AMERICAN HEALTH CONSULTANTS®

HOMECARE Quality Management™

INSIDE

JUNE 2000

VOL. 6, NO. 6 (pages 61-72)

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OSHA directive aims to reduce high numbers of needlestick injuries

Agencies must include safety devices in their exposure control plans

Another new occupational safety development has hit the home health industry: federal and state initiatives requiring all health care providers to switch to devices that reduce the risk of needlestick accidents.

The Occupational Safety and Health Administration issued a directive to its inspectors in November regarding the bloodborne pathogen exposure control plans that health care providers must create for their operations.

Special Report: Preventing Needlestick Injuries

The directive requires that the plans include the use of "engineering controls" such as sharps injury protection or needle-free devices to reduce employee exposure to bloodborne diseases such as human immunodeficiency virus (HIV), hepatitis B, and hepatitis C.

For agencies in a number of states, the push for safer needles began even earlier. In California, for example, a similar directive signed into law in 1998 set a July 1, 1999 deadline for making the changes. At least six other states have similar legislation pending.

High incidence of accidents

The regulators' goal is to reduce the estimated 600,000 to 800,000 needlestick injuries occurring among health care workers each year. It's hard to determine how many of those occur in home health, but consultant **Lori Douglass**, RN, MS, CFNP, COHN-S, owner of OccuHealth Consultants in Modesto, CA, says she believes the number is extremely small.

She says the home health industry once again has been caught up in regulations designed to solve problems in hospitals and other health care settings.

"As far as home health, it was a very unwelcome development," she says. "The risk is so minimal in home health. You want to cut the risk down as much as possible, but you can only take it down so far."

Mary St. Pierre, RN, BSN, director of regulatory affairs for the National Association for Home Care (NAHC), says agencies are required to keep up with the latest directives, and know what safety devices are available for the procedures they perform. "I know that agencies are desperately trying to get the best equipment in there because it is very costly when they have somebody who has a needlestick injury — both emotionally and financially costly."

St. Pierre says some advances that agencies may see as too expensive could end up saving money in the long run. "[Agencies] need to be certain that they weigh the cost-benefit analysis. It may save them tremendously, if they avoid the emotional trauma and the financial costs of having their staff have to go through the follow-up of having a needlestick, the reports and physician visits and testing."

Special risks in home health

The very nature of home health — bringing care to patient homes, transporting supplies from place to place in personal vehicles — leads to particular needle safety risks, says **Donna Haiduven**, RN, PhD, CIC, infection control supervisor for Santa Clara Valley Medical Center in San Jose, CA.

Haiduven conducted focus groups with home health nurses to study the barriers to needle safety in home care.

"There's no standardized work surface, so a nurse has to put her equipment down wherever she can find a place," she says. "Poor lighting makes it hard to see what you're doing."

Body mechanics can play a part if a patient is in a chair or other position that requires a nurse to bend at an uncomfortable angle. In addition, she says, the nurse never knows what other factors may hinder a procedure, including children and pets getting in the way.

Scott D. Alcott, RN, BSN, PhRN, works on a relief basis for Abington (PA) Memorial Hospital Home Care, and performs a lot of venipuncture and IV access procedures. He says that one of the most difficult issues he deals with is disposal of the sharps afterward, particularly if a patient doesn't have a sharps container in the home.

"You now have to be prepared to deal with sharps waste disposal, which for me means I carry a red box in my car," Alcott says. "So now I'm driving around with contaminated sharps — with biohazard waste — in my personal vehicle."

Needlesticks can occur when a sharps container falls open in the trunk, Haiduven says. If a container isn't available, and the nurse leaves a recapped needle in the supply bag, another person could end up being injured later.

When a home health worker is injured by a needlestick, the cost of treating it can vary dramatically based on various risk factors, including the status of the patient and the type of wound inflicted.

Douglass says that in California, proponents of the new needle safety legislation pointed to treatment costs of $8,000 per needlestick. But she contends that costs only apply to a small number of cases. "Most needlesticks, including the large majority of what you see in home health care, are going to be low or maybe moderate risk. Then, you're really looking at the cost of doing four blood tests over a six-month period — less than $500."

There may be added costs for giving a worker a hepatitis B shot if needed.

