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Keep communication lines open with top brass to keep pharmacy a priority

Show you've made money to receive money

There are many strategies and details pharmacy leaders can employ to help maintain their department's staffing and resources. But arguably one of the most important is to create and maintain a solid line of communication with hospital leaders, physicians, and staff.

"We need to make sure everyone understands that the services pharmacists deliver on a day-to-day basis have a return on investment," says **Michael D. Sanborn**, MS, RPh, FASHP, corporate vice president for cardiovascular service at the 3,000-bed, multisite Baylor Health Care System in Dallas. Sanborn was scheduled to speak about proving your return on investment through clinical services at the 14th Annual American Society of Health-System Pharmacists' (ASHP's) Conference for Leaders in Health-System Pharmacy, held Oct. 19-20, 2009, in Chicago.

Pharmacy directors need to keep their hospital administrations informed of how pharmacy is doing, says **Billy W. Woodward**, BS, RPh, executive director of Renaissance Innovative Pharmacy Services in Temple, TX. Woodward was scheduled to speak about strengthening core pharmacy services at the ASHP's conference in October.

Summary points

- Build trust with hospital leaders through open lines of communication.
- Provide data on successful quality and safety projects, as well as cost-savings in pharmacy.
- Use hallway chit-chat time to let other hospital staff and leaders know about your small successes.

There are seven areas of accountability for each hospital pharmacy, and pharmacy directors must keep in mind three overarching principles for each area, Woodward says.

They must make certain everyone in their department feels some level of responsibility, ensure there is a culture of leadership and top-down guidance, and maintain a proactive

communication plan in dealing with hospital leadership, Woodward advises. **(See story on seven areas of accountability, p. 124.)**

"The information needs to be put upfront on a regular basis," Woodward says. "And it should be hand-delivered so it doesn't end up in the inbox and never gets read."

If the pharmacy director is not regularly letting hospital leaders know what the pharmacy department is doing, there could be problems where cutbacks impact the hospital pharmacy's resources and ability to provide quality care, Woodward adds.

"Even if you're doing a first-rate job, you could have problems," he says.

"I've seen departments that were doing an A-plus job, but the bosses upstairs didn't know that, and the pharmacy department was on the verge of having positions eliminated," Woodward explains.

Even when a hospital system is not making across-the-board cuts, it is financially sensible to keep pharmacy's economic and quality successes on the leadership's radar screen, Sanborn notes.

"A hospital pharmacy might want to obtain funding for a big project one day, and the director brings the idea forward," Sanborn says. "But the project is turned down, and one reason why the department is not successful is likely because the pharmacy hasn't created an identity of fiscal value in the first place."

If the pharmacy director had been consistently providing information about the pharmacy's outcomes, including cost savings through clinical pharmacy programs or changes, top leadership will clearly understand that the pharmacy department provides significant value, Sanborn explains.

Then it would be a much shorter leap for the hospital leadership to agree that a new pharmacy project would provide value over the long run and be worth the initial investment, he adds.

Pharmacy directors need to remind hospital corporate leaders that cutting labor rarely is the best way to cut costs in the pharmacy department, Woodward says.

Labor is the biggest expense in overall hospital costs, but this isn't true in the pharmacy department, he explains.

"In the inpatient, acute care setting, 70-75% of the costs for the pharmacy is drugs," Woodward says. "Manpower might be 5%."

So when a hospital cuts pharmacy staff, they're making a big mistake because they could cut 20% of the pharmacy staff to have an impact of cutting only 4% of the pharmacy budget, Woodward says.

"Then the drug budget will start to go up 18% a year because there are no employees available to take care of reducing it," he adds. "And things suffer from a quality standpoint too."

If the bosses above the pharmacy head don't understand how this scenario will play out, then it's because the pharmacy director hasn't done a good job of communicating with them, Woodward says.

"By the time you have a consultant upstairs looking for ways to cut costs, then it's too late to convince the administration that you need enough resources to do the things you do to keep the hospital safe and control costs," Woodward adds.

It might not be possible for hospital pharmacies to avoid all job cuts during an economic downturn, Sanborn notes.

"But the more everyone realizes that every pharmacist delivers value, the less likely you will be to experience some cuts," Sanborn adds.

