Constructive ways to prevent, identify, and remediate deficiencies of "challenging trainees" in experiential education

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The practice of pharmacy is highly influenced by the training pharmacy clinicians receive through experiential education (EE) programs, for it is within this "total practice immersion" that their skills are shaped, honed, and refined.[1] However, not all rotation experiences are positive for both preceptor and trainee. Due to trainees' diverse backgrounds, personalities, and expectations, as well as diversity in practice environments and other possible factors, preceptors may encounter trainees with poor academic or clinical performance, a lack of practical experience or professional maturity, or life circumstances that result in less than desirable educational outcomes. When faced with a challenging trainee situation, preceptors are expected to navigate all types of challenges deftly and with confidence. A breadth of pharmacy literature regarding best practices in precepting is available, but there is very little literature addressing how to handle challenging situations with trainees.[2-5]

The terminology used to define and characterize suboptimally performing trainees in pharmacy and medicine is varied and often applied cautiously so as not to label or stigmatize. The terms "trainee in crisis," "trainee in difficulty," "challenging trainee," "dyscompetent trainee," "disruptive student," "marginal student," and "problem learner" have been used in published literature and preceptor training programs to characterize underperforming trainees.[6-10] The American Board of Internal Medicine (ABIM) defines a "problem resident" as a "learner who demonstrates problem behaviors significant enough to require intervention by program leadership."[7] The American Medical Association defines behavioral problems as "personal conduct, whether verbal or physical, that negatively affects or potentially affects patient care, including conduct that interferes with one's ability to work with members of a health care team."[11] Equivalent definitions are not found in the pharmacy literature. For the remainder of this article, "challenging trainee" denotes a pharmacy student or pharmacy resident who is performing below preceptor expectations with regard to knowledge, attitude, or skill set.

Health professions students can encounter difficulty in both didactic and experiential training. It is estimated that 6–15% of students encounter academic difficulty during their training.[4] A survey of medical school clerkship directors found that up to 15% of third- or fourth-year medical students were identified as "struggling" during their internal medicine clerkship.[10] That number appears to remain consistent during postgraduate medical training; ABIM has estimated the proportion of "problem residents" (i.e., trainees requiring program intervention) to be 8–15%.[12] Reported data on challenging trainees in health professional education programs are believed to underestimate the prevalence of the problem.[4] Medical schools have reported that due to a lack of training for clinical preceptors and the amount of time required to address an identified issue, many deficiencies of experiential trainees remain undocumented.[4,13] Medical educators have also stated that struggling trainees are a "continuing concern" and that faculty members must correctly identify and assist those learners while "weighing concerns about future care and obligation to society."[10]

There is a paucity of recommendations and published literature addressing the identification and optimal management of challenging trainees in pharmacy EE. Current Accreditation Council for Pharmacy Education (ACPE) standards state that institutions must have policies regarding early intervention and remediation for academic and behavioral problems.[14] However, the standards provide minimal guidance on how preceptors or colleges of pharmacy can resolve encountered challenges. While the issue is acknowledged, the stakeholders are left to find solutions independently.[14] In a 2013 study, the websites of 122 pharmacy schools were reviewed, and posted academic standards or progression policies were evaluated; of the 98 programs (80%) that posted such data, 82% did not have policies clearly outlining EE

progression and retention plans.[15] For pharmacy resident training, American Society of Health-System Pharmacists (ASHP) standards comment only on resident evaluation and do not address how to manage residents performing at the "needs improvement" level.[16]

The field of medical residency training faces a similar dilemma, with Accreditation Council for Graduate Medical Education standards stating that preceptors must "verify that residents have demonstrated sufficient competence to enter practice without direct supervision" but omitting concrete guidance on what to do if that level of competence is not attained.[17]

Experiential preceptors may find themselves in a position where remediation plans are needed to address concerns related to a challenging trainee. However, preceptors struggle to find timely solutions due to a lack of training or experience in handling such problems, discomfort with the situation, and demanding primary workloads. Proposed remediation plans should provide achievable, fair, and balanced resolutions in terms of academic or professional competency standards.[18] The intent of this article is to provide a foundation and framework for pharmacy preceptors to characterize situations commonly encountered with challenging trainees and to discuss the identification, prevention, and management of such scenarios in EE.

Setting the foundation and framework. Many commonly encountered challenges involving trainees can be successfully resolved through preceptor planning, early identification of potential issues, and management of challenges with swift and appropriate interventions. Preceptors prepared with a strong foundation and framework for prevention and identification of issues, as well as potential strategies to remediate concerns, are most likely to be successful.

The foundation for delineating EE trainee challenges proposed in this article is based on the work of Langlois and Thach,[19] who categorized interventions in terms of primary, secondary, and tertiary prevention. Primary prevention includes global measures applied to all trainees to prevent educational challenges (i.e., a structured rotation syllabus and orientation along with mutual goal setting). Secondary prevention involves creating solutions, such as using teaching strategies with trainees who exhibit poor performance to identify problems and effectively manage issues as they arise (i.e., creation of an individualized remediation plan based on the problem and the unique learner or situation). Tertiary prevention measures include concessions that are used to rectify poor performance when primary prevention has failed and secondary prevention strategies are exhausted; in this case, an extension of the training program may be needed or the trainee may be dismissed from the program.

Recognizing that primary prevention concepts are widely discussed in the precepting literature and that decisions about tertiary measures are generally made above the level of the individual preceptor, we focused this article on secondary prevention strategies (i.e., solutions for remediation).[2-5,19] The framework for identifying and analyzing challenging trainees that is described here is based on the work of Steinert.[20] This framework asks the preceptor to consider the "problem" from all angles, including the perspectives of the trainee, the teacher, and the system, and to recognize that factors other than trainee shortcomings may be contributing to a challenging situation.[8,20] This framework provides the structure by which potential remediation strategies for secondary prevention discussed in this article are organized.

