Bridging the Education Gap

Reimagining Pharmacist Training for the Home Infusion Era

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Here's an exercise for you. Find some information about HOW to train home infusion pharmacists. How did it go?

As of February 2026, the query "home infusion pharmacist training" in PubMed returned 35 results, 5 of which demonstrated potential value. For comparison, the query "pharmacist training" returned 21,639 results. This dynamic will not be surprising to those of us in the field. While home infusion pharmacy is a dynamic, challenging, rewarding subset of the pharmacy profession there is a paucity of formal didactic education and educational tools available for those who may want to enter the practice. In addition, exposure to home infusion pharmacy as a professional option remains limited.

This is frustrating for pharmacists and operational leaders alike. We want to attract clinicians to our organizations and the industry, but where do we find them? Historically, clinicians stumbled upon home infusion because as a student, they needed to fill an elective, or as a practicing pharmacist in another site of care, they were ready for a change. An expanding industry requires a more active approach. How do we let students, residents, new, and veteran practitioners know we are here, create enthusiasm, prepare them for this unique practice, and support ongoing learning?

One important tactic is to broaden our scope when fostering awareness of the industry by establishing robust, repeatable points of entry with sustainable educational touchpoints. It's also important to acknowledge potential areas of failure to identify opportunities for future improvement. This article will provide practical ideas for attracting, training, and retaining qualified pharmacy personnel while utilizing available resources.

Home infusion's footprint in the larger pharmacy profession is much less visible than hospital and community practices for many reasons. Following are some simple ideas for expanding it at various points of entry.

STUDENT LEVEL

Ask any current pharmacy student what they know about home infusion, and the typical answers range from "Nothing," to "I had one lecture about it." Nurturing students into home infusion pharmacists is a long-term endeavor, but even if you don't see immediate results, it raises awareness of the industry that can pay off later. Here are tips for reaching students:

- **Go back to school.** Contact your alma mater or nearby college of pharmacy. Learn how home infusion is represented in their curriculum. If it's under-represented, ask if you can participate by creating something new. If presenting is not your thing, ask to be a contributor or subject matter expert.
- **Volunteer as a preceptor.** Explore opportunities to precept students at your practice location. If you don't have the time to do this yourself, identify a knowledgeable and enthusiastic team member to take on the role.

  Precepting Advanced Pharmacy Practice Experience (APPE) students can be a significant commitment, but the juice is usually worth the squeeze. A creative preceptor can generate patient-based activities beyond medication reconciliation and entering lab values that stimulate the student and encourage learning. A 4-6-week rotation is certainly not enough time for the student to demonstrate IV compounding competency and prepare sterile medications for patients. But students can shadow, mimic compounding skills at a desktop, and actively engage with technicians. The APPE student can perform and document patient assessments, attempt kinetic recommendations, and collaborate with the dietitian for nutrition cases. Include the student in drug information cases, creating content for team meetings, and inventory evaluation. Students will appreciate a preceptor who is excited to share the journey with them.

  For more tips on effective preceptor programs see "Fostering the Future: Building an Advanced Pharmacy Practice Experience (APPE) Rotation" in the November/December 2023 issue of INFUSION.[1]
- **Open the doors.** Other options include precepting Introductory Pharmacy Practice Experience (IPPE) students or inviting students to job shadow.
- **Sell the sizzle.** Skills and knowledge learned in the home infusion site of care can be useful in board exams or on a resume. Home infusion pharmacy operations are built on USP <797> standards, which are their own language. Many students have minimal sterile compounding skills labs and home infusion offers a gateway to more exposure and fluency in an area unfamiliar to many pharmacists. In addition, it could be a stand-out item on a resume.
- **Connect them to the industry.** NHIA offers free membership to full-time students in medical fields. This allows the student to access education, news, networking, mentoring and other benefits. In addition, student members get free registration to the NHIA Annual Conference where they can participate in in-depth and interactive education and really see what the profession has to offer. For more information, go to https://nhia.org/opportunities-for-students/.

While on my home infusion rotation, I was not only given the opportunity to work alongside the pharmacists, but I also worked alongside nurses, clinical technicians, compounding technicians, the warehouse team, and intake. It gave me a clear picture of the entire process and how each member contributes to patient success.

— Derek A. Ruzzo, PharmD, RPh
Pharmacy Supervisor - Providence, RI

I knew nearly nothing about home infusion prior to having my APPE rotation. However, during this rotation I found interest in this unique area of practice and was able to contribute to meaningful projects. After learning more about the field and the opportunities that come with completing this residency, I decided to pursue this career path.

