



# HOSPITAL INFECTION CONTROL & PREVENTION

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**AHC Media**

## Presidential order pushes CMS to make antibiotic stewardship programs the law of the land

*Fed agencies of all stripes to fight drug resistant infections*

*By Gary Evans, Executive Editor*

Setting the stage for CMS regulations requiring antibiotic stewardship programs in hospitals nationwide, President Obama has issued a sweeping executive order to reduce the threat of multidrug resistant bacteria to the nation's endangered formulary.

Eventual regulatory action on antibiotic stewardship by the Centers for Medicare & Medicaid Services (CMS) was already seen by some as a foregone conclusion, but the executive order was accompanied by an urgently worded presidential advisory panel report that calls for initial federal

regulations to be in place by the end of 2017.

"I would recommend that health care institutions across the country start preparing — [discussing] what would need to happen should this occur?" says **John Lynch, MD, MPH**, head of the antimicrobial stewardship program and co-director of infection control at Harborview Medical Center in Seattle, WA.

"I suspect like infection control — which has a combination of both state and federal requirements for reporting — we may see something similar happen across the United States [for antibiotic stewardship]," says Lynch, a member of

**"YOU CAN'T REALLY SEPARATE ANTIBIOTIC STEWARDSHIP FROM INFECTION CONTROL."**

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the Infectious Diseases Society of  
America (IDSA).

California — the only state to  
have an antibiotic stewardship law in  
effect — recently revised the general  
requirements passed in 2006 to a  
much more specific mandate for  
state hospitals effective July 2015.  
(*See related story, p. 111*) Other states  
are expected to follow California's  
lead, meaning we may see a  
patchwork of state laws and federal  
regulation similar to the explosion  
of health care associated infection  
(HAI) reporting laws that started a  
decade ago.

“Hospitals and other settings  
need to prepare for this sort of  
combined reporting requirements  
by their states and the federal  
government,” Lynch advised.

At the federal level, the Sept.  
18, 2014 executive order states that  
by the end of calendar year 2016,  
the Department of Health and  
Human Services (HHS) must review  
existing regulations “and propose  
new regulations or other actions, as  
appropriate, that require hospitals  
and other inpatient healthcare  
delivery facilities to implement  
robust antibiotic stewardship  
programs that adhere to best  
practices, such as those identified by  
the Centers for Disease Control and  
Prevention.”<sup>1</sup> The executive order  
calls for formation of a multi-agency  
task force, which must submit a five-  
year national action plan by Feb. 15,  
2015 that includes “goals, milestones,  
and metrics for measuring progress,  
as well as associated timelines for  
implementation.”

In addition to pushing for new  
drug development and reaching out  
to international partners facing a  
similar, global problem, the executive  
order calls for a more aggressive  
role in “actively identifying and  
responding to antibiotic-resistant

outbreaks; preventing outbreaks and  
transmission of antibiotic-resistant  
infections in healthcare, community,  
and agricultural settings through  
early detection and tracking of  
resistant organisms; and identifying  
and evaluating additional strategies  
in the healthcare and community  
settings for the effective prevention  
and control of antibiotic-resistant  
infections.”

The order was accompanied by a  
report by the President's Council of  
Advisors on Science and Technology  
(PCAST), which included more  
specific details of what should be  
included in a CMS regulation on  
antibiotic stewardship.<sup>2</sup> (*See related  
story, p. 114.*)

## Now entering the post-antibiotic era

As infection preventionists are  
well aware, there are now infections  
resistant to all available antibiotics,  
as vanishing drug efficacy and  
a “post-antibiotic” era are no  
longer theoretical threats. The  
CDC has repeatedly warned that  
we are entering a post-antibiotic  
era, particularly as gram negative  
bacteria like carbapenem-resistant  
Enterobacteriaceae (CRE), exchange  
resistance plasmids and enzymes  
that can render most antibiotics  
useless. At this year's conference of  
the Association for Professionals  
in Infection Control and  
Epidemiology (APIC) in Anaheim  
there were CRE infections described  
that were even resistant to colistin,  
a last-choice antibiotic that has  
maintained its efficacy primarily  
because it's typically worse for the  
patient than anything they are  
infected with.

