Toward a Strategy of Patient-Centered Access to Primary Care

Leonard L. Berry, PhD; Dan Beckham, MBA; Amy Dettman, RN, MBA; and Robert Mead, MD

Abstract

Patient-centered access (PCA) to primary care services is rapidly becoming an imperative for efficiently delivering high-quality health care to patients. To enhance their PCA-related efforts, some medical practices and health systems have begun to use various tactics, including team-based care, satellite clinics, same-day and group appointments, greater use of physician assistants and nurse practitioners, and remote access to health services. However, few organizations are addressing the PCA imperative comprehensively by integrating these various tactics to develop an overall PCA management strategy. Successful integration means taking into account the changing competitive and reimbursement landscape in primary care, conducting an evidence-based assessment of the barriers and benefits of PCA implementation, and attending to the particular needs of the institution engaged in this important effort. This article provides a blueprint for creating a multifaceted but coordinated PCA strategy—one aimed squarely at making patient access a centerpiece of how health care is delivered. The case of a Wisconsin-based health system is used as an illustrative example of how other institutions might begin to conceive their fledging PCA strategies without proposing it as a one-size-fits-all model.

COMPETING ON CONVENIENCE

To create a viable PCA strategy, one must account for several market dynamics. The first is intertype competition, or competition for the same customers by dissimilar competitors. One of the most common ways that intertype competitors distinguish themselves from existing organizations is in how they change customers’ expectations of convenience. For example, consumers now expect virtually any business to offer online access to its services; businesses that do not offer such access have trouble competing for customers.

In primary care medicine, competing for patients on the basis of convenience may seem an unlikely concern given the predicted shortages of primary care physicians (PCPs), expected increases in health care utilization related to the Affordable Care Act, and the aging of the US population. However, intertype competitors already handle a growing share of the estimated 50 million low-acuity patient visits annually. For example, more than 8000 urgent care clinics in the United States offer extended walk-in services remotely.

A primary care practice that wants to deliver health care effectively must interact with patients where, when, and how they want to be served. Patient-centered access (PCA), or consistently providing convenient access to services that patients need and desire, is becoming a priority for medical practices, many of which are adopting useful tactics to achieve this goal. These practices include, but are not limited to, operating urgent care, retail, and employer-based clinics; offering same-day and group appointments to patients; deploying physician assistants (PAs) and nurse practitioners (NPs) on the front lines of care; and enabling patients to access health services remotely. All these tactics enhance PCA, but none of them alone—or even all of them put together—is enough. Achieving the goal of PCA—improving clinical quality and efficiency while reducing the time, effort, emotional burden, and expense that patients incur in obtaining care—requires a comprehensive management strategy that attends to the uniqueness of the health care setting and to the needs and expectations of the patients. This article articulates a multifaceted but coordinated strategy of PCA and provides a basic blueprint for implementing it using various tactics.
hours, a physician presence, and many testing services. More than 1400 retail clinics (in supermarkets, drug and discount stores, and airports), typically staffed by NPs and PAs, treat a defined set of low-acuity conditions and offer immunizations, basic screenings, and other services. Retail clinics are predicted to more than double in number by 2015. Employer-based clinics, often staffed by clinicians from external contractors, are now operated by about a third of US companies that have more than 500 workers in 1 location. Increasingly, urgent care, retail, and employer-based clinics are owned by physician groups or health systems. Finally, telephone visit (eg, Teladoc) and electronic visit (eg, Consult A Doctor and American Well) competitors are making inroads. During an e-visit, for example, a patient logs into a Web portal to communicate in real time with a doctor or NP who can prescribe medications electronically.

Any strategy for pursuing PCA in primary care must focus on the importance of intertype competition and patients’ rising expectations of convenience. Maintaining the status quo increases vulnerability and overlooks opportunity in the new competitive environment. The first step in moving forward is to understand the basic structure and pillars of a PCA strategy.

THE BUILDING BLOCKS OF PCA

The fundamental mission of PCA is to provide timely, high-quality care, irrespective of whether an in-person encounter is required. The aim is to assist patients with a comprehensive range of health needs by coordinating care among multiple clinicians, each performing tasks aligned with his or her training. Information technology plays a pivotal role in facilitating communication among staff and with patients, in managing medical records and allowing patients to retrieve information from them, in coordinating care plans, and in giving clinicians quick access to evidence-based clinical protocols.

