

Patient Credentialing as a Population Health Management Strategy: A Diabetes Case Study

Lindsay L. Watson, PharmD,¹ Benjamin M. Bluml, BPharm,¹ and Alexandria Skoufalos, EdD²

Abstract

When given the opportunity to become actively involved in the decision-making process, patients can positively impact their health outcomes. Understanding how to empower patients to become informed consumers of health care services is an important strategy for addressing disparities and variability in care. Patient credentialing identifies people who have a certain diagnosis and have achieved certain levels of competency in understanding and managing their disease. Patient credentialing was developed to meet 3 core purposes: (1) enhance patient engagement by increasing personal accountability for health outcomes, (2) create a mass customization strategy for providers to deliver high-quality, patient-centered collaborative care, and (3) provide payers with a foundation for properly aligning health benefit incentives. The Patient Self-Management Credential for Diabetes, a first-of-its-kind, psychometrically validated tool, has been deployed within 3 practice-based research initiatives as a component of innovative diabetes care. Results from these projects show improved clinical outcomes, reduced health care costs, and a relationship between credential achievement levels and clinical markers of diabetes. Implementing patient credentialing as part of collaborative care delivered within various settings across the health care system may be an effective way to reduce disparities, improve access to care and appropriate treatments, incentivize patient engagement in managing their health, and expend time and resources in a customized way to meet individual needs. (*Population Health Management* 2014;xx:xxx-xxx)

Background

THE AFFORDABLE CARE ACT is mandating significant changes in the way care is delivered, structured, and paid for (eg, Accountable Care Organizations, Patient-Centered Medical Homes). The United States spends more than any other developed country on health care (almost 50% more per capita on an adjusted basis), but extra expenditures do not translate into better health outcomes.¹ A fundamental challenge underlying the health system's woes can be summarized succinctly in terms of value, particularly when the system is viewed from a global perspective. The ultimate marker of the effectiveness of health reform is to achieve measurable improvement in population health outcomes. The evolving models will affect patients' ability to access and navigate the health care system, understand their treatment options, and make informed decisions that will help them to properly manage their health care.

Emerging models of care, such as the patient credentialing program described in this article, aim to reduce waste, enhance coordination, and promote shared decision making among care providers and the patient. When given the opportunity to become actively involved in the decision-making process, patients can positively impact their health outcomes. Understanding how to empower patients to become informed consumers of health care services is an important strategy for addressing disparities and variability in care.

Key determinants of health (including education, stress levels, mental and emotional state, financial, and/or food insecurity), in addition to disease-related factors, have a direct bearing on quality of life and health status for individuals. These determinants can influence treatment choices, affect an individual's ability to interact with health care providers, and prevent a person from adhering to complex dietary and medication protocols.² By developing strategies

¹American Pharmacists Association (APhA) Foundation, Washington, D.C.

²Jefferson School of Population Health, Thomas Jefferson University, Philadelphia, Pennsylvania.

to modulate the effects of these determinants on the course of disease, we can begin to construct a model that has the potential to affect the overall health of the US population.

Impact of diabetes

The emerging changes within the health care system are of particular significance to patients with chronic conditions like diabetes, which, because of its complexity and prevalence, has a profound impact on the health status of the population. Diabetes is a condition that is largely preventable and sometimes even reversible if caught in the earliest stages before the cascade of serious complications (eg, cardiovascular problems, renal failure, blindness, amputation) sets in. It carries a significant burden of illness for those with the disease, and its complexity strains the capabilities and resources of a fragmented system. For the estimated 26 million Americans with diabetes,³ careful monitoring and management of everyday activities is necessary to halt or slow the progression of disease and delay the onset of life-threatening complications.

At an April 2014 continuing medical education program for primary care physicians, Robert Ratner, MD, Chief Scientific and Medical Officer of the American Diabetes Association, noted that people with diabetes are expected to manage—on their own and multiple times daily—blood testing and medication dosing/administration that is typically handled only by licensed health care professionals. “In essence,” he stated, “people with diabetes are their own primary care providers.”