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Here are some strategies that will help improve communication between pharmacy and the top brass:

• **Speak at department head meetings:** "You should make a periodic presentation to the department head meeting about what pharmacy currently is doing, such as using dashboards and metrics and other methods to demonstrate how pharmacy is creating value," Sanborn says. "Show how managing the formulary and other clinical programs impact the budget."

• **Position pharmacy at the hospital leadership table:** It's important for the hospital pharmacy leaders to be well-positioned in the hospital's organizational structure, Woodward says.

"ASHP has talked about having a chief pharmacy officer," he adds. "This can work, but regardless of what the position is called, it's critical for pharmacy to be positioned at the table to talk with the right people at the right time."

If pharmacy leaders aren't present at hospital corporate and leadership meetings, then it will be much more difficult for them to be heard and to maintain pharmacy as a priority.

Pharmacy heads can help encourage the hospital to include them in the leadership structure by developing relationships through communication about the size of the pharmacy department's budget, its manpower, and the safety issues and their consequences, Woodward says.

Baylor Health Care System has a corporate director of pharmacy who attends senior leadership meetings and most major meetings, Sanborn says.

The corporate director of pharmacy oversees the health care system's 13 hospital directors of pharmacy, and the position has evolved over the past few years, he adds.

"Pharmacy directors at sites have a direct line of reporting to the corporate director of pharmacy," Sanborn says. "That way, once we all agree on what the goals are for pharmacy, the corporate director drives the performance against those goals."

Baylor's pharmacy department was the first clinical department to have system-wide leadership, he notes.

"All of the clinical departments now have a corporate leader," Sanborn adds.

• **Submit quarterly reports to administration:** "We've been sending quarterly reports of our overall pharmacy performance to the administration for at least five years," Sanborn says.

"They're short and sweet," he adds. "We used to do a six-slide PowerPoint presentation, summarizing our performance, and now we have consolidated it down to a one-page dashboard that we can also e-mail and review with senior leadership."

• **Create a dashboard to describe expenses and progress:** The Baylor pharmacy dashboard includes specific labor and drug expense benchmarks that have to be hit by all of the hospitals, Sanborn explains.

"We provide an easy-to-read, one-page summary of where the department is with respect to those benchmarks, in addition to including progress initiatives that we should be working on," Sanborn says.

"For instance, there's a therapeutic interchange summary with year-to-date fiscal information about what we focus on," he explains. "There's also an Excel spreadsheet with two graphs that summarize where our labor and drug expenses are, followed by a table that shows which initiatives the department is working on and what we're doing."

The dashboard might also measure output based on pharmacists per adjusted patient day ratios and show whether the department is hitting a particular target, Sanborn says.

"We also have FTE measurements based on doses dispensed, and all of those metrics vary by facility," he adds.

• **Provide anecdotes of successes:** At the Baylor hospital emergency department, there's a pharmacist who works full time, and there have been documented savings since that position was created a year ago, Sanborn says.

"The savings are well above the pharmacist's salary, but more importantly, the pharmacist has had an impact on throughput in the emergency department and has helped a lot with triage," he explains. "We've been able to adjust the triage process."

For example, ED patients often need to be sent to the intensive care unit (ICU) because of their need for IV medications.

"If the pharmacist can adjust those IV drips so they're no longer necessary, then the patient can be transferred to a lower level of care, and that has a big financial impact on the hospital," Sanborn says. "The ED pharmacist also can have a big impact on antibiotic streamlining."

This is the type of anecdote a hospital director should be pointing out with hospital leadership, showing how just one clinical pharmacist program can positively impact both quality of care and the financial bottom line.

"An ED pharmacist also can standardize the

ED's protocols, looking at medication use and monitoring to see if there are ways we can function more efficiently," Sanborn says. "That's a project that will last a year or two, and the physicians and nurses are very excited about it."

• **Market pharmacy's successes with all staff:** "You can do this in a variety of ways," Sanborn says. "Whether you're at a department head meeting or just a meeting with your supervisor or administrator, you can discuss the department's accomplishments."

If something significant has happened, then put it in an e-mail.

"Say you have numbers for a particular project and it looks like you've saved $30,000 over the past six months," Sanborn says. "Craft a short e-mail to your boss, saying, 'We just got the numbers in, and we've saved $30,000 over the past six months.'"

