

Integrating pharmacists into diverse diabetes care teams: Implementation tactics from Project IMPACT: Diabetes

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Abstract

Objective: To describe local implementation tactics used by the 25 Project IMPACT: Diabetes communities and partnering organizations to help patients who are disproportionately affected by diabetes.

Setting: Care was delivered in 25 communities within 17 states at federally qualified health centers, community pharmacies, free clinics, employer work sites, medical clinics, physician offices, and other settings.

Practice description: In addition to pharmacists, practices included physicians, nurse practitioners, dietitians, physician assistants, social workers, behavioral therapists, and other types of health professionals. Insurance status and the predominant ethnicity of patients differed between communities. Each community had at least one community champion responsible for leading local implementation who was supported by an American Pharmacists Association Foundation community coordinator and Foundation staff.

Practice innovation: The key innovations within each of the 25 communities were the integration of pharmacists on diabetes care teams, use of the Patient Self-Management Credential for Diabetes at baseline, and collection of a standardized minimum dataset. Communities deployed other practice innovations to support the care model, including group education classes, grocery store tours, joint provider visits, and provision of patient incentives.

Evaluation: The specific components of each community's implementation and innovation were aggregated via postproject surveys. Clinical and process measures were also collected and are published separately.

Results: Each community is characterized based on the people involved and the care delivered. Aspects of the communities described include health care provider teams, population characteristics, practice settings, care components, data collection methods, incentives provided, and self-reported service sustainability.

Conclusion: Pharmacists can be integrated successfully into a diverse array of practice settings and teams to help a wide variety of patients through the provision of team-based, patient-centered care. Flexibility in implementation strategies allows for customization of the care provided to best meet population needs.

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Project IMPACT: Diabetes was designed to integrate pharmacists into diabetes care teams in 25 communities to help patients who are disproportionately affected by diabetes. High-risk or disproportionately affected areas included those with the following:

- Incidence of diabetes higher than the state average
- Patients with uncontrolled A1C (i.e., >7%) and other outcome measures
- Patients with limited access to diabetes care due to geographic, financial, or other barriers
- Communities showing need, through lack of focused resources or diabetes-related programming, for implementation of enhanced diabetes care

Consistent with previous APhA Foundation initiatives,^{1–3} Project IMPACT: Diabetes deployed the Foundation's model of collaborative, team-based care, use of patient self-management credentialing, and collection of a minimum data set to facilitate successful project implementation within diverse communities. Communities also chose how to integrate unique aspects of care delivery into their local processes to best meet the needs of their patients.

At a Glance

Synopsis: A companion article to a Research study published in this issue, this Experience paper describes strategies that enabled success of Project IMPACT: Diabetes. The American Pharmacists Association (APhA) Foundation issued a formal request for proposal and selected 25 communities and partnering organizations for the project. Maximum real-world flexibility was permitted in these communities to allow a community champion and other members of local health care teams to incentivize and care for their patients with diabetes, most of whom were uninsured or underinsured, and to integrate pharmacists into health care teams. Flexibility in local implementation, including customization through population-specific tactics, seemed to empower communities to build new or adapt current services that are now sustainably embedded into routine care within their communities.

Analysis: *Project IMPACT: Diabetes deployed the Foundation's model of collaborative, team-based care, use of patient self-management credentialing, and collection of a minimum data set to facilitate successful project implementation within diverse communities. It demonstrates that integration of the pharmacist into routine care of patients with diabetes—the basis of the Asheville Project and studies conducted by the APhA Foundation—can succeed in a wide variety of communities and practice types. By applying the approaches used in Project IMPACT: Diabetes in a customized manner, communities and health care teams can work with pharmacists to improve diabetes care across the United States.*

This manuscript describes local implementation tactics employed by each of the 25 Project IMPACT: Diabetes communities to help readers identify customization strategies that should be considered for inclusion within their local diabetes management services. The Western Institutional Review Board approved the study and granted a waiver of informed consent. The final results of Project IMPACT: Diabetes are published elsewhere in this issue.⁴

Setting

The 25 implementing communities were selected through a competitive application process that began in February 2011. The APhA Foundation hosted a series of webinars to describe the initiative and issue a formal request for proposals. Applicants were requested to share information about the lead organization, the surrounding community and partners, the patient population who would be receiving care, existing diabetes programs, any local resources available including data management capabilities, and strategies for meaningfully integrating pharmacists into routine care. Each proposal was evaluated based on the community's access to appropriate patient populations, physical and human resources, data and information, education and training for staff, and ability to align incentives for all involved in the implementation. The communities were also assessed on their motivation to participate, the organizational and project leadership, and previously demonstrated success implementing innovative care models.