According to the 2014 Standards of Medical Care released by the American Diabetes Association,⁴ high-quality care for people with diabetes includes the following components:

- The use of an integrated team of providers with expertise in diabetes (may include physicians, nurse practitioners, physician assistants, nurses, dietitians, pharmacists, diabetes educators, and mental health professionals);
- Patients must assume an active role in care management, as full participants and members of the team;
- Care management that is a collaborative therapeutic alliance, with self-management education as an integral component;
- Education that helps patients develop problem-solving skills and competence in all aspects of care management; and
- Individualized treatment plans that take into consideration patient preferences, age, and social and cultural factors.

Patient credentialing has the ability to facilitate the provision of quality diabetes care for all patients with the disease.

Patient Credentialing and the Patient Self-Management Credential (PSMC) for Diabetes

Credentials identify individuals who have met core competencies in a specified area, typically related to a profession or job. Patient credentialing applies this model to identify people who have a certain diagnosis and have achieved certain levels of competency in understanding and

managing their disease. Patient credentialing was developed to meet 3 core purposes: (1) enhance patient engagement by increasing personal accountability for health outcomes, (2) create a mass customization strategy for providers to deliver high-quality, patient-centered collaborative care, and (3) provide payers with a foundation for properly aligning health benefit incentives. Credentialing allows providers to easily identify a patient’s self-management strengths and weaknesses, tailor the education provided, develop and communicate individualized health goals for the patient to strive to achieve between appointments, and reassess patient progress in a measurable way at subsequent visits. Credentialing “meets people where they are” in that it can be adapted to accommodate sociodemographic factors, including reading level and language preference, and it identifies gaps in patient understanding and proficiency so that appropriate education may be tailored to meet individual needs.

Patient credentialing can occur in any health care setting and with the involvement of many types of health care team members. Based on the disease state or condition and the tactics required to manage it effectively, various providers may be well suited to administer or utilize the results of a patient credential to help direct the care that will be provided. Patient credentialing has the ability to standardize the process for determining core focuses for care delivery and health goals, which may reduce health disparities among patient populations, as each patient’s specific needs are identified through the patient credentialing process regardless of other confounding factors. This customization will serve to standardize and elevate the quality of care provided across practice settings and provider types.

In 2002, the American Pharmacists Association (APhA) Foundation created a first-of-its-kind, psychometrically validated patient credential focused on diabetes self-management.⁵ PSMC for Diabetes was developed to achieve the 3 goals of patient credentialing (enhanced patient engagement, mass customization of care, and a foundation for health benefit incentives), and was deployed within innovative research projects as the APhA Foundation evaluated ways to meaningfully integrate pharmacists into collaborative health care teams to improve patient outcomes. Psychometric validation of the tool ensured that the design, administration, and interpretation of assessment questions were reliable and valid (ie, that the credential assesses its outcomes consistently across time, individuals, and situations and that it accurately measures what it intends to measure).

The PSMC was created to encompass 3 domains: knowledge, skills, and performance. Within each domain patient scores are associated with a ranking of *beginner*, *proficient*, or *advanced*. As many health care providers can attest, patients can have a good knowledge base but, without the proper skill set, they still experience self-management challenges. In addition, it can be challenging for patients to routinely perform self-management behaviors over the long term when managing a chronic condition. The PSMC for Diabetes enables diabetes care providers to assess patient progress along the self-management continuum and allows them to target education and interventions to empower patients to achieve improved health outcomes. Figure 1 shows how a patient may progress through the credentialing

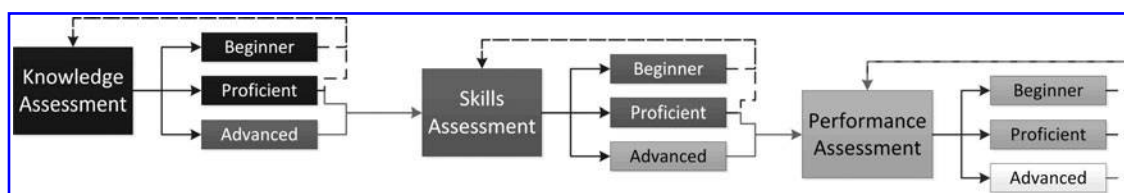


FIG. 1. Patient Self-Management Credential achievement-driven process

process as various achievement levels are attained in each domain.

