If you’ve tried to fill a position for an infusion pharmacist lately, you know that finding the right person with an appropriate knowledge of the alternate-site infusion field and a solid skill set that includes everything from sterile compounding to monitoring patients on complex therapies in the outpatient environment is a tall order to fill. Home and alternate-site infusion pharmacy is a unique practice setting that requires drug knowledge, clinical patient care, and critical thinking.

That uniqueness has proven to be a primary factor in engaging professionals of a certain stripe. A number of pharmacists who find home infusion therapy become “converts,” dedicated to the field. But a general lack of awareness about the practice setting and competition from other, more traditional settings where pharmacists are also in high demand have made it increasingly difficult for infusion providers to recruit and retain qualified young pharmacists.

NHIA knows that a critical staffing shortage is one of the most significant challenges facing provider members. Not only does it require resources to find a qualified pharmacist and bring him or her up to speed, but staffing challenges can also threaten the delivery of the same high-quality care that has been the trademark of home infusion for decades. If unaddressed, the situation could impact the industry’s future, becoming more troublesome as the practice setting grows to accommodate an expanding health care system that is sure to emphasize care in the home and alternate sites.

“Looking to the future, we must actualize a destination where staffing shortages are more proactively addressed, and reduced,” asserted NHIA Board Chair Lynn Giglione, R.N., in her address at the 2009 NHIA Annual Conference & Exposition in Baltimore. “NHIA is committed to supporting your current and future recruiting efforts by establishing more collaborative education-based relationships with both pharmacy and nursing schools to expand the knowledge and interest in the home infusion field among the students being trained.” While the association is currently in the formative stages of reaching out to schools of pharmacy, part of that process involves looking at the current system,
contributors to the situation, and the many positive relationships that already exist between infusion providers and the academic world as a foundation for further development.

**Career Opportunities**

“There’s a shortage of pharmacists and nurses with home infusion experience,” confirms Pammi Farren, R.Ph., Ph.D., Branch Infusion Manager for Coram Specialty Infusion Services—an Apria Healthcare Company. “During the interview process, a provider can spend a significant amount of time explaining home infusion practice to a candidate. Without prior infusion experience, and the training process may take a year or more.” At a pharmacist’s salary, that’s expensive, Farren points out.

And, once hired there’s no guarantee a pharmacist will stay in home infusion. “Our clinical people are in high demand,” she continues. “It’s difficult to keep them because of other opportunities.” Those opportunities often include bigger salaries and signing bonuses from retail chains and community pharmacies.

“Most pharmacy students in general graduate not even realizing that home infusion is a career choice,” observes Mary Monk-Tutor, Ph.D., M.S., R.Ph., FASHP, Professor of Pharmacy Administration and Director of Assessment for the McWhorter School of Pharmacy (MSOP) at Samford University in Birmingham, Alabama. Even though students at MSOP are required to take a class in preparing IVs from a teacher with a home infusion background, about 75 percent of them go straight into community practice. “Many of them are under the impression that is the only way to have patient contact,” she explains.

Monk-Tutor, who practiced home infusion before joining academia, notes that for the students she teaches, patient contact factors heavily into their career choice. “Most of our students want to connect with the patient and the health care team, helping in some way. They also want to use all their skills and see how the physical properties of the drug work with the patient.” It’s frustrating, she says because, “they are describing home infusion, but they don’t even know we’re on the list of possible career options.”

That lack of awareness contributes to a “chicken-and-egg” situation where schools of pharmacy devote little coverage to home infusion, students don’t learn about home infusion, and enter other fields, thus, reinforcing the idea that schools of pharmacy are preparing students for the careers that exist after graduation. Schools of pharmacy don’t consider emerging trends—such as the growing number of infusible drugs in the pipeline—as well as they should when helping students plan for the future, says Monk-Tutor. That’s reflected in their curricula.

They are also bound by accreditation standards. “They design their curricula to meet accreditation standards as well as to meet competency requirements for licensing exams,” she explains. A few of the accreditation standards set forth by the American Association of Colleges of Pharmacy (AACP) and the licensure standards set forth by the National Association of Boards of Pharmacy (NABP) refer to clean room activities and sterile compounding, but not directly to infusion, says Monk-Tutor. “As a result, not many cover home infusion and if they do it’s as an elective course or rotation.” There are a few residency programs available for pharmacists seeking intense exposure to home infusion, but with no professional requirement to do so—and the pressure of student loans that can total more than $100,000—many recent graduates elect to jump right into the workforce.

