

Improving the Health of South Dakotans through the Prevention and Management of Diabetes, Heart Disease, and Stroke

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Year Three of the five-year project to improve the prevention and management of patients with diabetes and cardiovascular disease (CVD) was a year of implementation of programs. Several programs were initiated, launched, and expanded throughout the year. Despite the challenges that continued to be encountered due to the COVID-19 pandemic, the team not only met the goals of implementation but also started data collection and preparation for analysis. Additionally, the project reached 340,000 South Dakotans through the patient awareness campaign, “Your Pharmacist Knows,” developed and presented four webinars, worked with students to create and present four posters digitally displayed during the national American Pharmacist Association 2021 Annual Conference, and is in the process of developing several papers and an additional poster accepted for the national American Public Health Association 2021 Annual Meeting.

During Year Three, the SDSU team continued to work in three primary workgroups, the Patient Workgroup, the Practitioner Workgroup, and the Payer Workgroup. Figure 1 demonstrates the project’s workgroup structure. Though each of the workgroups took lead on different responsibilities, all of the groups worked together for successful implementation of programs. All of the workgroups and stakeholders represented in each workgroup are dependent on one another; the patients need to be aware of their local pharmacy services, pharmacies need to be able to offer those services, and payers need to reimburse services so patients can receive and pharmacies can offer those services. As such, the patient awareness campaign, led by the Patient Workgroup, was launched to increase patient knowledge and awareness of pharmacy services as this was a gap found in the Year One landscape analysis. Additionally, the Practitioner Workgroup worked with pharmacies to establish, advance, and expand services offered through training sessions, assistance with service set-up, and helping collaborating sites have the resources needed for initial and continued service provision. Simultaneously, the Payer Workgroup worked with local health plans to provide information and feedback on the pharmacy services being offered, as well as, working to provide the documentation needed to demonstrate the impact and value of these services.

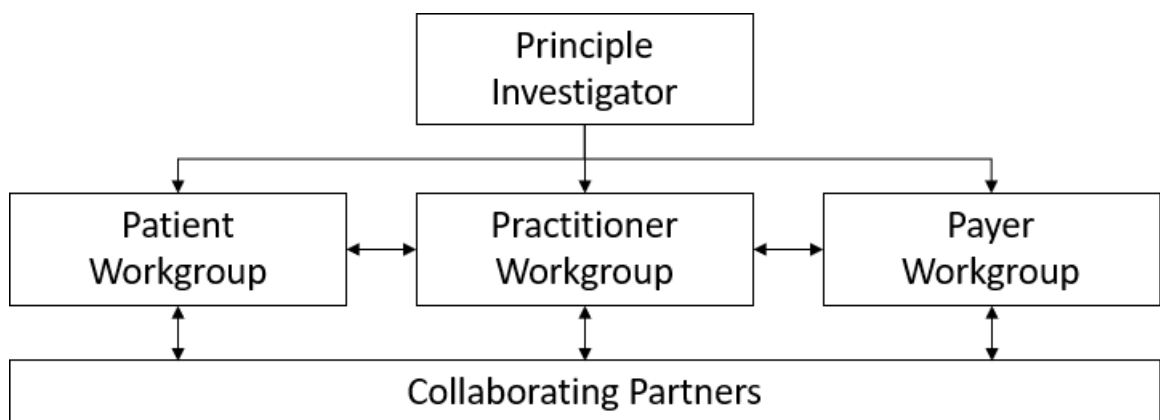


Figure 1. Project workgroup structure

Overview

The Patient Workgroup launched the patient awareness campaign, “Your Pharmacist Knows,” developed in Year Two, to continue to expand knowledge, awareness, attitudes, and norms of pharmacy services. The team worked to enable website tracking on the “Your Pharmacist Knows” website that allowed insights to website traffic. Additionally, this workgroup worked closely with the Practitioner Workgroup in Year Three to recruit and enroll patients into medication therapy management (MTM) services and the project.

Goals

The main goal of the Patient Workgroup in Year Three was to launch the “Your Pharmacist Knows” patient awareness campaign to improve the understanding of the pharmacy-provided services available to patients. Another major goal was to recruit and enroll patients in pharmacy-based services, with an emphasis on MTM. Recruitment efforts were done in collaboration with the Practitioner Workgroup and pharmacy partners.