Patient self-management assessments

Knowledge. The knowledge assessment is a structured questionnaire that patients can complete online or on paper within a health care setting. The questionnaire for the PSMC for Diabetes consists of 36 multiple-choice questions constructed to gain insight into 6 knowledge categories: medical care, medications, monitoring of blood glucose levels, meals/diet, motion/exercise, and management/preventive care. The assessment is designed to help providers “meet the patient where they are” and to assist in identifying knowledge strengths and weaknesses early in the process of care. Methodologically, this provides a mechanism for customizing care in a way that meets each patient’s individual needs while also establishing a way to benchmark and recognize patients’ progress in learning about their disease. The PSMC online system has 3 methods for collecting patient responses: (1) via kiosk mode for the patient to complete in the provider office, (2) via a secure assessment link that is e-mailed to the patient for completion before the visit, or (3) via an entry screen for providers to input patient responses from the paper version of the assessment. All input methods will result in the automatic scoring of responses and deliver a report to the provider.

Skills. Skills assessments are conducted by a health care provider during a patient visit. Through the skills assessment process, patients are asked to demonstrate disease monitoring and management techniques and to respond to oral questions from the provider regarding these techniques. There are 6 different PSMC diabetes skill assessments: blood glucose monitoring, nutrition, oral medication, insulin (where applicable), foot and skin care, and stress management. Each of the skills assessments includes questions for the provider to ask the patient, preferred responses to assist with the administration and scoring of the assessment, and a checklist to record how competent the patient was at demonstrating the skills. Providers can choose to enter patient responses in the online system for immediate scoring or record them on paper and then enter them into the online system later for scoring. The skill assessments are scored individually and then in aggregate to create an overall skills achievement level.

Performance. Performance assessments identify how well patients are following through with implementing the self-management behaviors that they have the knowledge and skills to achieve. The PSMC diabetes performance assessment consists of a series of 10 required and 8 optional

questions focused on diabetes care standards, including regular health care visits, behavioral goal setting, proper nutrition and exercise, medication adherence, dental visits, vaccines, eye and foot exams, and clinical monitoring for A1c, blood pressure, and lipid profiles. Answers to the 18 questions are obtained by reviewing medical records if they are available or by asking patients for self-reported responses as needed. Assessment metrics are input directly into the online system or collected via paper form in the same process used with skills assessments. The performance assessments are designed to create ongoing accountability and recognition for the patient in achieving their self-management goals.

Achievement levels within the PSMC

Each assessment is scored by the APhA Foundation’s online platform to indicate whether the patient is *beginner*, *proficient*, or *advanced*. *Beginners* are starting the journey to become effective self-managers and can benefit most from broad disease state education programs. *Proficient* patients have demonstrated that they are capable self-managers in the assessed area, and providers can utilize their responses to the assessment to identify gaps where additional education will serve to advance the individual’s abilities. *Advanced* patients have mastered the self-management area that was assessed. Providers are able to access the patient’s score within the PSMC online portal immediately after the assessment is completed. The ranking of *beginner*, *proficient*, or *advanced* is accompanied by a list of the highest areas of need for additional education, which enables providers to determine the best approach for sharing the results with the patient, customizing learning activities, and recognizing/celebrating achievement of attaining higher competency levels.

The goal for patients is to achieve a level of *proficient* or *advanced* as they move sequentially through the assessments of knowledge, skill, and performance. As illustrated in Figure 1, providers have the option to either readminister an assessment or move the patient onto the next sequential assessment when patients achieve a level of *proficient*. The performance assessment is intended to be repeated with the patient for as long as they are managing their condition. However, the frequency of those repeated performance assessments will depend on each individual’s achievement level in that domain and personalized care plan. Regardless of the domain or the path each patient takes to becoming *advanced*, as patients reach their goals the credential can be used to celebrate their success, identify individuals able to serve as peer mentors, and award incentives for achievement that serve to mitigate their risk for disease-related complications.

