAIS. In any case,

Isolation a common conundrum in LTC

Rising acuity challenges "home" culture

The challenge of improving infection prevention is a formidable one, given such basic conundrums as how do you effectively isolate an infected or colonized resident who needs to move about and socialize for their overall health and well-being?

While isolation systems are a cardinal principle of infection control in hospitals, experts trying to develop guidance for long term care concede the "unique infection control challenge for the LTCF is the mobile resident, who may be confused or incontinent and serves as a possible vector for infectious diseases."[1] On the other hand, the downside of isolation, including inactivity and desocialization, could make recovery difficult for the infected resident.

Such issues are under discussion at high levels because long term care is the top priority in the next phase of the Department for Health and Human Services (HHS) Action Plan to prevent health care associated infections (HAIS). The HHS has formed a multirepresentative long term care working group to identify key action items, many of which are likely to address transmission of multidrug resistant organism (MDROs). While there is general agreement that acuity is increasing in long term care, there is also the longstanding culture of a home environment.

"One of our goals is to increase the research and understanding of transmission dynamics for MDROs within this kind of community," says **Nimalie Stone**, MD, MS, a member of the HHS long term care working group and a medical epidemiologist at the Centers for Disease Control and Prevention. "There is a culture change movement [aimed at] making nursing homes less institutional and more homelike. I think that is very appropriate. We know that a person's physical, mental, and emotional healing is quickened when they are in a social environment and engaging in activities."

That said, it is sometimes necessary to implement isolation measures to prevent transmission or fight an outbreak.

"There are definitely times when contact precautions, for example, are implemented for a resident who has an active *Clostridium difficile* infection," she says. "Most facilities have a protocol or policy in place for using transmission-based precautions for times when an individual resident may have a higher risk of shedding an MDRO, or in this case when their environment could become quite contaminated by infectious spores that could be readily transmitted."

However, the duration of time that contact precautions are in place may differ from a hospital, which may simply leave the patient in isolation depending on the length of stay. "In a nursing home, that doesn't really work," she says. "I would say most facilities have protocols, but they have to tailor them to achieve this balance."

Reference

1. Smith PW, Bennett G, Bradley S, et al. SHEA/APIC Guideline: Infection prevention and control in the long-term care facility *Am J Infect Control* 2008;36:504-35. ■

CMS has essentially fiscally empowered a larger number of facilities to take post-acute patients, as Stone estimates that 90% of skilled nursing facilities nationwide now admit post-acute care patients—many of them with well established infection risk factors like the presence of central lines. Long term care will be the focus of the third phase of the HHS plan, which began with hospitals in 2009 and then added ambulatory care settings.

The HHS has formed a multi-representative long term care working group to identify key action items. CMS officials declined to comment for this story, with the agency's press office deferring because the HAI prevention project is an HHS-wide initiative. However, it is telling that CMS representatives from the agency's survey certification group and its office of clinical standards and quality are co-chairing the long term care working group.

The working group has met once and may have finished outlining some of the key issues and interventions in time for a general meeting on the HHS action plan slated for this September, says Stone, a member of the panel. Their task is formidable however, as long term care presents some unique challenges for traditional infection approaches, particularly in the face of increasing acuity of residents/patients.

"One of the first challenges being addressed by this group is the fact that long term care is a fairly heterogeneous setting in terms of the types of facilities and services," she says. For example, a long term care setting could include relatively healthy "long-stay" ambulatory residents, those "bridging" from the hospital back to the community, and others seriously ill or under hospice care. "We may have to develop different strategies to prevent infections in these populations because they have inherently different risks they are bringing to the table," Stone says. "The post-hospital population tends to have more devices or antibiotic exposure and they could be a reservoir to drive transmission and acquisition to the long-stay population. But ultimately, I think if we create this infrastructure and education across the continuum of care it is going to make everyone safer."