However, if the needlestick is deemed high-risk — from a clearly infected patient and involving a deep stick or large amount of blood — the nurse may have to embark on a 28-day drug regimen that is extremely expensive and can result in lost work time. In addition, some workers need counseling to deal with their fears about the injury.

And in the case of a hepatitis C exposure, where there is no vaccine and patients often progress to the point of needing a liver transplant, the costs are astronomical.

"You're looking at up to a million dollars for a liver transplant," Douglass says.

Alcott, who himself suffered a nonseroconverting needlestick five years ago, estimates the cost of his prophylactic medications, lab work, doctor's visits, and counseling at more than $3,500. And that didn't take into account emotional stress or lost work time. "You have to start putting that into the price," he says.

Safer needle alternatives are improving

As interest has increased in safer alternatives to the standard needle equipment, technology has begun to provide new devices.

Most involve some means of moving the needle to a position where the sharp end isn't sticking out of the device after a procedure is completed.

For example, Bio-Plexus Inc., of Vernon, CT, produces a blood collection needle that is "blunted" after use. A blunted needle sits inside another hollow-bore needle with a beveled edge. When the nurse or phlebotomist pushes a button, the blunted end slides outside the sharp edge, and the needle is removed.

"Sixty-one percent of needlestick injuries happen in the two seconds between the time the needle is removed from the patient and disposed of," says **Carol Coburn**, director of investor relations for Bio-Plexus. "What our product does is eliminate that two-second exposure time."

Another type of device causes a spring-loaded needle to retract into the syringe after it is completely depressed. Still others allow operators to slide or flip a plastic sheath over the exposed needle.

Bioject Inc. of Portland, OR, goes even further — its injector doesn't use a needle at all, instead using compressed CO_2 gas to fire medication directly through the skin.

Alcott, who in addition to his home health duties serves as northeast sales representative for Bioject, says his clients have seen a welcome side effect to the device: reduction in the need for sharps containers and red-bagged trash since the procedure rarely draws blood and the device has no sharp end.

New products aren't perfect

All of those products have their limitations and drawbacks. Some require two-handed use, or that nurses change how they perform a procedure. If a safety device isn't activated automatically, a nurse may forget to activate it.

The retractable devices may not be used for drugs given in incremental doses. Alcott says the Biojector shouldn't be used for drugs intended to last a long time, such as the contraceptive Depo-Provera. It also isn't calibrated to inject insulin, although the company makes a home-based insulin injector that a patient can use.

All of these options have one thing in common — they're significantly more expensive than the standard needle and syringe. Douglass says facilities such as hospitals can justify the expense by pointing to a noticeable decrease in needlesticks. But her home health clients, many of whom had very few needlesticks to begin with, see less return on that expenditure.

"They can't even equate it into reducing needlesticks, if they're only having one every five years," she says. "It's solely money out of their pockets."

Alcott points out that some of his clients have been able to go to their insurance companies and argue for lower premiums based on the lessened risk to employees.

Conversion process slow

Despite the regulatory move to safer needle devices, home health workers may be dealing with unprotected needles for years to come. One reason is that occupational safety guidelines don't apply to individual patients, such as diabetics who self-inject. Home health nurses will continue to instruct those patients in how to use the needles.

In addition, because of the natural lag time as agencies and DMEs regroup and retool, "the standard syringe and needle are out there for a while to come, I would think," says **Mike Brown**, RN, CRNI, clinical director for Phoebe Care Connection in Allentown, PA.

But Alcott says change is coming. "You're seeing more and more manufacturers developing safer systems. They know that the old 3- and 5-cents needle and syringe is a thing of the past. In most of the states that have passed legislation, the only way you're allowed to use a needle is if you cannot do the procedure any other way. That's pretty strict." ■

Know your needles, and take time to choose one

There are myriad products to study and try

In the wake of state and federal directives calling for increased use of needle safety devices, agencies are scrambling to find out what's available and to pick the right group of products to serve both nurses and patients.

While many efforts are still in the fledgling stages, agencies that are further along in the process agree on an important element — introducing nurses to the wide variety of products available so they can assess the usefulness of each and allow the agency to make an informed choice.

