

Can virtual reality become the new training vehicle in community pharmacies for continuous glucose monitoring?

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World Journal of Biology Pharmacy and Health Sciences, 2025, 21(03), 107-117

Publication history: Received on 29 January 2025; revised on 05 March 2025; accepted on 07 March 2025

Article DOI: <https://doi.org/10.30574/wjbphs.2025.21.3.0267>

Abstract

This action research study, approved by the Institutional Review Board (IRB) of Northeastern University, explores the role community pharmacists play in helping diabetes patients with Continuous Glucose Monitoring (CGM). Community pharmacists play a pivotal role in administering healthcare services to patients in the U.S. Using qualitative dominant action research methodology, this study employed semi-structured interviews, observations, and surveys to reveal that community pharmacists need scalable and accessible CGM professional development. The findings indicated that today's pharmacy ecosystem is quite chaotic and not conducive to traditional methods of training such as being called on by manufacturer representatives to be educated. Further, there is an absence of diabetes-specific and CGM services being provided at pharmacy, the nation's most reachable and frequently visited healthcare destination. The study underscores the need for technology-driven CGM education solutions to empower community pharmacists in delivering primary care services for patients with diabetes. Action steps were engineered to explore the use of virtual reality (VR) technology as a training modality in community pharmacy as a solution. Findings signify that VR technology can be an effective training tool that enables community pharmacists to provide CGM primary care services for patients with diabetes.

Keywords: Community pharmacy; Continuous glucose monitoring; Virtual reality; Primary care in pharmacy; Training in pharmacy

1. Introduction

Diabetes is a complex, chronic disease affecting approximately 30 million diagnosed Americans and costing \$412.9 billion annually in healthcare expenses (1). The prevalence of diabetes is growing rapidly, with 1.2 million Americans being newly diagnosed each year (2). Community pharmacists are uniquely positioned to help manage diabetes, as patients may visit their local pharmacy around 35 times per year compared to only a few visits to their primary care doctor (3). With around 67,000 community pharmacy locations, 90% of the U.S. population lives within five miles of one (4). About 60% of the 315,000 U.S. pharmacists work in retail pharmacies (5).

The American Diabetes Association has updated its 2025 standards of care recommendations to include continuous glucose monitoring (CGM) for all patients with diabetes (6). Pharmacists also advocate for CGM use and desire to help patients as capable practitioners who can improve patient outcomes. CGM devices, combined with pharmacist interventions, have been shown to reduce A1c levels in diabetes patients (7). A1c reflects the 90-day average of blood glucose levels (8).

The problem of practice, for this action research study, was that a leading diabetes technology company (Company A), located in the western United States (U.S.), sought to better understand the role today's community pharmacist plays in

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helping diabetes patients with CGM. Community pharmacists work in retail or community pharmacy settings, where they dispense medications and provide consultations to the general public (9). Current trends suggest community pharmacists increasingly take on larger roles in primary care for people with chronic diseases (10). For example, pharmacists in some states, such as Oregon, have the authority to prescribe CGM devices for diabetes patients (11).

Regarding CGM, Company A needed to understand the professional development needs of pharmacists, prescriptive dynamics, current pharmacy services, and the resources required to better support pharmacists. This issue is significant because it directly impacts Company A's decisions on resource allocation for pharmacy education and tools that empower pharmacists to serve their diabetes patients. The challenge for Company A and other companies in this space is to understand how the role of community pharmacists in primary care is evolving and what support is needed.

The expanding role of community pharmacists, combined with the demanding environments they work in, has increased the complexity of delivering the education needed to meet new demands and ensure health equity for currently underserved populations. Emerging evidence indicates a need for innovative training solutions as the pharmacist's role continues to evolve and the needs of the community go unmet. Community pharmacists can be valuable assets to diabetes patients (12) but require effective training to fulfill this role.

The purpose of this action research study was to investigate the evolving role community pharmacists play in providing CGM services for patients with diabetes. CGM devices offer critical benefits that help people with diabetes avoid life-threatening complications (13). Community pharmacists are uniquely positioned to assist with diabetes management (3). However, the CGM needs of many people with diabetes remain unaddressed due to lack of formal training for community pharmacists. The following research questions were used to guide this study:

1.1. Cycle One Primary Research Question

What role do community pharmacists play in helping diabetes patients with CGM?