Major Activities and Outcomes

The patient awareness ad campaign commercial developed in Year Two was launched September 21, 2020 and ran through December. Once the commercial stopped airing, participants that completed the pre-survey were asked to complete the post survey. To recruit more patients to participate in the survey, a similar newspaper ad ran in 116 newspapers across the state of South Dakota for six weeks starting March 8th, reaching 61 of 66 counties and stretching across all corners of the state. The commercial ran again for five weeks starting the end of April and five participants completed the post-campaign survey from this group. Additional efforts to enhance knowledge and awareness of pharmacy services included displaying print materials for the “Your Pharmacist Knows” campaign. Collaborating pharmacies were each sent 1-2 posters, 25-50 business cards, and 25-50 brochures to be displayed in their pharmacies. Each document contained a link to the website containing a repository of information. You can access the “Your Pharmacist Knows” website at <https://www.sdstate.edu/your-pharmacist-knows>.

A total of 162 participants enrolled. Of the participants that completed the pre-campaign survey, 33/59 (55.9%) participants completed the post-campaign survey. Significant attrition of the original participants’ list occurred due to incorrect contact information documented on 60 participants, an additional 24 participants that declined to participate in the post-survey, and 26 participants not completing the survey. Evaluation via the pre-post survey to explore patient awareness of knowledge of pharmacists and pharmacy-based services is in progress.

The team worked to enable tracking on the website including number of visits to the website, time spent on various pages of the website, and zip code of the access. This information allows the team to understand which pages are being accessed the most and where users are finding the most value. Additionally, understanding the general location

of the access can give clues as to where users may be seeing marketing materials or are being referred to the site more regularly.

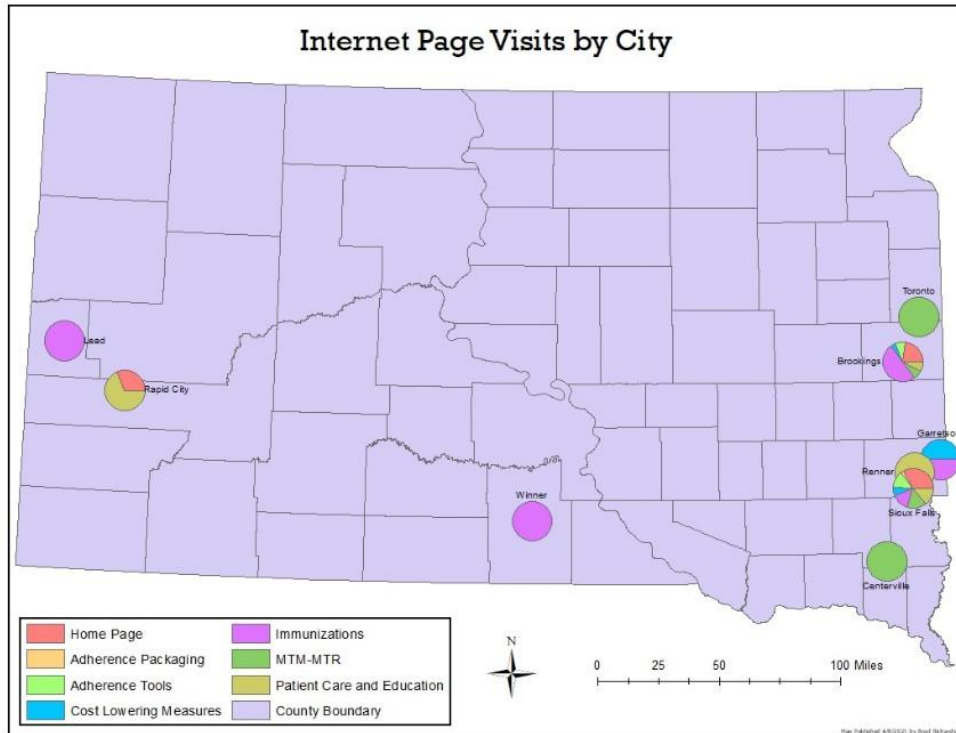


Figure 2. Location of users accessing the “Your Pharmacist Knows” website Partial data of the year starting when tracking was enabled showed a 34% video completion rate (good compared to industry standards), primarily from the digital ad campaign, and a 54% viewability (average for the industry). Overall, 340,000 impressions were made to South Dakotans, primarily on Fridays and Sundays. Please see Figure 2 for the information on the location of internet page viewers.

The Patient Workgroup worked with the Practitioner Workgroup and the partner sites to finalize patient recruitment lists and recruitment scripts for each site. Once patients gave verbal consent to be contacted by SDSU for the project, students on the SDSU team would call to verify eligibility and describe the requirements of participation. Patients interested in participating were then sent the initial survey to complete.