Even a brief walk down the hall with the hospital's chief executive could be an opportunity to reinforce pharmacy's value.

"I was recently talking in the hall with our CEO about our success with bedside barcode scanning, and he complimented the department and said, 'When you focus on patient safety, the finances take care of themselves,'" Sanborn says.

Pharmacy staff should receive the same pharmacy reports sent to hospital leaders, and hospitals should have communication boards with charts and graphics that display the pharmacy's progress on various metrics, Sanborn suggests.

These simple, persistent communications help build the understanding that pharmacy adds value, he says.

"Pharmacists understand much more now than they did 4-5 years ago that while clinical practice is very important, they also have stewardship responsibility to the organization," Sanborn says. "We recognize that the more efficient we can be from a financial standpoint, the more likely it is that our service capabilities will increase." ■

Pharmacy's goals should include these seven areas of accountability

Expert outlines plan of action

When the economy is challenging, it's more important than ever for hospital pharmacy leaders to show how their department creates value in safety, quality, and the bottom line.

It will take a comprehensive and authentic leadership plan to meet any hospital resource crisis head-on, says **Billy W. Woodward**, BS, RPh, executive director of Renaissance Innovative Pharmacy Services in Temple, TX. Woodward has more than 35 years of experience in hospital pharmacy work and consulting, including having worked as a corporate director in two large academic health systems.

"Many times people react to a crisis without an overall strategy," Woodward notes. "They go from one set of challenges to another."

But the most effective pharmacy leaders have a strong, proactive plan that includes seven areas of accountability, he says.

"Anyone of these spheres of accountability can become so big that it dominates the entire strategy, and that's the hazard of it," Woodward adds.

Here are the seven areas of accountability:

• **People sphere:** This should be pharmacy directors' top priority, Woodward says.

"If you don't have a strong people-centered team, none of the other accountabilities get done," he says.

There is more to managing staff than hiring, training, and firing, he adds.

New employees quickly should be brought into the hospital pharmacy's culture of leadership, which demonstrates how every person in an organization is an important part of the overall group, he advises.

"If they're treated that way while in training and retraining, and if they're allowed to participate and be involved in the decision-making process, then they can become team members who feel they know what the purpose of the department is," Woodward says.

"Everyone in the department should understand who they are, what they're supposed to do, what their role is, and how it fits into the organization."

Summary points

- Keep these seven spheres in mind: people, business, operations, clinical care, medication safety, regulatory compliance, and integration across the continuum.
- Put managing staff and keeping a culture of leadership at the top of your priorities.
- Don't allow any one sphere to grow so big that it overwhelms the others.

Strategies for achieving this include these:

- Motivate staff to work independently and to become self-sufficient, even while keeping in mind that they're part of a team;
- Instill in employees the belief that they can always make things better; and
- Maintain training and career development resources even during challenging economic times.

"You need to maintain a pipeline of staff so you can groom people to move into positions of leadership," Woodward says.

• **Business accountability:** Pharmacy directors need to keep the business aspects of a pharmacy on their radar screens.

"You need to make sure you're getting the best prices, and you should have clinical programs in place that force your formulary decisions," Woodward says.

"Do you have a clinical team that interacts with the prescriber in a way that affects outcomes?" he says.

"Think about the fundamental business processes of a large, multimillion-dollar operation and what the C-fleet expects you to be doing," Woodward suggests. "Pharmacy people sometimes let this fall through the cracks."

The business equation is a critical piece, and it includes entrepreneurial activities, Woodward says.

"Pharmacy has a tremendous potential to be an entrepreneur among the health system," he adds.

• **Operational accountability:** This sphere includes drug distribution, packaging, paperwork, and process mechanics in the drug operations.

"This is a sphere that tends to get so big that it takes over all of your time and attention," Woodward says. "And it's so important that you as a leader among pharmacy staff should be careful to not get lost in that sphere."

If the operations sphere becomes so big that other spheres of accountability are ignored, then the pharmacy fails, he adds.

• **Clinical care accountability:** "This runs parallel with the operational piece," Woodward says. "I've seen examples where operations get out of whack and bigger than life, and clinical care monitoring and even cost monitoring do not get done."