Stewardship programs are needed  
to optimize the use of antibiotics

# California passes new law on drug stewardship

*Other states expected to follow as antibiotic resistant bacteria becomes national concern*

A revised, more directive antibiotic stewardship law for hospitals (S.B. 1311) was recently approved in California, replacing the 2006 version that was a landmark for its time but lacked the specificity to ensure all hospitals were complying with its intent.

“Actually most hospitals do have an antibiotic stewardship program, [but] how robust it is varies from hospital to hospital,” says **Annemarie Flood**, RN, BSN, CIC, infection prevention program manager, City of Hope, Los Angeles. “[The new law] requires specific things like a multidisciplinary, physician-led program.”

The new law requires all general acute care hospitals to implement an antimicrobial stewardship policy in accordance with guidelines established by the federal government and professional organizations by July 1, 2015.

The law requires acute care hospitals to develop a physician-supervised multidisciplinary antimicrobial stewardship committee, subcommittee, or workgroup, including at least one physician or pharmacist who has attended training specifically on antimicrobial stewardship provided by — but not limited to — the Centers for Disease Control and

Prevention. The law also requires general acute care hospitals to report antimicrobial stewardship program activities to each appropriate hospital committee undertaking clinical quality improvement activities.

California remains the only state that requires antibiotic stewardship in hospitals, but other states are expected to follow as the issue gains momentum nationally.

“There are other states getting close,” says **John Lynch**, MD, MPH, head of the antimicrobial stewardship program and co-director of infection control at Harborview Medical Center in Seattle, WA. ■

— “not just reduce the total volume used — in order to maximize their benefits to patients, while minimizing both the rise of antibiotic resistance as well as adverse effects to patients from unnecessary antibiotic therapy,” the presidential advisory report stated. “Stewardship involves identifying the microbe responsible for disease; selecting the appropriate antibiotic, dosing, route, and duration of antibiotic therapy; and discontinuing antibiotics when they are no longer needed.”

Some 2 million people are infected with antibiotic-resistant pathogens annually, resulting in some 23,000 deaths, the CDC estimates. Drug stewardship has been shown to reduce the burden of resistant organisms in facilities and improve patient safety, but the CDC estimates that only about half of U.S. hospitals have implemented such programs.

Common barriers to implementation include higher priority clinical initiatives, staffing constraints and insufficient funding, the PCAST report found. The result is that about half of antibiotics prescribed are completely unnecessary, and the problem is compounded as the drugs kill off susceptible bacteria and select out resistant strains.

## APIC reviewing ex order, Pres report for comment

While emphasizing the importance of antibiotic stewardship, APIC would like to review the ultimate CMS regulation that comes out of this process before issuing a blanket endorsement.

“We would have to see what the language in the regulation is before we would say anything about it —

that is our practice. But in general, we support antibiotic stewardship,” says **Annemarie Flood**, RN, BSN, CIC, chair of the APIC Public Policy Committee.

The committee is currently reviewing the executive order and the PCAST report and is expected to issue a formal comment in the near future. Currently, APIC is reaching out to patients with an educational campaign, trying to tamp down the expectation and demand for unneeded antibiotics. In addition, APIC selected antibiotic stewardship as the theme of infection control week activities this October.

“We realize that antibiotics are becoming a diminishing resource,” Flood says. “We agree that antibiotic stewardship is one of the tools that we need to utilize to preserve that resource. Infection preventionists are really in a unique position to reach out to health care workers and the public

as well to teach them about antibiotic stewardship.”

However, antibiotic stewardship is only one element of preventing multidrug resistant infections, she noted. Of course, IPs face the constant challenge of improving compliance with hand hygiene, barrier precautions and other critical elements that are dependent on the vagaries of human behavior.

As proposed by the presidential advisory committee, a CMS regulation would essentially codify recent CDC recommendations on antibiotic stewardship.<sup>3</sup> (See related story, p. 114) In addition, PCAST recommended that a CMS regulation require health care facilities to report data to the Antimicrobial Use and Resistance (AUR) module in the CDC’s National Healthcare Safety Network (NHSN). This relatively new NHSN module currently gives facilities the option to report antimicrobial usage of various classes of antibiotics and/or antimicrobial resistant infections from a host of gram negatives to MRSA.

