

## COMMENTARY

### Accommodating Pharmacy Students with Physical Disabilities During the Experiential Learning Curricula

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Accommodating pharmacy students with physical disabilities during the experiential learning portion of the Doctor of Pharmacy curriculum can present unique challenges for pharmacy schools. The available literature on accommodations for pharmacy students in the experiential learning environment is sparse, leaving programs with little guidance. This commentary from the Big Ten Academic Alliance calls on the academy to create a community of shared resources and best practice examples and offers practical suggestions for accommodating pharmacy students with mobility, vision, and auditory disabilities during Introductory Pharmacy Practice Experiences (IPPEs) and Advanced Pharmacy Practice Experiences (APPEs).

**Keywords:** pharmacy, disability, accommodations, experiential

#### INTRODUCTION

Experiential education is an integral component of the pharmacy curriculum that allows students to practice pharmacy under the supervision of a preceptor. Completing these experiences may be challenging for students with physical disabilities who require accommodations. Pharmacy schools are required to provide reasonable accommodations for students with disabilities, but there is limited guidance describing best practices for accommodations in the experiential setting. Therefore, the authors call on the experiential education academy to create a community of shared resources and best practice examples to assist others with drafting accommodation plans for students with physical disabilities in the experiential education environment. This commentary is an effort from the Big Ten Academic Alliance Experiential Learning Work Group to share our experiences with accommodating students with physical disabilities in the experiential learning environment in order to foster this culture.

#### Background

The Americans with Disabilities Act (ADA) of 1990 is foundational to the civil rights and protections of those with disabilities. The legislation requires covered employers to provide reasonable accommodations to employees, establishes accessibility requirements in public facilities, and prohibits discrimination against people with disabilities during hiring and onboarding processes.<sup>1</sup> The Americans with Disabilities Act Amendments Act of 2008 (ADAAA) amended the ADA (1990) and the Rehabilitation Act of 1973 (Section 504), broadening the definition of disability, recognizing learning as a major life activity that may be limited by disabilities, and granting students with disabilities

equal opportunity in learning environments.<sup>2</sup> The ADA enables students with disabilities to access all levels of education, resulting in an increased number of students with disabilities pursuing health professional education.<sup>3-5</sup> While there are numerous articles describing accommodations for health professional students in medicine and nursing, there are few articles describing accommodations for pharmacy students. We provide the following guidance and case examples from our collective experience (Table 1) to support schools of pharmacy accommodating students with physical disabilities.

### **Preparing to Make Accommodations**

A first step in preparing to make accommodations for students with physical disabilities is creating a system for students to submit accommodation requests upon admission to the program. All students should be provided with information about disability services, steps to obtain services and disability documentation requirements. In addition, students should be reminded throughout their educational career to submit accommodation requests as situations change.

Accommodations within pharmacy are critical to fostering inclusivity in the educational setting and ensuring the success of students with disabilities. While each student admitted to a pharmacy program must meet the “academic and technical standards requisite for admission or participation in the institution’s educational program or activity,” institutions must provide reasonable accommodations so that students with disabilities have an equal opportunity to successfully complete the school’s program.<sup>2</sup> A careful balance must be maintained between upholding a curriculum’s academic and technical standards while providing reasonable accommodations to students. As such, it is advised that schools periodically review their technical standards to make sure the standards are viable and appropriate to allow the consideration of reasonable accommodations for students with disabilities keeping in mind that accommodations do not alter the program or impose an undue burden on the institution or potential rotation sites.

### **Exploring Accommodation Options**

Once a student has submitted a request, it will be important for programs to establish a team to support the student’s needs in didactic courses, labs, and experiential courses. The team should include the student, appropriate faculty including experiential representatives, and representatives from the campus disability office. Communication will be key in reviewing the student’s needs, concerns, and career goals. In addition, identifying accommodations that are reasonable and viable in the classroom and experiential sites will be paramount to the student’s success.

Transitioning between the didactic and experiential phases of pharmacy education is challenging for many students and it may be particularly challenging for students with accommodation needs. Understanding, implementing, and managing accommodations in the experiential setting may be especially difficult for students, schools, and practice sites, requiring advanced planning. Frequent open and honest communications is advised between the students, the experiential education team along with representative(s) of school’s disabilities office prior to scheduling experiences. It is important for the experiential team to understand the student’s career aspirations to assist with rotation planning and address any concerns the student may have. The student may have concerns pertaining to how site staff will perceive their abilities and the perceptions and reactions of patients to their disability or about their ability to provide safe patient care, particularly in a fast-paced practice site. Reviewing the student’s needs, goals and concerns in advance will help the team better serve the student.