At Ramona VNA and

Special Report: Preventing Needlestick Injuries

Tips to help you reduce home care needlesticks

Even before looking at safer needle alternatives, there are steps agencies can take right away to lessen employees' exposure to needlesticks:

• **Provide sharps containers for nurses to carry in their cars.** At Ramona VNA and Hospice, a nurse must carry a separate container out for each patient, and bring it back from the visit, unless the patient will require multiple injections. Several nurses mentioned the danger of exposure to needles left in supply bags when a sharps container is not available.

• **Reinforce that nurses should avoid recapping needles.** Recapping creates two opportunities for a needlestick, explains **Donna Haiduven**, RN, PhD, CIC: First, when the nurse is putting the cap back on the needle, and again, if the cap falls off or is pierced by the needle.

• **Let nurses know about reports of needlesticks.** Explaining to nurses how the injuries occur reinforces safer practices. Ironically, Haiduven says, nurses who are most committed to safe practices are often those who've had past needlestick injuries.

• **Follow up on needlestick reports.** If your agency has had a number of needlesticks, it's time to review practices, says consultant **Lori Douglass**, RN, MS, CFNP, COHN-S.

"The [injury] that occurs every four or five years is probably uncontrollable — maybe someone jerked their arm or something," Douglass says. "But if they're having needlesticks every month or two, something is causing that to occur. There is no question they need to be looking at their procedures, at their new hire orientation, at their annual training, at their sharps disposal. They don't need legislation to do that." ■

Hospice in Hemet, CA, new state regulations that took effect in mid-1999 prompted a push toward safer devices, says **Lauren Mahieu**, RN, quality improvement manager. There had been interest in the subject before, but the higher cost of alternative devices had been an obstacle.

"We began looking at it in early 1999," Mahieu says. "It didn't really become a priority until the law was passed."

She says Ramona sent its infection control nurse to an inservice created to address the state Occupational Safety and Health Administration (OSHA) requirement. There, the nurse got a chance to try out a range of devices and get a feel for how they worked.

Similarly, Home Health Care Management in Wyomissing, PA, was responding to the federal requirements and proposed state legislation when it tapped **Mike Brown**, RN, CRNI, clinical director of affiliate Phoebe Care Connection, to look at alternatives to standard needles.

Test drive new devices

Previously, the company used a needleless system produced by Bioject Inc. to deliver mass flu immunizations.

Brown is now in the midst of putting together field trials of several devices in each of four major groups: injectables, capillary sampling products, blood draw devices, and venipuncture products.

A team of nurses will test one product at a time in each group until they've worked with all the products. Brown is developing evaluation forms the nurses can use to detail the advantages and drawbacks of each product. He hopes to trial each product for two to four weeks, completing the process by the end of the year.

Romayne Keener, RN, Home Health Care Management's community health educator, compares the tryout phase to test driving a car before buying it: "It would be stupid not to do it," she says.

Ramona VNA's tryout stage was handled differently. Mahieu says different devices were brought in during inservices so nurses could work with them and provide feedback.

She says getting the nurses to "buy-in" to a product is vital. "You have to make sure it's user-friendly for the nurses and that they like it. Because if they don't like the product, then they're not going to use it properly."

Donna Haiduven, RN, PhD, CIC, who conducted nurse focus groups to study needle safety in home health, says nurses' assessments of needle safety devices can be quite subjective, varying greatly even within one agency.

One nurse might see a safety device as a barrier, while others might like it, she says.

"It was really striking — I found much variation within agencies on the products available," Haiduven says.

Some of the factors that helped determine whether nurses liked a product: Did it require more than one hand to use properly? How often did the nurse use it? Did it require that she change her technique? Was she properly

Helpful needlestick info available on the Web

The following Web sites can link you to information on needlestick prevention, as well as links to other useful sites:

• **www.osha.gov** — The site for the Occupational Safety and Health Administration has a number of useful pages, including the Nov. 5, 1999 directive regarding the use of safer needle devices **(www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2_44D.html)** and educational materials **(www.osha-slc.gov/SLTC/needlestick/index.html)**.

• **www.cdc.gov/niosh/2000-108.html** — A November 1999 alert on needlestick prevention issued by the National Institute for Occupational Safety and Health of the Centers for Disease Control and Prevention.

• **www.tdict.org** — The site for the Training for Development of Innovative Control Technologies Project, based at San Francisco General Hospital. Features include a performance standard for safety devices, and a downloadable evaluation form.