There also have been a few cases where a hospital becomes so progressive clinically that pharmacy leaders forgot the operational piece, he notes.

"Those situations ended up with major patient care issues, as well as creating a financial disaster for the institution," Woodward adds. "So any one of these spheres can become bigger than life and take over, and all have to be addressed in their own right."

• **Medication safety and quality improvement:** "To appropriately address these you have to have a focused initiative that stands aside and looks objectively at the whole process, including safety and improvement issues," Woodward says.

"I've seen operational folks who've done a great job of mechanics, but who didn't take the additional perspective and ended up with medication safety issues," he adds.

• **Regulatory compliance:** "Legal, regulatory, and compliance issues are a three-pronged sphere," Woodward says. "These include accreditation rules and Medicare regulations."

Pharmacy leaders should focus on corporate compliance, he suggests.

"If they can't address it then they could have serious legal and ethical challenges," Woodward says.

If there are problems in this area, the fall-out can dominate a pharmacy department because of the incredible pressure to resolve all concerns, whether they're regulatory or the result of a survey by the Joint Commission of Oakbrook Terrace, IL.

• **Integration of pharmacy across the continuum:** "The seventh accountability is extremely important, but it's not one that people think of," Woodward says.

Pharmacy departments need to be integrated across the health care continuum.

"Pharmacies tend to get caught in one piece of the puzzle," Woodward says. "We don't transfer services across the continuum, so we may do well in the hospital, but we do a terrible job of discharge planning."

It's important for hospital pharmacists to be included in making certain patients receive the correct medication information and are prepared to contact a retail pharmacy when they are discharged home, he adds.

Hospital pharmacies that are well integrated have staff that get along well with clinical staff, Woodward says.

Sometimes it's a challenge to integrate the pharmacy's clinical team with its operational team.

"If you have a great clinical team, but the operational team thinks they're doing all the grunt work, then you have the makings of potential problems within the department," Woodward explains.

"Also, nurses and physicians are critical to the ultimate success of the pharmacy system," he adds. "Again, all of these integration principles aren't talked about much, and, unfortunately, they often are not done very well."

Pharmacy leaders should keep their eye on the seven spheres of accountability to ensure their department maintains balance and focus on its goals.

"All of these spheres become overwhelming," Woodward says. "But my message isn't to say it's easy, but that it can be done, and I've seen good examples of hospital pharmacies that have these elements in place and did a good job most of the time." ■

Medication reconciliation process improves with grant-supported pharmacist

Assure patient gets right medications

Like many hospitals, Piedmont Hospital in Atlanta, made medication reconciliation a top priority four years ago when the Institute for Healthcare Improvement (IHI) campaign focused on how hospitals could save 100,000 lives through several initiatives including medication reconciliation.

"We jumped on it fairly early and have been trying to accomplish medication reconciliation ever since," says **Sarah Mullis**, RPh, pharmacy director.

"The more we work with it, the more I'm convinced of its importance, and the more I'm convinced that it's not easy to do," Mullis adds.

The Joint Commission of Oakbrook Terrace, IL, also has focused on medication reconciliation, and this has given pharmacy directors another good reason why their organizations should put resources into this area.

"They realize that across the country everyone still is struggling to get medication reconciliation done and to get it done correctly," Mullis says.

Piedmont Hospital's medication reconciliation documentation is electronic as are the physician orders and nursing documentation, Mullis says.

"We had one of our pharmacy residents do a project on medication reconciliation at the beginning, and that helped us get started," she adds.

Originally, the hospital's medication reconciliation process was in a paper format, says **Kim Butler**, PharmD, clinical coordinator in the pharmacy department at Piedmont Hospital.

"We felt it should be done by a pharmacist, but there were resource issues, so we partnered with nursing since they had been doing medication histories," Butler explains.

The nurses continued to take the initial medication history, but if they had any questions about which medication or dosage a patient was taking they could request a pharmacy consult, she adds.

"So the pharmacist would come and talk with the patient and clarify any medications they weren't sure about," Butler says.

When the hospital's medication reconciliation process switched to an electronic format, patients' medications were entered and reconciled on the computer, and the medication orders then came electronically to the pharmacy for processing.

The hospital has received a grant to assist with having a dedicated pharmacist to one 20-bed unit, working with nurses and other disciplines in patient care. The pharmacist's role includes medication reconciliation.