Barriers

The barriers to this workgroup included low response rate to the Patient Awareness Campaign survey recruitment and high attrition from the original participant group. This could partially be due to the lag time between agreeing to participate and sending out surveys. Though the same methods for recruitment the second time were used from the original recruitment efforts, response rates were significantly lower. The lower response rate could, in part, be due to the timing of the campaign with the ongoing COVID-19 pandemic. Internal process changes were made to decrease attrition rates from participants such as improving documentation processes and decreasing the amount of time between recruitment and receipt of the survey.

Overview

The Practitioner Workgroup collaborated with several pharmacy partners to implement new and expanded programs throughout Year Three. Thirty pharmacists were educated through the American Pharmacists Association's (APhA) training modules facilitated by the project team in partnership with pharmacists from partnering pharmacies, with 21 pharmacists completing general MTM training, four pharmacists completing the cardiovascular disease (CVD) training, and five pharmacists completing the diabetes training.

Goals

The primary goals for the Practitioner Workgroup in Year Three were to implement new pilot programs, to continue to expand and improve pharmacist provided MTM services with sustainable workflows, and to enroll patients into the program for outcomes evaluation. Additional goals included continuing to provide APhA training to improve pharmacist knowledge, skills, and confidence in providing services and to set up data/technology to improve workflows and reports.

Major Activities and Outcomes

Work was done this year to continue to further develop and expand programs with current partners, collaborate with new partners for further reach of services available, and implement pilot programs. Ongoing efforts to improve efficiencies through workflow and technology set-up continued throughout the year with all collaborators.

Two collaborators continue to be strong partners in the project. Work with both entities has led to implementation of services at new sites and improved processes. Expansion and improvement of services allowed partners to extend their reach to more patients this year. Collaborators expanded into three new sites and one new community in South Dakota, with conversations starting on new communities to expand to. Another collaborator spent significant effort to upgrade their pharmacy system which enabled streamlining of services and documentation, better patient care, and increased time to provide MTM services due to system efficiency. Patient enrollment into the project began at all sites this year.

A collaborator continued to offer and expanded the number of pharmacists providing MTM services with 3053 delivered services reported in Outcomes MTM in Year Three, primarily focusing on adherence needs (45.8%) and disease state education (18.6%). The SDSU team helped this collaborator expand their medication packaging and synchronization program and utilize data to specifically target patients most likely to receive benefit from the program, including those with diabetes and/or CVD, with the goal of improving medication adherence through a combination of MTM services and easy-to-use packaging delivered to the patient. Additionally, two clinic sites started integrating a pharmacist into their workflows, along with the pharmacist working with the healthcare team. Furthermore, the team worked with this partner to extract data, develop reports, and prepare for evaluation of data.

A lot of effort from both the SDSU team and a second partner went into developing best documentation practices this year. This partner improved the accessibility of diabetes patient education materials by making the materials available in Meditech, their electronic health record. They also developed patient education materials for MTM that were incorporated into Meditech for practitioner usage. These pharmacists provided 1835 MTMs across 13 clinics, primarily for medication dose changes (38.9%), patient education (16.8%), and helping patients starting new medications (12.3%).

The SDSU team assisted a third partner in workflow barriers for medications with questions, enhancing pharmacist efficiency. Implementing a new pharmacy system greatly enhanced the workflows and ease of documentation in the pharmacy. This partner also launched a pilot with SD Health Link, the SD health information exchange, to improve access to patient data. Feedback from pharmacists performing MTM services is that the information has proven to be extremely helpful to the pharmacist, eliminates lag time from previous workflows involving faxing for information, and enhances the MTM encounter with the patient. Additionally, documenting key patient information obtained through South Dakota Health Link into their pharmacy system, such as kidney function, has been helpful in catching drug safety issues.

Three new collaborators were on-boarded this year.

The SDSU team worked with one new collaborator to establish MTM services. Much of the effort in Year Three was spent working with the leadership team and key stakeholders within the organization to prepare and garner support for implementation of the MTM services. Set-up work included MTM workflows, enrollment criteria and generation of patient lists, documentation, referral processes, reports, and pharmacist education.

At another new partner site, interviews were completed with seven practitioners and one patient. Work is ongoing to recruit more patients for interviews. Evaluation of the practitioner interviews is in progress and a briefing document will be provided to the organization once complete. The briefing document will be utilized to provide feedback to the partner and will include recommendations from the SDSU team based on findings from the interviews.