The Figure illustrates a possible PCA strategy for a multiphysician primary care practice. The spectrum of access choices accounts for the heterogeneity of the needs and preferences of the served patients by offering them multiple paths to receiving care. Impediments—system-related factors such as inability to schedule timely appointments, patient-related factors such as patients’ work schedules, and locational factors such as those related to transportation—can be minimized through intelligent, deliberate execution of a PCA strategy.

Executing a PCA Strategy

The labor, knowledge, skill, and time intensive nature of health care services all represent challenges to improving productivity. The traditional office visit works well for patients who can wait for an available in-person appointment and whose medical issues can be addressed effectively in the time allotted. Although research establishes that most patients would rather see their existing primary physician than someone new, the growth of intertype competition in primary care clearly exhibits the willingness of many patients to trade-off continuity of care for better access. Modernizing how patients access care can help physicians’ practices compete for patients in this evolving environment. Let us explore the components.

Team-Based Primary Care. A team-based approach enables physicians and nonphysicians
to work up to, rather than down from, their level of training in a coordinated fashion. 

Productivity and access improve when specialists, PCPs, NPs, PAs, and nonclinicians each focus on their areas of expertise while working together toward common goals.15,20

Quality of care and levels of patient satisfaction typically do not decline when NPs and PAs provide primary care services—and access can improve.21-24 In a study of patients’ preferences in finding a new primary care provider, 50% chose a physician, 23% opted for a PA or NP, and 26% indicated no preference. However, when respondents had the choice of seeing a PA or NP on the same day or a physician the next day (for a worsening cough) or in 3 days (for frequent severe headaches), the majority chose the PA or NP.25

Medical assistants, who have more limited clinical training, can also play a role. For instance, Clinica Family Health Services, whose 4 centers serve a low-income, mostly Latino population near Denver, assembles care teams (“pods”) of 3 PCPs and 3 medical assistants (each assigned to a PCP), plus a registered nurse, case manager, and behavioral health professional.11 Medical assistants take medical histories using electronic templates and give immunizations; registered nurses handle low-acuity conditions according to standing orders; and other designated team members provide various preventive and chronic care services, including monitoring patient registries and contacting patients who are due for screening or laboratory tests.

Electronic health record (EHR) systems specifically designed to support team-based care play a key role in helping team members coordinate primary care.26,27 In simulation research, an EHR-supported team-based approach meaningfully increased the overall pool of patients without compromising access.13 Other studies also document increased patient satisfaction when a coordinated team-based approach is used.28-31

**Alignment of Supply Capacity With Demand Patterns.** Well-executed team-based approaches increase the overall supply capacity by allowing team members to focus on the aspects of care that they can execute most efficiently and minimizing the time spent on tasks well below their license. Teams can also accomplish more in a single patient visit and provide some of the care in nonvisit contact with patients. Practices can improve the timeliness of office visits by reserving slots for same- or next-day appointments (“advanced access”) or by scheduling regular, nonappointment office hours. Computerized centralized scheduling systems can aid in these efforts at hospitals and larger group practices, in which costs, including those for hiring staff to do scheduling, can be amortized. Some systems already enable patients to schedule appointments online.

Aligning supply and demand also requires extending business hours to some evenings and weekends. About 65% of emergency department (ED) visits, regardless of acuity, occur from 5 PM to 8 AM or on weekends.32-34 One study estimated that timelier access to PCPs could reduce ED visits by more than 40%.35 Primary care practices that offer same-or next-day access and extended hours can better compete with urgent care clinics and other intertype competitors by fulfilling the preference of most patients to see their regular clinician.20

**Group Medical Appointments.** A well-documented approach is the group (or shared) appointment for patients who need ongoing medical attention and education for chronic illnesses such as type 2 diabetes.37-42 By convening willing patients with common medical concerns to learn about topics such as medication use, nutrition, exercise, and stress management, group appointments can help counter the high cost of educating patients one-on-one.27 The appointments are typically staffed by a physician as well as other team members, such as nurses, dietitians, fitness experts, and child psychologists. Appointments usually last 60 to 120 minutes, enabling attendees to ask more questions than they might during a short office visit and to learn from other patients.19,37 Attendees may also be seen privately and receive prescriptions and referrals. Technology such as Go to Meeting, through which multiple patients interact with one another and an educator online, offers an alternative to in-person sessions. Implementing group appointments successfully requires a high level of patient awareness, sufficient reimbursement, effective staffing, and convenient timing (such as evening hours).

**Satellite Clinics.** The growth of urgent care, retail, and employer-based clinics is shifting the paradigm for office visits. However, primary
Remote Delivery of Services. As complements to brick-and-mortar offices, remote services can reduce the demand for unnecessary in-person visits and generate efficiencies while still individualizing care. A well-conceived remote practice can help to align the level of care that is provided with what is actually needed.

