Emerging Practices in Diabetes Prevention and Control: Working With Pharmacists

National Center for Chronic Disease Prevention and Health Promotion

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OVERVIEW

Historically, the Centers for Disease Control and Prevention's (CDC's) National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) has provided funding for State chronic disease programs on a disease-specific level, releasing separate funding opportunity announcements (FOAs) to address chronic conditions (e.g., cardiovascular disease, diabetes, obesity). However, chronic diseases have a high incidence of comorbidity, and the burden of these diseases has continued to escalate. In recognition of these issues, CDC has adopted a more integrated approach to chronic disease prevention and control, increasing opportunities for coordination across related diseases and risk factors so that public health programs can work synergistically to be more effective and efficient. One recent FOA that embraces this approach is the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health program (CDC-RFA-DP13-1305, referred to in this document as 1305).

As State health departments are serving on the front lines of coordinated chronic disease public health prevention efforts, grantees are exploring and testing new and innovative approaches that will provide critical insight and lessons learned. The goal of the Emerging Practices in Diabetes series is to summarize and share information on these practices to inform the work of other grantees working in the same or related areas.

The Four Domains of Chronic Disease Prevention

To optimize public health's efficiency and effectiveness, CDC recommends coordinating chronic disease prevention efforts in four key domains[1]:

1. Epidemiology and surveillance to monitor trends and track progress
2. Environmental approaches to promote health and support healthy behaviors
3. Health care system interventions to improve the effective delivery and use of clinical and other high-value preventive services
4. Community programs linked to clinical services to improve and sustain management of chronic conditions

These four domains help organize and focus the effective work the public health community has been doing for many years. At the same time, they help concentrate efforts to strengthen programs and build expertise to address gaps in services. Finally, they help government agencies, State and local grantees, and diverse public and private partners find new ways to work together and support each other's efforts.

In this emerging practice document, we examine the role of pharmacists in chronic disease management and highlight examples from three 1305 grantees: Colorado, Iowa, and Ohio. We focus specifically on two activities involving the use of pharmacists: medication therapy management (MTM) and team-based care. These strategies primarily fall within domains 3 (health care system interventions) and 4 (community programs linked to clinical services) of the four domains for coordinating chronic disease prevention. See Exhibit 1 for the relevant 1305 strategies and short-term performance measures.

Exhibit 1: 1305 Strategies and Short-Term Performance Measures Related to Working With Pharmacists

1305 Strategy	Short-Term Performance Measures
3.2.1: Increase engagement of nonphysician team members (i.e., nurses, pharmacists, and patient navigators) in hypertension and diabetes management in health care systems	▪ ***3.2.01***: Proportion of health care systems with policies or systems to encourage a multidisciplinary team approach to blood pressure control ▪ ***3.2.02***: Proportion of health care systems with policies or systems to encourage a multidisciplinary team approach to A1C control ▪ ***3.2.03***: Proportion of patients in health care systems that have policies or systems to encourage a multidisciplinary team approach to blood pressure control ▪ ***3.2.04***: Proportion of patients in health care systems that have policies or systems to encourage a multidisciplinary team approach to A1C control
4.3.3: Increase engagement of community pharmacists in the provision of medication/self-management for adults with high blood pressure and/or diabetes	▪ ***4.3.03:*** Proportion of community pharmacists that promote medication management or self-management for adults with high blood pressure ▪ ***4.3.04****:* Proportion of community pharmacists that promote medication management or self-management for adults with diabetes

Engaging Pharmacists in Diabetes Prevention and Management

Today, the role of pharmacists is expanding, which gives them greater impact in the changing landscape of health care and public health. Beyond dispensing medications, pharmacists also provide a range of prevention services to help improve health outcomes. In the United States, people with chronic conditions (e.g., diabetes) account for 91% of all prescriptions filled. By 2020, it is estimated that 157 million Americans (roughly 49%) will have at least 1 chronic noninfectious or infectious medical condition.[2] Pharmacists are well positioned to impact this population. By understanding the role of pharmacists, public health practitioners can identify opportunities to better apply pharmacists' knowledge and skills to improve the Nation's health.