The integration of a pharmacist into the healthcare team is being piloted within the unique structure of a third new collaborator to serve the Medicaid population. A pharmacist from a partner is on-site and integrated into the healthcare team part time. Workflows and policies developed earlier in the project are being adapted to serve the needs of the healthcare team.

Evaluation of economic, humanistic, and clinical outcomes will be done by collecting surveys every six months, compiling and evaluating clinical data from pharmacist tracking, and evaluating claims data. The SDSU team worked with collaborating sites to begin work with sample data in Year Three to prepare for evaluation in Year Four.

APhA training

Eight APhA training courses were offered to pharmacists serving patients of South Dakota and were facilitated by a combination of the SDSU team and pharmacists from collaborating partners. Facilitators each brought their personal experiences and expertise, enhancing the experience of participants. The courses were advertised through emails and social media platforms, with support from pharmacy partners, SDSU’s College of Pharmacy and Allied Health Professions, the South Dakota Pharmacists Association, and the South Dakota Society of Health Systems Pharmacists. In addition, the South Dakota Pharmacists Association further promoted this project by adding a video to the home page of their website, which can be found at <https://sdpha.org/>. Of the eight courses offered, two were cancelled due to low/no enrollment. The courses were taken by pharmacists from several communities throughout the state including Sioux Falls, Rapid City, Brookings, Mitchell, Huron, Dell Rapids, and Flandreau. The SDSU team had to be creative throughout the COVID-19 pandemic, offering courses virtually and in hybrid format to limit contact in compliance with CDC recommendations and the guidance of the South Dakota Board of Regents. In particular, the skills demonstration portion of the courses required delivery of equipment and individual virtual appointments for participants to demonstrate the skill on someone in their home or at their current workplace.

	Total Completed	Completed in Year 3
Total Pharmacist Participants	84	30
General MTM Course Participants	47	21
Cardiovascular Disease Course Participants	18	4
Diabetes Risk Management Course Participants	19	5
Number of MTMs completed for courses	188	84

Table 1. Trainings and MTMs completed

Given that all APhA training participants have been members of collaborating organizations, post-training efforts have been integrated into ongoing work and meetings.

Barriers

Despite the continued impacts of the COVID-19 pandemic, especially the increased demand on practitioners, administrators, and staff at partnering sites, the team worked to successfully implement new programs and expand existing programs. A lot of time was spent in Year Three working with new key stakeholders to ensure continued project support at partnering sites due to staff changes at the sites.

The Practitioner Workgroup and a current partner worked on a collaboration with another potential partner; however, they were unable to get the approvals needed from this organization in a timeline that worked with project deadlines.

Though a lot of barriers were overcome in order to offer the APhA training courses virtually or in a hybrid method, the SDSU team successfully facilitated several training sessions and learned about scheduling and advertising approaches to improve response and reach, including partnering with other organizations to advertise training opportunities.

Overview

In Year Three, the Payer Workgroup released the Payer Toolkit and focused on continuing to build relationships with new payers and working toward inclusion of economic data for evaluation. The team met with several payer groups to identify opportunities of mutual benefit.

Goals

In Year Three, the Payer Workgroup's major goals were to continue to build collaborative relationships with payer stakeholders and to release the Payer Toolkit.

Major Activities and Outcomes

The SDSU team worked closely with a partner's team throughout the year on health claims data that will be utilized to evaluate economic outcomes for patients enrolled in MTM. Due to an update to their software, modifying and running reports was paused until after the updates and identification (ID) crossover were completed.

Five elicitation interviews were completed with leaders from a collaborating organization and a briefing document was created, highlighting the themes identified. Efforts continued to build a partnership with the organization that would be mutually beneficial.

Throughout the year, several conversations were held with state organizations serving Medicaid patients. While the partner was very interested in testing the impact of a pilot program for patients, there was some hesitancy in sharing data to assess the economic impact of patients receiving MTM services. Despite significant efforts by the team, the partner denied access to claims data even with patient consent to release information. An alternate solution to use proxy measures for assessing economic impact was proposed and accepted by this partnering organization.

The Payer Toolkit initial version was finalized. Updates will continue to be made as needs arise. Several potential opportunities for additions have been discussed and will be prioritized in the upcoming year.

Barriers

A handful of training opportunities were identified; however, interest was low from payer groups.

Some of the payers are hesitant to share claims data. The SDSU team continues to work towards common evaluation goals with payers.

Overview

After continued attempts to contact tribal nations that had previously expressed interest but had stopped responding, the SDSU team pivoted efforts to building a collaboration with a different organization that serves Native Americans in South Dakota communities.