1.2. Cycle One Secondary Research Questions

- How is the role of the pharmacist evolving with prescribing autonomy for CGM?
- What are the professional development needs for pharmacists for CGM?
- How are pharmacists helping patients with CGM?
- What are pharmacists' perceptions on patient access to CGM?

1.3. Cycle Two Research Question

How can virtual reality become a viable training method that could be adopted by community pharmacy to drive CGM education and provide pharmacists with the confidence needed to enact primary care services for CGM?

2. Methods

This investigation is an action research study. Action research explores lived experience of participants and helps apply solutions based on the findings. Action researchers are then bound to act on the knowledge they acquire through research (14). The principles of action research are symbiotic. Participation and collaboration between the researcher and the study's participants is critical. Action researchers are practitioners who do research with people, not on people (15). Action research seeks to enact praxis, or the movement from theory to practice. This type of research sits at the intersection of inquiry and interdependence. The goal of the action researcher is to learn something important about the social construct and impart meaningful action to create change. The researcher and the participants experience the proposed change together and are engaged in collective reflection (16). In this study, the research design centered on capturing community pharmacists' experiences working with diabetes patients and CGM technology, fostering a partnership between the researcher and participants.

The participants and internal stakeholders of this action research study were community pharmacists, who provide medications and consultations to the public (9). Community pharmacists may work in chain pharmacies, which can be national or regional, or in independently owned locations. Independent pharmacies may consist of single or multiple locations owned by individuals or groups (17).

The inclusion criteria for participants were community pharmacists currently working in a retail pharmacy setting. All other types of pharmacists were excluded from this study, as the focus was specifically on community pharmacy. For instance, hospital pharmacists and ambulatory care pharmacists were not included. The pharmacists involved in this

study had the necessary expertise to participate in both Cycle One and Cycle Two research. They were not only experts in community pharmacy, but also critical to developing the Cycle Two action steps. These pharmacists operate within the community pharmacy ecosystem and have experienced various training methods throughout their careers. This group possesses the specialized knowledge needed to address the Cycle One and Cycle Two research questions thoroughly.

In Cycle One, 16 participants were invited to join the study through multiple channels. For example, the Idaho Board of Pharmacy helped by contacting two pharmacists in the state on the researcher's behalf. A national pharmacy chain's diabetes category manager collaborated by engaging with several pharmacists on their staff. Additionally, pharmacists from the Medical Science Liaison team at Company A contributed to gaining participation from industry colleagues. Snowball sampling was then used purposively to recruit 54 total survey participants who were active community pharmacists. One survey, which included 25 of the 54 participants, was conducted in Colorado, Oregon, and Idaho where CGM prescribing authority is granted to pharmacists. The balance of the survey participants operated in other states. In the study, pharmacists are referred to as participants and are assigned numbers. See Table 1 below for participant details.

Table 1 Cycle One Interview Participants

Participant Code	State	Chain Type	Years' Experience
P1	VT	Regional	7
P2	MA	National	25
P3	PA	National	3
P4	NY	Regional	7
P5	VT	Regional	2
P6	MA	National	14
P7	ID	National	<1
P8	OR	National	<1
P9	CO	National	<1
P10	CO	National	<1
P11	CT	National	15
P12	OR	Regional	15
P13	CO	Regional	19
P14	ID	Independent	6
P15	ID	Independent	<1
P16	ID	Independent	5

In Cycle One of this study, 16 semi-structured interviews and two surveys with 54 participants were conducted with community pharmacists to collect data. Interviews were recorded using the Zoom platform and lasted approximately 30 minutes. Surveys were designed and distributed via email to participants using the Qualtrics software. In Cycle Two, the researcher administered a pre-survey to participants prior to delivering the 10-minute training simulation using the VR software. A post-survey was offered, which posed the same questions, two weeks after pharmacists experienced the training (see Figure 3). Additionally, semi-structured interviews were conducted with each Cycle Two participant after the training. Field notes, analytic memos, and reflective practices were integral to the research process. Verbatim transcripts of Cycle One and Cycle Two audio-recorded interviews were analyzed in NVivo 14 software using the thematic method recommended by Braun and Clarke (18).

3. Results

All interview transcripts generated by Zoom were imported into NVivo and coded for meaning. A series of four overarching parent codes were created deductively, using a preconceived, or *a priori*, list of codes (19). Additionally, child codes were created inductively as the coding process evolved. The coding strategy employed was based on using descriptive and process codes. A total of 73 and 33 codes were created, respectively in Cycles One and Two, throughout multiple iterations of qualitative analysis of the participants' interviews. Codebooks were generated providing full descriptions of each code.