Integrating patient credentialing into care models

Patient credentialing has a role in a diverse variety of primary care settings. Health care providers in physician offices, clinics, pharmacies, patient education centers, and other locations where patients receive routine care can integrate patient credentialing into the care delivery process to assure that patients understand their condition and are able to manage their health between visits. Credentialing assessments can be effectively administered in advance of or during the visit with the provider. Assessments can be sent electronically to the patient before the visit or administered by support staff or the provider within the primary care setting via the Web site, paper format, or in an interview. For certain assessments, patients may be required to demonstrate to the provider that they can competently complete certain self-management skills. Depending on the focus of the patient credential and the education topics that should be addressed to advance the patient's capabilities, different health care team members may be better suited to administer or receive results from the assessment. Regardless of setting, results from the credential can be utilized to identify a need for referral to other providers or programs to create efficiency in the health care system, enhanced communication between providers, and appropriate utilization of the resources available to help patients take control of their health.

The PSMC for Diabetes has been an essential component of several APhA Foundation patient-centered research initiatives that integrate pharmacists into diverse diabetes care teams, and is an exemplar of how patient credentialing can be integrated into primary care. Within the research initiatives, the credential was administered primarily by pharmacists within community pharmacies. Results were shared with the patient and other members of the health care team, as appropriate, to facilitate collaboration and alignment regarding care plans. The tool empowered the health care team to identify the topics and skills that each patient struggled to understand and to target education to help the patient master those high-impact areas. The PSMC for Diabetes also created a structured process for pharmacists participating in the research initiatives to provide customized care while ensuring consistency in the patient experience, regardless of which practice location or practitioner was implementing the program.

Utilization in payment systems

Patient credentialing not only empowers patients and provides a mass customization tool for health care providers, the process also has a largely unrealized value for payers. Payers may stratify potential risk within a population based on credentialing achievement levels, which in turn can help shape health plan design. Patient credentialing quantifies each person's understanding of and ability to manage their disease state by adhering to routine treatment and accessing preventive care, which can also enable payers to properly align incentives for patients who successfully control their health and avoid costly complications.

Payers can recognize various levels of achievement by reducing or eliminating co-payments; providing free preventive services, home monitoring devices, and value-added services that would not otherwise be accessible; or modifying health plan costs. For example, patients achieving a

level of *proficient* in the PSMC for Diabetes skills assessment related to insulin use may receive waived co-payments for their insulin medication and associated supplies. Payers also may choose to provide incentives for patients based simply on their continued engagement in the patient credentialing process, which will drive people to stay engaged in the health care system and increase the number of touch points for preventive care and health education.

Discussion of Outcomes: A Diabetes Case Study

The PSMC for Diabetes has been used for more than a decade in the quest to improve care delivery. In research projects wherein the PSMC was deployed as one component of an innovative diabetes care model, clinical outcomes improved and health care costs declined. The 3 main utilizations of the credential were the Patient Self-Management Program (PSMP) for Diabetes,⁶ the Diabetes Ten City Challenge (DTCC),^{7,8} and Project IMPACT: Diabetes (IMPACT).^{9,10} All of the projects involved the integration of pharmacists into diabetes care teams as the main intervention, with the PSMP for Diabetes serving a supporting role in directing care delivery. Pharmacists also provided patient care services including scheduled consultations, clinical goal setting and monitoring, collaborative drug therapy management, and referrals to diabetes educators and physicians as needed.

The collection of experiences from the PSMP, DTCC, and IMPACT demonstrate the use of patient credentialing across varying patient populations. The PSMP and DTCC were implemented in conjunction with beneficiaries of self-insured employers, while IMPACT was focused on communities that included underserved or uninsured patients and populations disproportionately affected by diabetes. As shown in Table 1, patients of varying ethnicities have participated across the projects. Across all 3 projects the mean age of patients was in the range of 50–59 years, and slightly more women engaged than men. Tables 2 and 3 show the positive clinical results achieved across the projects' diverse populations.