Using Steinert's model to assess knowledge, attitudes, and skills. The first of the two trainee assessments recommended by Steinert[8,20] is conducted to determine if a deficiency exists in one of the three competency domains: knowledge, attitudes, and skills. When completing this assessment, the preceptor may identify that the trainee has a deficiency in more than one domain. It is also important to identify trainee strengths that have been overlooked. During this part of the assessment, it might be identified that the trainee lacks knowledge about basic principles of pharmacy practice. It may also be revealed that a trainees' attitude reflects a lack of emotional intelligence or professionalism. Moreover, a preceptor might determine that a trainee's practice-related skills, such as technical and clinical skills, communication abilities, and judgment, are incomplete and thus cause him or her to struggle while interpreting information or communicating.

The most common knowledge challenge identified among medical trainees is related to deficits in basic science or clinical application of knowledge.[8,20] Knowledge gaps are frequently uncovered pursuant to documented poor performance on a prerotation baseline knowledge examination, direct observation of performance problems (e.g., in patient counseling, in making recommendations during medical rounds, in providing answers to other healthcare providers), and problems documented during rotation learning activities (e.g., preparation of topic discussion materials, case presentations, journal club presentations). There are two major ways to remediate these deficits: direct instruction and coaching. Several helpful direct instruction techniques can be applied to elevate the trainee: mentoring through "metacognition" strategies (i.e., helping the trainee transition from thinking like a trainee to thinking like a pharmacist); referring the trainee to readings, with subsequent active topic discussions to augment the assigned reading; and Socratic questioning, which may be used to further assess knowledge gaps and assist the trainee in making connections across disciplines.[21-31] Likewise, there are some helpful coaching techniques, which include requiring the trainee to submit a weekly logbook documenting study habits and topics

studied; implementing a reduction in the trainee's workload to allow for more time spent in self-study and reading (depending on the degree of deficiency), with preceptor-initiated discussions to assess for knowledge improvement; and working with the residency program director (RPD) or EE coordinator to obtain assistance in assessing the trainee for learning disabilities or suggestions on learning strategies not already employed (or both).

Appendices A and B describe potential issues related to the other two learning domains (skills and attitudes, respectively) and also provide potential solutions to help remediate identified trainee deficiencies.

Using Steinert's model to assess stakeholders' roles. Steinert[20] suggested that after an assessment of the learning domains has been performed, a second assessment be conducted to evaluate training challenges from the perspectives of all key stakeholders: the trainee, the preceptor, and the system in which training occurs (in the context of pharmacy practice, that is typically a pharmacy department, a hospital, or a health system). This part of the overall assessment should aim to identify both strengths and potential deficiencies of the involved preceptor and system, as well as qualities the learner has or situations that may have an impact on the learning experience. In evaluating the stakeholders, it might be identified that a preceptor's expectations of a trainee may not be realistic or do not match the competencies required to perform in a particular educational experience. It might also be revealed that the preceptor or the trainee (or both) have cumbersome workloads that do not allow for optimal functioning of either party. Finally, the trainee may have life circumstances, such as personal struggles (e.g., changes in family or marital status, substance abuse problems), or learning disabilities that may affect his or her ability to focus and perform. Potential challenges involving EE stakeholders are further described in Appendix C.

After completing both assessments recommended by Steinert[8,20] and identifying the problem, the preceptor's investigation may identify that the deficiency rests not only with the trainee but with the preceptor and the system as well. If a trainee issue is identified, secondary prevention must be implemented. By using this two-pronged approach for assessment, the preceptor and the trainee can construct a robust and individualized remediation plan.

Primary prevention. While no preceptor begins teaching a rotation anticipating that problems will arise, it is advisable to prepare and plan for them in an effort to minimize their impact or identify them as early as possible. Prerotation planning for the trainee component of an advanced pharmacy practice experience (APPE) includes (1) a thorough orientation of the trainee to the site and the syllabus, as well as clear expectations with regard to professional behavior, and (2) an early assessment of the trainee's knowledge base, strengths, and weaknesses.[11] This early assessment can be done through both preceptor exploration (e.g., via formal pretests at the start of the rotation) and student self-identification. Once the preceptor has identified the student's needs, he or she can effectively engage the student one-on-one in the appropriate preceptor role (as described below) and subsequently provide the level of assistance the student needs to achieve rotation goals.

Preceptor roles may include instructing, modeling, coaching, and facilitating; each role allows a different level of autonomy for the trainee.[24] In the instructing role, preceptors convey knowledge directly to the trainee using lectures or discussions. In modeling, or "active observation," the preceptor solves a patient care issue, providing an example for the trainee to emulate. Coaching requires preceptors to build on previously modeled tasks by having the trainee execute a skill or task and then providing feedback to help refine the skill. Facilitating allows the greatest autonomy for the trainee, allowing him or her to conduct direct patient care experiences and providing opportunities for self-evaluation of clinical decisions.

In addition to prerotation planning for the trainee, the preceptor should engage in training to prepare for challenging situations that could arise. Preceptors should (1) obtain education on strategies to identify and solve issues with challenging trainees, (2) develop an awareness of the training program's policies and procedures as they relate to trainee progression, remediation, and failure, and (3) consider what defines minimum competency for knowledge, skills, and behavior within the confines of an individual preceptor's experiential rotation and at varying levels of training (an introductory pharmacy practice experience, an APPE, or a postgraduate year 1 or year 2 residency). Professional organizations such as ASHP, the American Association of Colleges of Pharmacy, the American College of Clinical Pharmacy, and the American Pharmacists Association offer textbooks and seminars in preceptor development; however, only small sections of these resources provide guidance on handling challenging trainees.[2,5,55]

For some preceptors, minimum competency can be assessed by answering the question "Are my patients in danger because of the care provided by this individual?"[10] By providing guidelines for both the trainee on rotation and the preceptor conducting the rotation, these "universal precautions" can set a framework for an improved rotation.

Secondary prevention. Secondary prevention constitutes the main intervention for successful trainee remediation and performance improvement. There are several steps required for a preceptor engaging in secondary prevention, including (1) identification of performance concerns, as stratified by Steinert's model, (2) open dialogue with the learner and key stakeholders, (3) creation of an individualized remediation plan detailing

specific strategies (i.e., learning opportunities encompassing structured activities and instructional methods) to correct noted deficiencies, with clearly stated criteria for success, and (4) reassessment of the learner's performance to ensure acceptable improvement and competency. Secondary prevention is focused on thorough and timely assessment of trainee performance and remediation of deficits within the context of an individualized rotation experience.