**The Accidental Career Path**

It’s important to let students know that home infusion is an option, but it’s also critical that schools of pharmacy offer the skills, knowledge, and confidence they need to perform on the job (see box, p. 40). New graduates are seldom—if ever—prepared to walk onto the job.

“I came out of pharmacy school prepared for hospital or retail and nothing else,” remembers Eureva Walker, Pharm.D., Clinical Pharmacist and
Home Infusion in Academia

Home infusion is represented in academia, but only to a very limited degree. In the mid-1980s, a majority (73%) of schools of pharmacy that were surveyed offered a stand-alone class on aseptic technique, according to Mary Monk-Tutor, Ph.D., M.S., R.Ph., FASHP, Director of Academic Programs and Associate Professor of Pharmacy Administration for the McWhorter School of Pharmacy at Samford University in Birmingham, Alabama. However, it was usually offered as an elective, and often with no lab component.

By 1991, the numbers had improved. Nearly all the schools surveyed (99%) had infusion instruction in varied degrees as an elective. But basic lab skills were lacking, she says. Only half (50%) covered aseptic technique, and even fewer taught patient monitoring.

By 2007 all schools offered something on sterile compounding, reports Monk-Tutor. But a fair percentage of schools still didn’t require students to compound sterile preparations (9%), or had them compound in groups (8%). “That means approximately 20 percent of students have no first-hand compounding experience to speak of,” notes Monk-Tutor.

There’s a debate going on about technical skills versus pharmacy practice, she adds, with some viewing sterile compounding as something pharmacy technicians can carry out and pharmacists don’t need to be concerned with. “The truth is there’s always going to be that day when someone calls in sick, or a late order comes in and you have to do the mixing,” asserts Monk-Tutor. “Also, if you’re the supervisor and the one whose pharmacy license is on the line, you have to know it to supervise it.”

Reaching Students

Pharmacy rotations are a great way for students to learn about different practice settings. Many alternate-site providers do serve as preceptors and offer their facilities as sites for rotations, but there’s always room for more. Since home infusion rotations are usually elective—rotations in certain practice settings like hospitals are required—their popularity among students depends on word of mouth. Students who have had positive experiences tell their friends. Likewise, students who have had some coursework—or even a lecture—on infusion are more likely to take the plunge. Clearly, the more that our field collectively reaches out to students to build these awareness bridges, the greater our chances will be to stem the tide of pharmacist staffing shortages—both today and down the road.

“Over the course of a five-week rotation, students see that home infusion is not like the retail setting,” asserts Barbara Exum, Pharm.D., Vice President of Operations for HomeChoice
Partners, Inc., which has been hosting up to five students at a time in different locations since 1998. “They talk with patients weekly for full therapeutic evaluations, work with dieticians monitoring TPN and enteral patients, do care planning, patient assessments, and so on.”

“Overall students spend little individualized, hands-on time in the lab learning and demonstrating competency in sterile technique, compounding, and understanding the principles of intravenous medication stability,” Exum continues. “The learning opportunity we provide compliments the other facets of their pharmacy school education and provides another level of growth for pharmacy students. It’s great to see their enthusiasm as they progress during the rotation toward providing quality pharmaceutical care to home infusion patients.” Exum, an adjunct assistant professor at Virginia Commonwealth University School of Pharmacy oversees the pharmacy student experiential training for HomeChoice Partners, which has relationships with various pharmacy schools throughout Virginia, North Carolina, South Carolina, and Georgia.

Hands-on experience is critical, she continues, because at this point in their education, the didactic training is over and students are embarking on the experiential portion, usually in their fourth year. HomeChoice Partners allows students to go into homes with nurses so they can see patients on the therapies and learn about vascular access and the devices necessary to deliver IV medications. Students also learn about compounding, checking calculations, packing orders and supplies, patient monitoring, care planning, medication profiles, and more.

“Our goal is that when they leave, they could function as a home infusion pharmacist with their own patient loads that they follow,” Exum says. “I can recommend them to other providers if we have no openings, but if we do, they are totally prepared to walk on the job—it helps us greatly with recruiting.”

“These programs are a good way to expose students to mixing and pharmacy operations, and then integrate that with the clinical side.” observes Mike Haley, R.Ph., Pharmacy Operations Manager for Chartwell Pennsylvania. Haley and Director of Pharmacy David Benedict, Pharm.D., BCPS, oversee a pharmacy externship program and host students on rotations from four area schools of pharmacy. They both lecture at local universities, as well.

However, as Exum suggests, the programs also help alternate-site providers tremendously when it comes to finding future clinicians by allowing a provider to see a potential hire in action. “We’re looking for problem solvers and critical thinkers,” says Bennedict. “Home infusion is the wild west of pharmacy—anything can happen. Physicians will trust you with their patients, so our pharmacists need to have that ability.”