It should be pointed out that accommodations used for a student during their didactic courses should not be expected to be optimal or appropriate for a reasonable accommodation in the experiential setting and modifications may need to be considered. For example, implementing physical modifications to a classroom or lab for student’s access and ease of mobility may be reasonable, while such changes to a retail pharmacy counter may be financially and logistically unreasonable for the site. While some accommodations are costly, not all accommodations pose insurmountable financial obstacles as assistive technologies have rapidly evolved in affordability. Working with the student, site, experiential team, college, and the disability resource center is key to identifying what is reasonable.<sup>6</sup> Large-font text and other visual or auditory modifications greatly assist with accurate information transmission but may introduce potential risks to patient privacy. Thus, it may be necessary to “modify the modifications” such as using computer privacy screens or asking students to use headphones and exercise additional discretion to protect patient information. Based on the various considerations that may arise in implementing accommodations, it may take multiple attempts to secure preceptors and sites who have the ability to support the student. It is ideal for the site and preceptor to have prior experience accommodating students with disabilities; however, as long as the site and preceptor are willing to communicate and collaborate, that will make all the difference in a successful outcome and experience for the student.

The experiential team will need to select clerkship sites and preceptors that will be able to support the learner’s accommodation needs and concerns. Some of this vetting can be done at initial and return site visits. Table 2 presents a

guide for physical accommodations that can be reviewed at site visits. Maintenance of confidentiality is important at this juncture. Sites and preceptors should initially be identified based on accommodation needs without disclosing student specific information. Once the accommodating site is confirmed, student specific details may be shared but specific student health information may only be shared by the student.

Another challenge for students with physical disabilities needing accommodations in the experiential setting is the need to rotate through multiple sites. This requires significant coordination and planning. Providing sequential rotations at a single site where accommodations have been implemented is an intervention that allows the student to continue and remain in an environment where he or she has acclimated. For example, the site may be able to dedicate a workspace that accommodates the student's needs over the course of the extended experience. This approach may help deliver the best possible experience for the student providing a level of comfort in the environment and with staff whom the student will interface.

In some circumstances, students may need the help of an intermediary, which is someone assisting the learner under the direction of the learner. This assistance should not fundamentally alter the curriculum. As such, intermediaries can reasonably be utilized in the curriculum for activities that pose dexterity challenges such as sterile compounding and skills evaluations. It should be noted that intermediaries assisting with experiential rotations may be subject to the same on-boarding requirements as the student (eg, pharmacy technician licenses, immunizations, background checks) along with attaining permission from state boards of pharmacy. Some issues may be circumvented by requiring intermediaries to be pharmacy technicians or registered pharmacists.

### **Pharmacy Specific Accommodations for Various Physical Disabilities**

Accommodation plans for physical disabilities in experiential education can be intimidating to implement, particularly if they have never been approached before. Part of the implementation challenge is the lack of examples of how similar accommodation plans have been implemented in the pharmacy setting. In an effort, to build a culture of accommodation plan sharing within pharmacy, we share various examples for students with physical disabilities that have been implemented by the experiential programs among the Big Ten schools of pharmacy in Table 1.

#### ***Applying mobility accommodation in pharmacy***

People requiring mobility aids, including wheelchairs, canes, and other power-driven mobility devices are entitled to access buildings and all areas that members of the public can access. The health-system, however, has discretion to determine what types of mobility accommodations can be offered to potential students. Planning should include consideration of the physical characteristics of the type of mobility device, the facility's volume of pedestrian traffic, the parking, entrance and exit areas and size and space along with operational characteristics of the pharmacy department. How students will access and navigate within patient rooms, auditoriums, and conference rooms along with compounding, hazardous and sterile environments should be determined.

When assigning students to experiential rotations, it is important to consider placing those requiring the use of mobility devices at facilities with existing policies for accommodating those devices. In institutions without such pre-existing policies, schools may find it beneficial to work with preceptors and sites to develop guidelines for accommodating students. Accommodation guidelines should address, but not be limited to, the different types of mobility devices, physical dimensions of hospital facilities, safety requirements of the pharmacies, and access to particular areas.

Depending on their disability, students may tire quickly necessitating a reduction in length of the rotation day. Sites may need to be flexible with the length of the rotation which may need to be extended beyond the usual period. Of note, rotation extensions may delay graduation for the student. In addition, workstations may need to be adapted to meet the student needs. Finally, students may need alternative ways to demonstrate competency, such as verbally explaining how to do an activity or directing an intermediary through activity completion, rather than physically performing the activity themselves.

#### ***Applying visual accommodation in pharmacy***

In experiential education, reasonable accommodations for visual impairments may include student placements at sites with close proximity to public transportation or within the service area of a specialized transit service for individuals with disabilities. A work schedule that allows the student to safely commute to the site should be considered. For example, if the student uses public transportation, the rotation hours should be congruent with the transportation schedule or, if the student walks, a schedule during daylight hours may be necessary. Workstations should allow for additional materials, such as optical magnification devices, that may assist with task completion.