Identification of performance concerns. The process and circumstances through which a preceptor first recognizes a challenging trainee can vary greatly according to factors such as the individual trainee's personal qualities, the practice environment, the time spent interacting with the trainee, preceptor expectations, and the degree of performance deficiencies. When alerted to performance deficits, preceptors should search for objective evidence to quantify and qualify their concerns at the earliest feasible time during the rotation experience. Once preceptors have meaningful concerns regarding the trainee's knowledge, attitude, or skill set, they should conduct a more thorough assessment of the learner using Steinert's framework. This structure assists the preceptor in characterizing the trainee's strengths and weaknesses in each of the three competency domains and identifying factors involving all stakeholders that may be contributing to a problematic situation.[8,20]

During the secondary prevention phase, it is important for the preceptor to spend sufficient time directly observing the trainee in multiple settings and during interactions with varied patient types and healthcare colleagues.[8] This assessment allows for a global perspective on the trainee's performance in recognition that most problems are complex in nature and are unlikely to be isolated to a single circumstance or competency domain.[8] The use of Steinert's model also provides the preceptor with an objective assessment of concerns that can be openly discussed with the trainee and other stakeholders.

Communication with stakeholders. Maintaining clear communication with a challenging trainee is important when discussing the preceptor's assessment. Strengths and deficiencies in performance or the preceptor's expectations should be discussed openly with the trainee as early as possible and frequently throughout the rotation experience. Best practices indicate that initial conversations should be in a one-on-one environment and broadened to include additional stakeholders as needed.[8]

The use of open dialogue to address concerns or deficiencies is an important precursor for successful remediation. Objective discussions can serve as a remediation strategy for some learners who, once aware of their deficits, are able to self-identify and act on solutions to improve their performance.[8,56] Unfortunately, some trainees are reluctant to receive, or lack the professional maturity to accept, constructive feedback. In this circumstance, preceptors should consider taking a step back from the discussion and refocusing their attention on mentoring the trainee by providing valuable feedback. Several great resources within the medical education literature provide detailed guidance on this topic for both trainee and preceptor.[47,56-58] Once trainees understand that the preceptor's intention in initiating discussion and feedback is to assist them in honing their professional knowledge, skills, and attitudes, the preceptor can again focus on discussions regarding performance deficits.

When faced with a situation involving a challenging trainee, the responsible preceptor should promptly contact and work directly with the RPD or the EE coordinator or director during the secondary prevention phase. These individuals can assist the preceptor in conducting an evaluation of the trainee. They can provide guidance on appropriate documentation; help determine the depth of deficiencies, the trainee's needs, and options for remediation; and determine whether or not a proposed remediation plan is compliant with the program's procedures. The RPD or EE staff may be able to review past trainee evaluations or contact previous preceptors to gain information or insights on how best to approach remediation of trainee deficits. Finally, early involvement of the RPD or EE staff is beneficial, as those parties can provide support during a period when the preceptor may feel the burden of the added workload that comes with addressing a challenging trainee.

Creation of an individualized remediation plan. Once performance concerns have been clearly identified and articulated to the trainee and other stakeholders, an individualized remediation plan should be created. Regardless of the extent and complexity of remediation needed, several key components must exist within the plan in order for it to be successful.[18] The performance deficits should be matched to remediation strategies with complementary criteria for success, all of which must be specific, measurable, realistic, and time bound.

Principles of remediation. Recognizing the need for a systematic, organized, and goal-directed approach to remediation, the Council for Emergency Medicine Residency Directors (CORD) created a task force to provide guiding principles for resident remediation. Per the CORD Remediation Task Force, the suggested steps in implementing a remediation plan are as follows: (1) identify the core competency that requires remediation, (2) write a detailed description of events and behaviors that have led to the need for remediation, (3) outline a time frame for remediation, (4) list specific objective measures that will be assessed to identify successful remediation, (5) delineate a schedule for meetings with the trainee and other needed parties, (6) individualize the learning strategy to meet the trainee's needs, (7) clearly identify and list consequences for the trainee's failure to improve, (8) identify the information that will be commu-

nicated to others, and (9) gather dated signatures of all personnel involved in the remediation plan.[18]

It is imperative that the trainee be included in the development of the remediation plan. Through this process the trainee can gain a clear understanding of performance deficits, agree and commit to the plan, and be made aware of the metrics by which success will be defined.[18] Providing concrete descriptions of performance expectations allows both trainee and preceptor the opportunity to feel confident in the plan of action.

The choice of remediation strategies depends on the individual trainee, the context of training, and documented performance deficits in the three competency domains (per Steinert's model).[8,20] Assessment and documentation should be consistent with the prespecified rotation goals and with competency expectations established early in the rotation and during the primary prevention phase.

Teaching techniques. Deliberate practice. Deliberate practice is a framework for educators to design training that maximizes improvement of motor or cognitive skills. Use of deliberate practice has been associated with achievement of expert performance in several fields, including music, sports, aviation crisis management, and, recently, anesthesiology training.[35,37,38] In deliberate practice, individual learning activities have three fundamental components: structured learning activities, formative assessment (e.g., feedback), and reflection. Learning activities are repeated and modified in order to acquire expertise, and expertise is maintained with a commitment to continuous professional development.[35,37] Structured learning activities should have an authentic focus (i.e., easily translate into the practice of pharmacy), with clearly stated goals, and be adapted to the learning level of the trainee.[4] Teacher feedback should be specific, constructive, timely, and criterion referenced. Reflection is the central driver of performance improvement and is based on teacher feedback and self-assessment, which allow the trainee to take responsibility for learning and find external validity in training experiences.[39] What differentiates deliberate practice from routine practice is a focus on trainee engagement in learning activities to acquire and maintain skill expertise; in routine practice, an emphasis on establishing minimum competence often results in performance being arrested through a focus on the quantity of performance (e.g., in rote repetition of skills) instead of its quality.