Within the PSMP and DTCC, the PSMC for Diabetes was utilized at baseline and at subsequent follow-up visits with the pharmacist.^{6–8} It provided a cohesive strategy for the prioritization of care needs across the communities

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF PATIENTS IN PSMP, DTCC, AND IMPACT

<i>Demographic Characteristic</i>	<i>PSMP</i>	<i>DTCC</i>	<i>IMPACT</i>
N=	256	573	1,836
Average Age (years)	55	50–59	54
% Female	60	51	57
Ethnicity (%)			
White	63	80	41
African American	30	13	24.5
Hispanic	NA*	3	21.5
Native American	1.5	2	5
Asian	2.5	1	1
Not specified or other	3	1	7

*NA = not available

DTCC, Diabetes Ten City Challenge; IMPACT, Project IMPACT: Diabetes; PSMP, Patient Self-Management Program

TABLE 2. SUMMARY OF OUTCOMES FROM PROJECTS USING PSMC FOR DIABETES

	<i>Patient Self-Management Program for Diabetes⁴</i>	<i>Diabetes Ten City Challenge^{5,6}</i>
Study Description	<ul style="list-style-type: none"> • Setting: Community pharmacies in 5 distinct geographies in partnership with self-insured employers • Main intervention: Pharmacists’ patient care services were delivered using scheduled consultations, clinical goal setting, monitoring, and collaborative drug therapy management with physicians and referrals to diabetes educators. • Additional components: PSMC for Diabetes, patient incentives, payment for pharmacist services, health coaching 	<ul style="list-style-type: none"> • Setting: Community pharmacies in 10 distinct geographic areas contracting with self-insured employers • Main intervention: Community-based pharmacists provided patient care services via scheduled consultations within a collaborative care management model. • Additional components: PSMC for Diabetes, patient incentives, payment for pharmacist services, health coaching
Clinical Outcomes	<ul style="list-style-type: none"> • Mean A1c decreased 0.8% • Mean LDL-C decreased 8.9 mg/dL • Mean systolic blood pressured decreased 4.8 mm Hg • Influenza vaccination rates increased 15% • Eye examination rates increased 36% • Foot examination rates increased 42% 	<ul style="list-style-type: none"> • Mean A1c decrease of 0.4% • Mean LDL-C decrease of 4 mg/dL • Mean systolic blood pressure decrease of 3 mm Hg • Influenza vaccination rates increased 33% • Eye examination rates increased 24% • Foot examination rates increased 40%
Humanistic Outcomes	<ul style="list-style-type: none"> • Patient satisfaction with overall diabetes care improved 30% in the highest range from baseline after 6 months • 95.7% of patients reported being very satisfied or satisfied with the diabetes care provided by their pharmacists 	<ul style="list-style-type: none"> • Patient satisfaction with overall diabetes care increased from 39% to 87% in the highest range from baseline to 6 months • 97.5% of patients reported being very satisfied or satisfied with the diabetes care provided by their pharmacists
Economic Outcomes	<ul style="list-style-type: none"> • Total mean health care costs per patient were \$918 lower than projections for the initial year of enrollment 	<ul style="list-style-type: none"> • Average total health care costs per patient per year were reduced by \$1079 (7.2%) compared with projected costs

A1c, hemoglobin A1c; LDL-C, low-density lipoprotein cholesterol; PSMC, Patient Self-Management Credential

TABLE 3. PROJECT IMPACT: DIABETES FINAL A1C RESULTS AND DEMOGRAPHICS BY CREDENTIAL ACHIEVEMENT LEVEL[†]

<i>Baseline Achievement Level</i>	<i>N=</i>	<i>Baseline A1c</i>	<i>Most Recent A1c</i>	<i>Change to Date</i>	<i>P Value</i>
<i>Beginner</i>	622	9.3 (SD=2.1)	8.3 (SD=1.9)	-1.0 (SD=2.2)	<0.001
<i>Proficient</i>	721	8.9 (SD=2.0)	8.2 (SD=1.7)	-0.7 (SD=1.8)	<0.001
<i>Advanced</i>	324	8.5 (SD=1.7)	8.0 (SD=1.7)	-0.5 (SD=1.4)	<0.001
		<i>Total Population*</i>	<i>Beginners*</i>	<i>Proficient*</i>	<i>Advanced*</i>
N=		1667	622	721	324
Average Age		54.0	54.7	53.5	53.7
% Female		57.8	55.5	60.1	57.1
% White		40.6	18.5	48.0	66.7
% Hispanic		22.4	43.6	11.2	6.5
% African American		24.1	22.5	27.0	20.7
% American Indian		5.2	5.6	5.5	3.7
% Asian		0.6	0.6	0.7	0.3
% Pacific Islander		0.6	0.8	0.4	0.6
% Other		1.4	1.8	1.7	0.3
% Not Specified		5.0	6.6	5.4	1.2

[†]Includes patients in 25 participating communities who received care from collaborative health care teams that included pharmacists and that used the PSMC for Diabetes.