• **www.med.virginia.edu/medcntr/centers/epinet** — The site for the University of Virginia's International Healthcare Worker Safety Center. Features a downloadable exposure prevention checklist, as well as an extensive list of safety devices, with manufacturers' contact information. ■

educated on its use?

"In some of the focus groups, nurses would show products and people in the same agency hadn't seen it, didn't know it was available," Haiduven says. "A lot of education is needed and a lot of support."

That education and support should continue well after the devices have been introduced.

Feedback proves valuable

Mahieu says that after Ramona VNA and Hospice introduced its first safer phlebotomy devices, feedback showed that nurses weren't as well-educated in their use as first thought.

"We thought they understood how they worked, but they really didn't," she said. "We needed to reinservice."

SOURCES

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Part of the problem was that the safety feature — a sheath that was pulled over the needle — had to be manually activated, and nurses would sometimes forget to do that.

A recent safety alert by the National Institute for Occupational Safety and Health suggests that so-called "passive" needle safety devices, in which the safety feature is activated automatically, are preferable to those that must be activated manually.

Other suggestions from Haiduven, based on recommendations from her nurse focus groups:

• **Train nurses as close as possible to the time when they're going to be using the devices in the field.** Haiduven says nurses in her focus groups complained about training held so far in advance of actual use of the devices that nurses had forgotten what they'd learned.

• **Limit the number of different devices used for the same procedure, to avoid confusion.**

• **Use a "buddy" system, in which a nurse learning how to use a device is accompanied in**

the field with someone who is experienced with it.

• **Hold feedback sessions where nurses can pool their experience with the new products and work through problems.**

Coordinate efforts with providers

Brown says it's important for agencies to understand that they're not working in a vacuum.

"We're checking with major providers to see if they're going to be using any of these safety devices, if they'll be providing them to patients when they purchase their supplies and their medication," he says. "We really have to be familiar with what products the other companies are using."

He also suggests letting the companies know about an agency's findings, to help convince them to use devices that have proved successful. "As we get through this trial period, we'll be in contact with DMEs [durable medical equipment] again to say this is what we feel is a safe product and an easy product to use for the clients."

And the process shouldn't end with the selection, says **Mary St. Pierre**, RN, BSN, director of regulatory affairs for the Washington, DC-based National Association for Home Care. She notes that OSHA requires agencies to continue to monitor improvements in needle safety as technology produces better alternatives. "They really need to have a person designated, to keep on top of the latest out there." ■

Agency creates tool to reduce medication errors

Now information is more complete, accurate

Health care providers have increased their attention to medication issues in the last year, particularly since the federal government said that medication errors are a nationwide problem causing thousands of deaths.

One way home care agencies can prevent medication problems is by improving their documentation of patients' medication. For instance, Decatur (AL) General Home Health Services launched an extensive quality improvement (QI) project last spring in order to clean up some documentation problems related to the agency's medication patient profile.

A chart review showed that nurses accurately and completely documented patients' medications 84% to 86% of the time, and that was not good enough, says **Jimmie Galbreath**, RN, MSN, director of the rural, hospital-based agency that covers 10 counties in northern Alabama.

Making it better

Since the QI process ended, the agency's compliance on medication documentation has risen to the 98% to 100% range, Galbreath says.

The QI process works step by step:

1. Form a quality management (QM) team to make changes. After a 25% sampling of medication profile charts revealed a problem with incomplete and inaccurate information, Decatur General formed a multidisciplinary quality management team to address the issue, Galbreath says.

The QM team, consisting of a physical therapist, an occupational therapist, nurses, and managers, met biweekly for a month. They brainstormed and came up with ideas for changing the agency's medication profile tool, he explains.

The chart audits had identified the major problem areas, so they targeted these items:

• **Staff did not always indicate specifically when a patient began or discontinued a particular medication.**

• **Staff didn't identify where the patient obtained the drugs, such as in a hospital or from a pharmacy.**

• **Staff didn't identify the medication route of administration, such as through an IV, orally, or intramuscularly.**

"These were things that the form did not specifically ask for," Galbreath says. "The performance improvement person saw that the forms consistently were missing this information, so she brought it to our attention."