Case presentation model. A learner-led patient case presentation structure consisting of six steps—summarize, narrow, analyze, probe, plan, and select (SNAPPS)—was developed within the outpatient medical education setting.[32] This model facilitates timely discussion between preceptor and trainee, emphasizes "collaborative learning conversations," and allows for informal assessment of the trainee's thinking and communication skills. The six steps of the SNAPPS approach are as follows:

1. Summarize briefly the history and findings.
2. Narrow the differential by comparing and contrasting the possibilities.
3. Analyze the differential by comparing and contrasting the possibilities.
4. Probe the preceptor by asking questions about uncertainties, difficulties, or alternative approaches.
5. Plan a management strategy appropriate to the patient's medical issues.
6. Select a case-related issue for self-directed learning.[32]

Although the SNAPPS model was created for use in physician experiential training, it can be applied in terms of a pharmacist's scope of practice and practice setting (e.g., a pharmacist trainee discussing the role of a particular drug therapy in contributing to acute kidney injury alongside non–drug-related factors). The SNAPPS model requires the trainee to utilize all six skills associated with critical thinking that have been identified by the American Philosophical Association: interpretation, analysis, evaluation, inference, explanation, and self-regulation.[59]

Socratic method. The Socratic method is a preceptor-led teaching strategy employed to develop and refine critical thinking skills.[21,22,24,27-31] Also known as "Socratic questioning," this technique involves the use of a series of structured questions to assess a trainee's current knowledge base, uncover knowledge gaps, and facilitate decision-making with sound rationale. The Socratic method has many applications for teaching and learning across all age groups, levels of training, and settings.

Metacognition. Metacognition has been described as "thinking about one's thinking."[25] In pharmacy education, it has been defined as "knowledge about one's own thinking processes and consciously planning, monitoring, and evaluating learning."[26] Trainees with good metacognitive skills identify what they know and do not know and then focus on learning what they do not know through a concerted, coordinated effort. Therefore, metacognitive skills are acquired through two steps: (1) self-assessment of knowledge and (2) self-regulation of learning processes by planning how to research and then internalize new knowledge and skills.

Reflective writing. Reflective writing is a tool that promotes metacognition, enhances critical thinking skills, and engages the individual in self-assessment of experiences or learning.[42] It can be used to track thoughts on situations or performance and record and respond to emotions.[11] Reflective writing has been encouraged by health professional accrediting bodies as well as ACPE, which recommends the development of student portfolios.[14]

360-degree feedback. 360-degree feedback is also known as multisource feedback or multirater feedback. The unique aspect of this feedback mechanism is that it requires more than just preceptor feedback. It requires input

from peers, other members of the healthcare team (e.g., attending physicians, residents, nurses, technicians, social workers), and subordinates (e.g., residents receive feedback from students) as well as the preceptor. With this tool, feedback is focused on observable behaviors such as communication skills, leadership, and professionalism.[43] The feedback provided by the reviewers can be used during discussions with the trainee about performance and can also be used to help form a remediation plan.[44] This form of feedback has been commonly used in nonhealthcare fields and is gaining popularity in healthcare management circles.[44,45]

Simulation. Simulations of patient care or other practice-related challenges can be effective in remediating a variety of trainee skill deficits.[11] Simulation training might include role-playing scenarios involving a trainee and a preceptor, "mock pages" (i.e., wireless pager alerts about fictitious patient cases that need review), video-recorded exercises, and computer-based training.[48,49] Regardless of the method used, it is recommended that simulation be used in combination with reflective writing or postsession debriefings.

Reassessment of learner performance. Reassessment of the learner's performance is the final phase of secondary prevention and involves ascertaining whether or not remediation was successful. Embedded within the written remediation plan there should be criteria for determining the success of efforts to correct documented deficits and clearly delineated consequences to be applied if the trainee does not achieve the desired endpoints.

Tertiary prevention. Tertiary prevention is necessary at the point at which early interventions and program-developed remediation plans have failed and there are limited options remaining for the trainee and the preceptor; this is the point when decisions and remediation are no longer the responsibility of the preceptor but originate at a higher level (e.g., the EE coordinator or RPD). At this point in the process, decisions with regard to a trainee's future endpoint must continue to be highly individualized, taking into account the sensitivity, complexities, and circumstances of the situation and the stakeholders involved. Depending on the case, RPDs or EE coordinators may have to involve human resources personnel, legal counsel, or the dean of students.[50] Options at this point in the remediation process may involve one or more of the following: rotation failure, removal of the trainee from the rotation, academic or professional probation, program dismissal, leave of absence, or referral of the trainee to outside remediation resources.[4,8,20] Among these high-level interventions, the most commonly implemented by surveyed Canadian medical RPDs were rotation failure (with a requirement to repeat the rotation), probation, program dismissal, and a requirement that the trainee repeat a year of residency.[52]

In extreme circumstances, offsite remediation could be considered. For example, the University of Colorado School of Medicine offers a remediation program to medical trainees of all levels (students, residents, fellows, and attending physicians) who either self-identify deficits or are referred by an EE coordinator or RPD.[60] After a detailed interview and assessment of the enrolled trainee, a team of educational specialists and physicians develops an individualized remediation plan. During the implementation of the plan, individuals are evaluated by a variety of direct and indirect assessment methods that have been chosen based on the presenting deficit. The program's leaders have reported a 90% remediation success rate but have also noted the substantial resources necessary to run such a program. To our knowledge, there are no such programs for pharmacy trainees.

Discussion. Due to changes in the profession and in academic pharmacy, there is the potential for an increase in the number of challenging trainees. Annual rates of enrollment in colleges and schools of pharmacy have continued to rise each year since 2001.[61] During the 2014–15 school year, 13,994 traditional professional doctor of pharmacy degrees were awarded, a nearly twofold increase from 2001, when 6948 degrees were awarded.[61,62] Not only is there an increasing number of pharmacy students, but there is increasing demand for and availability of postgraduate pharmacy residency programs. In the span of six years (2010–15), the number of applicants has increased 59% (from 3938 to 6277) and available residency positions have increased 66% (from 2390 to 3987).[63] Additionally, ACPE experiential training requirements now place more emphasis on patient care rotations, with a requirement that all but two APPEs must be in direct patient care sites.[14] The expansion of experiential training requirements in graduate pharmacy curricula, coupled with growth in both enrollment in colleges of pharmacy and residency positions, increases the likelihood of working with challenging trainees in future years.