— Joey Cantone, PharmD
PGY-1 Pharmacy Resident

Participating in morning rounds during my home infusion rotation really solidified my interest in this practice area. I loved discussing each individual patient case and determining how we could best treat them.

— Derek A. Ruzzo, PharmD, RPh
Pharmacy Supervisor - Providence, RI

PHARMACY TECHNICIANS

Pharmacy technicians can arrive in home infusion from a variety of backgrounds: retail, hospital, specialty, nuclear, or with no pharmacy experience at all. This versatility makes them both the easiest and hardest group to hire. To promote success, job descriptions need to be descriptive and clear and new hires need a functional onboarding pathway. Lack of structured training around sterile compounding, patient care, supply management, and advanced clinical topics may leave them feeling frustrated and second-guessing their ability. Fortunately, there are many training resources available for pharmacy technicians learning IV compounding technicians.

- **Go-to training.** IV compounding is a primary technician skill, and there is no need to create programs from scratch to educate new learners. Leverage training modules like NHIA's Sterile Compounding Advanced Certificate Training (ACT) to educate learners about engineering controls, aseptic technique, and USP <797>. NHIA's Sterile Compounding Workshop at the Annual Conference is an ideal opportunity for hands-on learning. Longer term, technicians can become certified and earn additional certificates in specialized areas. For more information, go to https://ptcb.org/credentials/.
- **Branch out.** Pharmacy technicians are valuable in an array of roles in addition to sterile compounding. Be sure to offer varied experiences, thorough training, and see where they excel. Carefully evaluate pharmacist tasks and determine where technicians can support. Examples include tasks such as medication profile management, lab retrieval, and inventory management. For more on career possibilities for pharmacy technicians, see "Translatable Skills in a Specialized Practice Setting" in the March/April issue of INFUSION.[2]
- **Define clear roles.** Technicians often find themselves operating in the "gray" space—filling in the spaces where they can support pharmacists' efforts. Determine a clear division of role-based priorities prior to technician training. If the pharmacist has been expecting the technician to load laboratory results, but they weren't trained extensively on that, they are less likely to take ownership and be successful.

RESIDENT LEVEL

Pharmacy residents are in a unique position because they are in both a practice and learning environment. They may not have received much exposure to home infusion—compared to hospital or retail pharmacy—prior to residency, so how do we prepare them for a career in this unique site of care?

- **Go from auditing to accountability.** The goal throughout the year should be for the PGY1 resident to progress from being an auditor—more of an observer—to a participant who is accountable for their work. For example, at the beginning of the year, the resident is learning to audit and find critical care-plan issues, however, by the end of the year, they are accountable for modifying the care plan with the multidisciplinary care team to meet patient needs.[3] As preceptor, ensure that the residency programming provides experiences that facilitate that transition.
- **Offer varied experiences.** Include residents in activities that are common to the home infusion pharmacy. For example, training new employees, observing sterile compounding, evaluating team members, performing quality audits, planning for safety and emergency incidents, and more. This allows them to apply skills and knowledge in new ways. Be sure they are properly prepared so they can succeed. For example, placing a resident on a care team with little to no background information will not be a rewarding experience, and they will quickly experience burnout and frustration.

I truly learned the most from experiences that allowed me independence and forced me out of my comfort zone, as these built the most confidence towards making the transition from a student to a pharmacist.

— Joey Cantone, PharmD
PGY-1 Pharmacy Resident

Having the ability to provide patient-centric care had the biggest impact on my professional development. While pharmacists are actively involved in patient care across a multitude of pharmacy practice areas, home infusion provided a level of patient care that went beyond order verification and dispensing.

— Derek A. Ruzzo, PharmD, RPh
Pharmacy Supervisor - Providence, RI

NEW PRACTITIONER

Proficiency in home infusion requires a combination of the best attributes of community, hospital, and specialty pharmacy all in one package. New practitioners who are just starting their careers bring enthusiasm and the most up-to-date knowledge to the field. However, they may lack the depth of real-world knowledge and confidence that comes with experience. Here are some ways to harness this talent and keep these individuals interested in the home infusion industry.

- **Be part of their professional identity.** Newly graduated pharmacists entering the home infusion arena are still forming their "professional identity," how a person demonstrates the expected behaviors in a profession.[4] Aspects of professional identity include what the pharmacist believes their role is and how they explain, present, and conduct themselves in the context of practice. "Professional identity formation" can occur when the pharmacist transforms through socialization in that community and shares the profession's belief—they think, feel, and act like a pharmacist.[4] Home infusion may very well become a new pharmacist's identity so we need to prepare them with skills to be successful.
- **Learn, Do, Teach.** This is an effective method for learning and mastering skills.[5] First, ask the new pharmacist to learn new skills and information. Next, have them apply the skills and knowledge gained—under observation and then independently. Finally, have them teach others, which ensures they retained the information and reinforces that they can apply it. Examples include presenting a topic discussion in a team meeting or helping to precept future students. See Exhibit 1 for examples of Learn, Do, Teach for learners at several levels.
- **Mentor.** Ensure that the new pharmacist has a mentor or preceptor to field questions throughout the onboarding process and beyond. Preceptors should set up standing meetings to define successes and discuss obstacles. Lack of mentoring could leave the learner feeling unvalued, discouraged, and reconsidering their career choice.