Preceptors may need to consider altering how they communicate and how others will communicate with the visually impaired student. For example, electronic methods where fonts may be enlarged, rather than hand-written notes, may be preferred. Verbalizing written information, specifically when referencing charts, graphs, or diagrams. Examples of auxiliary aids and services that may be used to assist visually impaired individuals with communication include qualified readers, taped texts, audio recordings, and Brailled materials. Exceptions to providing these auxiliary aids and services would be when doing so fundamentally alters the nature of the goods or services provided to the public.

### ***Applying auditory accommodation in pharmacy***

To support students with auditory impairment, it is important to understand the extent of the impairment (ie, range of auditory loss), situations where student hears best and not at all, and adaptations or technology that the student currently uses. The experiential education team can work with preceptors to identify less noisy environments and to determine whether the site can utilize the same auditory technology used by the student.

Sign language, cued speech, and qualified interpreters can assist auditory impaired students with patient interactions such as discussing symptoms, obtaining accurate medication reconciliations, patient counseling, and communicating with other health care providers. All interpreters must be qualified and familiar with specialized medical terminology and concepts. A qualified interpreter well-versed in medication names and terminology is a valuable resource. They help ensure that students receive accurate information and that messages to the patient are clear and accurately understood, minimizing errors caused by miscommunication. Computer assisted real-time transcription can also be used in facilities with appropriate computer resources.

### **Implementing the Accommodation**

A key step in the implementation process is identifying costs and financial resources for the accommodation plan. To determine who is responsible for these costs, schools should check their specific policies. Accommodation costs should be relayed to all parties involved so there are clear expectations as to who is financially responsible. For example, if an intermediary is utilized it should be clear who will pay for the service. In our collective experience intermediaries are typically paid by the school.

After reviewing the accommodation plan and costs, it will be important for the student and preceptor to complete a practice walk-through to ensure success. A walk-through offers the opportunity to modify and make any necessary changes prior to the start of the rotation. It is helpful for both the learner and the preceptor to provide input on suggested changes. After completion of the walk-through process, the accommodation plan should be documented including the intervention and how it supports the learner, those involved creating the intervention, and the parties responsible for any financial costs. Finally, the site should confirm that the accommodations are ready for the student's rotation and communicate the accommodation plan to only essential site personnel keeping in mind ADA confidentiality rules.

### **Monitoring the Accommodation**

To ensure the accommodation plan is effective, programs should communicate with the student and the preceptor during the rotation. Periodic check-ins allow for the learner and preceptor to assess if the intervention is meeting the needs of the learner and still reasonable for the site. If the situation changes, the plan will need to be revised to find a reasonable accommodation. If an urgent concern arises, the student or the preceptor should contact the school promptly.

### **CONCLUSION**

While facilities may face many challenges in providing accommodations, these challenges can be overcome through persistence and creativity. Providing reasonable accommodations for student pharmacists with physical disabilities will be a rewarding endeavor for students and institutions alike. The authors hope that the information presented in this commentary will be valuable to pharmacy schools providing accommodations for their own students with physical disabilities. In addition, the authors call on the experiential education academy to create a community of shared resources and best practice case-based examples to assist others with meeting the needs of students with physical disabilities in the experiential education environment.

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Table 1.