New collaborative care models identify pharmacists as valuable contributors to the health care team. Enhanced training equips pharmacists with the necessary skills to provide a variety of preventive care and wellness services—thus increasing access to care for patients. Incorporating pharmacists in team-based care models increases patient awareness of the importance of medication adherence and further encourages and supports behavior change and self-management of many chronic illnesses and diseases.[3]

- *Medication therapy management*. The American Pharmacists Association describes MTM as a broad range of health care services provided by pharmacists. A consensus definition, adopted by the pharmacy profession in 2004, defines MTM as a service or group of services that optimize therapeutic outcomes for individual patients. MTM goes beyond the medication-dispensing role of pharmacists; however, it may take place at the same time that medication or a medical device is provided. A pharmacist may provide MTM services in all care settings (e.g., pharmacies, health care clinics, community settings). Pharmacists providing MTM seek to ensure that the medication is optimal for the patient and his or her health conditions and that the best possible outcomes from treatment are achieved.[3] Pharmacists use MTM to help patients get the best benefits from their medications by working with patients to actively manage drug therapies and by identifying, preventing, and resolving medication-related problems.
- *Team-based care*. Pharmacists provide patient care services that are compatible and synergistic with the patient-centered medical home model and other innovative models of team-based care.[3] Because they often work in the local community, pharmacists extend the health care team from the health care setting into the community. Consequently, pharmacists are some of the most accessible health care professionals. Research shows real value in pharmacists' management of diabetes and heart disease.[3–5] Public health initiatives that promote efforts to engage pharmacists as members of the health care team can result in significant improvements in the treatment of diabetes, better control of high blood pressure, improved management of cholesterol, and reduced overall health care costs.[4]

Helpful Tips for Working With Pharmacists

- Start by learning about efforts being carried out in your State and build on them.
- Focus on work that has the greatest potential for reach in the State.
- Work with pharmacy students and assigned adjunct faculty/ preceptors.
- Focus on activities or efforts that allow you to target people with or at risk for hypertension/diabetes.
- Avoid funding pilot and/or demonstration projects that are not founded on scientific evidence.

COLORADO: TEAM-BASED CARE

Description

Program Overview

Prior to 1305, pharmacist integration in team-based care in Colorado occurred in pockets across the State, but there was no statewide coordinated system to strengthen this practice. To address this gap, the Colorado Department of Public Health and Environment (CDPHE) is using 1305 funds to build a pipeline of experienced pharmacy students to fill roles in community-based sites across the State. However, the funds are not used to pay pharmacy students to deliver care. Rather, pharmacy students provide Medicaid patients with hypertension and/or diabetes with medication adherence support and disease testing and management services. Students conduct these activities in partnership with the client's primary care provider (PCP) to achieve better health outcomes.

CDPHE established strategic partnerships that led to the development of a pilot program, the Regional Care Collaborative Pharmacy Integration Project, to integrate pharmacists into care coordination efforts. The project supports a regional and holistic approach to care in the geographically large State. CDPHE worked closely with its internal epidemiology and data departments to use geographic information system (GIS) disparity mapping to identify target areas with a shortage of providers and a high prevalence of diabetes and hypertension. CDPHE formed partnerships with select Medicaid Accountable Care Organizations, known in Colorado as Regional Care Collaborative Organizations (RCCOs), and with pharmacies in those target areas. RCCOs span seven regions in Colorado, connecting Medicaid clients to providers and services. Because pharmacists are not recognized Medicaid providers in Colorado, partners determined that integration of pharmacists at the RCCO level would be a viable solution, with RCCOs contracting with pharmacies to provide services. CDPHE initially partnered with an RCCO to develop a sustainable model for the inclusion of pharmacists in approaches to care coordination. This approach also allowed CDPHE to generate evidence using Medicaid data to encourage other RCCOs in the State to adopt or adapt CDPHE's approach to team-based care. Fourth-year pharmacy students from the University of Colorado's Skaggs School of Pharmacy and Pharmaceutical Sciences (Skaggs) and Regis University School of Pharmacy (Regis) were integrated into the pilot program to alleviate the financial burden on RCCOs associated with pharmacy-based MTM services.