“The [NHSN module] is really designed to gather these data on a national level so that hospitals can benchmark themselves against other similar facilities,” says **Daniel Diekema**, MD, president of the Society for Healthcare Epidemiology of America (SHEA).

The presidential advisory panel recommended CMS report the NHSN data on its Hospital Compare quality indicator site and eventually add stewardship to its value based purchasing requirements. Lynch says requiring reporting of antibiotic data to the NHSN would “change the prioritization of antibiotic usage in health care without a doubt.”

Both SHEA and IDSA originally called for a federal CMS regulation to preserve antibiotic efficacy in a 2012

position paper.<sup>4</sup> The associations have continued to champion the issue and lobby for regulations.

“SHEA has been pushing for this for quite a while now,” Diekema says. “The incentives would really drive hospitals to establish serious antibiotic stewardship programs.”

## Will data burden be an issue for IPs?

In calling for a CMS regulation on stewardship, the PCAST report specifically cited infection prevention

“SINCE ...  
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WITH ASKING  
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COLLABORATOR.”

as a field dramatically empowered by CMS Conditions of Participation (CoPs). “The infection-control CoP changed hospital practices from being reactive (with measures deployed after the outbreak of infections) to proactive (with successful large-scale interventions that prevent serious health care-associated infections such as central line-associated bloodstream infections, surgical site infections, and the transmission of resistant pathogens from patient to patient),” the advisory report states.

Still, there have been longstanding

concerns in the infection prevention community about the burden of more and more data collection on inundated IPs. On the other hand, there is also the expectation that automated surveillance technologies, electronic records and improved links with clinical laboratories could make any new regulatory requirements on antibiotic resistance more manageable. However, with infection preventionists pushing to get out on the ward floors and even to the patient bedside, a proposed CMS regulation that would relegate them back into their silos as data collectors may not sit well with the profession. A key 2012 paper co-authored by infection preventionists called for IPs and hospital epidemiologists to have collaborative roles on antibiotic stewardship programs.<sup>5</sup>

“Since a lot of antimicrobial stewardship has to do with asking physicians to change what they are doing, they must have a physician collaborator,” says **Sara Cosgrove**, MD, lead-author of the paper and director of antibiotic stewardship at Johns Hopkins Hospital in Baltimore. “In the stewardship world we have seen infection control make great strides and some of that is related to being a person who drives change and leads interventions — not the role 20 years ago of doing more surveillance.”

Lynch concurs, saying infection prevention is indispensable to antibiotic stewardship.

“I run infection control and antibiotic stewardship here at my hospital and I think you will find that kind of combination is going on in a lot of places,” he says. “A lot of people who work in infection prevention work in antibiotic stewardship in our program. I think philosophically you can’t really separate antibiotic stewardship from infection control.”

They are complementary [and] need to work together and integrate going forward. Infection preventionists are the experts in NHSN surveillance and data uploading. That's a skill set that antibiotic stewardship teams don't currently have."

Physician and pharmacists are expected to lead antibiotic stewardship programs, but the CDC report on which the CMS regulation will apparently be based notes that, "infection preventionists and hospital epidemiologists coordinate facility-wide monitoring and prevention of healthcare-associated infections and can readily bring their skills to auditing, analyzing and reporting data. They can also assist with monitoring and reporting of resistance and CDI trends, educating staff on the importance of appropriate antibiotic use, and implementing strategies to optimize the use of antibiotics."<sup>5</sup>

## Unknowns, unintended consequences

There are other concerns and caveats about how all of this may play out, with some questioning the breadth of federal agencies tapped to participate in the process. For example, the presidential order summoned agencies of all stripes to join a new task force on this issue, including Homeland Security and the Department of Defense.

"Some people are concerned whether there is enough direction," says Diekema. "I think some people were wanting there be identified a single responsible party to move this forward so it doesn't kind of get lost in the bureaucracy. Time will tell how much of this report and how many recommendations from the President's Council are actually going to come to fruition."