Next, codes were evaluated using thematic analysis to identify patterns and impart greater meaning. This process involved constructing shorter labels post-coding and translating them into expanded extensions (19). Themes were generated using a systematic methodological process. A code list was created using both parent and child codes aligned with the four main research questions. Codes that were categorically similar were clustered for each research question and categorized based on frequency of use. Researchers identify patterns and create clusters (19). Each group of codes was then reflected upon to generate overarching themes. This rigorous process resulted in the identification of 13 themes in Cycle One and three in Cycle Two. Table 2 details the themes that emerged from thematic analysis of the Cycle One semi-structured interviews, corresponding to the Cycle One research questions.

Table 2 Cycle One Themes Matrix

Research Questions	Thematic Analysis Results
How is the role of the pharmacist evolving with prescribing autonomy for CGM?	CGM Prescriptions are not Being Written by Community Pharmacists Lack of Confidence Prescribing CGM if no Training is Provided Perceived Barriers to Prescriber Authority for CGM Community Pharmacists are Writing Other Prescriptions
What are the professional development needs for pharmacists for CGM?	Accessible and Scalable Professional Development is Needed Live Training Preferred but not Suitable for Chaotic Environment More Training Resources Needed in a Manner Suitable for Workplaces
How are pharmacists helping patients with CGM?	CGM Services are Scarce in Community Pharmacy Pharmacists Believe in CGM but Lack Awareness Pharmacy Environment is Challenging for Pharmacists
What are pharmacists' perceptions on patient access to CGM?	Pharmacists Perceive Insurance is a Barrier to CGM Access Prior Authorizations are a Perceived Barrier Cost of a CGM is a Perceived Barrier

Note. This matrix outlines the main research questions from Cycle One, and the associated themes derived from thematic analysis.

4. Discussion

4.1. Discussion of Cycle One Findings

The Cycle One findings indicated that community pharmacists need accessible and scalable professional development for CGM to empower them to provide better support to diabetes patients in a formal and consistent manner across all communities. In Colorado, Idaho, and Oregon, where pharmacists have prescriber authority for CGM, initial findings suggested confusion about their ability to write these prescriptions. At the time of this study, none of the Cycle One participants working in these states had assertively written a CGM prescription for a patient. Additionally, survey results from Colorado, Idaho, and Oregon showed that 78% of respondents believe they do not have prescriber authority for CGM, with another 13% undecided. This indicated a significant amount of confusion. Although pharmacists from one chain in these states were aware of a protocol for writing CGM prescriptions, none of these three participants had written a single prescription.

While most interview participants preferred live education, the study revealed that the metric-driven pharmacy environment is not conducive to traditional training methods, such as visits from manufacturer representatives. Challenges such as no-rep policies, labor shortages, lack of coordinated visits, and pharmacists' reluctance to be

approached by representatives contribute to these difficulties. Participant 11 stated, “If a rep ever came into my store, they would be denied right away because the chain does not want reps.” Survey results indicate that less than a third of pharmacists want to see a representative due to the time constraints they face. These findings supported the need for an innovative solution for accessible and scalable professional development, such as using VR to provide critical training for pharmacists to deliver primary care services. The Cycle One research also indicated that pharmacy chains are not providing the formal CGM training that pharmacists need, underscoring the demand for a new, scalable, and accessible professional development solution. When asked about formal CGM training, several participants mentioned that their employers had not provided any. For instance, Participant 3 stated, “My company does not provide anything to really support me as I try to help these patients.” Lack of CGM training is a significant problem in the industry, given the prevalence of patients with diabetes in the U.S., and given that pharmacies are the most accessible healthcare destinations in the country. In Cycle One surveys, approximately 60% of respondents confirmed that they need more education on CGM.

None of the 16 interview participants in Cycle One reported that their pharmacy offers specific diabetes services to patients. This finding aligns with the literature, as Vascimini et al. (20) asserted that there is weak evidence that community pharmacists are actively engaging in CGM-related services. Further, evidence suggests that community pharmacist-driven CGM initiatives may improve diabetes care significantly, but that more CGM education is needed for pharmacists (20). This result aligns well with the Cycle One findings that indicated a need for scalable and accessible professional development for CGM. Participants emphasized the importance of seeing the product out of the box and learning experientially with the device, aligning with the proposal for Cycle Two research on a new training method that allows for applied learning.