“Seeing students in these programs is like getting a four to five week ‘interview’ with them,” adds Haley. “You get to see how they work and what they know.”

In addition, students who convert to hires require considerably less training. “It used to take a year for us to train a new pharmacist,” he recalls. “With someone who has done rotation here, it’s more like three to six months.”

There are other benefits to bringing former students on as staff, say Haley and Bennedict. Retention improves when you have more prepared and engaged employees, who are not
surprised by their job descriptions or the corporate culture (see Advancing the Bottom Line and Service Quality via a Culture of Employee Retention, p.22 for more.) “In 2007 our turnover for pharmacists was 15 percent,” offers Haley. “This year it was 3.2 percent.” Low turnover—along with some of the labor contributions from students on rotation—have resulted in reduced overtime for pharmacists (56%) and pharmacy technicians (50%), adds Benedict.

Furthermore, clinical outcomes have also improved for Chartwell Pennsylvania—thanks to the added staffing by students, the organization was able to put a new patient follow-up call policy into place, where all patient compliance calls are made within 24 hours of order delivery. “Prior to the program, patient compliance was between 40 and 50 percent,” recalls Haley. “It’s now at 89 percent. Of course the goal is 100 percent, but we’ve seen great improvements.” See Exhibit 1 for a list of the many benefits associated with hosting residency programs.

Reaching out to Graduates

While it’s less likely that pharmacists will undertake experiential education in the form of a year-long residency after graduation, a handful of these programs do exist in home infusion. For example, Critical Care Systems (CCS) started pharmacy residency programs in 2008 in its Boston and Philadelphia locations. This year the organization has five residents, with new programs in Chicago, Houston, and Phoenix.

These programs don’t happen by accident. They require a great deal of planning and commitment—especially since CCS is pursing Post Graduate Year One (PGY1) residency accreditation by the American Society of Health-System Pharmacists (ASHP), according to Caryn Dellamorte Bing, R.Ph., M.S., FASHP, Clinical Services/Residency Program Manager for CCS. “We believe the accreditation process strengthens the program,” she explains. “There’s a whole set of residency learning system goals and objectives to meet, plus significant additional learning experiences beyond the typical pharmacist’s orientation to home infusion.”

“We offer the program because it covers the amount of knowledge we expect from a home infusion pharmacist,” Bing continues. “If we’re going to spend time training new practitioner pharmacists, why not use this program to do it?”

The program also brings residents much further along with training and mentoring than they would get as a new employee, according to Bing. “It’s more structured, focused on getting someone new to the practice up and functioning. By the end of the year-long program, each resident should have the confidence to be an independent, critical thinker based on experience that they might not otherwise have.”
CCS residents receive training and clinical practice experience in home parenteral therapies; participate in all aspects of specialty infusion pharmacy services (clinical, operational, and managerial); participate in company-wide clinical universities; and complete learning experiences with branch, national and regional preceptors for nutrition support, reimbursement, risk management, performance improvement, product review, and drug information.

They also work with Corporate Clinical Services providing drug information support remotely to all CCS branches and they each conduct and present an original research project. After orientation and validation of pharmacist competencies, residents can also take pharmacist-on-call and participate in patient care and operational processes.

Bing adds, “Administering our residency centrally allows the branch pharmacists to focus on the precepting and hands-on training rather than administrative details.” CCS National Director of Pharmacy, Don Filibeck, Pharm.D., M.B.A., is the Residency Program Director for the five CCS residency programs.

After jumping into home infusion pharmacy “feet first,” Eureva Walker (mentioned earlier) decided to take a residency at Option Care, Inc. in Buffalo Grove, Illinois. The program was new and unaccredited at the time. It has since attained accreditation and is a viable program under Walgreens-OptionCare, but currently no one is placed in the residency.

“It was a great experience,” she recalls. “I was given great opportunities.” Working at the corporate headquarters, Walker was able to participate in major projects like traveling to survey branch locations for compliance with USP <797>, see specialty pharmacy pipeline drugs in action, and research protocols for off-label uses of certain drugs.

“I’ve never been in a pharmacy position where I got a lot of training—it was always more like an orientation,” she explains. “I did a residency so I could take my practice to the next level.” Because she had a few years of work experience, Walker says she could see where other pharmacists can become weak or lose touch—areas such as nutrition and pediatrics—and she wanted to focus on them. “I was able to do that in my residency, and I’m currently working toward the development of a general pharmacy practice.”