The pharmacist can be proactive, anticipating problems and preventing them, partly through a little pharmaceutical detective work, Mullis and Butler say.

The pharmacist knows the right questions to ask patients. For instance, there might be a case of a patient with atrial fibrillation, and the patient's medication list did not list an anticoagulant, Butler says.

So the pharmacist knows to call the patient's drug store and physician's office to dig a little deeper and find out which anticoagulant the patient had been taking, she explains.

"The pharmacist might ask the patient's family to bring in all of the patient's medication bottles the next time they visit, and then he/she can make sure the patient's medications are appropriate," Butler adds.

"If the patient's medical record lists asthma and there's no inhaler listed, the pharmacist

Summary points

- An electronic format for medication reconciliation can make the process more efficient.
- Hospital pharmacists are skilled at playing "detective" when tracking down patients' medicines.
- Pharmacists should be called in to consult on the high-risk, high-medications use patients.

will ask the patient, "Are you taking an inhaler,'" Mullis says. "And the patient might say, 'Oh yeah, I forgot to tell you about that.'"

The pharmacist dedicated to the unit works only weekdays and does other clinical work, as well, Mullis notes.

"The grant money is not enough to cover the position entirely, but anything helps," Mullis says.

The problem most hospitals have is that it's difficult to come up with the resources necessary to have a clinical pharmacist conducting medication reconciliations and medication histories, Mullis says.

"Very few, if any, hospitals across the country are having pharmacy totally do this," she says. "Would it be ideal? Yes. Is it practical? No."

Hospitals do the best they can, and this means having clinical pharmacists consult on medication reconciliation when questionable or complicated cases arise.

"Patients omit things and forget to tell you about medications, or their dosages have changed," Mullis says. "They might have quit taking a prescription, but they forget to tell you."

This is why some detective work is necessary, and pharmacists are in the best position to do this, she adds.

For example, at Piedmont Hospital there was a recent case where a patient had a history of epilepsy, but the patient had not listed any seizure medications, Butler says.

"So after talking with the patient, the pharmacist was able to determine that the patient was on an antiepileptic agent, but had forgotten to mention it," she adds.

"In another case, a transplant patient had typed up a list of medications and gave it to us," Butler says. "But the patient had been discharged from another facility, and the medications had changed."

No one had updated the list, so the patient was put on the medications from the old list until the pharmacist spoke with the patient and learned that some had been changed, Butler adds.

"Some anti-rejection doses had been lowered, and others were changed," she says.

Piedmont Hospital had 213 transplants in the last fiscal year with a total of 6,286 inpatient days and 6,979 clinic visits, says **Noreen Carew**, RN, CNN, MBA, administrative director of transplant services at Piedmont Hospital.

Because of the high volume, there is a clinical pharmacist dedicated to handling transplant patients, Mullis says.

"The medications transplant patient's need are as critical as any because you need to balance the dosages so the patient doesn't reject the transplanted organ," she explains. "Plus most of these drugs can be fairly toxic."

So a pharmacist is assigned to this group of patients, including both inpatient and outpatient, Mullis says.

The inpatients are seen once per week, but their medications are reviewed daily by the pharmacist. And about one-fourth of the outpatients are seen by a pharmacist, Carew says.

Ideally, hospitals like Piedmont would have clinical pharmacists dedicated to all patient care units, Mullis says.

"I'd love to say to nurses, 'You go nurse, and we'll do medication reconciliation,'" Mullis says. "I don't think in my lifetime that would occur."

But what is possible for many hospitals is medication reconciliation on a priority or consulting basis.

So patients who have high risk of medication errors because of their comorbidities or their high number of prescriptions could be reviewed by a clinical pharmacist, Mullis notes.

And if the pharmacist works only weekdays, then the medications of patients who were admitted over the weekend would be reviewed on Monday, she adds.

"Most hospitals have a process of medication reconciliation in which medicines are reconciled within 24 hours," she says. ■

Professional Pharmacy Focus: Antimicrobial Stewardship

Infectious disease specialist offers advice on following JC ID guidelines

Tabletop education is one strategy

Hospital pharmacy directors could use the Oakbrook Terrace, IL-based Joint Commission's infectious disease guidelines and guidance in the 2010 National Patient Safety

Summary points

- Joint Commission infectious disease guidelines offer framework for antimicrobial stewardship program.
- First step: Collect infection and antibiotic use data.
- A clinical or infectious diseases pharmacist should be involved in antimicrobial stewardship program.