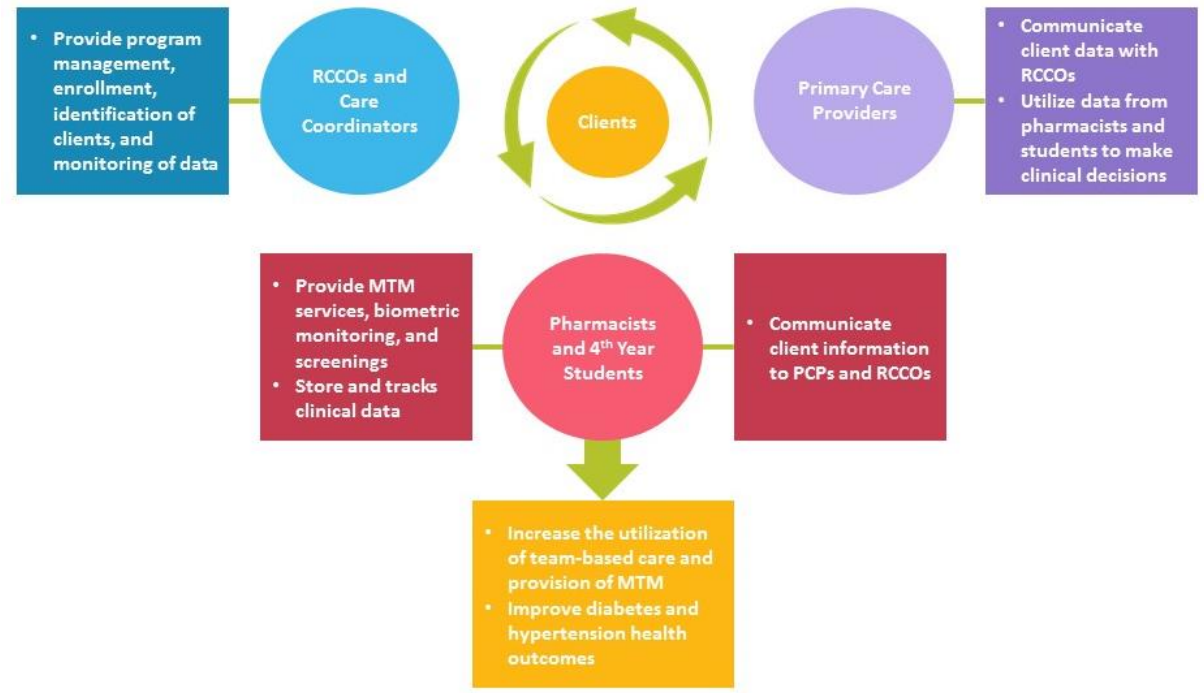
The following outlines the flow of services for the pilot program:

- RCCOs enroll Medicaid clients into the pilot program at preferred pharmacies.
  - Eligible clients must have hypertension and/or diabetes and demonstrate a history of nonadherence to medication treatment. RCCOs may also review hospitalization history to identify eligible patients to invite as clients in the Regional Care Collaborative Pharmacy Integration Project.

- Fourth-year pharmacy students from Regis and Skaggs are required to complete rotations at preferred sites that are guaranteed student placements each year, providing medication adherence and disease management services at no cost to the RCCO or its clients (patients).
  - Prior to placement, Skaggs requires students to participate in training on the electronic client data tracking system and a refresher course in motivational interviewing.
- Students update client information in an electronic client data tracking system that Skaggs developed.
- Students work with CDPHE and the RCCO to track clients who receive services at preferred pharmacies.
- Students share client information with clients' PCPs and RCCOs.
- Primary care providers that participate in this program share client data with RCCOs.
- PCPs use pharmacists' data to inform clinical decisions.
- Skaggs collates client attitudinal and clinical data from preferred pharmacies, and the RCCO collates clinical data from PCPs and claims data from Medicaid to create a fuller picture when assessing changes in health outcomes.

Exhibit 2 provides a visual depiction of the contributions and roles of pharmacists, fourth-year pharmacy students, PCPs, and RCCOs participating in the Regional Care Collaborative Pharmacy Integration Project.

Exhibit 2: Regional Care Collaborative Pharmacy Integration Project, 2014–2016



Role of the State Health Department

CDPHE has played several key roles in the planning, development, and implementation of this project:

- *Convener*. Since the onset of this work, CDPHE primarily functions as a convener and facilitates communication between internal and external partners to ensure processes advance with a shared understanding of the purpose and goals of the program and collaboration.
- *Funder*. CDPHE's 1305 funding has allowed the State to support several key partner activities. The Colorado State Health Department also funds Skaggs's and Regis's strategies, including the client information system used at the preferred sites and a pharmacy student resource book.
- *Evaluator*. CDPHE uses project data from the RCCO, Skaggs, and Regis to assess the impact of pharmacy integration into team-based care for Medicaid clients within an accountable care system to enhance a model that can be implemented across different RCCO regions statewide.

Role of Partners

For this project, CDPHE built upon existing partnerships with two Colorado-based schools of pharmacy (Skaggs and Regis) and two major pharmacy associations (the Colorado Pharmacists Society and RX Plus).