With this anticipated increase in challenging trainees, there is a need for preceptors equipped to appropriately identify the challenges hindering trainees' success as well as strategies to mitigate the challenges in a timely, efficient manner. Preceptors must adequately prepare for each and every trainee and diligently employ primary prevention methods, early assessment, and documentation. This process of early rotation preparation and assessment allows preceptors to identify challenging trainees and develop individualized remediation plans while accommodating varying levels of training. While it is the preceptor's job to educate pharmacy students and residents, there is also an obligation to protect patient safety during trainee development; therefore, "gauging of independence" for each trainee is critical. Educators have a responsibility to hold trainees to high profession-

al standards.[33] Failure is undesirable to both trainee and preceptor but is sometimes a necessary consequence that can lead to the provision of better learning opportunities for the trainee.

While challenges with trainees can develop and evolve, in most cases they are not insurmountable if managed in a strategic manner.

Disclosures

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References

1. Haase KK, Smythe MA, Orlando PL et al. American College of Clinical Pharmacy position statement: ensuring quality experiential education. *Pharmacotherapy*. 2008; 28:1548-51.
2. Doty RE. Getting started as a pharmacy preceptor. Washington, DC: American Pharmacists Association; 2011:77-132.
3. Berger BA. Communication skills for pharmacists. Washington, DC: American Pharmacists Association; 2002:1-22.
4. Maize DF, Fuller SH, Hritcko PM et al. A review of remediation programs in pharmacy and other health professions. *Am J Pharm Educ*. 2010; 74:article 25.
5. Cuellar LM, Gingsburg DB. Preceptor's handbook for pharmacists. Bethesda, MD: American Society of Health-System Pharmacists; 2009:120,248-9.
6. Williams BW. The prevalence and special educational requirements of dyscompetent physicians. *J Contin Educ Health Prof*. 2006; 26:173-91.
7. Dupras DM, Edson RS, Halvorsen AJ et al. "Problem residents": prevalence, problems and remediation in the era of core competencies. *Am J Med*. 2012; 125:421-5.
8. Steinert Y. The "problem" learner: whose problem is it? AMEE guide no. 76. *Med Teach*. 2013; 35:e1035-45.
9. Maynard R. Preceptor CE: handling difficult learning situations with students and residents. Presentation via webinar hosted by Pharmacist's Letter; 2013 Aug 7.
10. Frellsen SL, Baker EA, Papp KK, Durning SJ. Medical school policies regarding struggling medical students during the internal medicine clerkships: results of a national survey. *Acad Med*. 2008; 83:876-81.
11. Sanfey H, Darosa DA, Hickson GB et al. Pursuing professional accountability: an evidence-based approach to addressing residents with behavioral problems. *Arch Surg*. 2012; 147:642-7.
12. Yao DC, Wright SM. The challenge of problem residents. *J Gen Intern Med*. 2001; 16:486-92.
13. Hauer KE, Ciccone A, Henzel TR et al. Remediation of the deficiencies of physicians across the continuum from medical school to practice: a thematic review of the literature. *Acad Med*. 2009; 84:1822-32.
14. Accreditation Council for Pharmacy Education. Accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree for 2016. https://acpe-accredit.org/deans/StandardsRevision.asp (accessed 2015 May 18).
15. Poirier TI, Kerr TM, Phelps SJ. Academic progression and retention policies of colleges and schools of pharmacy. *Am J Pharm Educ*. 2013; 77:article 25.
16. American Society of Health-System Pharmacists Commission on Credentialing. ASHP accreditation standard for postgraduate year one (PGY1) pharmacy residency programs (September 2014). www.ashp.org/DocLibrary/Accreditation/Newly-approved-PGY1-Standard-September-2014.pdf (accessed 2015 May 1).
17. Accreditation Council for Graduate Medical Education. ACGME program requirements for graduate medical education in internal medicine (2013). www.acgme.org/acgmeweb/Portals/0/PFAssets/2013-PR-FAQ-PIF/140_internal_medicine_07012013.pdf (accessed 2015 May 18).
18. Katz ED, Dahms R, Sadosty AT et al. Guiding principles for resident remediation: recommendations of the CORD Remediation Task Force. *Acad Emerg Med*. 2010; 17(suppl 2):S95-103.
19. Langlois JP, Thach S. Preventing the difficult learning situation. *Fam Med*. 2000; 32:232-4.
20. Steinert Y. The "problem" junior: whose problem is it? *BMJ*. 2008; 336:150-3.
21. Paul R, Elder L. The thinker's guide to the art of Socratic questioning. Tomales, CA: Foundation for Critical Thinking; 2007:2-9.
22. Elder L, Paul R. The thinker's guide to the art of asking essential questions. Tomales, CA: Foundation for Critical Thinking; 2009:3,46-7.
23. Tanner KD. Promoting student metacognition. *CBC Life Sci Educ*. 2012; 11:113-20.
24. Weitzel KW, Walters EA, Taylor J. Teaching clinical problem solving: a preceptor's guide. *Am J Health-Syst Pharm*. 2012; 69:1588-99.
25. Schneider EF, Castleberry AN, Vuk J, Stowe CD. Pharmacy students' ability to think about thinking. *Am J Pharm Educ*. 2014; 78:article 148.
26. Medina MS, Plaza CM, Stowe CD et al. Center for the Advancement of Pharmacy Education 2013 educational outcomes. *Am J Pharm Educ*. 2013; 77:article 162.
27. Lewis DP. Using the Socratic method in office-based teaching. *Fam Med*. 2004; 36:162-3.
28. Oh RC. The Socratic method in medicine—the labor of delivering medical truths. *Fam Med*. 2005; 37:537-9.
29. Oh RC, Reamy BV. The Socratic method and pimping: optimizing the use of stress and fear in instruction. *Virtual Mentor*. 2014; 16:182-6.
30. Oyler DR, Romanelli F. The fact of ignorance: revisiting the Socratic method as a tool for teaching critical thinking. *Am J Pharm Educ*. 2014; 78:article 144.
31. Tofade T, Elsner J, Haines ST. Best practice strategies for effective use of questions as a teaching tool. *Am J Pharm Educ*. 2013; 77:article 155.
32. Wolpaw TM, Wolpaw DR, Papp KK. SNAPPS: a learner-centered model for outpatient education. *Acad Med*. 2003; 78:893-8.
33. Langlois JP, Thach S. Managing the difficult learning situation. *Fam Med*. 2000; 32:307-9.
34. Moulaert V, Verwijnen MG, Rikers R, Scherpbier AJ. The effects of deliberate practice in undergraduate medical education. *Med Educ*. 2004; 38:1044-52.
35. Hastings RH, Rickard TC. Deliberate practice for achieving and maintaining expertise in anesthesiology. *Anest Analg*. 2015; 120:449-59.
36. Wu JS, Siewert B, Boiselle PM. Resident evaluation and remediation: a comprehensive approach. *J Grad Med Educ*. 2010; 2:242-5.
37. Ericsson K, Krumpe RT, Tesch-Romer C. The role of deliberate practice and acquisition of expert performance. *Psychol Rev*. 1993; 100:363-406.
38. Kulasegaram KM, Grierson LE, Norman GR. The roles of deliberate practice and innate ability in developing expertise: evidence and implications. *Med Educ*. 2013; 47:979-89.
39. Droege M. The role of reflective practice in pharmacy. *Educ Health (Abingdon)*. 2003; 16:68-74.
40. DasGupta S, Charon R. Personal illness narratives: using reflective