Goals to help confirm what they're doing right, as well as to identify problem areas.

"It's important for us to know we're on the right track," says **Deanne Tabb**, PharmD, MT (ASCP), infectious disease specialist at The Medical Center, which is part of Columbus Regional Healthcare System in Columbus, OH.

"It opened my eyes to the fact that I need to generate a timelier chart of antibiotic utilization," Tabb says.

The Joint Commission's 2010 National Patient Safety Goals include the following:

• NPSG.07.03.01: Implement evidence-based practices to prevent health care-associated infections due to multidrug-resistant organisms in acute care hospitals.

• NPSG.07.04.01: Implement evidence-based practices to prevent central line-associated bloodstream infections.

• NPSG.07.05.01: Implement evidence-based practices for preventing surgical site infections.

Meeting patient safety goals

One step in ensuring these goals are met is to collect antibiotic use and infection data. Then when problems are discovered, they should quickly be addressed through education and process changes.

Hospital pharmacies can use antibiotic use data to effect change, particularly in rapid cycles, she adds.

"Rapid cycles are set time bursts where you look at something and monitor it for three or four weeks at a time, assessing and analyzing data," Tabb explains.

"You ask, 'What else do I need to do here?'" Tabb says. "You identify opportunities and areas that need to be improved."

The Medical Center focused on education as a part of its process for improving its infectious disease program.

It helps if a hospital has infectious disease physician advocates, but this isn't always possible, Tabb notes.

"Some hospitals have really good infectious disease physician champions and have been doing this for a year, but the majority of hospitals have not even started on this program," she says.

The Joint Commission's guidelines help reinforce the importance of focusing on infectious disease, but hospital pharmacists also need to collect objective data, showing evidence that supports a more judicious use of antibiotics, Tabb adds.

"It's difficult and labor intensive," she adds. "We don't actually have an infectious disease physician who works for the hospital, and there are a lot of institutions that are in the same boat as we are."

The few available infectious disease doctors will visit the hospital for diagnostic consults, but are not available to support antimicrobial stewardship or attend meetings of the antimicrobial subcommittee, Tabb says.

This leaves all antimicrobial stewardship and education work mostly to an infectious disease pharmacist.

Even when hospitals can afford to hire an ID physician, the antimicrobial program still needs an infectious disease pharmacist or clinical pharmacist to run the daily activities, Tabb says.

One of the important roles of an antimicrobial stewardship program involves staff education about why everyone should focus on this area. **(See story on hospital's antimicrobial education program, p. 129.)**

"We need to teach people how to use antimicrobials wisely," Tabb says.

But it's important to have hospital leadership support before starting an educational program, and one way to obtain this is through referring to the Joint Commission's recommendations, Tabb notes.

Another strategy is to use a pocket guide with evidence-based durations of therapy and lists of the most commonly treated indications, Tabb says.

This handy guide tool could be developed with input from various hospital committees, which helps to obtain buy-in, she adds.

"I go to different committees, present some of the information, and listen to what their needs are," Tabb says. "It's nice to get recommendations from a couple of physicians, and they'll take ownership because they've asked for it." ■

Hospital's antimicrobial education program has five-week themed series

Door posters and tabletop notices are used

Sometimes an antimicrobial stewardship program needs a catchy and short educational series to capture hospital staff's attention.

So The Medical Center of Columbus, GA, used a five-week series on ways everyone could do a better job in antimicrobial stewardship through the use of door posters and table-top tents, says **Deanne Tabb**, PharmD, MT (ASCP), infectious disease specialist at The Medical Center, which is part of Columbus Regional Healthcare System.

Antimicrobial stewardship programs should be a hospital priority, and everyone in a hospital has some responsibility for making it work. An education program that reaches people from around the hospital, but doesn't involve the resources of inservices, is one way of raising awareness.

Here's how the five-week program works:

• **Week 1:** "We defined why antibiotic resistance is increasing, explaining how there has been overuse of antibiotics and this is associated with worse outcomes," Tabb says. "So we get people engaged about what we need them to focus on."