Reference

1. Ostrowsky BE, Trick WE, Sohn AH, et al. The Control of Vancomycin-Resistant Enterococcus in Health Care Facilities in a Region N *Engl J Med* 2001; 344:1427-1433 ■

Staff shortages linked to infection citations in LTC

Taking a closer look at LTC mortality estimates

Fifteen percent of U.S. nursing homes receive deficiency citations for infection control per year, with many of those breaches tied to staffing issues, long term care researchers report.[1]

Conducted by a team of researchers at the University of Pittsburgh's (Pitt) Graduate School of Public Health, the study analyzed deficiency citation data collected for the purpose of Medicare/Medicaid certification between 2000 and 2007, representing approximately 16,000 nursing homes per year and a panel of roughly 100,000 observations. The records analyzed represent 96% of all U.S. nursing home facilities. The Centers for Medicare and Medicaid Services (CMS) requires that nursing homes be certified before receiving reimbursement for Medicare and/or Medicaid residents. As part of this certification process, facilities that do not meet certain standards are issued deficiency citations. This study examined the deficiency citation for infection control requirements known as the F-Tag 441.

The team discovered a strong correlation between low staffing levels and the receipt of an infection control deficiency citation. "Our analysis may provide some clues as to the reason for the persistent infection control problems in nursing homes," the authors found. "Most significantly, the issue of staffing is very prominent in our findings; that is, for all three caregivers examined (i.e., nurse aides, LPNs and RNs) low staffing levels are associated with F-Tag 441 citations. With low staffing levels, these caregivers are likely hurried and may skimp on infection control measures, such as hand hygiene."

In particular, a shortage of RNs was predictive of subsequent infection control citations, says lead author **Nicholas Castle**, MHA, PhD, a professor of health policy and analysis at Pitt. "It may be that the RNs provide more direction and more attuned to issues like hand washing," he tells *Hospital Infection Control & Prevention*. "So possibly the more RNs you have the better the infection control practices."

Low staffing levels are endemic throughout the nursing home industry, and thus promoting infection control measures may be challeng-

ing, Castle and colleagues concluded: "Our data show that receiving an F-Tag 411 deficiency citation for infection control is associated with poor quality of care in general (i.e., quality of care deficiency citations) and with the worst lapses in quality of care (i.e., level J, K, and L deficiency citations). This may be particularly significant for elder care. However, further progress in this area also may be spurred by recent changes in the F-Tag 441 deficiency citation by the CMS. In July 2009 and then again in September 2009, the CMS revised F-Tag 441 to encompass infection control and hand hygiene requirements."

Though those changes imply CMS now requires facilities to have a more formal infection control program, marked concern remains at the national level. Leading public officials are placing a high priority on improving infection control in long term care, in part because residents and patients in both non-acute settings and hospitals are moving multidrug resistant organisms across the whole healthcare continuum.

"One of the things they comment on in this study is the role of facility staffing, and I would also consider whether the stability of your staff—turnover rates—has influence on the knowledge and practice of infection prevention," says **Nimalie Stone**, MD, MS, a medical epidemiologist specializing in long term care at the Centers for Disease Control and Prevention. "One of their conclusions that we totally agree with is increasing education and training resources specifically directed for nursing home providers. That is a very important goal."

What is the real death toll in LTC?

In reviewing the literature, the study also cites a staggering mortality figure that appears recurrently in the long term research. The authors note that "between 1.6 and 3.8 million infections occur each year in these nursing homes, with almost 388,000 deaths attributed to these infections."[2] The ballpark figure of "nearly 400,000 deaths annually" is also occasionally cited, raising the question of whether the mortality of infections in long term care is really four-fold that of the 100,000 patients who die annually of HAIs in hospitals. Or unbelieveably enough, could it actually be higher?

The truth is that the numbers reflect extrapolated mortality estimates from data that are now around a decade old. They have been preserved in the literature like amber because there is no national surveillance system for long term care infections—let alone their morbidity and mortality.

One of the studies frequently cited for the death toll was published in 2000, but Stone says even that work drew on 12 fairly small studies that date back to the 1980s and 1990s.[3]

"I would say we don't have a current estimate of the number of infections and outcomes [in long term care], but we know it is a very vulnerable group of people," she says. "They have a lot of reasons to have greater risks for infections and worse outcomes, and some of that is driven by the natural waning of the immune system that happens with age. As we age we tend to acquire additional medical conditions like diabetes, heart disease, lung disease, stroke—all of which contribute to our increased risk of infection or impair recovery from an event."