While the CDC and PCAST certainly outline and inform the future of stewardship programs, ultimately some specific items will have to be boiled down to a checklist that can be used by a CMS surveyor.

"If it becomes a CoP there is going to have to be a way to measure it — a checklist or something," he says. "That's how the [CMS] works."

And work by government agencies can proceed at a ponderous pace, as exemplified by the CMS' ambitious draft survey for inspecting infection control programs in hospitals. The draft checklist — which looks at everything from hand hygiene to the surgical suite — was originally projected for finalization in 2013. Now the latest word is that it will be issued in fiscal year 2015, which began Oct 1. Interestingly, the draft CMS infection control survey included some non-enforceable provisions on antibiotic stewardship, showing that the issue is on the agency's radar but apparently can't be enforced without new regulation. In any case any resulting CMS regulation must have specificity and rigor if it truly is going to be effective in curtailing the misuse and overuse of antibiotics.

"It's easy to say you have a stewardship program because you produce antibiograms and have named a PharmD as the head of stewardship," Diekema says. "That doesn't necessarily mean you're doing anything to improve antimicrobial utilization or measure with the appropriate metrics. I think that one of the things that sometimes gets lost in the larger picture is that we still don't know what the best ways are of doing stewardship. What are the appropriate things to be measuring? What style or approach to stewardship is most effective? How do you measure that effectiveness? What are the unintended

consequences of certain approaches to stewardship?"

In that regard, the PCAST report calls for more research into such questions, but the problem has reached such a crisis point that would it seem far too urgent to brook inordinate delay. That point was driven home when *HIC* recently asked a CDC stewardship expert whether the latest iteration of multidrug resistant bacteria — in this case a virulent form of KPC that was also impervious to antibiotic treatment — was a proverbial "game changer."

"I think the game has already changed," said **Arjun Srinivasan, MD**, a medical epidemiologist in the CDC's Division of Healthcare Quality Promotion. ■

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## Pres panel calls for CMS drug regs in long term care

Going beyond hospitals, a report by a presidential advisory committee recommended regulatory requirements and incentives for antibiotic stewardship programs in long term care and outpatient facilities.

The President's Council of Advisors on Science and Technology (PCAST), argued that nursing homes "accept medically complex patients, often on transfer from acute care hospitals, [who] are at greater risk of having undergone antibiotic treatment. [Long term care] institutions have been implicated in outbreaks of multi-drug resistant infection."

The PCAST recommendations include:

- By the end of 2017, CMS

should have federal regulations in place that will require hospitals, critical access hospitals, and long-term care and nursing home facilities to develop and implement robust antibiotic stewardship programs that adhere to best practices. Similar requirements should be phased in rapidly for other settings including long-term acute care hospitals, other post-acute facilities, ambulatory surgery centers, and dialysis centers.

- Regarding antibiotic use in outpatient settings, CMS should expand the Physician Quality Reporting System to include quality measures that discourage inappropriate antibiotic use for non-bacterial infections, such as

respiratory tract infections.

- CMS should include in the Inpatient Quality Reporting program and reporting on Hospital Compare quality measures based on data reported by health care facilities to the CDC's NHSN Antimicrobial Use and Resistance module. Such quality measures should be ready for submission to the consensus body entity for endorsement by 2017, and implementation consideration through the Measure Application Partnership by 2018.

- Federal agencies should require implementation of antibiotic stewardship programs as a condition for receiving federal grants for health care delivery, including in community health care centers. ■

## IDWEEK 2014: Antibiotic stewardship reduces pediatric patients length of stay, readmissions

*'Skeptics' wrong, stopping antibiotics, discharging sooner worked*

Hospitalized children were discharged sooner and were less likely to be readmitted when physicians followed the recommendations of an antibiotic stewardship program, researchers reported recently in Philadelphia at the IDWeek 2014 conference. The study is the first to show the benefits of drug stewardship on children's health.