Accommodation/Case Vignette Example	Site Activities Potentially Impacted	Consideration for Interventions
<p><b>Auditory:</b> Student requiring use of hearing aids and may read lips at times</p>	<ul style="list-style-type: none"> <li>- Communication activities where masking may make it difficult for student to hear/interpret dialogue due to inability to see other's mouths such as phone communications</li> <li>- Communications in areas with loud background noise such as IV room with hoods and fans</li> <li>- Communications during rounding especially if softer voices being used</li> <li>- Pharmacies with drive thrus since patients are further away and lack of telephone adaptors or lack of transportability</li> </ul>	<p><u>Specific Case Interventions:</u></p> <ul style="list-style-type: none"> <li>- Use of noise cancelling headsets for communication in IV rooms</li> <li>- Telephone and hearing aid with bluetooth function</li> <li>- T-coil connection to phone that can easily move to other phones</li> <li>- Teleprinter or teletypewriter (TTY)</li> <li>- Clear mask for lip viewing</li> <li>- Speech recognition software or app (ie, AVA)</li> </ul> <p><u>Other Potential Interventions:*</u></p> <ul style="list-style-type: none"> <li>- Technological options: Speech to text transcription, Computer assisted real-time transcription (CART), Closed captioning, sound alerting devices</li> <li>- Auxiliary aids: Oral Interpreters, Sign Language, Cued speech, Intermediary, Pharmacy staff to assist in communications</li> </ul>
<p><b>Mobility:</b> Student requiring utilization of a motorized wheelchair with varying level of dexterity in limbs</p>	<ul style="list-style-type: none"> <li>- Compounding of medications and sterile preparations</li> <li>- Transcribing verbal telephonic prescriptions</li> <li>- Dispensing of medications</li> <li>- Immunization certifications</li> <li>- Blood pressure readings</li> <li>- Blood glucose readings</li> <li>- CPR/BLS certification</li> <li>- Travel to/from site and within the clinical setting</li> </ul>	<p><u>Specific Case Interventions:</u></p> <ul style="list-style-type: none"> <li>- Use of an intermediary hired through disabilities office with petition and approval from Board of Pharmacy</li> <li>- Site selection within reasonable miles of residence</li> <li>- A reduced daily rotation schedule to fit student's need to avoid fatigue and stress which may lengthen the rotation from 4 to 5-6 weeks</li> <li>- Site and preceptor collaboration with staff to support student while completing rotation</li> <li>- Creation/selection of work space/station for student to adjust to size, width and height of wheelchair</li> <li>- Placement at sites that have handicap access and comply with ADA regulations</li> </ul> <p><u>Other Potential Interventions:*</u></p> <ul style="list-style-type: none"> <li>- Technological options: Wheelchair with capability of sitting/standing positions, Adjusting height work benches, Headset (ear-piece, microphone) so do not have to reach across counter</li> <li>- Auxiliary aids: Periodic rest breaks for change in position, Reaching tool or assistance from staff for out of reach items</li> </ul>
<p><b>Visual:</b> Student with significant visual impairment requiring a cane for walking and magnifier for reading</p>	<ul style="list-style-type: none"> <li>- Reading non-electronic and/or handwritten materials</li> <li>- Preparation of sterile compounds where compounding must take place no less than six inches from the front edge of the work surface</li> <li>- Travel to/from site and within the clinical setting</li> </ul>	<p><u>Specific Case Interventions:</u></p> <ul style="list-style-type: none"> <li>- Syringe magnifiers in the sterile environment</li> <li>- Magnification aids to assist with interpretation of medication orders and prescriptions and review of medical records with small font</li> <li>- Use of computer that allows screen magnification</li> <li>- Schedule that allows the student to safely commute to/from the site</li> <li>- Site selection near public transportation with available accommodations</li> <li>- Sequential rotation placements at a site</li> </ul> <p><u>Other Potential Interventions:*</u></p> <ul style="list-style-type: none"> <li>- Technological options: size of computer monitors, audio recordings, screen reader software; magnification software,</li> </ul>

		providing headphones to student (patient privacy) in conjunction with text to talk software - Auxiliary Aids: Large print material, electronic learning materials, rotations where care can be managed remotely (tele-pharmacy), Intermediary, magnifier, brailled materials,
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\*Modified from the Job Accommodation Network website ([www.askJan.org](http://www.askJan.org))

Table 2. Site Visit Physical Accommodations Guide

Auditory	<input type="checkbox"/> Availability of assistive technology for auditory needs <ul style="list-style-type: none"> <li>▪ Voice-to-text software</li> <li>▪ Headset compatibility</li> <li>▪ Closed captioning telephones and applications</li> </ul> <input type="checkbox"/> Availability of work-related assistance <ul style="list-style-type: none"> <li>▪ Sign language interpreters</li> </ul>
Mobility/Dexterity	<input type="checkbox"/> Availability of assistive technology for mobility/dexterity needs <ul style="list-style-type: none"> <li>▪ Adaptive mouse and keyboards</li> </ul> <input type="checkbox"/> Availability of work-related assistance <ul style="list-style-type: none"> <li>▪ Aide to assist with reaching for objects</li> </ul> <input type="checkbox"/> Accessible parking and building access <ul style="list-style-type: none"> <li>▪ Keyless entry</li> <li>▪ Automatic doors</li> <li>▪ Elevators</li> <li>▪ Entrance and exits</li> <li>▪ Restrooms</li> </ul> <input type="checkbox"/> Square footage for clearance and mobility of pharmacy department areas <ul style="list-style-type: none"> <li>▪ Workflow station</li> <li>▪ Conference rooms</li> <li>▪ Break/rest areas</li> </ul>
Visual	<input type="checkbox"/> Availability of assistive technology for visual needs <ul style="list-style-type: none"> <li>▪ Screen enlargement</li> </ul>
Other	<input type="checkbox"/> Allowance for service animal in the workplace <input type="checkbox"/> Availability of work-related assistance <ul style="list-style-type: none"> <li>▪ Readers</li> <li>▪ Note takers</li> </ul> <input type="checkbox"/> Pharmacy staff training seminars to ensure sensitivity and awareness <input type="checkbox"/> Allowance for a “student champion” to serve as a point of contact for students and faculty

## Appendix. Big 10 Accommodation Article – Author Contributions

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