writing to teach empathy. *Acad Med*. 2004; 79:351-6.
41. Larson EB, Yao X. Clinical empathy as emotional labor in the patient-physician relationship. *JAMA*. 2005; 293:1100-6.
42. Nuffer W, Vaughn J, Kerr K et al. A three-year reflective writing program as part of introductory pharmacy practice experiences. *Am J Pharm Educ*. 2013; 77:article 100.
43. Rodgers KG, Manifold C. 360-degree feedback: possibilities for assessment of the ACGME core competencies for emergency medicine residents. *Acad Emerg Med*. 2002; 9:1300-4.
44. Michner L, Kent SS. Employing a 360-degree performance tool: around the pharmacy in 360 degrees. In: Ash DS, ed. ASHP management pearls. Bethesda, MD: American Society of Health-System Pharmacists; 2008:11-21.
45. Williams H. Hospital talk: 360-degree feedback. *Aust J Pharm*. 2015; 96:49.
46. Hammer D. Improving student professionalism during experiential learning. *Am J Pharm Educ*. 2006; 70:article 59.
47. Brukner H. Giving effective feedback to medical students: a workshop for faculty and house staff. *Med Teach*. 1999; 21:161-5.
48. Schwind CJ, Boehler ML, Markwell SJ et al. Use of simulated pages to prepare medical students for internship and improve patient safety. *Acad Med*. 2011; 86:77-84.
49. Curtin LB, Finn LA, Czosnowski QA et al. Computer-based simulation training to improve learning outcomes in mannequin-based simulation exercises. *Am J Pharm Educ*. 2011; 75:article 113.
50. Poppe LB, Granko RP. Managing underperformers. *Am J Health-Syst Pharm*. 2011; 68:2123-5.
51. Armstrong E, Parsa-Parsi R. How can physicians' learning styles drive educational planning? *Acad Med*. 2005; 80:680-4.
52. Dudek NL, Marks MB, Regehr G. Failure to fail: the perspectives of clinical supervisors. *Acad Med*. 2005; 80:S84-7.
53. Guerrasio J, Aagaard EM. Methods and outcomes for the remediation of clinical reasoning. *J Gen Int Med*. 2014; 29:1607-14.
54. Guerrasio J, Furfari KA, Rosenthal LD et al. Failure to fail: the institutional perspective. *Med Teach*. 2014; 36:799-803.
55. Harris BJ, Butler M, Cardello E et al. Report of the 2011–2012 AACP Professional Affairs Committee: addressing the teaching excellence of volunteer pharmacy preceptors. *Am J Pharm Educ*. 2012; 76:article S4.
56. Branch WT Jr, Paranjape A. Feedback and reflection: teaching methods for clinical settings. *Acad Med*. 2002; 77:1185-8.
57. Algiraigri AH. Ten tips for receiving feedback effectively in clinical practice. *Med Educ Online*. 2014; 19:25141.
58. Bienstock JL, Katz NT, Cox SM et al. To the point: medical education reviews—providing feedback. *Am J Obstet Gynecol*. 2007; 196:508-13.
59. Oderda GM, Zavod RM, Carter JT et al. An environmental scan on the status of critical thinking and problem solving skills in colleges/schools of pharmacy: report of the 2009–2010 Academic Affairs Standing Committee. *Am J Pharm Educ*. 2010; 74:article S6.
60. Guerrasio J, Garrity MJ, Aagaard EM. Learner deficits and academic outcomes of medical students, residents, fellows, and attending physicians referred to a remediation program, 2006–2012. *Acad Med*. 2014; 89:352-8.
61. American Association of Colleges of Pharmacy. Academic pharmacy's vital statistics; 2015. www.aacp.org/about/Pages/Vitalstats.aspx (accessed 2015 May 18).
62. Drown DL. A looming joblessness crisis for new pharmacy graduates and the implications it holds for the academy. *Am J Pharm Educ*. 2013; 77:article 90.
63. National Matching Services Inc. ASHP Residency Matching Program: summary of programs and positions offered and filled for the 2015 Match. www.natmatch.com/ashprmp/about-stats.html (accessed 2015 May 18).