Both pharmacy associations were interested in Medicaid's pharmacist-related policies and the elimination of billing barriers for services provided. CDPHE's partnership with Skaggs was developed prior to 1305 for work with diabetes self-management education in pharmacies. CDPHE expanded this partnership to identify ways to perform additional cardiovascular disease and hypertension work in pharmacies statewide. Skaggs and Regis were interested in educating and developing opportunities for students to practice disease management activities. CDPHE brought together the interests of the pharmacy associations, the schools of pharmacy, and the State's overall vision for care in Colorado into the development of a model for integrating pharmacists into team-based care.

CDPHE's key partners in this effort are highlighted in Exhibit 3.

Exhibit 3: Partner Roles and Responsibilities

Key Partners	Roles and Responsibilities
Regional Care Collaborative Organization (RCCO)	Ensures geographically targeted areas capture Medicaid recipients for the pilot program and refers eligible clients to preferred pharmacy sites. The RCCO is the liaison between the pharmacy, PCPs, and clients, and is responsible for analyzing claims data and enrolling clients in the program.
University of Colorado's Skaggs School of Pharmacy and Pharmaceutical Sciences (Skaggs) and Regis University School of Pharmacy (Regis)	Place fourth-year pharmacy students in preferred pharmacy sites. Students provide medication adherence and disease testing and management services emphasizing diabetes, hypertension, and cardiovascular disease. Students also capture client biometric and attitudinal data in the pharmacy database. Skaggs developed a resource manual to provide students with guidance on delivering medication adherence and disease testing and management services at community pharmacies. Topics in the guide include measuring and improving adherence, self-monitoring and management, and making lifestyle changes including referral to the Colorado Quitline (to assist clients to quit smoking). The resource guide is a tangible product of CDPHE's partnership with Skaggs that CDPHE hopes to share with pharmacies outside the pilot program. Skaggs is also contracted to develop and maintain the client data tracking system.
Other Partners	**Roles and Responsibilities**
Colorado Pharmacists Society and Rx Plus	Provide CDPHE with guidance on Medicaid policies. (The Colorado Pharmacists Society has an established relationship with Colorado's Medicaid office.) Provides access to independent pharmacy staff through meetings and an annual pharmacist survey.

CDPHE's Experience Implementing the Initiative

Facilitators

A key facilitator in the implementation of CDPHE's 1305-related work is mutually beneficial partnerships, as discussed above. Other key facilitators include the following:

- *Partners' approach to this scope of work.* Regis's and Skaggs's interest in enhancing student skills in team-based care is an asset to this work.
- *Support from the State Medicaid office.* Because the State Medicaid office is committed to achieving coordinated care, it is supportive of the pilot program and remains a partner in identifying and addressing current barriers.
- *Internal capacity and resources.* Access to internal resources and staff (including the epidemiology and data department as well as internal evaluation staff who assisted with the development of logic models) is critical. These items were built into the 1305 budget to allow for the use of CDPHE staff time.
- *Consistent messaging.* Consistent messaging to and through federal entities (e.g., CDC and the Health Resources and Services Administration) pushed the work forward, increased its visibility, and facilitated conversations with internal and external partners.
- *Access to relevant resources describing team-based care.* Availability of outcome data from the Asheville Project and similar studies, pharmacy-specific CDC publications and tools,

research and institutional knowledge on pharmacy integration, and Colorado-based service delivery models facilitated the planning and direction of this program.

Challenges

CDPHE did not experience any critical challenges during the implementation of this initiative. Experiences navigating new relationships and limitations are described.

- *Navigating Medicaid reimbursement policies*. CDPHE experienced some difficulty when navigating Medicaid reimbursement for pharmacy-based services, as Colorado Medicaid does not currently recognize pharmacists as a qualified billing provider. Because of this, and to promote a coordinated approach to team-based care, the project utilizes RCCOs as the care coordinating and contracting entity, which enables them to reimburse pharmacists for services rendered.
- *Lack of interoperability of the electronic health records across health care settings*. Since this is a new system, users are still trying to determine how to best share data across pharmacy and primary care practice sites while ensuring that data are useful for different practitioners. CDPHE believes 1305 work and increasing communication between health care settings will help refine the system.
- *Sustaining promotion of team-based care among competing interests*. Ensuring 1305-related activities remain relevant and a priority among competing interests in quality improvement and system change work is critical, given the multiple demands made on clinics and providers daily.
- *Provider environment*. Clinics do not see just Medicaid clients, but a mix of many publicly and privately insured patients. CDPHE has to identify the most appropriate approach for these different entities by working to understand the relationships and coverage areas for multiple private payers, traditional Medicare and Medicare Advantage payers, traditional Medicaid, and RCCOs. This primary remaining challenge is refining the service delivery model so that it works for all types of payers and can continue to be a viable way to engage pharmacists, even as the pharmacy profession evolves to meet new demands.