The educational material provided specific details of what employees can do to help.

• **Week 2:** "We looked at goal initiatives, including how to obtain quality cultures and establish source control," Tabb says.

Other goals might be to write indications for all antibiotics and to set durations of therapy, she adds.

• **Week 3:** The third week of posters were devoted to what an antibiotic is for.

Nurses, physicians, therapists, and others working with patients need to know why a particular drug is being used for a certain patient, Tabb says.

"The person prescribing that antibiotic should follow the patient's clinical response on a daily basis, and at the 72-hour mark ask if they have the right antibiotic," she adds.

The educational material focused on writing clear indications: "How do I know if I get to the chart and there isn't a clear indication?" Tabb says. "Every practitioner, even the nurses, need to know what the indication is."

Summary points

- Staff education about antimicrobial stewardship could involve themed posters and table-top tents.
- The first week might explain why antibiotic resistance is spreading.
- The last week's theme could reinforce the importance of obtaining cultures.

The posters provided examples of clear indications. For example, one might say, "Write Levaquin® 750 mg orally every day for community-acquired pneumonia," Tabb says.

Providers need to write these in either the order or the progress note so that any practitioner could read that chart and know why that antibiotic was prescribed, she adds.

• **Week 4:** Educational materials focused on setting durations of therapy, following the clinical response.

"Then I give them an example and say, 'Now that your patient is on day 2 of antibiotic therapy and has clinically responded, you need to write another order that says to continue it four more days,'" Tabb explains.

For example, the chart might read that the patient is given levofloxacin (Levaquin®), 750 mg, PO daily times four more days, Tabb notes.

"That's something they're not used to," she adds. "Their habits are not hardwired to write times five or times seven days, so our baseline statistics are really not impressive at all."

Providers were allowing excessive lengths of duration of therapy, Tabb says.

"They might choose the right antibiotic, but they were keeping them on it for too long," Tabb says. "This was a huge opportunity to improve."

Patients often were kept on antibiotics too long because it was easy for providers to lose track of how long a particular patient was on antibiotic therapy, particularly when documentation was on paper, she adds.

"Once you get on computerized physician order entry, then you can hardwire setting durations of therapy," Tabb says.

• **Week 5:** This week's educational message

was a reminder not to forget about the cultures.

"This week is devoted to obtaining cultures before antibiotics are administered, if possible," Tabb says. "You can utilize respiratory therapy to get quality sputum cultures or respiratory cultures like in pneumonia."

Sometimes hospital staff will give a patient a cup and ask for a sample, but no one will follow up when the patient cannot produce a sample within the first couple of hours, Tabb explains.

"We encourage them to get respiratory therapy in to assist and help encourage and coach the patient," Tabb says. "We want to grow out the pathogen and fine-tune our antibiotics when we get the pathogen, because if you don't get a good culture then you have to stay on a broad-spectrum antibiotic."

Patients admitted with bacteremia and sepsis needed repeated blood cultures to ensure sterilization of their blood stream, Tabb says.

But there was a high variability of this being practiced.

Need confirmed cultures

"There might not be a confirmation on the chart where someone made sure the patient didn't have persistent bacteremia," Tabb explains. "For organisms like MRSA or for sepsis, you need confirmed cultures at 48 or 72 hours with repeat blood cultures, and those need to be negative before you would feel confident that the patient doesn't have persistent bacteremia while on active therapy."

Without the confirmation, there is no way of knowing how long it will take the patient's blood stream to be clear of infection, she adds.

"For different patients who have the same organism it could take from 24 hours up to seven days," Tabb says. "So this was part of the week 5 education, to remind people to repeat cultures every 72 hours until the cultures were confirmed negative."

Also, the educational session taught employees to not collect surface cultures, which just means there's colonization, she says.

The Centers of Disease Control and Prevention (CDC) has a campaign that advises health care workers not to treat colonizing organisms because they're not actively causing infection, and treating something like that with antibiotics might lead to having a worse problem, Tabb explains.

"The CDC's goal is to prevent antimicrobial resistance in health care settings," she adds. ■

Guidelines offer tips on improving antimicrobial stewardship program

Start with low-hanging fruit

As each pharmacy director faces the daunting challenge of improving or initiating an antimicrobial stewardship program with limited resources, there are a few strategies that can make this process work more smoothly.