Home infusion seemed to check all of the boxes. I really found it so satisfying and inspiring to follow each patient for the entire duration of their treatment plan. Not only could I cultivate my skills as a clinical pharmacist, but I also learned the importance of aseptic technique and USP <797> standards.

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EXHIBIT 1

Examples of "Learn, Do, Teach" in Home Infusion

	Learn	Do	Teach
Student	Review methods of administration with preceptor	Select appropriate methods of administration while shadowing with pharmacists	Perform patient counseling regarding elastomeric method of administration
Technician	Complete aseptic training modules	Demonstrate skills to preceptor and maintain competencies	Review policies and procedures with teammates in pharmacy team meeting
Resident	Study ASPEN PN Core Curriculum	Begin managing PN caseload with preceptor	Grand rounds topic on unique PN case
New Pharmacist	Review of PN policies and procedures along with available resources	Collaborate with dietitian to recommend PN electrolyte changes	Counsel patient about the importance of proper adherence to PN for safe management
Experienced Pharmacist	Revisit anti-microbial curriculum and become aware of current standards of care	Utilize available modeling to care for narrow therapeutic drug patients	Audit patient charts to ensure they meet quality standards and recommend necessary adjustments

EXPERIENCED PHARMACIST

Pharmacists with established careers in other sites of care may experience an identity crisis upon entry into the home infusion field. Knowledge gaps may not be apparent until they are in the role, which can create frustration and apprehension. In reality, very few experienced pharmacists would be ready to hit the ground running without previous infusion experience. Another consideration is state of mind. Pharmacists coming to home infusion from other sites of care may be professionally burnt out if they experienced chronic understaffing, productivity quotas, and other challenges.[6] It's important to show care and concern for their wellbeing while re-establishing the field's commitment to safety. Following are a few more recommendations:

- **Identify and address knowledge gaps.** Learners coming from community pharmacy often have effective communication skills and adaptability. But they may become overwhelmed revisiting complex calculations and sterile compounding procedures. Operational leaders need to have patience with these learners and recognize that this knowledge cannot be fully onboarded in a 60-90-day orientation. Mastery of these topics takes repetition and strong mentoring from tenured, supportive teammates. Even pharmacists from hospital settings, who may be more up to date regarding sterile compounding, PN, and antibiotic therapies, do not have experience managing administration of these therapies in the home. They need thorough education about routes of administration, administration methods, and patient supplies.
- **Expect a steep learning curve.** Established pharmacists might think, "I'm a pharmacist…it will be fine!" But they could quickly become frustrated with order entry or understanding IV pump supplies. Care and concern should be given to these individuals–remind them to give themselves grace.
- **Navigate professional identity.** It's likely that an established pharmacist has already established their professional identity. Help them avoid regretting the choice to enter the home infusion world. Highlight the skills that can be transferred from their existing knowledge toolbox—problem-solving is universal. Professional identity can change and one can learn to love an unexpected career pathway.
- **Be a mentor.** Mentoring is just as important for tenured pharmacists. They need a safe space to ask questions, discuss career planning, and validate that they are on target to meet orientation and training goals.

I'm extremely proud to have started in home infusion as an intern, then get hired as a clinical pharmacist, and eventually take over as the pharmacy supervisor/pharmacist in charge.

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NEXT STEPS

Your brain might now be spinning with ideas on how to make an impact in your pharmacy. Keep it simple to begin with and "chunk-etize" it.

Begin by using resources that already exist. NHIA offers excellent educational opportunities, as mentioned earlier. Role preparedness studies and exit surveys could also help home infusion teams identify where they are meeting and exceeding expectations or missing the mark. Survey current teammates to better understand their barriers to learning when they were new employees. Discuss priorities with leadership and focus on coaching new employees about these potential knowledge gaps.

Set a reasonable period for orientation. Be aware of the distinction between ONBOARDING and MASTERY, which are 2 very distinct topics. Define what mastery looks like in your location, and do not expect a new trainee to reach this level of expertise immediately. It will be interesting to see how the future of your home infusion looks as we embrace Gen Z learners and the pharmacy landscape changes.

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