A total of 25 diverse communities, located within 17 states, were selected to participate. The manuscript that describes the results of Project IMPACT: Diabetes includes a full list of the communities and their locations.⁴ The settings in which care was delivered varied between communities and included sites such as federally qualified health centers (FQHCs),⁵ community pharmacies, free clinics, employer work sites, medical clinics, and physician offices, among others. Communities were encouraged to form local partnerships that would expand patients' access to diabetes services, which resulted in unique care settings available within each community.

Practice description

Each community designated at least one community champion responsible for leading local implementation. The majority of the champions were pharmacists, but benefits administrators, a physician, and a social worker also took on the role. Each community champion was supported by an APhA Foundation community coordinator and APhA Foundation staff throughout contracting, patient enrollment, patient care, and data collection. The community coordinators typically interacted directly with the community champion but also provided

assistance to the local implementation teams as the need was expressed by the community champions.

The local diabetes care teams included health professionals working within each community's care settings. In addition to pharmacists, teams comprised physicians, nurse practitioners, dietitians, physician assistants, social workers, behavioral therapists, medical assistants, and others. Some providers were also certified diabetes educators (CDEs).⁶ While the composition of the care team differed among sites, the common thread was that they all included pharmacists and provided patient-centered care.

Patients engaged across the Project IMPACT: Diabetes initiative were homogenous in only one way: they were all adults with a diagnosis of type 2 diabetes. Within each community, other similarities were present, such as insurance status and predominant ethnicity of the patients. The location, collaborating organizations, and care settings shaped the composition of patients who had the opportunity to engage, which often stratified communities as predominantly including one ethnicity and only uninsured, underinsured, or fully insured patients.

Practice innovation

Project IMPACT: Diabetes' key innovations implemented across the 25 communities were the integration of pharmacists on diabetes care teams, use of the APhA Foundation's Patient Self-Management Credential (PSMC) for Diabetes at baseline, and collection of a standardized minimum dataset.⁴ One-on-one patient visits with the pharmacist were provided in every community. As members of the team, pharmacists educated patients on the pathology of diabetes and how medications work to improve health, taught insulin injection techniques and importance of medication adherence, promoted healthy lifestyles, reinforced health goals, and monitored progress toward those goals. As part of the enrollment process, all patients completed the knowledge assessment from the PSMC, which helped pharmacists and other providers customize the care they would deliver to meet individual needs by identifying key knowledge deficits.⁷

The minimum dataset was collected for all patients and submitted on a quarterly basis to the APhA Foundation. A project-specific Microsoft Access database was provided to the communities to facilitate data collection and secure transfer, and some communities also had electronic health records that were used to aggregate data for submission. In addition to the variability in data storage and collection tactics, communities did not show uniformity in providing pharmacists access to patients' medical records. Despite the differences in data infrastructure, all communities successfully completed the quarterly uploads of the standardized dataset for their enrolled patients.

Each community deployed additional practice innovations to support the care model such as collaborative practice agreements, group education classes, grocery store tours, cooking classes, joint provider visits, and provision of patient incentives. These innovations may have included programs that existed in the communities before Project IMPACT: Diabetes began or new services conceived as part of the total implementation plan. Some communities chose to incentivize patients with free or discounted test strips, gift cards, discounted copayments, free medications, additional health services such as eye examinations, or transportation vouchers. These were provided on varying schedules depending on the incentive type, community plan, and patient needs.

Evaluation

Following the end of the patient care period, the APhA Foundation provided survey forms via a website to the community champions to request that they identify the specific components of each community's implementation and care processes.

Results

The mixture of tactics detailed in Tables 1, 2, and 3 (available in the online version of this article at JAPhA.org) represent each community's effort to implement the APhA Foundation care process in a way that best meets the needs of their patient population. The goal of Project IMPACT: Diabetes was not to assess the value of each of these tactics, but rather to evaluate the impact of diabetes care that includes pharmacists. As such, the information presented within the tables is intended to educate the reader about implementation tactics to consider and those that could be supportive as pharmacists' patient care services are incorporated into local diabetes care.