*Includes only patients with at least 2 A1c measures.

A1c, hemoglobin A1c; PSMC, Patient Self-Management Credential; SD, standard deviation

participating in the PSMP and DTCC, which enhanced the care provided by the pharmacist as part of the main health coaching intervention. Table 2 details the clinical, humanistic, and economic outcomes from the PSMP and DTCC, which are associated with the inclusion of pharmacists and the PSMC for Diabetes as components of diabetes care programs. Within both of these projects and in select communities from IMPACT, payers chose to incentivize patients who participated in the care program, which included use of the PSMC for Diabetes. Incentives included free or discounted diabetes medications or supplies, waived co-payments, or additional health services at no cost to the patient.⁶⁻⁸

Within IMPACT, administration of the PSMC for Diabetes knowledge assessment was required at the time of enrollment.^{9,10} It was available to be used as a support resource by pharmacists, physicians, social workers, dietitians, and many other providers and team members as they worked collaboratively to develop a care plan and education priorities (which were part of the main intervention) for patients. Some of the 25 participating communities elected to use the credential at each visit as a way to assess patient progress and determine the need for and schedule of follow-up visits.^{9,10} Using basic statistical analysis methods for determining significance from a paired *t* test, it can be seen in Table 3 that there is a relationship between baseline hemoglobin A1c (A1c) and baseline knowledge assessment achievement level.

Patients who are at the *beginner* level have higher baseline A1c levels than those who are *proficient*, and the latter have higher A1c levels than patients who are *advanced*. There is also a relationship between change in A1c and baseline knowledge assessment achievement level, indicating that *beginners* may see a higher reduction in A1c than *proficient* patients and *proficient* patients may see a higher decrease than those who are *advanced*. This relationship was observed when all patients were receiving similar levels of care from collaborative teams that included pharmacists and the use of the credential. The demographic information suggests that certain ethnicities may have a higher propensity for certain achievement levels.

Future of Patient Credentialing

Implementing patient credentialing as part of collaborative care delivered within various settings across the health care system may be an effective way to reduce disparities and improve access to care and appropriate treatments. Regardless of setting or provider, patients would have the opportunity to be assessed objectively and to have personal needs identified and addressed by their provider. Those areas of focus may lead to enhanced education, referral to other providers, or identification of a need for changes in medication therapies or care plans. By administering a credential, providers have an opportunity to create efficiency in their assessment of patients and to overcome the barriers and discrepancies in the system that often hinder high-quality care from being delivered uniformly across populations. Patient credentialing also supplies a new mechanism to fuel collaboration within health care teams as providers and patients share information about personalized care plans developed from credential achievement indicators.

The A1c results and accompanying demographic analyses from IMPACT illustrate how patient credentialing could be valuable as a population risk stratification tool in addition to its uses in targeting patient-level interventions by pharmacists and other providers. The PSMP, DTCC, and IMPACT were not launched to directly measure the effect of patient credentialing, indicating that future studies to isolate the impact of the credential on a variety of sociodemographic groups could be beneficial. Through a more efficient identification of groups of patients who could most benefit from certain types of education or treatments, community resources can be effectively and appropriately applied to address population health needs. This translates into an optimized distribution of time, attention, health care resources, and financial rewards across the system. Applying limited resources to the people and groups most in need of care has the power to improve care delivery and patient outcomes.

Patient credentialing also introduces a unique opportunity to expand the impact of each provider-patient touch point and sustain the level of proficiency that was achieved on previous visits. The framework for patients to achieve higher credential levels necessitates interaction and collaboration with health care providers. Credentialing can motivate patients to maintain contact with their providers, and it can help providers capitalize on the brief time they have to spend with patients, especially those who may be less engaged. These additional, more meaningful touch points increase patient access to the health care services, medications, information, and preventive care they need to avoid complications. By zeroing in on patients' highest needs, providers can successfully tailor the care they provide and coordinate involvement by other team members in patients' care as needed.