Goals

In Year Three, the main goal of the SDSU team was to develop a collaborative partnership with a tribal nation.

Major Activities and Outcomes

A collaboration with an organization that serves Native Americans in South Dakota communities formed. As stated above, elicitation interviews were completed with seven providers. Interviews were audio recorded and were sent out for transcription. The transcriptions were coded and thematically analyzed. Development of a manuscript describing results is in progress. One elicitation interview was also completed with a patient. Recruitment is ongoing for further patient interviews. A briefing document will be provided to the organization to provide feedback and recommendations to them.

Attempts to contact the tribal nations that had expressed interest in participating in the project were made several times throughout the year. No response was received. Various barriers contributed and the SDSU team decided not to continue to pursue contact.

Barriers

Barriers to the work with tribal partners were largely lack of response from contacts, causing the SDSU team to pivot to a new strategy. Additionally, recruitment of Native American patients to participate in elicitation interviews has been difficult, despite provision of incentives for participants.

Title	Type	Link
<i>Strategies for Engaging Community Partners, Healthcare Professionals, and Students: Research Experiences from Four Institutions</i>	Webinar	Available upon request
<i>Review of Oral Agents for Type 2 Diabetes</i>	Webinar	TRAIN
<i>Review of Injectable Agents for Type2 Diabetes</i>	Webinar	TRAIN
<i>CGM Monitoring and Management of Diabetic Complications</i>	Webinar	TRAIN
<i>Assessing the Impacts of an Educational Campaign on Patient Awareness and Perceptions of Expanded Pharmacy Services in South Dakota</i>	Poster	Available upon request
<i>Assessing the Impact of an Educational Campaign on Patient Awareness and Perceptions of Expanded Pharmacy Services in South Dakota, Encore Presentation</i>	Poster	See above
<i>Comparing Practitioner Perspectives in Rural versus Urban Settings</i>	Poster	Available upon request
<i>Comparing Practitioner Perspectives in Rural versus Urban Settings, Encore Presentation</i>	Poster	See above
<i>The Patient's Journey: Barriers and Facilitators to Care in South Dakotans with Diabetes and Cardiovascular Disease (CVD)</i>	Paper ¹	N/A
<i>Improving the Health of South Dakotans through the Prevention and Management of Diabetes and Cardiovascular Disease: A Landscape Analysis – The Payer Perspective</i>	Paper ¹	N/A
<i>Using the Theory of Planned Behavior to investigate patient awareness and perceptions of expanded pharmacy services in South Dakota, United States of America</i>	Paper ¹	N/A
<i>Improving Health Care for South Dakotans with Diabetes and Cardiovascular Disease: Provider's Outlook</i>	Paper ¹	N/A
<i>Comparing Pharmacist Perspectives of Pharmacy Services in Rural versus Urban Settings</i>	Paper ¹	N/A
<i>Pharmacists: The most Accessible, yet Underutilized Healthcare Practitioners in South Dakota</i>	Poster ¹	N/A

Table 2. List of Year Three Publications

¹Work In Progress

Year Three was a year of implementation including building upon and expanding previous work, developing partnerships with additional collaborators, and piloting new programs. The SDSU team worked with collaborators to enhance workflows and processes, implement new services and new locations for services, and share and adapt best practices across sites. The team had to pivot several times and worked with many potential collaborators throughout the year. Steady momentum was gained throughout the year at partnering pharmacies, with each making progress towards improved and expanded MTM services, increased awareness and knowledge of measuring outcomes, and an improved knowledge base of pharmacists. The team was able to leverage each others' strengths, give feedback, and brainstorm solutions to roadblocks regularly at team meetings. Several of the team members took on growth opportunities to enhance their skills and strengthen the overall team. The team strategically planned Year Four to continue expansion of services at partnering sites, collaborating on data collection and evaluation, and development of patient educational materials.

Additionally, the work completed in Year Three can be tied back to addressing the major needs identified in the Year One landscape analysis. The implementation work in Year Three built upon the work in Year Two to begin addressing needs identified. See Table 3 for details on the progression of work.