There were 33 community champions within the 25 communities, with 8 communities using 2 champions. Of those, 26 champions were pharmacists, 5 were administrators, 1 was a physician, and 1 was a social worker. The diverse health care teams across the communities, characterized in Table 1, included 126 pharmacists, 96 physicians, 37 nurse practitioners, 32 medical assistants, 22 dietitians, 19 patient or health advocates, 12 specialist physicians, 11 social workers, 6 physician assistants, 6 behavioral therapists, 2 *promotoras*, and 48 other types of health care team members. CDEs worked on the teams in 14 communities.

The patients within the community specified their race/ethnicity at the time of enrollment. Based on presence of at least 40% of patients being in one ethnic or racial group, 11 communities indicated white as the most prevalent race/ethnicity, 6 indicated Hispanic, 4 indicated black, 1 indicated Native American, and 1 had a majority of patients not specifying their race/ethnicity. Additionally, 2 communities had more than 40% of patients in the white and black groups. A total of 17 com-

munities indicated that they mainly served uninsured or underinsured patients, and the remaining 8 indicated they served insured patients.

Table 2 demonstrates that care was delivered within diverse care settings across the communities. These settings included 44 community pharmacy locations within grocery stores, 24 physician offices, 16 FQHCs, 15 independent community pharmacies, 13 community or diabetes education centers, 7 county or city health clinics, 6 free clinics, 5 other types of clinics, 5 chain community pharmacy locations, 4 employer worksites, and 4 nonspecified locations. All 25 communities collected and reported the standardized minimum dataset. Of these, 21 communities elected to use the APhA Foundation's IMPACT database, which streamlined data collection, aggregation, and reporting. The other 4 communities used proprietary data systems to collect and store data and then reported them to the APhA Foundation through the database's upload function. Within 15 of the communities, pharmacists had direct access to patient medical records through the use of an electronic health record.

Table 3 shows that all communities provided patients with one-on-one visits with the pharmacist and used the PSMC as components of the care delivered. A total of 13 communities had collaborative practice agreements in place between physicians and pharmacists, 11 offered group education classes, and 8 included joint provider visits, in which the pharmacist and another provider saw the patient at the same time. Overall, 8 communities incorporated the American Association of Diabetes Educators framework (AADE7)⁸ into care, 7 provided grocery store tours, and 4 offered cooking classes to the Project IMPACT: Diabetes participants.

During the project, 19 communities provided some form of incentive to enrolled patients (Table 3). Free or discounted diabetes test strips were provided in 12 communities, discounted copayments for medications or diabetes supplies were available in 8 communities, and 7 communities provided free medications. Gift cards incentivized patients in 10 communities, transportation vouchers were supplied in 3 communities, and 3 communities gave patients an opportunity to receive additional health services such as eye examinations. Incentives were provided on varying timelines. In all, 11 communities provided enrollment incentives, 7 provided incentives at each visit, 7 gave them on an as-needed basis, 2 used a predetermined schedule based on length of engagement in the services, 2 rewarded patients as they achieved their health goals, and 1 provided rewards during special types of visits.

One year after the end of the official patient care period, community champions were asked about sustaining the services that had been provided within Project IMPACT: Diabetes (Table 2). All but one community reported continuing to offer diabetes care services, and all

reported that pharmacists remained on the health care team.

Conclusion

Pharmacists were successfully integrated into a diverse array of practice settings and teams to help a wide variety of patients through the provision of team-based, patient-centered care. The consistent components employed in all 25 communities as part of the project infrastructure included one-on-one visits between the patient and pharmacist, use of the PSMC to customize each patient's care to best suit individual needs, and collection and reporting of a standardized minimum dataset of clinical and process measures.

Communities were given the flexibility to customize which diabetes care services were provided within the APhA Foundation's process model to meet the needs of local populations. Every community chose to incorporate collaboration between multiple types of health care providers into their implementation plans, which demonstrates the value in team-based care and collaboration. Flexibility in local implementation, including customization through population-specific tactics, seemed to empower communities to build new or adapt current services that are now sustainably embedded into routine care within their communities.