Conclusion

Next Steps

Moving forward, CDPHE would like to use data gathered through this pilot program to ensure it is actionable at the consumer and provider clinic level. The cycle of defining, testing, refining, and disseminating outcomes remains a key building block in the State's efforts to improve pharmacy-based medication adherence and testing and disease management services provided to Medicaid, Medicare, and privately insured patients. Core outcomes include the development of a service delivery model that can be implemented in any RCCO across the State, a description of the financial benefit for utilization of pharmacists at the regional care level, and improved services and health outcomes for clients with hypertension or diabetes across Colorado. These outcomes are aligned with the goals of the Triple Aim,[6] which intend to reduce the cost of care, improve the patient experience, and improve the health of all Coloradans.

A second RCCO has expressed interest in developing a similar model, and CDPHE is currently in conversations defining future work. Since each RCCO is local and has its own specifications, models being considered for future exploration include additional ways to contract with individual pharmacies, hire RCCO staff pharmacists, or utilize a third-party to provide adherence and medication therapy management services, all of which will help achieve sustainability.

For More Information

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Lessons Learned

- Take the time needed to assess the landscape. Thoughtfully plan and foster strategic partnerships before program implementation.
- Develop a heterogeneous team of partners that are best suited to do the work.
- Discuss organizational capacity and needs with partners to promote coordination of partners' efforts. This might require asking partners challenging questions. Be prepared for difficult responses.
- Be flexible and open rather than prescriptive to innovative approaches to care coordination.
- Stakeholders may have disparate interests and goals. Find common ground among partners, and make sure it is reflected in any action plan.

Resources Suggested by CDPHE

- CDPHE's 1305-funded model for pharmacy integration into team-based care

IOWA: TEAM-BASED CARE

Description

Program Overview

The Iowa Department of Public Health (IDPH) has identified ways to establish and sustain partnerships between pharmacists and providers through promoting health systems interventions that involve team-based care. This includes two interventions: (1) team-based care strategies with the University of Iowa's College of Pharmacy and (2) the Pharmacy Practice Advancement Strategy Project in collaboration with the Iowa Pharmacy Association (IPA).

IDPH's team-based care strategy targeting hypertension began prior to 1305 funding and expanded to include diabetes management and hemoglobin A1C testing during fiscal years 2013–2015. A CDC project officer encouraged IDPH to foster a partnership with researchers at the University of Iowa exploring team-based care strategies as a means to address hypertension. After a series of meetings, the University of Iowa's College of Pharmacy (COP) and IDPH combined efforts and defined the direction of the collaboration.

The following outlines the implementation of IDPH's 1305-funded team-based care strategies:

1. The University of Iowa's COP recruits providers and pharmacists who are interested and new to care coordination.
2. After recruiting interested health professionals, COP meets in person with both the provider and the pharmacist (and any additional involved staff) to guide discussions about the parameters of the partnership.
3. COP provides participating health professionals with a booklet and CD of resources and guidance materials to facilitate the implementation of care coordination.
4. Both IDPH and COP encourage the participating provider to refer patients with high blood pressure and/or diabetes who are newly diagnosed, lack hypertension control, or have high A1C levels to work with the participating pharmacist on a continuous basis between visits to the provider. The pharmacist may then provide testing and education and discuss compliance issues with the patient and suggest that the provider add, discontinue, or modify prescribed medications.
5. COP monitors the partnership over a 4- to 6-month period and provides technical assistance as needed.

The Pharmacy Practice Advancement Strategy Project emerged from supplemental 1305 funding. IDPH selected IPA as its primary partner for this strategy because of the association's statewide presence. IDPH initially formed a relationship with IPA through work on the CDC-funded Community Transformation Grant and has since maintained this relationship. Under 1305, IPA seeks to promote, foster interest in, and establish team-based care collaborations *leading to the*

development of formal collaborative practice agreements. The State works with IPA to achieve these goals through three activities:

1. Implementing the Pharmacy Engagement Assessment Survey during year 2 of the 1305 project period to explore pharmacists' current roles, responsibilities, and educational needs.