The team also suggested some changes of their own. For example, team members thought the form wasn't as user-friendly as it could be, and they wanted to change the order of some items and add specifics to others.

"For instance, they wanted a column that said 'start date of the drug,' and wanted a separate column for the discontinued date," Galbreath says.

Team members also suggested adding a column to identify whether a drug was a new drug, a changed dosage, or a different administration route. "They wanted the lines on the form to be wider so they had more space to be able to enter

the information without it being so compact," Galbreath adds.

The team also decided that changes would be needed in how the tool was filed. The previous process was to keep an original medication file in the patient's active chart. Then staff would copy the active file and place that in the travel packet so they would have it available when they did a home visit. "There would be identifiable information specific for that patient, such as a plan of care and medication profile and any modification orders to include the address and travel information to the patient's residence on a clipboard," Galbreath explains. "We have one prepared for every single client, so the visiting staff only needs to pull out the clipboard, and they have all the current information."

The problem was that when staff revised or updated the medication profile contained in their travel packet, they often forgot to copy those changes to the original medical profile in the patient's permanent chart.

So the team corrected this problem by putting the original medication profile in the travel packet, and a copy in the active patient's chart. When a patient is recertified or discharged, the current medication profile is taken out of the travel packet and put into the patient file, and the medication profile copy is tossed out.

This change also has made it easier for the agency to give physicians the most accurate and up-to-date medication information. When a physician calls in for an update, the nurse handling the case is paged, and that nurse reads information to the physician from the medication profile in the travel packet. **(See medication profile, inserted in this issue.)**

"We have not had a problem with nurses losing the form," Galbreath adds.

Use staff's ideas

2. Present changes to staff and modify according to their ideas. The next step: make copies of the revised form and show these to the staff for their comments and review.

"We had the quality management team inservice the staff on the use of the revised form, and also the QM team gave the visiting staff the rationale for why the changes were made," Galbreath says. "They told them the problems that were identified and the reason they felt that if they changed the form it would be more user-friendly."

Employees then volunteered some information about problems that the team had not considered, so they essentially became members of the quality management team, Galbreath says.

"We took a small team that instantly became a large QM team because when the small team rolled it out to the staff, everyone was interested and everyone was concerned and wanted information on how they could improve the agency's medication profile compliance rating," he explains.

They held a large brainstorming session and came up with a list of modifications to the revised form.

One of those changes was to put a place on the form for the rehab staff to sign the form after listing patient medications. The previous form had only a place for the nursing staff, who reviewed the medications, to sign the form. Since therapists were not permitted to review the form — they could only list medication information on it — there was no place for them to sign it.

"The large team said we needed a place for the signature of people who listed medications and a space for the person who reviewed the medications," Galbreath says.

This change made a lot of sense and meant that everyone who added to the form or changed or reviewed the form was accountable.

"If you identify more than one drug that's contraindicated and there has not been an intervention to solve this problem, then you know who reviewed the form and who to talk with about the problem," Galbreath says.

Likewise, if there's a mistake on a medication's dosage or administration on the form, then a manager will know to speak with the person who listed medications.

The larger QM team also decided to combine some columns to simplify the form. For example, the revised form had a column to check if the drug listed was new and a separate column to check if the drug listed was for a changed dosage.

"The large team convinced the small team that they could combine those two columns, and they would still know whether it was new or changed because rather than putting a checkmark in the space, they could write in the letters 'N' or 'C,'" Galbreath explains.

The original QM team made changes to the form according to the suggestions at the staff meeting, and then they copied it to be used during a trial period.

3. Use new tool during a trial period and revise as needed.

At Decatur General, the new medication profile

SOURCE

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was used only on new patients. This made it simpler for the staff, and gave a large enough sample to use during a trial period.

During the trial period, the entire staff continued to discuss the form at weekly staff meetings. The discussion was open and gave employees time to bring up any problems they had identified, trends, or issues relating to using the new form.

Then, rather than making changes after each weekly meeting, the QM team kept track of the comments and would repeat them at following meetings to see if the problems, trends, or issues were consistent over time, or if they were simply a part of the adjustment period that accompanies any change in procedure.

After several months of the trial period, some minor changes were made, and the QM team showed the new and professional-looking form to the entire staff for review and correction of any errors. Once approved by the staff, the form was copied and tried for a month.