Cycle One results aligned with literature regarding challenging workplace dynamics, which contributed to the 2023 pharmacy walkouts known as “Pharmageddon.” Goforth (21) explained that social media coined the term to describe the phenomenon of thousands of community pharmacists walking out of their jobs due to difficult working conditions. Cycle One data supports this portrayal of a chaotic, short-staffed, metric-driven pharmacy environment. The study indicates that pharmacists face challenges that hinder their ability to serve patients effectively. Major challenges include prescription-filling quotas and lack of time. Participant 5 shared, “Our time is already so pinched. I feel like I’m always doing so many things at once.”

While there are multiple barriers emerging from Cycle One, they concentrate into a problem of practice centered around an absence of effective formal learning and development for community pharmacists focused on CGM. Therefore, the aim of this study is to address this gap by ideating and deploying an innovative approach for scalable and accessible CGM training using fully immersive VR technology.

4.2. Discussion of Cycle Two Responses

Cycle One findings demonstrated the need for a new training vehicle in community pharmacy that is scalable and accessible and provides relevant content to aid pharmacists in helping more underserved patients with diabetes. This new innovation needed to provide relevant content to community pharmacists to inform and thereby empower them to perform primary care services for people with diabetes. The study indicated pharmacists want and need more education on CGM that can be delivered in an efficient and effective manner. The main objective of this action step was to introduce an innovative concept, using VR technology to bridge training gaps in CGM education for community pharmacists. The FreeStyle Libre 3 CGM device was chosen as the product for use in the training simulation, as it is a common CGM product dispensed at pharmacies (see Figure 1). The use of VR has been proven to increase confidence by 275% using applied learning as well as decreasing distractions (22). “Patient simulation in pharmacy education has proven to be an effective educational tool that can bridge the gap between theory and practice” (23). This positive praxis is good news for VR to upskill pharmacists on the use of CGM for the purpose of catalyzing primary care services for patients with diabetes. The VR simulation presents a new pedagogy for CGM education in the pharmacy ecosystem. The goal was to pioneer the innovative concept during live sessions in community pharmacy locations to enable participants to experience the modality and provide objective feedback (see Figure 2).



Note. From left to right the sensor, reader, applicator, package carton, phone application, and product logo are depicted.

Figure 1 The FreeStyle Libre 3 CGM Device



Note: These are photographs of five of the seven participants during the VR training simulation. The participants gave permission to be photographed for this research project.

Figure 2 Pharmacists Experiencing the VR Training on CGM

This research aimed to educate pharmacists in an effective manner, given the challenges of the pharmacy ecosystem that were uncovered in Cycle One. The Cycle Two action steps included meeting with the award-winning, California VR company SimInsights, gaining a copyright license from Company A, creating the training intervention software, delivering the training sessions where participants experienced the VR intervention, and conducting an evaluation using pre-post surveys and semi-structured interviews with the seven research participants. Cycle Two included seven participants working at large national pharmacy chains. Table 3 indicates the Cycle Two participants' codes for identification when attributing quotations in the results section, the state and type of pharmacy chain the participants worked in, and their years of experience as a pharmacist.

Table 3 Cycle Two Participants

Participant Code	State	Chain Type	Years' Experience
P1	MA	National	3
P2	MA	National	25
P3	MA	National	2
P5	MA	National	1
P5	MA	National	2
P6	MA	National	14
P7	MA	National	15

4.3. Finding 1: VR Training Increases CGM Primary Care

An outcome of this study was that pharmacists were truly empowered to engage in primary care services after experiencing the training intervention using VR as a modality for CGM. Figure 3 shows the results from the pre-post survey that was administered to measure the efficacy of the training. Prior to the training, participants lacked confidence in their ability to counsel patients on the glucose reporting functions of the device- they were unlikely to provide CGM primary care services for diabetes patients. Additionally, pre-intervention, pharmacists were not even sure of what was in the box. However, after experiencing the fully simulated VR training, participants reported statistically significant increases in product knowledge, application, data reporting, confidence, and likelihood of providing CGM primary care services to patients. Participant 2 tells us that pharmacists are more likely to provide primary care services to patients for CGM once that they have experienced the VR professional development training. "Yes, I'd be more likely to proactively seek out a patient who I know is picking up either the sensors or the reader for the first time and address them proactively to answer any questions they might have or show them the product versus letting them pick it up and take it home without any explanation. I feel like it increased our confidence level with the product"(P2).