“I liked home infusion because it is very clinical,” says Walker. “The pharmacists are very well respected by physicians for the decisions they make and they have a lot of latitude and personal responsibility in managing patients.”

Although she intended to remain in home infusion, she was not able to find a position in the Chicago area where she lives. Regardless, it was well worth it, she says. “It was the best decision I ever made. Otherwise, I’d be going from job to job with no satisfaction and no chance of really doing more with the patients which is what I was looking for.” Walker is sure to talk about home infusion as a practice setting to the residents she supervises as the Residency Coordinator at the hospital.

Reaching out to Schools of Pharmacy

While the programs mentioned above are a good start, they are just the tip of the iceberg in terms of reversing current staffing shortages or helping the field prepare for a future in which more pharmacists will be needed. Addressing the root of the problem means proactively reaching out to the academic world and helping it to understand that home infusion is a viable career option and an area of study that can—and should—be greatly developed.

“The schools are trying to keep up with the practice of pharmacy where maybe they should be a step ahead,” asserts HomeChoice Partners’ Exum. “With all the changes in health care and the pipeline drugs, this is a good time to introduce home infusion. Our practice is a great example of how everything that’s taught in the didactic portion of pharmacy school is pulled together.”

“If students are prepared for home infusion, they can easily step into many other practice settings, but the converse is not true,” points out Coram’s Farren. “The fact that home infusion involves application of
the basic principles is a great selling point for us with schools of pharmacy.”

In addition to including home infusion content in coursework and greatly improving access to sterile compounding labs and other skill-building venues, changes could be made at the curriculum planning level. These bigger changes would need to reflect the accreditation and licensing requirements that drive curricula development. And, that message is more likely to be heard if it comes from the profession as a whole.

While NHIA begins to strategically work on these broader issues, there are some steps that providers and professionals can take to get the ball rolling (see the box, this page for more on how to get involved in NHIA’s efforts). First, you can volunteer as a lecturer on a specialty topic, such as pain management or nutrition. As Walker pointed out, these are areas that relatively few pharmacists explore, but are essential parts of the pharmacy school coursework. By sharing your expertise, you could help to build a relationship with the school of pharmacy and also represent home infusion among professors as well as budding pharmacists.

Many professionals take another step in the call to teaching and serve as an adjunct professor. As part of her own Pharm.D. program at Midwestern University Chicago College of Pharmacy, Anna Nowobilski-Vasilios, Pharm.D., M.B.A., FASHP, CNSC, BCNSP, developed an elective course on home infusion. That was in 1999; Nowobilski-Vasilios, who was the Residency Director at Option Care, Inc., still teaches it. “Most of the students who come to this class want to be here for one reason or another,” she says. “It’s a different breed of person who wants to deal with the patient in his or her entirety.”

You can also serve as a preceptor and open your site up to students for rotations. “That’s a five- to six-week program that starts with shadowing, then full-time, on-the-job training,” says Nowobilski-Vasilios. Preceptors must create the rotation experience to deliver on the learning objectives required by the college of pharmacy.

Contact the school of pharmacy’s office of experiential education, she advises. They are always looking for sites. It takes time to structure a program that’s meaningful to the students but there are perks beyond personal satisfaction. “Preceptors are usually paid a small amount, and get the privileges of adjunct professors, like access to online drug libraries and other resources, at the university.”

With so many new colleges of pharmacy, the demand for clinical rotation sites is increasing, adds Bing. “A number of Critical Care Systems branches serve as preceptor sites for the advanced practice student rotations, several for some of the newest colleges of pharmacy.”

In addition, having students working in your facility can contribute to the organization in many ways. “They get one-on-one contact with patients, which fosters the counseling skills they’ll use anywhere,” offers Chartwell Pennsylvania’s Haley. They can also do medication profiles, care planning, literature searches, charting, and other pharmacy functions with the proper supervision.

Another way to help would be to offer resources to schools of pharmacy that need assistance providing realistic lab experience. Labs are expensive to build, stock, and maintain, notes Samford’s Monk-Tutor. Offering your facility for after-hours practice, or even donating expired medications, solutions, and other supplies can keep labs accessible and stocked.

No matter how you contribute, “a little investment today is going to help you—and the profession—down the road,” concludes Benneidt. “You should want to teach someone your craft. After all, someone took the time to teach you.”

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NHIA Taskforce on Collaboration with Academia

NHIA members who are interested in joining our taskforce to promote greater inclusion of home infusion pharmacy in academic curricula, should contact Kristen Santaromita, Associate Director of Education & Research at NHIA. Kristen can be reached at 703-838-2661 or Kristen.Santaromita@nhia.org.