2. Supporting the Pharmacy Practice Advancement Strategies Forum using survey results to inform the development of a 1-day educational forum.

3. Supporting regional meetings during which smaller groups of pharmacists are encouraged to invite providers to participate in networking and educational opportunities in team-based care.

With guidance from the State's CDC Project Officer, and using other State surveys as a basis for development, IDPH worked with IPA to create the Pharmacy Engagement Assessment Survey. The survey was disseminated to each pharmacy—chain-based, independent, franchise-based, and hospital-based—licensed with the Iowa Pharmacy Board. IPA and the State disseminated a total of 711 surveys and achieved a response rate of 30%.

Role of the State Health Department

IDPH's role in the implementation of both the Pharmacy Practice Advancement Strategy Project and team-based care strategies is to initiate communication with new partners, develop the parameters of the partnerships and any associated contracts, maintain regular correspondence with partners and subcontractors, review reports to inform the direction of the program for subsequent fiscal years, present findings to stakeholders during forums and other events, and collate materials from CDC and the Million Hearts initiative to share with partners to keep resources current. IDPH also seeks to explore ways funds can be leveraged to achieve shared goals and target shared interests with new partners.

Role of Partners

With resources from 1305, IDPH expanded a previously established partnership with IPA and the University of Iowa and recruited new partners, as outlined in Exhibit 4 below.

Exhibit 4: Partner Roles and Responsibilities

Key Partners	Roles and Responsibilities
Iowa Pharmacy Association (IPA)	Serves as a sole-source contract with IPA for the Pharmacy Practice Advancement Strategy Project to build relationships with practices through IPA's statewide connections.
University of Iowa College of Pharmacy (COP)	Contracts with IDPH to recruit health care providers and pharmacists interested in a collaborative approach to care provision.
Other Partners	**Roles and Responsibilities**
Drake University	Subcontracts with IPA and assists with the development of the Pharmacy Engagement Assessment Survey and data collection/entry.
Iowa Hospital Association	Refers interested pharmacists and providers to IDPH and invites IDPH to present pharmacist-related work at Iowa Hospital Association conferences.
Iowa Medical Society	Provides IDPH with preliminary guidance on organizations to contact.

IDPH's Experience Implementing the Initiative

Facilitators

A key facilitator in the implementation of IDPH's 1305-related work is the development of mutually beneficial partnerships. Other key facilitators include the following:

- *Partners' approach to this scope of work*. Partners' enthusiasm about promoting, coordinating, and implementing team-based care and their connections (i.e., actual pharmacists) outside the network of partners that IDPH has established facilitates program implementation. Established partners' enthusiasm also attracts and facilitates the development of new partnerships.
- *CDC and Million Hearts webinars and information describing care coordination and team-based care*. Million Hearts resources are used to guide partnerships under team-based care strategies.
- *IDPH's internal review of relevant research articles*. IDPH reviewed University of Iowa research articles describing evidence-based and emerging practice strategies in care coordination prior to meeting with the research team. Doing the work on the front end was important to ensure that the meeting with University of Iowa researchers would be productive.

Challenges

IDPH experienced some challenges during the implementation of their team-based care strategies (highlighted below); however, these experiences did not significantly hinder the implementation of these strategies.

- *Low response rate*. The survey had a 30% response rate which limits the generalizability of the results.
- *Recruiting pharmacists and providers*. Although health care professionals expressed interest in participating, IDPH found that providers and pharmacists have competing interests and

demands on their time, making it difficult to prioritize participation in a team-based care collaboration.

- *Navigating the policies and procedures experienced when establishing a partnership/contract with an academic institution*. Approving contracts and continuation proposals with academic institutions can be a lengthy process, which can delay the implementation of project activities and impact the program's timeline.
- *Becoming familiar with requirements of the funding mechanism*. Transitioning to a new funding modality, receiving funds, and becoming familiar with the funding mechanism's performance measures require an investment of staff time.
- *Enhancing the appeal of care coordination*. Legislation in Iowa does not permit pharmacists to be reimbursed for their team-based care efforts. This restriction can limit pharmacists' enthusiasm to participate. IDPH and their partners are working on strategies to address reimbursement policies to enhance the appeal of team-based care for pharmacists.