"We continued to do QI audit checks, and the statistics were improving, and by the end of the month of the second revision everything seemed to be okay," Galbreath says.

The agency's medication documentation compliance rose to 98% to 100%, and the agency created a presentation about its successful QI project to show surveyors of the Joint Commission on Accreditation of Healthcare Organizations of Oakbrook Terrace, IL, at a survey in January.

"The surveyors loved it, and we were accredited with no Type 1 citations," Galbreath adds. ■

Control PPS costs with early discharge plans

Second in a two-part series

In Part 1 of this series on discharge planning in the April issue of *Healthcare Quality Management*, **Lucy Lee**, RN, BA, MHA, CHCE, owner of Lee Health Care in Hamilton, TX, explained how her agency, as part of a prospective payment system (PPS) demonstration project, has begun preparing for the imminent change. Her nursing staff have changed their focus to include discharge planning at the very beginning of care. Home health nurses talk to patients about independence, teach them about their illnesses, assess their abilities to care for themselves, and prepare family caregivers with specific goals and discharge dates in mind.

Teaching self-care

Lee says some problems that can interfere with the teaching process are hard to discern on a first visit. Those problems can include learning difficulties or plain stubbornness.

"We've got crotchety old German farmers who've been the boss all their lives, and by gum, no young chick is going to come into their house and tell them how to do things," Lee says. "In those cases, we know it's going to be a harder process and we have to adjust what we're going to teach."

The agency usually has more than one person seeing the patient, including different nurses, therapists, and aides. All can provide valuable perspectives in determining what might be an obstacle to care.

Lee Health Care also has a director of patient care who reviews every case, looking at factors that may have escaped front-line providers.

"She can look at it a little more objectively and can say, 'I don't think this makes sense,' or 'It looks like you're going to have a problem with this situation.' It's just another set of eyes, another brain working on the process, and that has helped us a whole lot," Lee adds.

Social workers help find alternatives

At the VNA of Texas in Dallas, review is conducted as part of regular case conferences in which both new and continuing patients are discussed, says **Emily Tripp**, RN, MED, CHCE, group vice president for home care and hospice for the VNA.

"The new patient's care plan is reviewed at the case conference and it includes the discussion of what the discharge plans are for this patient, the progress the patient is making toward meeting those plans and any kind of impediments to it,"

Tripp says. "And then the team will [decide how] they need to do to help the patient with those problems."

In cases where patients are found to need more than self-care or family assistance, the VNA involves a social worker, who can help with referrals to other community resources.

"We try to find someone else who can assume some of that care — family members or neighbors or sometimes church members," she says. "Sometimes there are more formalized groups we can access in the city."

Social workers can help plan discharge

But in the most difficult cases, where a patient simply cannot remain at home, social workers can help plan the discharge to institutional care.

If a patient refuses to accept the alternatives, and the agency has done all it can under Medicare, then the patient is informed via an advanced beneficiary notice that the care he or she requires doesn't qualify for Medicare coverage. Patients are given the option of paying for the care themselves or making other arrangements.

Tripp says that at the VNA, those situations are handled in a conference-type setting that includes the agency, physician, patient, and family members.

"We make sure we've covered all the options as far as what we can do for the patient," she says. "We explain the process, and what the situation is, so we're not in a position of abandonment. Someone may feel like we've abandoned them, but that's not the same as giving them options for where they can get the care. If they choose to refuse to access those options, then that's their choice, but we can't just always jump in and be that option forever."

Both Lee and Tripp say it's vital at the point of admission to determine whether home care is the right option for a patient.

Tripp says the criteria for admission include the requirement that care can be administered safely at home. "We've had referrals for patients who really needed an institutional kind of setting, continuous care around the clock."

In those cases, she says the agency goes back to the referral source to determine to a more appropriate care setting.

Lee says the years of practice her nurses have received through the PPS demonstration have helped them improve their skills at assessing and teaching patients."Before, if [the patients] didn't know how to read a thermometer, we could go several times and teach them," she says. "Well, we've learned how to do that better now, because we are more concerned with how much resource utilization we have."

They also are better at seeing the big picture of care — how caregivers and other factors affect the patient's progress. For example, instead of training new caregivers one at a time, a nurse would determine at the beginning anyone who might need to know caregiving skills and teaches them all at once.