As infection prevention in long term care becomes a national priority and the CDC increases surveillance by expanding its existing hospital sentinel system, the toll of infections in long term care may come into better focus. The longstanding perception in hospitals that infections were an inevitable consequence of increasingly invasive care has been shattered by dramatic "zero infections" success stories in recent years. However, the old dogma may still apply in long term care, where as many people may die *with* infections as do *because* of them. In the short term, the issue is not likely to become any clearer as the walls between acute and long term care continue to come down.

"Estimates suggest that there is almost twice the number of cases of *C. diff* in nursing homes compared to acute care hospitals, but they are linked because many of those people have come from one sector to the other," Stone says. "It may just be because you are not in the hospital long enough anymore you manifest that complication somewhere else. I think that infections that are happening in nursing homes are also contributing to rehospitalizations and that's another healthcare initiative that both acute care and long term care will be aligned around. [We are trying to] understand those rehospitalizations and put in practices that can reduce those rates."

It remains an open question how many HAIs in long term care can be prevented, and cor-

respondingly, how much that staggering death estimate could be reduced. Given the frequently cited lack of resources in long term care, one would think the increasing national emphasis could yield some dramatic results in nursing homes. On the other hand, the old mortality estimates were certainly based on resident populations with less acuity than those in long term care today. By that logic, the death toll may even be higher than the literature estimates.

Deborah Patterson Burdsall, MSN, RN-BC, CIC, corporate infection preventionist for Lutheran Life Communities, Arlington Heights, IL. has worked in hospitals and nursing homes over a career that spans decades. She recalls when most nursing home residents didn't even go to the hospital unless, for example, they fell down and broke a bone. By the same token, fewer of them came into long term care with vents, lines and other invasive devices.

"The acuity has changed drastically—I would say specifically in the last five years or so," she says. "They are as acute now as [patients] when I worked in a hospital."

References

1. Castle NG, Wagner LM, Ferguson-Rome J, et al. Nursing home deficiency citations for infection control. *Am J Infect Control* 2011;39:263-9
2. Richards C. Infections in residents of long term care facilities: an agenda for research report of an expert panel. *J Am Geriatr Soc* 2002;20:570-576.
3. Strausbaugh LJ, Joseph CL. The burden of infection in long term care. *Infect Control Hosp Epidemiol* 2000; 21:674-679 ■

APIC joins calls for powdered glove ban

FDA label alternative widely blasted

Though conceding that powdered latex gloves pose little risk of causing patient infections, the nation's largest infection prevention group is joining the chorus of those urging the Food and Drug Administration to ban the gloves in favor of safer alternatives.

In comments submitted to the FDA, the Association for Professionals in Infection Control and Epidemiology (APIC) "finds very limited scientific evidence that powder on medical gloves, specifically surgeon's gloves, may act to promote infection. However, APIC cannot cite any instance in which powdered gloves offer a unique benefit over powder-free gloves… Indeed, the elimination of powdered gloves will significantly lower the risk of allergic reactions."

By making powder-free gloves the standard, the FDA will reduce the incidence of allergic reactions from airborne protein particles carried to the medical staff using them and to the patient. Further, because the protein level in powder-free gloves is much lower, the gloves are less subject to hydration and, hence, retain their barrier qualities, APIC noted.

The generally cited merits of powdered gloves include that they are easier to don, absorb perspiration from surgeons' hands, and are less expensive. However, new cases of latex allergy among healthcare workers have dropped dramatically with the use of low-protein and powder-free gloves, as well as the increased popularity of latex alternatives. Thus, three separate petitions have been filed, citing the risks to patients and healthcare workers in calling for an FDA ban on powdered gloves. Going further, Public Citizen—a Washington, DC-based advocacy group—has issued a petition calling for a ban on all latex gloves.[1]

Some of the petitions raise the issue of patient safety and powdered gloves, primarily allergic reactions but also a possible risk of wound infections. Balking at an outright ban, the FDA has instead proposed a warning label that would read: "Warning: Powdered gloves may lead to foreign body reactions and the formation of granulomas in patients. In addition, the powder used on gloves may contribute to the development of irritant dermatitis and Type IV allergy, and on latex gloves may serve as a carrier for airborne natural latex leading to sensitization of glove users."