"Studies have shown stewardship programs reduce antibiotic use and decrease the risk of resistance, but this is the first to demonstrate that these

programs actually reduce length of stay and readmission in children," said **Jason Newland**, MD, lead author of the study and medical director of patient safety and systems reliability at Children's Mercy Hospital-Kansas City, MO.

Based on the findings of benefit to pediatric patients, Newland recommended other hospitals implement such programs and invest the resources to support them.

Over the course of the five-year study, the antibiotic stewardship program recommended that the

prescribed antibiotic be discontinued or the dose or type of antibiotic be changed in 1,191 (17%) of 7,051 hospitalized children reviewed by the program. The child's physician had the option of accepting or rejecting the recommendation.

When the program's recommendations were followed, the length of stay was shorter, and 30-day admissions were reduced among children who did not have complex chronic care issues, such as cerebral palsy or congenital heart disease, he said. The length of stay

averaged 68 hours and there were no 30-day readmissions among children whose doctor followed the recommendation, while the length of stay averaged 82 hours and 3.5% were readmitted within 30 days among those whose doctor did not follow the recommendation.

The most common recommendation was to discontinue the antibiotic because the stewardship program determined it wasn't necessary. Those who continued the antibiotic remained in the hospital so they could be monitored.

“Skeptics say stopping the

antibiotics and sending the kids home sooner will lead to more children being readmitted, but we didn't find that,” Newland said. “What we found was that kids were being taken off unnecessary antibiotics sooner – and in a safe manner.” ■

## AHA's antimicrobial stewardship toolkit expands on best practices

*Draws on CDC, APIC guidance for clinicians and patients*

The American Hospital Association (AHA) has created an online antimicrobial stewardship kit as part of its list of the top five hospital-based procedures or interventions that need to be reviewed and discussed by patients and physicians.

“The toolkit is a collection of resources available for health care organizations, patients, and physicians to develop and maintain an antimicrobial stewardship program,” says **John Combes**, MD, senior vice president of AHA and president and chief operating officer of the Center for Healthcare Governance in Chicago, IL.

The AHA pared down its advice on antibiotic stewardship to three general principles.

- Do not give antibiotics when they are not needed.
- Give the appropriate amount of antibiotics at the appropriate time.
- Give the right antibiotics.

Rather than reinventing the wheel, the AHA wisely drew on Centers for Disease Control and Prevention guidance and information from other knowledge leaders like the Association for Professionals in Infection Control and Epidemiology (APIC). The main sections include a user guide that introduces the toolkit; a CDC readiness checklist; a resource section for hospitals and health

systems; clinician implementation guides and tools, and patient resources. AHA advised sharing the CDC readiness checklist with senior management, quality leaders, purchasing directors, clinic managers, nurse managers, key physician leaders, risk managers, pharmacy leaders, infection preventionists and hospital epidemiologists, laboratory staff and information technology staff.

For ease of use, the AHA toolkit is divided into two sections, one for those just beginning a program, the other for those who wish to enhance an existing program. Clinician resources in the kit include webinars, clinical evidence supporting appropriate use of antibiotics, implementation guides and related articles. The patient resources section includes frequently asked questions, pamphlets and handouts on how patients can best engage in their care, and other resources on appropriate use of antibiotics.

In this area, the toolkit includes a new APIC infographic (<http://bit.ly/1BEH4Zr>) that explains to patients and consumers the key points of preserving antibiotics and why it is important not to “pressure” physicians for them if they are not needed. The handout touches on the basics of drug resistance and reminds patients that

antibiotics can have side effects and create “superbugs.” APIC also urges patients to ask these five questions to make sure they need a prescription.

1. Do I really need an antibiotic?
2. Can I get better without this antibiotic?
3. What side effects or drug reactions can I expect?
4. What side effects should I report to you?
5. How do you know what kind of infection I have? I understand antibiotics won't work for viral infections”

### AHA kit is designed for electronic use

The eight-page AHA toolkit is intended to be viewed electronically (<http://bit.ly/VTeDIB>) and contains links to additional tools and information. For example, the CDC Checklist for Core Elements of Hospital Antibiotic Stewardship Programs (<http://1.usa.gov/11236QG>) — a four-page tool — is available as a link.