This study indicated that VR simulation prepares pharmacists to deliver CGM primary care. During the interview data collection process, a well-tenured pharmacist confirmed the VR training delivered that required preparation. When asked if the training was a catalyst for CGM primary care she stated, "I feel like it did because it mimics you putting the sensor on the patient, and before (the training) I never knew what was inside the boxes, what it looked like, how to apply it, and seeing that was really helpful. I think, in relation to this particular device, that I definitely feel more comfortable providing primary care services" (P6).

As a result of this training, the study participants were ready to change their behavior going forward and provide enhanced care. "I think for the future I'm definitely prepared to answer questions from the patients and counsel them" (P3). The results of this research study were encouraging, as pharmacists are at the front line of care and see diabetes patients in their pharmacies every day. The finding that this VR training simulation on CGM has increased the confidence levels necessary for pharmacists to feel comfortable administering primary care for CGM was very promising. There are approximately 2.4 million people in the U.S. using a CGM device (24). The time to enhance pharmacist professional development with modalities that have been found to increase the enactment of CGM primary care is now.

Rating Scale 1-5 FreeStyle Libre 3 CGM Device Change Assessment		Before Intervention					After Intervention					Mean	P-value	
		1	2	3	4	5	1	2	3	4	5			
Competence	1. Please rate your knowledge of the components in the Libre 3 READER box.	0	3	4	0	0	2.57	0	0	0	1	6	4.86	0.000
Competence	2. Please rate your knowledge of the components in the Libre 3 SENSOR box.	0	2	3	1	1	3.14	0	0	0	2	5	4.71	0.003
Competence	3. Please rate your knowledge of the FreeStyle Libre 3 sensor application process.	0	2	3	1	1	3.14	0	0	0	2	5	4.71	0.003
Competence	4. I have a clear understanding of the FreeStyle Libre 3 data reports that are available to patients.	0	3	3	1	0	2.71	0	0	0	3	4	4.57	0.000
Competence	5. I have a clear understanding of how to navigate to the available data reports in the FreeStyle Libre 3 App.	0	5	1	1	0	2.43	0	0	0	3	4	4.57	0.000
Competence	6. I have a clear understanding of the purpose of each data report available in the FreeStyle Libre 3 device.	0	3	3	4	0	2.71	0	0	0	1	6	4.86	0.000
Personal Attribute	7. I have confidence in my ability to counsel patients on the reporting functionalities in the FreeStyle Libre 3 system.	0	4	2	1	0	2.57	0	0	0	4	3	4.43	0.000
Personal Attribute	8. I see myself as a pharmacist who can teach peers about the data reporting features in the FreeStyle Libre 3.	0	3	2	0	2	3.14	0	0	0	3	4	4.57	0.008
Future Impact	9. I seek opportunities to counsel patients on the relevance of the FreeStyle Libre 3 data reports.	0	2	0	3	1	3.71	0	0	0	3	4	4.57	0.086
Future Impact	10. I am likely to provide primary care services on the use of the FreeStyle Libre 3 data reports.	0	1	2	3	1	3.57	0	0	0	2	5	4.71	0.015
Future Impact	11. I am committed to helping patients understand the reporting features of the FreeStyle Libre 3 CGM device and why they are significant.	0	0	1	3	3	4.29	0	0	0	2	5	4.71	0.039