Conclusion

Next Steps

IDPH plans to evaluate the success of its team-building strategies as well as the current status of pharmacist-provider collaborations established with 1305 funding to identify successful approaches to building team-based care collaborations. IDPH also plans to use survey results to create tailored Pharmacy Practice Advancement Strategies Forum breakout sessions.

Lessons Learned

IDPH offered the following lessons learned and recommendations for public health practitioners who are considering similar efforts:

- Obtain support from your State pharmacy association during the initial stages of your efforts.
- Instead of starting from scratch, use resources available through educational institutions. These institutions may have established relationships within the targeted community.
- Avoid launching multiple new efforts at the same time. Each new effort has its own learning curve and issues to navigate.
- After reviewing all available data sources, you may need additional information to help inform the project's scope of work. Consider modifying an existing survey or developing a new survey to collect the necessary data. To promote a high response rate, offer different modes of access (e.g., online and paper-based formats) along with reminder processes. Be sure to minimize burden on potential partners to the extent possible.

Resources Suggested by IDPH

- Iowa's Million Hearts Initiative
- Fostering Provider-Pharmacist Team Management of Hypertension in the Community

For More Information

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OHIO: MEDICATION THERAPY MANAGEMENT

Description

Program Overview

Through its 1305 funding, the Ohio Department of Health (ODH) has engaged three federally qualified health centers (FQHCs) in a pilot project to measure the impact of MTM services on chronic disease. In this effort, ODH is seeks to reach patients with uncontrolled blood pressure and hemoglobin A1c using sustainable MTM service models. The primary aims of the project are to decrease the number of patients with poorly controlled hemoglobin A1C (A1C > 9%) and poorly controlled blood pressure in control (defined as >140/90 mmHg). The project also seeks to identify adverse drug events (or potential adverse drug events) and to promote diabetes composite control (defined as A1C, blood pressure, and LDL in control).

Role of the State Health Department

ODH has played several key roles in the planning, development, and implementation of this project:

- *Convener and connector for the overall project*. From the onset of this work, ODH's primary role has been to serve as the convener and connector across all partners and aspects of the project. ODH played an integral part in identifying and assembling key relevant partners who have helped to plan and launch the current effort. ODH has access to local health departments and projects in counties throughout the State in which they would like to add sites.
- *Funder*. While funder is an obvious and intuitive part of ODH's role, 1305 funding has allowed ODH to support a portion of the time and activity contributed toward this work by its partners. ODH acknowledges that many partners are doing more work than they are being funded to do. This limited funding, however, has helped show partners that their work is recognized, supported, and valued.
- *Consensus facilitator*. ODH was instrumental in helping the overall project team come to consensus on project outcomes. Within the project, there were many potential outcomes related to chronic disease and medication management. ODH helped the team prioritize outcomes they believed to be most important, yet still tied to 1305 priorities.
- *Evaluator and disseminator of information*. ODH has taken the lead in ensuring that outcomes are being evaluated as the work progresses and that the project team is making decisions based on data and the impact of the work. ODH collects, analyzes, reports, and disseminates information in a way that is usable and actionable by partners and presentable and understandable to relevant audiences.

Role of Partners

In developing this program, ODH initiated a new relationship with the Ohio State University College of Pharmacy and expanded previously established partnerships with several other entities, as outlined in Exhibit 5.

Exhibit 5: Partner Roles and Responsibilities

Partners	Roles and Responsibilities
The Ohio State University College of Pharmacy	Supports project planning and development. Also provides ODH with knowledge of and expertise in MTM and FQHCs through access to pharmacy faculty and residents and linkages to pharmacy practitioners and practice sites across the State.
Ohio Pharmacists Association (OPA)	Supports project planning and development. Provides access to the statewide pharmacy network and expertise in communicating with pharmacists, insurers, and payers statewide.
Ohio Association of Community Health Centers (OACHC) ***Three pilot sites:*** ▪ AxessPointe ▪ Primary One Health ▪ Health Partners of Western Ohio ▪ Athens/Southeast Ohio	Involved in project planning and development. Serves as a touchpoint for all FQHCs in the State, providing an avenue for ODH to reach FQHCs. Allows ODH and its partners to give presentations on the MTM work at their annual meetings and created a web page with resources for all the MTM work conducted in Ohio. The three pilot sites are affiliated with OACHC. It identifies and recruits patients into the program and collects and reports data.
Health Services Advisory Group	Health Services Advisory Group is Ohio's Medicare quality innovation network/quality improvement organization. Health Services Serves as an essential partner from the onset of the project. Shares resources from previous medication adherence projects. Regularly attends meetings and provides a data collection tool that was adapted for use by FQHCs.