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Appendix A—Skill-related challenges identified in experiential education trainees and potential solutions

Identified Challenge	Description	Strategies for Remediation
Ineffectiveness in collecting, presenting, or interpreting patient data from medical chart[5,24,32]	Difficulty in collecting, presenting, or interpreting patient information collected from medical chart; this may be evidenced by • A focus on summarizing a patient's admission and clinical course versus assessing information as a means to optimize care, • Inability to answer preceptor's questions regarding presented patient cases, and • Patient case presentations that are incomplete, inaccurate, or not focused on pertinent positives and negatives	Direct instruction: 1. Consider requiring trainee to make a standardized data collection sheet that includes dedicated space for each required data point (e.g., age, sex, basic laboratory test results, current medications, allergies) and space to document an assessment and plan (recommendations) for pharmacy-related interventions. 2. Explain why thorough review of a patient chart is warranted. For example, when empirical antibiotic therapy for suspected infection is initiated, the patient's medication allergies and renal function should be assessed. 3. Explain why identifying pertinent positives and negatives is essential to fully understand a patient scenario (i.e., positive signs and symptoms can help characterize the scenario while pertinent negatives reflect the differential diagnosis). For example, when a patient is being worked up for urinary tract infection, the presence or absence of polyuria, dysuria, frequency, and urgency should be noted, and results of urinalysis and urine cultures should be collected and assessed. 4. Consider requiring trainee to create a document listing signs and symptoms to be assessed during chart review for the most common disease states encountered at the rotation site. Modeling: 1. "Walk through" a patient chart review with trainee while "thinking aloud" (verbalizing thought processes and internalizing information). Be purposeful in highlighting areas of uncertainty (e.g., appropriate vs. necessary care, clinical controversies, differing provider preferences) to assist the learner in gaining insight on how to approach care in complex healthcare environment. Coaching: 1. Review a patient chart independently of learner and then compare and contrast collected data and interpretation of information together with learner. 2. Use a learner-led process for patient case presentations (e.g., SNAPPS model) that provides clear structure for information organization and analysis as well as identification of content areas for self-directed learning.

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Appendix A—Skill-related challenges identified in experiential education trainees and potential solutions

Identified Challenge	Description	Strategies for Remediation
Inappropriate or harmful therapy recommendations[19,21,22,27-31,33-39]	Poor clinical judgment or application of information in the context of actual patient care	Direct instruction: 1. Use Socratic questioning to uncover thought process and then formulate rationale for why recommendations may be inappropriate or harmful to patient (for example, risks associated with aggressive potassium replacement include cardiac dysrhythmias and phlebitis associated with potassium infusion; safe rates of potassium infusions depend on line type and the presence of telemonitoring, appropriate laboratory monitoring, and follow-up with potassium replacement). This method allows teacher and learner to assess thinking from many standpoints, including interpretation, assumptions, implications, logic, consistency, and point of view. Modeling: 1. Model for learner how to approach a given patient care scenario to formulate a recommendation in light of evidence-based medicine, local protocols, and clinical experience (e.g., use of a hospital protocol or tertiary resources). Coaching: 1. Use the learning framework of deliberate practice to provide structured learning activities, feedback, and reflection that facilitates comprehensive skill development and refinement. Ensure that feedback is timely and constructive to allow for maximal learner improvement and self-reflection.
Interpersonal skill deficit[3,8,11,14,20,36,40-45]	Difficulty in effectively interacting with preceptor students, or healthcare providers; this can include interactions described as • Socially awkward (e.g., odd affect, lack of empathy, exaggerated sympathy), • Aggressive (e.g., talking over others, being overly insistent), or • Lacking assertiveness (e.g., trainee is meek, soft-spoken, unable to "push back" when appropriate)	Direct instruction: 1. Assign reflective writings to explore learner's perspective on interactions; focus of assignments could include impact of communication on patient safety, characteristics of effective interprofessional healthcare teams, value of pharmacists in patient care, and differentiation of empathy and sympathy. Modeling: 1. Demonstrate how to interact effectively in several scenarios, including telephone, face-to-face, and group interactions. After each experience, reflect with learner on what went well (and why) and what could be improved (and how); discuss how a past scenario might have been approached differently. Coaching: 1. Provide specific instruction on how to handle potential scenarios. Prior to interactions, ask learner to brainstorm three questions the recipient of the information may have and prepare reasoned responses in advance to ease nerves and maximize success. 2. Engage in role-playing to enhance skills. 3. Use the learning framework of deliberate practice (described above). 4. Consider "360-degree review" to help learner gain perspective on how he or she is perceived by members of the healthcare team.

Appendix B—Attitudinal challenges identified in experiential education trainees and potential solutions

Identified Challenge	Description	Strategies for Remediation
Attendance or punctuality deficit[2,36]	Multiple absences or tardy arrivals are negatively affecting patient care, performance, or learner's credibility	Direct instruction: 1. Have an open discussion with learner, describing negative impact of poor attendance or punctuality. Ascertain potential contributing factors (e.g., legitimate illness vs. "mental health days," employment, personal life) and whether source of deficit is a need to juggle required responsibilities and personal desires (e.g., social activities). Reinforce message that gaining competence in practice requires being present and actively involved in the rotation. Coaching: 1. Address and document every account or violation. Set firm expectations and state the consequences of absenteeism or tardiness. Hold the trainee accountable for actions. 2. Encourage or require a hiatus from discretionary or extracurricular projects that may be affecting attendance.
Professionalism deficit[2,8,11,14,36,42-49]	Disrespectful communication with patients, preceptors, colleagues, or other healthcare professionals; unprofessional behavior when discussing patients with others (e.g., jokes in bad taste, negative stereotyping)	Direct instruction: 1. Conduct simulation (role-playing) exercises to develop or remediate deficits in professional characteristics or behaviors (e.g., how to professionally handle disagreement during discussion). Coaching: 1. Openly address (and document) all forms of inappropriate behavior, as avoidance can result in negative behavior reinforcement. Candidly discuss inappropriate behaviors and consequences in terms of patient care and how the learner, the preceptor, and the pharmacy profession are perceived. 2. Attempt to determine the root cause of problematic behavior (e.g., lack of self-awareness, impulsivity, nervousness) and trainee's intention (malicious vs. nonmalicious) to identify best course of action. 3. Have learner write reflection paper(s) based on identified issue(s); potential topics include (1) impact of tone, phraseology, and nonverbal communication on perceived intent of communication and (2) negative impact of behavior on colleagues, healthcare team, and patients. 4. Directly observe learner interactions prospectively to monitor performance. Provide continual feedback. 5. Consider "360-degee review" to ascertain perceptions of all stakeholders.
Lack of accountability[36]	Failure to accept responsibility for medication outcomes or misadventures; failure to report errors immediately	Direct instruction: 1. Discuss potential or actual consequences of necessary interventions not being implemented (including patient safety and cost implications). Coaching: 1. Implement a structured plan for late-day follow-up to help hold learner accountable. Follow-up plan should be used until preceptor is confident that trainee is making necessary interventions (or otherwise communicating appropriately).