“The toolkit has various components to help implement an antimicrobial stewardship program,” Combes says. “All organizations need to take the readiness assessment as a first step.”

The readiness assessment checklist includes questions such as:

- Does your facility have a formal, written statement of support from leadership that supports efforts to improve antibiotic use?

- Does your facility receive any budgeted financial support for antibiotic stewardship activities (e.g., support for salary, training, or IT support)?

The CDC summarizes the core elements of hospital antibiotic stewardship programs as containing these seven components:

- **Leadership Commitment:**

Dedicating necessary human, financial and information technology resources

- **Accountability:** Appointing a single leader responsible for program outcomes. Experience with successful programs show that a physician leader is effective

- **Drug Expertise:** Appointing a single pharmacist leader responsible for working to improve antibiotic use.

- **Action:** Implementing at least one recommended action, such as systemic evaluation of ongoing treatment need after a set period of initial treatment (i.e. “antibiotic time out” after 48 hours)

- **Tracking:** Monitoring antibiotic

prescribing and resistance patterns

- **Reporting:** Regular reporting information on antibiotic use and resistance to doctors, nurses and relevant staff

- **Education:** Educating clinicians about resistance and optimal prescribing

Regarding education, the CDC recommends providing regular updates on antibiotic prescribing, antibiotic resistance, and infectious disease management that address both national and local issues. Sharing facility-specific information on antibiotic use can help motivate improved prescribing, particularly if wide variations in patterns of use exist among similar patient care locations.

“After taking these steps, what becomes important is engaging physicians and showing them clinical evidence of what antimicrobial stewardship could do for the organization and their practices,”

Combes says. “I think all good antibiotic usage should be targeted and limited — at least at the institutional level where physicians are practicing.”

The current antimicrobial thinking

is targeted use of drugs for limited duration, he adds. “Make sure you have a very narrow range of use,” he says. “Before you get a culture back, use an antibiotic that has a pattern of susceptibility that is similar to organisms seen at your institution. Then when you get the culture back, narrow it down to a drug that is specific for that infection and use it for the shortest time recommended.”

The CDC recommends that clinicians specify the dose, duration and indication for all courses of antibiotics so they are readily identifiable. Make this information accessible to help ensure that antibiotics are modified as needed and/or discontinued in a timely manner. Develop facility-specific treatment recommendations based on national guidelines, using local susceptibilities and formulary options to optimize antibiotic selection and duration for common indications like community-acquired pneumonia, urinary tract infection, intra-abdominal infections, skin and soft tissue infections and surgical prophylaxis. ■

## Emergency department hand hygiene, catheter placement remain IC challenges

*Hand hygiene compliance varies widely*

At a time when Ebola and other emerging infections may first present at an emergency department (ED), researchers are finding a wide range of compliance — or lack thereof — with infection control measures.

In particular, there is room for considerable improvement in hand hygiene compliance and use of aseptic technique during catheter insertion in emergency departments.

Researchers conducting a literature review found that hand hygiene compliance in EDs ranged from 7.7%

to 89.7%.<sup>1</sup>

“A variety of factors may have contributed to variation in hand hygiene adherence rates,” says **Eileen Carter**, RN, BSN, lead author of the study. “We reviewed studies that were conducted in several countries. Differences in cultural practices, data collection procedures, and access to hand sanitizer and hand wash, may have contributed to the variation we saw in hand hygiene compliance.”

Caveats noted, but low compliance with hand hygiene and other infection

control precautions fits the narrative described at the APIC conference earlier this year by **Jeremiah Schuur**, MD, director of Quality, Patient Safety and Performance Improvement for Emergency Medicine at the Brigham and Women’s Hospital in Boston.

In a chaotic, often overcrowded ED, the prevailing mindset is that care must be administered quickly, engendering an “acceptability or normalization of deviance” with infection control measures, he said. (See *HIC* July 2014 p. 66.)

## Catheters placed in ED may be lost to follow-up

In that regard, the literature review study also raises questions about aseptic technique during placement of central venous catheters and urinary catheters in EDs.