Year One: Identified Needs	Year Two: Addressing Needs	Year Three: Implementing Programs
Non-pharmacist practitioners needed more education on pharmacist expertise and services	Focused educational efforts, such as a development of a webinar, geared toward educating non-pharmacist practitioners on pharmacist background, expertise, and services for patients	Continued engagement with non-pharmacist practitioners at collaborating sites; Incorporated MTM information into an EHR for provider use and patient education
Pharmacists expressed a desire to be a more integral part of the healthcare team	In-depth conversations and strategies with partners to empower pharmacists and their administrators to integrate them into the patient healthcare journeys	Pharmacists integrated into new healthcare teams including two clinics and a team serving Medicaid patients
Pharmacists needed guidance on integrating MTM services into workflow	Development of a webinar on MTM and its practical applications; Advanced training for 27 SD pharmacists, including actions, templates, and workflow processes to help implement MTM immediately in their practice	Specialized workflow guidance for each collaborating site; shared successful practices within and across collaborating sites
Patients needed more understanding of services pharmacists provide	Development of a thorough patient awareness campaign that will help patients begin to familiarize themselves with these	Distribute campaign materials at pharmacies across the state; Launch of “Your Pharmacist Knows” ad campaign; website tracking enabled
Payers understood team-based care but needed help in figuring out how to reimburse pharmacists for their services	Development of a toolkit that will provide detailed instructions, examples, and forms for payers to customize for their needs in reimbursing for pharmacy-based services	Finalized toolkit; received recommendations and suggestions for further customization of the toolkit based on site/setting; additional material will be added to the toolkit as needs are identified

Table 3. Major needs identified in Year One, actions taken to address needs in Year Two, and programs implemented in Year Three

1. Expand reach of support and resources

- Upon implementation of new sites or services, work within organizations to address identified gaps in understanding of pharmacists and their services.
- Utilize developed policies, procedures, and processes surrounding MTM delivery in new sites within the organizations.
- Expand pharmacist-provided services offered to patients including education and targeted programs to further patient knowledge and resources for health and wellness.
- Leverage developed policies, procedures, processes, and workflow when launching new pharmacist-provided services.
- Utilize organization-specific project data to engage appropriate practitioners to impact care.
- Continue to ensure all members of a patient's healthcare team have access to the information and data they need to effectively manage their diseases as sites expand.
- Advocate for reimbursement of pharmacist-provided services to enable access to all patients.

2. Expand and mature transdisciplinary relationships

- Continue to provide environments encouraging transdisciplinary collaborations and communication, including those outside of the traditional healthcare team such as care coordinators that can help patients with other wellness needs.
- Support development of infrastructure to enable efficient bidirectional communication and knowledge-sharing between practitioners working in different settings in which a patient engages.
- Upon implementation, obtain feedback and diverse perspectives from new sites with pharmacy-based services within an organization or local healthcare team to validate best practices and enhance models.
- Continue to identify new opportunities for work across departments within health systems, including pharmacists, that provide patient care, care coordination, or population health services to help impact patient care.
- Continue cross-professional development of webinars, trainings, or resources to educate on practical skills and knowledge and widen perspectives of practitioners.
- Develop agreements between pharmacies and other community or healthcare organizations to collaborate on community health and wellness.
- Facilitate events and utilize technology to simplify workflows that connect healthcare providers in traditional care settings with community-based and state resources that currently exist, such as:
 - Connecting a patient with diabetes with a local support group.

- Connecting an ambulatory care nurse to a community pharmacist.
- Bidirectional referrals across healthcare and community organizations serving patients.

3. Continue to grow confidence

- Continue to identify emerging resource needs and utilize existing resources to ensure sustainability of pharmacist-provided programs.
- Continue to offer and encourage attendance of advanced training to practitioners (i.e., APhA MTM training) that provide opportunities for direct application of learned skills and knowledge.
- Empower patients to better manage their disease state by helping them comprehend their medications and therapies through patient programs that target education and behavioral modification (i.e., MTM).
- Identify new ways to increase patient knowledge regarding pharmacy-based care such as leveraging other practitioners and healthcare organizations to promote patient participation in pharmacy-based services.
- Connect patients to pharmacists and empower them to seek out advanced pharmacy services such as MTM.
- Continually evaluate and adjust workflows to gain efficiency so pharmacists are able to do pharmacist-level tasks, such as MTM services, while technicians and other staff can focus on dispensing workflow.
- Utilize outcomes data and patient success stories collected to advocate for MTM and other pharmacist-provided services that have been shown to improve medication adherence and overall impact on patient care.
- Encourage evaluation of data from organizations across the patient's journey to identify and enhance interventions that improve patient outcomes.
- Continue to develop and strengthen relationships between practitioners in local communities to strengthen the overall healthcare team and improve the quality of patient care.

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- South Dakota Society of Health Systems Pharmacists



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