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Appendix B—Attitudinal challenges identified in experiential education trainees and potential solutions

Identified Challenge	Description	Strategies for Remediation
Overconfidence[47]	Degree of confidence exceeds level of training and credentials; lack of humility; attempts to speak with authority to hide lack of knowledge	Direct instruction: 1. Discuss learner's role and scope of practice in rotation experience. Require learner to write reflection paper about unintended negative patient care consequences of "simple mistakes" or "oversights" and to research sentinel events involving pharmacists. Coaching: 1. Acknowledge that learner is competent for level of training and note relative lack of clinical experience. Require trainee to review recommendations with preceptor prior to delivering them. Set firm expectations and clearly delineate consequences to be applied if learner exceeds scope of practice at rotation site. 2. When a recommendation is presented for approval, ask the learner to elucidate how the accuracy of information was confirmed and to list potential unintended negative consequences of implementing the recommended intervention.
Lack of confidence[47]	Performance in dynamic situations (e.g., direct patient care, providing recommendations, answering "on the spot" inquiries) is below expectation given knowledge base, potentially due to shyness, apprehensiveness, nervousness, and insecurity about abilities	Coaching: 1. In a safe, one-on-one environment, openly discuss observations and ask probing questions (Does the trainee agree with the assessment? Are personal character traits or team dynamics contributing to the problem behavior?). 2. Emphasize the importance of pharmacists having and using their voice on the patient care team to influence patient care. 3. Discuss learner questions, counseling points, and recommendations before a predetermined interaction to allow a practice run-through to build confidence. Offer encouragement and emphasize that learning often requires "productive discomfort."
Lack of motivation[2,18,47,50]	Lack of initiative or inability to engage in self-directed learning; apparent disinterest in rotation site, assigned activities, or patient care	Coaching: 1. Discuss observations of apparent disinterest or lack of motivation with the trainee and ask probing questions (Does the learner identify with the observations? If so, why? Are personal issues affecting performance?). Acknowledge the value learners bring to patient care at the practice site and encourage engagement. 2. Revisit the learner's professional and rotation goals. Help the learner find relevance in training (i.e., the utility in understanding all facets of healthcare system that patients experience in order to optimize care in a given practice area). Work to set mutual goals for how to use discretionary time during rotation to best meet the trainee's unique needs and interests.

Appendix C—Potential challenges involving experiential education stakeholders and strategies for resolution

Stakeholder	Challenge	Strategies for Resolution
Learner[6,8,11,12, 20]	Failure to improve despite acknowledgment of deficit or undesirable behavior (possibly due to sense of inadequacy or insecurity)	Discuss learner's expectations, assumptions, and reflections on progress and training plan; may be helpful to include a third party (i.e., a second preceptor or a program administrator).
	Life circumstances (e.g., illness, financial stressors, work and personal commitments) are negatively affecting performance	Engage in candid discussion and goal setting with learner; consider granting leave of absence.
	Learning disability	Make reasonable accommodation per Americans with Disabilities Act and policies of learner's institution to ensure that trainee can complete curriculum; work with experiential education (EE) leadership, as disability should be identified prior to rotation start.
	Mental health issue or suspected substance abuse or chemical dependency	Engage in candid discussion with trainee and EE leadership; consider confidential referral to university or employee health clinic and potential leave of absence or other agreed-on accommodation in accordance with policies of learner's institution (documentation must be kept separate from academic file).
	Behavioral problems	Manage through graduated interventions: (1) informal conversation for single incident, (2) reflection or awareness intervention for subsequent event, (3) development of specific action plan (incorporating goals and assessments) by EE program director/ leadership, and (4) follow-through with stated consequences per policy if remediation plan fails.
Teacher/preceptor[8,51-54]	Teaching strategies not aligned with learner's needs	Revisit stages of learning and preceptor's roles to optimally align teaching strategies implemented.
	Mismatched teacher and learner expectations	Revisit primary prevention (syllabus and orientation) to reconsider goals and expectations; help learner identify role and find relevance in training; document preceptor/learner goal setting.
	Stress (demanding workload)	Identify specific tasks for learner to contribute to patient care within preceptor's workload; during rotation planning, consider reduction of clinical or didactic workload during precepting times; if learner lacks adequate experience in rotation area, work with EE leadership to identify alternative experience for learner to help reduce preceptor burden.
	Negative influence of perceptions about learner	Complete independent assessment of trainee at start of rotation to develop unbiased, objective teaching plan.
	Inability to provide effective documentation of learner's strengths and deficits due to time constraints or lack of knowledge of documentation practices	Provide group and individual preceptor education about assessment expectations and trainee performance standards, institutional reinforcement and support of faculty documentation policies, and remediation options.

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Appendix C—Potential challenges involving experiential education stakeholders and strategies for resolution

Stakeholder	Challenge	Strategies for Resolution
System responsible for learner[8,52-54]	Lack of clear vision of how students fit into practice	Develop departmental and/or systemwide plan for how to best incorporate trainees into practice.
	Inconsistencies in standards for or supervision of trainees	Engage team of individuals to discuss and develop standards for trainees at different levels; agree on rules for supervision during training process to ensure competency of trainees and patient safety.
	Lack of ongoing feedback or appraisal	Predetermine specific intervals for trainee evaluation; encourage daily communication in preceptor–trainee relationships.
	Overwhelming patient care responsibility placed on learners	Determine learner's workload based on previous training; create realistic expectations.
System responsible for preceptor[5,8,52-54]	Uneven trainee load across staff; expectations not same for practitioners at similar levels	Secure agreement among preceptors on appropriate precepting loads and expectations.
	Lack of support for preceptors with regard to handling challenging trainees	Develop institutional and program policies for handling challenging trainees; engage program leadership in developing remediation plans as needed.
	Deficiencies in remuneration of preceptor or sponsoring program for trainee supervision	Work with administration to develop consistent policies regarding money distribution into specific fund reserved for preceptor or program development.