Figure 3 Pre-Post Survey Results

4.4. Finding 2: Pharmacists Believe VR is an Effective Learning Tool

It is critical that pharmacists believe in the training tools they are using to obtain the information required to help patients and provide care. This research found that pharmacists believe VR to be an effective modality for CGM training. The training that was delivered taught pharmacists fundamental knowledge about the device that is needed to counsel patients. "I feel like the training material was very comprehensive and easy to follow. It was informative and simplified. I feel like it was very comprehensive and very thorough. We have the opportunity to make a larger impact during our consultation with them (diabetes patients) if we have something like this" (P6). Participants were trained in the VR simulation on key topics such as the device components, sensor application, the iPhone App, and the glucose data reports that are critical to understand. These CGM topics are vital to a pharmacist's knowledge and directly affect their abilities to counsel patients effectively. This study found that pharmacists do not know what is inside the box, as they do not get a chance to open the CGM devices. "We can't open the packages in the store, so rarely are we handling it. I have no personal experience with it" (P2). The VR simulation was effective as it allowed the participants to simulate opening the reader and sensor boxes. It was clear that VR is an effective way to provide this necessary experience to pharmacists so they can help patients. "Because I've been able to at least virtually see and touch it. I'll be more confident." (P2). This experience was found to be an effective modality for learning about the reports as well. The simulation taught the pharmacists about four key glucose reports by having them use the app menu, select the reports, and watch the reports come to life while the pharmacist avatar provided the details. "Going through the virtual training was really helpful because it helped me to understand the different reports. I learned a lot; where the numbers come from so I can guide and help the patient and consult the patient on what data to look for" (P7). Pharmacists are not familiar with these reports unless they have had an effective training on them. This study has indicated that VR can simulate an experiential learning encounter that allows the user to have a personal experience with the product. The technology is like having a hands-on training session.

4.5. Finding 3: Implementation of VR Must be Well Planned

A relevant finding was that pharmacists are not familiar with VR, and the participants in the study had never used the technology before. There is a learning curve. Most participants made similar comments such as "It was my first time actually using virtual reality. I heard about the device, but I've never actually used it" (P3). From putting the headset on properly to holding the hand paddles correctly, there are some things that are intuitive and some that may not be so

easy to figure out without clear instructions. The well-planned part of this theme means understanding these dynamics and ensuring that there is a plan in place to deliver the training seamlessly.

Given that space challenges in the community pharmacy ecosystem exist, consideration must be given to the design of the software to ensure operability in a small area. That said, planning the design around a seated experience may be best. However, another finding of this study is that pharmacists want the flexibility to take the VR unit home with them to do the training. "I think bringing (the VR device) home would be more comfortable" (P4). This option could be considered, and planning around it would need to be factored into the implementation guidelines. Operationalizing VR as a training device in community pharmacy should be done with a software design that is not dependent on a W-Fi connection. Wi-Fi is not well supported in community pharmacy, and using a cell phone hot spot may get the job done, but not at a rate of speed that is needed. Pharmacists are busy and time is limited.

5. Conclusion

The activities completed in Cycle Two were responsible for the development of a training simulation for CGM education, using VR technology, which was delivered to pharmacists in an accessible manner. That training intervention has been proven to increase CGM awareness and competence levels of pharmacists in understanding a major CGM device in the U.S. market, its components, application process, and critical glucose data reports. Cycle Two activities employed the use of a pre-post survey to measure the efficacy of the VR training intervention. In that survey, a question was posed to pharmacists around the likelihood of enacting CGM primary care services in community pharmacy for the FreeStyle Libre 3 device. In the pre-survey, only one pharmacist showed the highest level of confidence delivering CGM primary care for this device. In the post survey, five of the seven participants rated themselves at the highest level while the other two participants rated themselves at the second highest level on the scale. Additionally, the results showed statistical significance was achieved in confidence counseling patients when comparing the pre-post survey. The knowledge gained by experiencing this new modality has not only increased the opportunities that pharmacists will seek to counsel patients on CGM, but also has increased the likelihood that these pharmacists will carry out more CGM primary care services that are vital to managing diabetes.

Cycle Two activities sought to test drive a new training modality in community pharmacy using VR. The test was successful, and an abundance of useful information was uncovered regarding the use of VR technology in community pharmacies and the considerations that come along with implementation. The literature supports the finding that VR technology has the power and accessibility to become the standard in pharmacy education (25). When it comes to teaching pharmacists, which is the underpinning of this action research study, Al-Worafi (2023) tells us "the use of patient simulation in pharmacy education has been growing in popularity in recent years, and it has become an essential tool in training the next generation of pharmacists" (23). The findings of this action research study come with a recommendation for Company A, as well as others in the CGM space, to continue researching the use of the VR technology as a training modality for pharmacists. The professional development gap for CGM in community pharmacies is a barrier to the delivery of CGM primary care services to diabetes patients by pharmacists. It is recommended to pilot the use of VR technology in a more substantial research setting by partnering with a pharmacy chain to continue to test drive the training vehicle to learn more about its potential and its impact on educating and empowering community pharmacists.

Compliance with ethical standards

Disclosure of conflict of interest

The author declares no relevant conflicts of interest or financial relationships.

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