Overall, Lee says, the increased emphasis on more efficient care has put more emphasis on patient independence. "We've all spoken those words for the 10 or 15 or 20 years we've been in home health; but in the last two years, we've had to change our thinking and really mean those words, that we want to move toward patient independence." ■

SOURCES

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It may be time to return to specialty rehab nursing

PPS and focus on quality bring program full circle

The home care industry has changed so drastically in the past few years that it's little wonder quality managers and administrators cannot keep up with the latest service trend. After all, the last they heard restorative nursing was out and the generalist nurse was in.

That's likely to change under the prospective payment system (PPS) for fiscal reasons, but even more for the purpose of improving the quality of home care, says **Janey A. Roach**, RN, MSN, ONC, an advanced practice nurse for orthopaedics / rehabilitation at the University of Pittsburgh Medical Center Home Health (UPMC).

Home care agencies under the proposed PPS rule have a greater incentive to provide care for orthopaedic patients because Medicare recognizes that those patients are more costly, Roach says.

"We won't know until the final regulations come out, but potentially we could be looking at $500 [or] more," she adds. "PPS will pay you more for three diagnoses of increasing severity in patient care, and the first is neurological, the second is diabetes, and the third is orthopaedics."

Soon after joining the UPMC home health agency two years ago, Roach hand-counted diagnoses of newly admitted patients at the agency for three months, and she found that 30% to 35% were orthopaedic cases. These included patients with osteoarthritis and degenerative joint disease, as well as surgery cases.

Despite this volume, the agency did not have a special training program.

"We still had a group of nurses who didn't understand orthopaedics," Roach says. So she helped the agency form a specialty orthopaedic/rehab team in February 1999.

It's too soon to see the final results, but anecdotal evidence suggests that the specialty nursing team has already improved quality and saved overall medical costs, Roach says.

Illustrative examples

Roach provides these examples of how specialty orthopaedic nursing can be cost-effective and improve quality:

• **Example 1:** A patient in her early 60s receives a total knee replacement and stays in the hospital for five days. The patient has no complications. When the patient is referred to home care, there are four skilled nursing visits at a cost of about $135 per visit for a total of about $540. The cost is the same whether or not a specialty rehab nurse is sent to the patient's home because the agency does not pay the specialty nurses a higher salary.

• **Example 2:** A similar patient has the same procedure and is referred to home care after a five day hospital stay. In this case, a regular medical-surgical home care nurse is sent to the patient's home for four visits. On the second visit, the nurse notices a small amount of drainage on the patient's knee dressing. But the nurse doesn't call the physician because this type of drainage is very common with other wounds, such as surgical sites on the stomach. By the fourth visit, the drainage is still there, but it has not increased, so the nurse does not call the physician. Then the patient goes to see the orthopaedic surgeon for a follow-up visit, and the physician is angry to see the drainage.

In this case, the physician called the home care agency, complaining that he wasn't notified about the problem. Because the prosthesis could potentially become infected with continued drainage, the physician had to wash it out and treat it with antibiotics. Then the patient needed an additional eight skilled nursing visits. The 12 visits cost about $1,614. The intravenous antibiotics, which were administered for 14 days, cost $2,100, and those costs do not include the additional surgical fee.

• **Example 3:** A similar knee replacement patient again is referred to home care after a five-day hospital stay. On the third visit, a specialty orthopaedic nurse notices drainage. This nurse knows from her training that any type of drainage at an orthopaedic surgery site is a cause for alarm, so she calls the physician. The doctor prescribes a seven-day, oral antibiotic and approves three additional nursing visits. The cost is $940 for seven visits plus about $20 for the drug, totaling $960.

Those examples demonstrate the importance of having a specialty orthopaedic team, for the patient's safety and overall cost savings, Roach says.

Plus, a specialty orthopaedic team will reassure orthopaedic surgeons that a home care agency is qualified and capable of handling their referrals. Even one mistake could result in an agency losing a huge referral base, Roach says.