“There are a lot of lapses in technique for inserting invasive devices,” says **Elaine Larson**, RN, PhD, FAAN, CIC, co-author of the study and associate dean for nursing research at Columbia University in New York, NY. “Most hospitals have a rule that if an invasive device is inserted under emergency conditions, then it should be re-inserted within 24 hours, but no one has ever studied that.”

Indeed, the authors were unable to find any studies that looked at adherence to re-inserting invasive devices that initially were inserted in the ED.

“It’s very hard to tease out this information from electronic databases,” Larson says.

Another problem is that hospital nurses and physicians might not even know where and when a catheter was inserted, she notes.

“Say the patient went from the ED straight to the operating room,” she says. “They don’t know whether it was inserted in the ED or the operating room, depending on the charting.”

Even as the health care field is trying to make electronic health records more useful, there remains information that is not collected.

“If there is not a field in the record that says the catheter went in at this time in the emergency department, then this information could be noted in electronic notes,” Larson says.

But the date and place of

insertion might not be mentioned at all. In addition, there are research needs for more information about whether central lines and urinary catheters inserted in an ED increase the risk of infections.

“Nobody even knows if the rule to re-insert the device even makes a difference,” she adds. “It seems like a good idea — imagine trying to put in a urinary catheter in the hallway, but we don’t know.”

Intervention studies that address ED catheter-associated urinary tract infections (CAUTIs) were largely educational based and aimed to improve the proportion of ED-placed urinary catheters that met medical appropriateness criteria, Carter says.

“Results were varied, indicating that education alone does not guarantee provider compliance,” she adds.

## Targeted HH campaigns work best

One thing the study does highlight is the importance of targeted hand hygiene campaigns. Studies from the U.S. and Italy showed sustained improvements in hand hygiene after a campaign. Observers used training materials from the World Health Organization prior to observing staff HH practices.

“Multimodal campaigns, which have focused on staff education and engagement, interdisciplinary champions, and performance feedback, have successfully increased hand hygiene rates,” Carter says.

“However, ED hand hygiene improvement efforts should also consider unique barriers to compliance in the ED,” she adds. “For instance, healthcare workers may provide care to patients in non-

traditional care areas where hand sanitizer is not readily accessible, which was addressed by one of the studies we reviewed.”

The literature review’s chief finding is that there is a need for improved compliance to infection prevention practices in the emergency department, Carter says.

“Future studies should evaluate the role of the ED in the transmission of infections,” she adds.

Larson says additional research questions include:

- What is the impact of ED patient crowding on hand hygiene and aseptic technique?

“When you have patients lined up in the hallway, can staff practice aseptic technique and hand hygiene — even if there is not a sink or hand rinse nearby?” Larson wonders.

- Do staffing levels in the ED have a significant impact on infection risk?

Or is the problem related to the level and type of staffing in the ED, she says.

“Is there enough staff in the ED to use aseptic technique, and is the staff able to practice good infection control?” she adds.

“It’s possible to make aseptic technique a two-person job,” Larson says.

One person can watch to make sure their colleague does not break technique.

- Do hospital employees follow their own organization’s guidelines and re-insert invasive devices within 24 hours, and do they even know about these guidelines? ■

## REFERENCE

1. Carter EJ, Pouch SM, Larson EL. Common infection control practices in the emergency department: a literature review. *Am J Infect Con* 2014;42:957-962



## The cycle of mentorship: You get what you give

By Patti Grant, RN, BSN, MS, CIC, Infection Preventionist, Addison, TX

No matter what your background, there is little doubt you can quickly name several people that impacted your infection prevention experience in a positive way, making you better that day and beyond. No doubt these same memorable people made it possible for you to see your contributions as productive and meaningful, when you saw them as commonplace and ordinary. These people are mentors.

You may not have read a description exactly like the one above, yet this is how it feels when I'm experiencing the gift of a mentor's time, shared learning, and selfless perseverance. You are a new Infection Preventionist (IP) and feel back to square one on the learning curve of a demanding new discipline — so you think. Remember that you bring a background that is unique — meaning you will be an IP like no other because of your varied prior experience.

It's amazing how rapidly the mentor/mentee cycle can flip with IP's as a professional group — and the power of APIC as the cornerstone — share evidence-based practices, personal experiences, grassroots

success stories, and noncompetitive networking.