"You need to start with the low-hanging fruit," suggests **Richard Drew**, PharmD, MS, BCPS, professor of pharmacy at the Campbell University School of Pharmacy in Buies Creek, NC, and an associate professor of medicine in infectious diseases at Duke University School of Medicine in Durham, NC. Drew also is a co-author of antimicrobial stewardship research, including a recently published paper that discusses recent antimicrobial stewardship guidelines.[1]

"You need to target the things that are well established and don't require a high amount of specific or specialized expertise or extra training," Drew says. "One program is IV oral switch programs."

Many hospitals, including small hospitals, have developed pharmacy-screening programs in which providers can easily see where patients meet criteria to be switched to oral medication, he notes.

"That to me is low-hanging fruit, because a staff pharmacist can do this if the criteria has been established," Drew adds. "It's pretty objective."

As hospital leaders increasingly hear about how antibiotic resistance is a health and safety threat, it is becoming easier for pharmacists to promote an antimicrobial stewardship program.

"Stewardship can save money and optimize outcomes and may help to survey — if not stabilize — resistance problems," Drew says. "Stewardship people look at trends in antibiotic resistance patterns and how we can change routine antibiotic use to improve outcomes or reduce resistance, which is why we're using old drugs differently and are consolidating dosing."

The antimicrobial stewardship guidelines have accelerated this discussion in many hospitals, he adds.

Another example of attainable changes would involve pre-approval and restriction programs,

Summary points

- When starting an antimicrobial stewardship program start with areas that cost little but yield big results.
- Provide feedback to physicians about their prescribing habits.
- As program advances, look beyond saving money

Drew says.

"If you've established appropriate criteria for selected drugs, then pharmacists are pretty integral in implementing these and validating the criteria that's in place for pre-approval use," he explains.

"Pharmacists are not applying specific expertise," Drew says. "They're saying, 'This is what other people say is appropriate.'"

Pre-approval programs are valid entities in settings where the hospital has limited resources and limited training, he adds.

Antimicrobial stewardship guidelines identify the pre-approval audit and feedback as an area that needs direct expertise from a pharmacist.

"There needs to be some level of feedback as to prescribing habits, and the feedback and education were identified as part of the guidelines, as well," Drew says.

"Often pharmacists are not necessarily dedicated to infectious diseases or to antimicrobial stewardship, but they can provide some feedback on prescribing habits and drug utilization habits," Drew notes. "They might say, 'Practitioner A uses 10 times more of a restricted drug than does Practitioner B.'"

All of these are ways to start an antimicrobial stewardship program in a low-resource setting.

If a hospital or health system has a few more resources then there are some additional programs that can be implemented.

For example, there might not have to be as focused attention on saving the hospital money in a stewardship program where the hospital has adequate financial and staffing resources to fund this enterprise.

"Traditionally, the programs have been giving corporate staff a scorecard of how they save money," Drew says. "The guidelines do a good job of saying, 'We need to think much beyond that because optimizing outcomes and the safe use of drugs are as admirable a goal as saving money.'"

Safety first

Safety must come first.

"There are ways that costs can be saved while maintaining or potentially improving outcomes, but that shouldn't be the sole driver," Drew says.

"We have programs here, and we dedicate them to different outcomes," he explains. "We have programs we believe are dedicated to cost savings."

Then there are projects that deal with resource utilization, such as the one that involved writing guidelines on monitoring fungal concentrations.

The hospital had some difficulty with antifungal drug levels, and so a program was started that targeted the utilization of laboratories, Drew says.

Another program looked at dosing algorithms and vancomycin levels. Its purpose was for safety, not cost savings, he adds.

"In more advanced programs the issue is to expand beyond saving a dollar in drug costs," Drew says.

"If the mindset of the hospital is to analyze costs in a silo, then they'll look solely at the drug budget," he says. "The idea is to get out of the silo mentality, and you need people who are trained and experienced with antimicrobial stewardship."

Reference

1. Drew RH, White R, MacDougall C, et al. Insights from the Society of Infectious Diseases Pharmacists on antimicrobial stewardship guidelines from the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America. *Pharmacotherapy* 2009;29:593-607. ■

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