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Table 1. Characteristics of implementation team members and patients within Project IMPACT: Diabetes communities

Partnering organizations	No. community champions				No. and types of health care professionals on team											CDEs	Most prevalent patient ethnicity ^a					Patient insurance status		
	Pharmacist	Administrator	Physician	Social worker	Pharmacist	Physician	Nurse practitioner	Medical assistant	Dietitian	Patient or health advocate	Specialist	Social worker	Physician assistant	Behavioral therapist	Promotora		Other	Certified diabetes educators on team	White	Hispanic	Black	Native american	Not specified	Uninsured or underinsured
Appalachian College of Pharmacy	1				4	1	4	4	1	4	1					1	✓	✓					✓	
Ball's Food Stores and Deffenbaugh Industries	2				9	20	3				5		1			2	✓	✓						✓
Central Ohio Diabetes Association		1		1	4				4			6				3	✓	✓					✓	
Centro de Salud Familiar La Fe, Inc.	1				7	3		2		3		1				2			✓				✓	
County of Santa Barbara Public Health Department	1				1	2	1	3	2		1								✓				✓	
CrossOver Health Care Ministry		1			10	4	3	5								5	✓			✓			✓	
Daily Planet	1				1	1		1	1	2		1		1								✓	✓	
Eau Claire Internal Medicine and Cooperative Health Pharmacy	1				1	1		1		2						11				✓			✓	
Eau Claire Cooperative Health Centers		1			1		1	1		2						16				✓			✓	
El Rio Community Health Center	1				7	2		3	1	1				2	1	1	✓		✓				✓	
Fink's Pharmacy	2				3	5											✓	✓					✓	
Jefferson County Department of Health	1				7	3														✓			✓	
Kroger Pharmacy, City of Cincinnati, and TriHealth	1				20				2	2							✓	✓		✓			✓	
Mountain States Health Alliance and Dispensary of Hope	1				1	1	8	3			1							✓					✓	
Ohio State University College of Pharmacy	1				6	20	1	2				2						✓		✓			✓	
Paramount Farms and Komoto Pharmacy		1			3	1		1	2				2		1		✓		✓				✓	
Pascua Yaqui Reservation of the El Rio Community Health Center	2				1	1		1					1				✓			✓			✓	
Price Chopper Pharmacy	1				2	1			2	1		1		1				✓					✓	
University of Kentucky and St. Claire Regional Medical Center	2				5											1	✓	✓					✓	
University of Mississippi School of Pharmacy and Diabetes Care Group	2				1	2	2	2	2							2	✓	✓					✓	
Variety Care	1				4	4	3	2					2	1			✓		✓				✓	
West Virginia Health Right		1			4		4	1	1	2						3	✓	✓					✓	
Wichita Public Schools and Dillons Pharmacy	1	1			20	20	5		4		4							✓					✓	
Wingate University School of Pharmacy	1				3	1											✓	✓					✓	
Zufall Health Center	1		1		1	3	2							1		1	✓		✓				✓	
Total	26	5	1	1	126	96	37	32	22	19	12	11	6	6	2	48	14	13	6	6	1	1	17	8

Abbreviation used: CDEs, certified diabetes educators.

^aPrevalent race/ethnicity determined by more than 40% of patients indicating the designated race/ethnicity.

Table 2. Characteristics of care settings within Project IMPACT: Diabetes communities

Community	No. care settings											Data collection and access				One-year sustainability	
	Community pharmacy—grocery store	Physician's office	Federally qualified health center	Community pharmacy— independent	Community or diabetes education center	County/city health clinic	Free clinic	Other type of clinic	Community pharmacy –chain	Employer worksite	Other	Collection and reporting of standardized dataset	Use of IMPACT database	Use of proprietary data system	Pharmacist access to medical records through electronic health record	Diabetes care services sustained	Pharmacists still on health care team
Appalachian College of Pharmacy	1	2	2	4	1	2	1	4	1	1	✓	✓	✓	✓	✓	✓	
Ball's Food Stores and Deffenbaugh Industries	7						1		1	1	✓	✓	✓	✓	✓	✓	
Central Ohio Diabetes Association			2	2							✓	✓		✓	✓	✓	
Centro de Salud Familiar La Fe, Inc.			1								✓	✓	✓	✓	✓	✓	
County of Santa Barbara Public Health Department			1	1	1						✓	✓		✓	✓	✓	
CrossOver Health Care Ministry						2					✓	✓	✓	✓	✓	✓	
Daily Planet			1								✓	✓	✓	✓	✓	✓	
Eau Claire Internal Medicine and Cooperative Health Pharmacy			1	1							✓	✓	✓	✓	✓	✓	
Eau Claire Cooperative Health Centers			1	1							✓	✓	✓	✓	✓	✓	
El Rio Community Health Center			3					1	1		✓	✓	✓	✓	✓	✓	
Fink's Pharmacy			1								✓	✓		✓	✓	✓	
Jefferson County Department of Health						4					✓	✓	✓	✓	✓	✓	
Kroger Pharmacy, City of Cincinnati, and TriHealth	15										✓		✓	✓	✓	✓	
Mountain States Health Alliance and Dispensary of Hope										1	✓	✓		✓	✓	✓	
Ohio State University College of Pharmacy		2									✓	✓	✓	✓	✓	✓	
Paramount Farms and Komoto Pharmacy			1	1			2	2			✓	✓		✓	✓	✓	
Pascua Yaqui Reservation of the El Rio Community Health Center			1								✓	✓	✓	✓	✓	✓	
Price Chopper Pharmacy	1	1									✓	✓				✓	
University of Kentucky and St. Claire Regional Medical Center				2					1		✓	✓	✓	✓	✓	✓	
University of Mississippi School of Pharmacy and Diabetes Care Group							1				✓	✓	✓	✓	✓	✓	
Variety Care			1	1							✓	✓	✓	✓	✓	✓	
West Virginia Health Right						1					✓	✓	✓	✓	✓	✓	
Wichita Public Schools and Dillons Pharmacy	20	20	4	3							✓		✓	✓	✓	✓	
Wingate University School of Pharmacy				3		1	1				✓	✓		✓	✓	✓	
Zufall Health Center			2	2							✓	✓		✓	✓	✓	
Total	44	24	16	15	13	7	6	5	5	4	4	25	21	4	15	24	25