The implementation tactics used by self-insured employers in the PSMP and DTCC demonstrate a simple way the PSMC can be leveraged to incentivize patients to more fully engage in the management of their health conditions. With the provision of incentives for continual engagement in a health management program and reassessment of achievement level, payers are able to drive patients to maintain consistent interaction with health care providers. It is hypothesized that with additional incentives given for reaching higher achievement levels, patients may become even more enthusiastic about self-managing their health. The changing health care system may benefit from the incorporation of patient credentialing as a means to reward patients who take an active role in their health.

Patient credentialing is not limited to diabetes management. Based in part on the positive results in diabetes, the APhA Foundation also has created a PSMC for Cardiovascular Health, and is exploring opportunities for the use of patient credentialing in other disease states and for complex medication administration or management scenarios. The incorporation of patient credentialing into routine care for patients with chronic disease may have the potential to create more open communication between patients and providers while also increasing the quality and appropriateness of care that is delivered across the health care system. If these improvements were made across geographic areas or targeted groups of patients, the customized care and optimized resource allocations may have a dramatic impact on population health. The promising results that have been

observed to date indicate the need for additional research and exploration of the potential role of patient credentialing as a component of chronic disease management.

Author Disclosure Statement

Drs. Watson and Skoufalos, and Mr. Bluml declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Dr. Watson and Mr. Bluml are employed by the American Pharmacists Association (APhA) Foundation, which developed the Patient Self-Management Credential (PSMC) and conducted the Patient Self-Management Program for Diabetes, Diabetes Ten City Challenge, and Project IMPACT: Diabetes. Dr. Skoufalos is employed by the Jefferson School of Population Health, which received a stipend from the APhA Foundation for manuscript development. Project IMPACT: Diabetes was supported through a partnership with the Bristol Meyers Squibb Foundation's Together on Diabetes initiative. Sanofi has provided support to the APhA Foundation for piloting expansion of patient credentialing into multiple practice environments.

References

1. Organisation for Economic Cooperation and Development. OECD Health Statistics 2014: How does the United States compare? <http://www.oecd.org/unitedstates/Briefing-Note-UNITED-STATES-2014.pdf>. Accessed on August 15, 2014.
2. Maddigan SL, Feeny DH, Majumdar SR, Farris KB, Johnson JA. Understanding the determinants of health for people with type 2 diabetes. *Am J Public Health*. 2006;96:1649–1655.
3. National Diabetes Education Program. The facts about diabetes: a leading cause of death in the U.S. What is diabetes? <http://ndep.nih.gov/diabetes-facts/#howmany>. Accessed on May 2, 2014.
4. American Diabetes Association. Standards of medical care in diabetes—2014. *Diabetes Care*. 2014;37(suppl 1):S21.
5. APhA Foundation. Patient Self-Management Credential (PSMC). <http://www.aphafoundation.org/patient-self-management-credential-project>. Accessed on May 2, 2014.
6. Garrett DG, Bluml BM. Patient self-management program for diabetes: first-year clinical, humanistic, and economic outcomes. *J Am Pharm Assoc*. 2005;45:130–137.
7. Fera T, Bluml BM, Ellis WM, Schaller CW, Garrett DG. The Diabetes Ten City Challenge: interim clinical and humanistic outcomes of a multisite community pharmacy diabetes care program. *J Am Pharm Assoc*. 2008;48:181–190.
8. Fera T, Bluml BM, Ellis WM. The Diabetes Ten City Challenge: final economic and clinical results. *J Am Pharm Assoc*. 2009;49:383–391.
9. Watson LL, Bluml BM. Integrating pharmacists into diverse diabetes care teams: implementation tactics from Project IMPACT: Diabetes. *J Am Pharm Assoc*. In press.
10. Bluml BM, Watson LL, Skelton JB, Manolakis PG, Brock KA. Improving outcomes for diverse populations disproportionately affected by diabetes: final results of Project IMPACT: Diabetes. *J Am Pharm Assoc*. In press.

Address correspondence to:
Lindsay L. Watson, PharmD
Director, Applied Innovation
APhA Foundation
2215 Constitution Avenue NW
Washington, D.C. 20037

E-mail: lwatson@aphanet.org