Here are some key aspects to the UPMC home health orthopaedic/rehab nursing program:

1. Recruit nurse volunteers.

The agency would not pay orthopaedic/rehab nurses a higher salary, and many nurses do not

care to handle orthopaedic patients, so Roach sought volunteers, who were interested in learning more about orthopaedics and who wanted to increase their own marketability as a nurse who could handle all of the typical home care duties, plus a bit extra.

"My goal was to have these nurses see all of the orthopaedic patients, but certainly the most complex cases," Roach says.

Orthopaedics are explained during training

2. Provide training and orientation.

Roach held a four-hour orthopaedic orientation program, spending 2.5 hours lecturing about orthopaedic surgery and care.

For instance, she explained to nurses that just about everything an orthopaedic surgeon does involves metals in the body. If a patient has a fractured tibia, the surgeon puts in a plate and screw. Because of these foreign objects in patients' bodies, there is a high risk and rate of infection, and the effects could be very serious. Any infection could quickly turn into a bone infection and sepsis; left untreated, this could eventually require an amputation.

"There are certain things you need to do as far as making sure wounds don't become infected," Roach explains. "For instance, when a patient returns home with a total hip replacement, the patient is not allowed to shower or place any soap or water on the metal clip staples."

Nurses must make sure nothing is done to increase the chance of superficial infection that could spread to the patient's joint, Roach says.

Take care to prevent long-term problems

If the joint is infected, the physician will have to take out the joint and wash it and put the patient on antibiotics for six weeks, sometimes even sending the patient to a nursing home.

"We've had chronic cases where they ended up without a joint or losing a leg," she says. "If you don't treat these things meticulously, you could end up with long-term problems."

The last part of the orientation program involved lectures from physical therapists, an occupational therapist, and a speech therapist, followed by a question-and-answer period.

The training also included clinical observation of rehab care.

3. Assign orthopaedic cases to rehab nurses.

Rehab nurses at UPMC have the same productivity as other home care nurses because they handle regular cases, in addition to the orthopaedic and rehab referrals. But they are specifically assigned to a patient population that has immobility needs or who are deconditioned due to these diagnoses: head injury, spinal cord injury, cerebral vascular accident, multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis, chronic obstructive pulmonary disease, arthritis, amputee, upper/lower extremity fracture, post-hip repair/replacement, and post-knee repair/replacement.

The orthopaedic/rehab nurses complete all assessments of patients who are referred only for physical therapy and occupational therapy. They identify any skilled nursing needs to ensure complete care, and then review and reinforce the patient's prescribed physical and

Homecare Quality Management™ (ISSN 1087-0407) is published monthly by American Health Consultants®, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Homecare Quality Management™**, P.O. Box 740059, Atlanta, GA 30374.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291. Hours of operation: 8:30 a.m.-6 p.m. Monday-Thursday, 8:30 a.m.-4:30 p.m. Friday EST. E-mail: customerservice@ahcpub.com. World Wide Web: www.ahcpub.com.

Subscription rates: U.S.A., one year (12 issues), $299. Approximately 18 nursing hours annually, $349. Outside U.S.A., add $30 per year, total prepaid in U.S. funds. One to nine additional copies. $179 per year; 10 or more additional copies, $120 per year. Call for more details. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. **Back issues**, when available, are $50 each. (GST registration number R128870672.)

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occupational therapies and treatments.

4. Provide follow-up to training.

Roach conducts annual competency visits with the rehab nurses. She also reads their case documentation and observes their technique, providing additional training and education when necessary. Often, she personally visits a particularly complicated orthopaedic case. And finally, she holds monthly meetings with the rehab team.

The hour-long meetings include food, and they give the team a boost both in morale and education. "At the last meeting, we talked about PPS and how Medicare recognizes that orthopaedics in rehab is an important thing," Roach says.

Attention to detail pays off

All of the attention to training detail will pay off with physician referrals and higher quality of patient care, Roach says.

"Home care nursing has come full circle," she explains. "We had specialty training and then got rid of it because we thought it was too expensive." But now, for home care agencies to compete on the basis of quality, they'll need to go back to specialty teams, she says. ■

CE objectives:

After carefully reading this issue of *Homecare Quality Management*, CE participants will be able to:

1. Interpret new regulatory changes in control of bloodborne pathogen exposure through needlesticks.
2. Develop a plan to incorporate safer needle devices into an agency's operations.
3. Assess the quality of an agency's medication assessment tool. ■