Table 3. Characteristics of care delivery within Project IMPACT: Diabetes communities

Community	Components of care							Incentives provided						Incentive timing							
	One-on-one visits with pharmacist	PSMC use	Collaborative practice agreements	Group education classes	Joint provider visits	AADE7 Framework	Food store tours	Cooking classes	Free or discounted test strips	Gift cards	Discounted copayments	Free medications	Transportation	Additional health services	None	At enrollment	During each visit	As needed by the patient	At predetermined lengths of engagement	When health goals were achieved	During special types of visits
Appalachian College of Pharmacy	✓	✓	✓	✓	✓	✓			✓	✓	✓					✓				✓	
Ball's Food Stores and Deffenbaugh Industries	✓	✓				✓			✓		✓							✓	✓		
Central Ohio Diabetes Association	✓	✓	✓	✓		✓	✓	✓							✓						
Centro de Salud Familiar La Fe, Inc.	✓	✓	✓	✓			✓	✓		✓	✓			✓							✓
County of Santa Barbara Public Health Department	✓	✓			✓										✓						
CrossOver Health Care Ministry	✓	✓	✓						✓	✓								✓		✓	
Daily Planet	✓	✓		✓	✓		✓		✓		✓	✓	✓		✓	✓	✓				
Eau Claire Internal Medicine and Cooperative Health Pharmacy	✓	✓	✓	✓					✓	✓	✓				✓		✓				
Eau Claire Cooperative Health Centers	✓	✓	✓	✓					✓	✓	✓				✓		✓				
El Rio Community Health Center	✓	✓	✓			✓								✓							
Fink's Pharmacy	✓	✓	✓	✓		✓					✓						✓				
Jefferson County Department of Health	✓	✓	✓		✓				✓		✓						✓		✓		
Kroger Pharmacy, City of Cincinnati, and TriHealth	✓	✓				✓	✓		✓	✓	✓				✓						
Mountain States Health Alliance and Dispensary of Hope	✓	✓								✓	✓		✓		✓						
Ohio State University College of Pharmacy	✓	✓			✓										✓						
Paramount Farms and Komoto Pharmacy	✓	✓	✓	✓				✓	✓	✓	✓	✓			✓	✓					
Pascua Yaqui Reservation of the El Rio Community Health Center	✓	✓	✓	✓	✓	✓									✓						
Price Chopper Pharmacy	✓	✓					✓			✓						✓					
University of Kentucky and St. Claire Regional Medical Center	✓	✓		✓					✓						✓						
University of Mississippi School of Pharmacy and Diabetes Care Group	✓	✓			✓										✓						
Variety Care	✓	✓	✓								✓				✓		✓				
West Virginia Health Right	✓	✓	✓	✓			✓	✓	✓		✓	✓				✓					
Wichita Public Schools and Dillons Pharmacy	✓	✓					✓				✓	✓			✓						
Wingate University School of Pharmacy	✓	✓			✓				✓	✓					✓	✓					
Zufall Health Center	✓	✓				✓					✓								✓		
Total	25	25	13	11	8	8	7	4	12	10	8	8	3	3	6	11	7	7	2	2	1

Abbreviations used: PSMC, Patient Self-Management Credential; AADE7, American Association of Diabetes Educators (AADE)7.