The FDA's proposed warning has been widely criticized by the petitioners as an insufficient intervention. For its part, APIC advised the FDA to put the warning in "plain language," noting that healthcare workers may benefit from more "plainly-stated guidance."

Many have made the move

Many hospitals have successfully switched to alternatives to protect patients and healthcare workers with latex allergies, says **Michael A. Carome**, MD, deputy director of the Health Research Group at Public Citizen. "When we see additional dangers from latex gloves, it's hard

for us to be silent on that given our role as an advocate for public health," he says.

Cornstarch powder on surgical gloves in particular poses a risk to patients, **Richard Edlich**, MD, PhD, distinguished professor emeritus of plastic surgery, biomedical engineering and emergency medicine at the University of Virginia Health Systems in Charlottesville, asserted in his 2008 petition to the FDA requesting a ban. It was also signed by 11 other health professionals.[2]

Powder from the gloves can cause granuloma and adhesion formation and leave patients with abdominal pain and inflammation, according to studies cited by the petition.

"The warning label is a waste of time," Edlich responded. "If you put all the dangers outlined [in the petition], it would take an 8 to 10 page warning on the label."

For Edlich, the effort to ban powdered gloves is a personal one. When he was a child, his mother's health declined due to recurrent benign abdominal tumors and acute intestinal obstructions, which he says were linked to pow-

CNE/CME Questions

21. The Vermont multidrug resistant organism (MDRO) Prevention Collaborative linking hospitals and long term care settings includes which of the following strategies?
    A. Use of a standard communication form regarding patients/residents carrying MDROs as they move among facilities.
    B. Minimizing use of devices and antibiotics that can increase MDRO risk.
    C. Prevention protocols for urinary tract infections
    D. All of the above

22. According to a baseline infection prevention survey administered in Vermont, how many of 31 responding long term care facilities reported that they had someone certified in infection control administering their program?
    A. Zero
    B. Seven
    C. 16
    D. 23

23. Legislation proposed in Illinois would require skilled nursing facilities to designate an infection prevention and control professional to develop and implement policies governing control of infections and communicable diseases.
    A. True
    B. False

24. A study of deficiency citations for infection control issued in nursing homes linked which of the following factors most strongly to receipt of a citation?
    A. Failure to use gloves
    B. Staffing issues
    C. High prevalence of *Clostridium difficile*
    D. For-profit facility

Answers: 21. D; 22. A; 23. A; 24. B

CNE/CME instructions

Physicians and nurses participate in this CNE/CME program by reading the issue, using the provided references for further research, and studying the questions. Participants should select what they believe to be the correct answers, then refer to answer key to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material. After completing the semester's activity, you must complete the evaluation form provided with this issue and return it in the reply envelope to receive a credit letter. ■

CNE/CME objectives

Upon completion of this educational activity, participants should be able to:

- Identify the clinical, legal, or educational issues encountered by infection preventionists and epidemiologists;
- Describe the effect of infection control and prevention issues on nurses, hospitals, or the health care industry in general;
- Cite solutions to the problems encountered by infection preventionists based on guidelines from the relevant regulatory authorities, and/or independent recommendations from clinicians at individual institutions. ■

COMING IN FUTURE MONTHS

■ Look for *HICprevent Newswire* alerts from APIC Baltimore

■ Latest guidelines under discussion at HICPAC

■ Big brother: Hi-tech hand hygiene surveillance

■ HAI rate reporting: reducing numbers or infections?

■ Is OSHA bluffing, or does it have clout to pass ID standard?

der on surgical gloves. Her medical problems influenced his decision to become a physician and led him to research the impact of cornstarch glove powder.