ODH's Experience Implementing the Initiative

Facilitators

Numerous factors have helped facilitate Ohio's work across this program, as outlined below:

- *Involving the "right people" from the "right places" in the initiative.* Across partners, the individuals involved in this initiative are engaged in, and passionate about, the work.
- *Taking time up front to thoughtfully plan the initiative.* Together with its partners, ODH spent approximately five months meeting and thinking about the needs in the state, the goals of the project, and ways to best operationalize and build on this work. Taking this time to talk, bring in different partners, and hear different perspectives, allowed the team to thoughtfully conceptualize and successfully implement their plan.
- *Maintaining close and frequent communication across all partners.* From the beginning of the planning process, individuals involved in this work met and spoke regularly to share ideas and build on successes achieved.
- *Implementing the pilot in one type of pharmacy setting (not mixing pharmacy sites in FQHCs, retail chains, etc.).* Working within one pharmacy setting allowed for the planning team to focus on one type of model and for challenges to be addressed and resolved more easily.
- *Giving participating FQHC sites the flexibility to recruit patients using approaches of their choosing.* ODH and its partners intended for this to be a "real world" project in that MTM was conducted at the individual FQHCs in the way they typically would. FQHCs were

expected to implemented new and different approaches to recruitment but rather allowed to continue recruiting as they traditionally would.

- *Allowing participating FQHC sites to develop their own protocols for patient enrollment in MTM.* Each of the participating FQHCs developed their own protocols for enrolling patients into MTM which allowed them to stay true to the culture of their site.
- *Using or adapting model data collection tools previously developed by the Alliance for Integrated Medication Management.* Not having to develop data collection instruments from scratch allowed for time and energy to be spent on other areas of the initiative.
- *Selecting data points that align with what the pharmacy sites were already doing.* This helped to minimize data collection/extraction burden among the FQHCs.
- *Enlisting an academic partner to take the lead on information/data dissemination.* Given that publication and dissemination are a large part of the culture in academia, having a partner on board with the expertise and comfort in playing this role has been a great benefit in promoting the work that has been done through this initiative.

Challenges

Ohio has experienced few challenges to date in this work, including the following:

- *Finding providers to champion the MTM model*. It takes time to identify providers on the team who are willing to speak to patients about the importance of medication therapy management and the importance of seeing the pharmacist for this type of review and care.
- *Building knowledge and awareness of the value of the MTM model*. Ohio is focused on sharing data and outcomes from this initiative to address this issue.
- *Establishing a fourth site in rural Appalachian Ohio.* Ohio is looking to expand this work into a community pharmacy setting; identifying practices that are currently doing this work has been a challenge.

Conclusion

Early Successes

ODH's initial steps accomplished in year 1 include the following:

- Formed an MTM consortium of leaders from the seven Ohio colleges of pharmacy
- Developed and implemented contracts with key partners that included data-sharing plans
- Developed a website to manage and coordinate project efforts across sites and to share resources
- Developed a data collection tool for tracking clinical outcomes and gathering data for performance measurement

By the Numbers

- Just over 44.8% of those patients who initially had hemoglobin A1c levels greater than 9% had had a controlled hemoglobin A1c measurement at 6 months into the program.[a]

[a] The program defines hemoglobin A1c "in control" as a hemoglobin A1C measurement less than or equal to 9%.

- Nearly 68.6% of patients with blood pressure greater than or equal to 140/90, initially, had blood pressure measurement defined as "in control" at six months into the program.[b]

Next Steps

Next steps in this work include expanding the model to additional FQHCs and engaging two additional Ohio colleges of pharmacy to implement MTM with primary care practices and independent pharmacies that serve 340b clients.

Lessons Learned

Lessons learned from ODH's work on this project are as follows:

- Collect data more frequently than usual (i.e., more than once annually).
- Start with the right partners (e.g., the State pharmacy association and the college of pharmacy at a larger university).
- Take the time needed to thoughtfully plan the work before launching the effort.

Resources Suggested by ODH

- CDC's A Program Guide For Public Health: Partnering with Pharmacists in the Prevention and Control of Chronic Diseases
- Poster presentation: MTM in FQHCS: Improving Chronic Disease Outcomes
- The Patient Safety and Clinical Pharmacy Services Collaborative's 2012 National Performance Story

For More Information

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[b] The program defines hypertension "in control" as a blood pressure measurement of less than 140/90.

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