What prompted this reflection on mentorship? An unexpected professional support trio I experienced in May 2014 in north-central Texas:

- **Maxine Garcia**, a fairly new IP at Baylor Surgical Hospital at Las Colinas, sent me an e-mail with "I'm excited" in the subject line. We'd known each other at another facility when she worked in the Emergency Department, and later as a Quality Coordinator at a different facility. Recently she stated, "Your job seemed fascinating. You explained why things were done and shared knowledge. I wanted to do that." Maxine described some prevention work she was doing at our local APIC meeting. I encouraged her to share what she was doing, telling her it was novel — even though she thought it routine and ordinary. Her contribution is now part of APIC's 2014 publication "Guide to Preventing Catheter-Associated Urinary Tract Infections."

- **Tosin Laja-Akintayo** is an energetic IP straight from bedside nursing that took on the IP/quality role at a sister facility, Methodist McKinney Hospital, whom I'm

joyfully mentoring. Tosin has taught me meaningful acquiescence through the ease in which she accepts public reporting requirements for the opportunity it is: a requisite part of IP visibility to advance patient safety. She chose not to focus on the difficulties and obstacles of morphing this new workload within the many IP responsibilities the profession has accumulated over four decades of fighting infections. I knew this yet she helped me relax into this practicality.

- **Donna Ballard** at Children's Medical Center Legacy is now an experienced IP. She knows Maxine, since Donna was a Nursing Supervisor at the same facility where the three of us worked around 12 years ago. Back then Donna quickly stood out as potential IP material with solid and proactive questions to prevent infection. Donna instinctively knew when to phone versus e-mail with a consultation since she understood infection transmission urgency without much prompting. She personally paid for basic IPC courses while still a Nursing Supervisor, documenting a serious intent to 'break into' the profession. Donna landed an IP job at a newly built hospital with

the stipulation I mentor her and have a formal letter in her Human Resources jacket for hospital accreditation purposes. Donna used to call me her “Morning Coffee” because I’d come to work and answer her e-mails before starting the day.

Imagine my surprise while talking with Tosin to discover she’d just gotten off the phone with Donna

regarding a pediatric question — a former mentee was mentoring at the same moment I was to the same IP. Within that week the aforementioned “I’m excited” email arrived from Maxine. The positive impact of mentoring was coming full circle — even though at the time I wasn’t sure if Donna and Maxine had connected yet (they had).

Encountering the gift of mentoring while simultaneously experiencing the eagerness of being the mentee is priceless. Be kind to yourself while learning and accept the help of others. Seek their expertise knowing this profession is more than worth it, and it really takes off when you can teach others. What will your cycle of mentorship be? ■

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

1. Identify the clinical, legal, or educational issues encountered by infection preventionists and epidemiologists;
2. Describe the effect of infection control and prevention issues on nurses, hospitals, or the health care industry in general;
3. 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.



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## CNE/CME QUESTIONS

1. **Despite their critical importance in reducing drug-resistant bacteria, the CDC estimates that approximately what proportion of U.S. hospitals have implemented antibiotic stewardship programs?**
  - A. 1/4
  - B. 1/3
  - C. 1/2
  - D. 2/3
2. **According to a presidential advisory committee report, common barriers to implementing antibiotic stewardship programs in hospitals include which of the following?**
  - A. higher priority clinical initiatives
  - B. staffing constraints
  - C. insufficient funding
  - D. all of the above
3. **With regard to antibiotic stewardship in outpatient settings, the presidential advisory committee recommended that CMS expand the Physician Quality Reporting System to include quality measures that discourage inappropriate antibiotic use for non-bacterial infections.**
  - A. true
  - B. false
4. **A study of antibiotic stewardship programs and hospitalized children found that when the program's recommendations were followed the result was:**
  - A. both length of stay and readmissions were reduced
  - B. length of stay was dramatically reduced but 30% of patients were readmitted
  - C. length of stay and readmissions had no significant reductions
  - D. length of stay did not decrease, but the patients were far less likely to be readmitted