While Edlich was at the University of Virginia, the health system switched to powder-free gloves. Many other hospitals and health systems have taken similar action, he notes. Powdered gloves are banned in the United Kingdom and Germany.

"Warning labels are just an excuse for manufacturers to continue to make powdered gloves to make money," he says. "There's not one article on PubMed [the National Library of Medicine's database of scientific literature] that says it's safe."

References

1. Carome MA and Wolfe SM. Petition to FDA to ban powdered and latex surgeon's and patient examination gloves. April 26, 2011. Available at http://bit.ly/lYK37s
2. Edlich RF, Long WB, Gubler KD, et al. Citizen's petition to Food and Drug Administration to ban cornstarch powder on medical gloves. September 24, 2008. Available at http://1.usa.gov/j2eIqG ■

OSHA chief: Infection standard still on table

Reg would be closely aligned with CDC

Though there was considerable pushback from infection preventionists when the idea of a federal infectious disease standard was proposed last year, recent comments from the chief of OSHA reveal that the controversial regulation is still on the agenda.

Hospitals aren't doing enough to protect their employees from infectious diseases, **David Michaels**, MD, PhD, administrator of the Occupational Safety and Health Agency (OSHA), said in recently to members of the Association of Occupational Health Professionals in Healthcare.

"Health care-acquired infections are a persistent problem," he said. "We believe the increasing levels of [MDROs] in health care settings really tell us we should do something much more comprehensive than we've done now. Most current infection control efforts are intended primarily for patient protection. There really isn't enough done on worker protection." ■

iP Newbie
Practical Tips for the New Infection Preventionist

Discharged ED patient tests positive: Your move

By **Patti Grant**, RN, BSN, MS, CIC
Infection Preventionist, Dallas, TX

There are obvious challenges that run through the training of an Infection Preventionist (IP) and fortunately many have answers with solid references. However, despite excellent formal training offered by our professional organizations and evidence-based recommendations to tackle basic patient care issues, there remain less obvious topics that can shake the confidence of the novice and make the learning curve a little steeper.

Several of these less evident learning ordeals have been covered in past columns, but this time let's tackle the dreaded "infectious follow-up" of labs from a patient discharged from the emergency department (ED). Actually, based on personal experiences and networking with peers, the post-ED positive infectious lab test can be a sensitive and anxiety-producing follow-up issue—regardless of years of experience.

No need to rehash the uniqueness of the ED setting of rapid turnover, assessment, and interventions. Suffice it to say that when the patient is admitted directly via the ED there is no doubt who Laboratory Services will call with a positive lab result: the physician or patient care professional caring for the patient. Where it gets tricky is when the infectious lab result is finalized after the patient has been released. Depending on your internal policies there are definite situations where the IP should be involved when infectious lab results come to light after discharge from the ED to home, another healthcare facility, and/or admitted to the same facility. Various examples include:

- Reporting a communicable disease to the local health authority (i.e., sexually transmitted diseases, enteric pathogens like Salmonella species, vaccine-preventable diseases, etc.) that are mandated by state regulations.
- Following up on a multidrug-resistant organism (MDRO) or *Clostridium difficile* to verify Contact Precautions have been instituted.
- Review of positive blood, sputum, wound, or urine cultures to determine healthcare-associated (HAI) infection status for your facility (a recent discharge) or something you should report to the transferring facility.
- Checking to see if a public safety worker (fire, police, emergency medical technician, paramedic, etc.) was exposed to a communicable disease listed as "notification required" per your state regulations
- Working with Employee Health Services when Meningococcal meningitis, for example, requires an investigation to determine if prophylaxis is required.

In these examples the IP is not *treating* anything based on the lab result per se, but is working to directly help prevent the *transmission* of infectious agents to others within the health care community or public health arena. Most IPs are not medical doctors and do not practice medicine. Ours is a profession that is more transmission-based than treatment-based.

Where the follow-up of positive 'infectious' lab results becomes gray is when treatment is not required because there is not an active infection, but a colonization is present with an MDRO. When an ED patient has been identified with MDRO colonization after discharge who notifies the patient? IPs go into their transmission-based mode and flag the patient record so they are slated for Contact Precautions during their subsequent hospitalizations to the facility. It is often during the next hospitalization that the patient finds out, for the first time, they had an MDRO isolated during their prior ED visit.

This notification responsibility should belong to the ED and not the IP because doing so triggers treatment-based questions from the patient. Most IPs are not qualified and/or not permitted to have treatment-based conversations with the patient because they might be practicing medicine without a license. If written notification is the way your healthcare facility decides to go, again the question/answer contact should be the ED because referring them to infection prevention can quickly turn into a patient "dissatisfier," especially when the IP states "I'm sorry, but I am not qualified to discuss your medical condition, please call…" This is a question you might want to look into before you have a public relations nightmare on your hands from a (rightfully) distraught or baffled MRDO patient. ■

Nominate a Newbie!

Do you know someone relatively new to infection prevention that would be a good candidate for one of our IP Newbie profiles? Drop us a line and tell us why you think their story may be of interest to *HIC* readers. E-mail gary.evans@ahcmedia.com.

iP Newbie

Practical Tips for the New Infection Preventionist

The new kid at the cool lunch table

`I just made it very personal. '

Stacey Taylor RN,BSN, entered her job as a rookie infection preventionist with much more optimism than experience, ready to take on a new role she saw as both interesting and important. Then, like some shunned geek in high school, she realized that most unpleasant of surprises: infection control was, in a word, unpopular.

"I didn't realize that people viewed infection control so negatively, in a sense," says the IP at North Hills Hospital in North Richland Hills, TX. "So that was hard to overcome and make it more of a positive thing. It has become that now. Now, people are more apt to ask me questions because I am out on the floor all the time, getting involved in stuff. But that was a huge thing to overcome."

That's right, Taylor got caught in the long held perception that infection preventionists are the "police" of hand hygiene and a few million other things. No wonder people scattered when she walked down the halls. Nothing if not resilient, she decided to keep walking the walk, being present and patient, talking to any who would listen.

"Really, just being accessible made all the difference in the world," Taylor says. "Most people were resistant , but eventually I got to know them by name, to know about their lives, and I just made it very personal. It should be."

No silo, no problem

Thus without really knowing the history of the field, she overcame one of its biggest obstacles: the silo, where too many IPs have sat too long, crunching infection rate numbers and mastering the technical aspects of the job.

"The office takes a lot of time too—don't get me wrong," she says. "Believe me, I can get stuck in here all day if I let myself. But I can't. I can't see what's going on if I am not out there."

And yes, there is a little "policing" that goes on, but with a human touch by a member of a team.

"I do look for hand washing and PPE compliance," she says "I have created an isolation form that goes in the chart—with a sticker on the outside of the chart. That helps communication so I always make sure that is being met. And I just talk to the charge nurses, people along the floors, and ask them how they are doing. Do they have any concerns or questions?"

As she got to know the staff, the questions and comments came more frequently. "I'm involved with everybody, and we all work together as a team," she says. "So a lot of it is just me being there because I make rounds everyday—everybody knows me. That has made the biggest impact."

The novice IP has gone from pariah to popular in her own right, even recruiting staff to join her newly formed "Germinator" team.

"I'm trying to get someone from every department," Taylor says. "They are my eyes. They can see more than I can and communicate more because they are out there all the time."

"Really, just being accessible made all the difference in the world."

Duly deputized, these IP collaborators set their own annual goals and they give Taylor a monthly status report.

"They tell me the education that is needed, the education that was given, and praise their people that have done a great job," she says. "I send "thank you" letters or little gift cards to those that were acknowledged. It gets them involved and that way I can communicate with them better."

Geez, it's tempting to say she's got them "washing" out of her hands, but Taylor has learned enough about infection prevention to know it can be suddenly humbling. Her advice to IP newbies: "Just be patient, because it is not going to make any sense at first. Realize you can't change it all right now."

Drawing on a culinary analogy, Taylor likens infection prevention to a scene straight from one of those bizarre shows on the Food Network. "It's like eating an elephant bite by bite," she says. ■