House calls can serve patients who require in-person care but who are nonambulatory or need access during off-hours. Medical groups participating in capitated or value payment plans (such as shared savings) may benefit financially by reducing patients’ ED visits. Practices can also contract with local employers to provide house calls to their employees and dependents.43

Telemedicine (applying technology to remotely diagnose, monitor, and treat patients) is increasingly being used to provide primary care in new ways.47 One promising application for a large medical group or health system is an off-hours call center staffed by nurses who have access to patients’ EHRs and databases that offer symptom-specific guidance. The nurses can provide consultative services, including advice to seek emergency care or an office visit when needed. Another option for practices of any size is to offer scheduled telephone appointments with a clinician, with appropriate reimbursement if that can be arranged with payers. Smartphones and tablets also enable clinicians to exchange information with patients. Technology cannot replace an in-person visit when clinically necessary or preferred by the patient, but it can play an important supporting role.

Remote monitoring—using, for example, armband sensors that collect data such as heart rate, blood pressure, and glucose levels—may be appropriate for selected patients with chronic diseases. Consultation via Skype or FaceTime can complement this effort. Various forms of telemedicine may expand access beyond the PCP to specialists and subspecialists in distant or inconvenient locations and enhance coordination among them.

Internet applications can transform traditional medical services to asynchronous services, thereby minimizing inevitable waits (and waste). Medical practices can offer patients online education (eg, on preventive health), well-secured access to their records (eg, test results), nonconsultative services (eg, appointment scheduling), and consultations (eg, e-mail exchange with a clinician).19,48 Patient portals such as MyChart provide single-point Internet access across primary care, specialist, and hospital settings.

HealthPartners, a large integrated Minnesota-based medical group, has developed virtuwell, an online clinic in which patients answer a series of questions leading to a probable diagnosis. An NP reviews the case, determines a treatment plan, responds to the patient by e-mail or text (usually within 30 minutes), and orders a prescription, if needed, from the patient’s pharmacy. The software covers common conditions that do not require laboratory tests and can be diagnosed accurately without a physical examination. Patients with complex issues are referred to a PCP. Patients pay $40 for the service with 85% covered by insurance. virtuwell was the first online clinic covered by Medicare.49

Ensuring that a PCA strategy is comprehensive means coordinating its various components, but it need not involve every tactic discussed above. Each practice has its own challenges to confront and opportunities to embrace. However, most organizations that pursue PCA will encounter some common barriers and reap some likely benefits, both of which we discuss below.

Barriers to PCA

Switching from a traditional access approach to PCA is not quick, easy, or inexpensive. It requires...
careful planning and, likely, a multiyear, sequential implementation of the component parts. Barriers impeding the transformation include the following.

Financial Risk. Fiscal concerns often foster inertia. Physicians in small practices may conclude that the required up-front investment in equipment costs, staff training, and overcoming staff members’ and patients’ resistance to change is best left to larger medical groups. Indeed, why should fee-for-service primary care practices with full appointment schedules consider an initiative that might yield fewer paid office visits? The short answer is that inaction is itself risky. Note that (1) the Centers for Medicare & Medicaid Services is actively sponsoring payment-model initiatives that reward innovative care-delivery methods that improve results; (2) many patient-centered medical homes and accountable care organizations now benefit financially by improving quality and reducing costs; (3) more than 20 US states now require commercial insurers to reimburse virtual care; (4) intertype competitors now entice patients to make relevant data from all points of access transparent in real time to a care team that strengthens their negotiating positions and share the cost of investing in technology.

Increased Workload. Offering patients new access paths can add to clinicians’ workloads (so-called desktop medicine) unless time is set aside to accommodate new forms of patient demand. Physicians may resist adding telephone appointments and e-visits to an already busy schedule. Kaiser Permanente Colorado addressed this concern by revamping PCPs’ schedules so that each hour included two 20-minute in-person office visits and one 20-minute period for telephone or electronic consultations.

Resistance to Technology. Integrating complicated EHR systems into existing workflows comes with a steep learning curve and up-front time investment, even for computer-savvy clinicians. Ongoing training on the efficient use of the EHR and additional support for clinicians who need it may help negate resistance, as can reimbursing clinicians for the time they spend learning new systems. Systems specifically designed to facilitate the necessary collaboration among members of the care team—and between the team and patients—are also critical in overcoming resistance.

Some clinicians prefer in-person encounters and perceive added risk related to confidentiality and liability in electronically delivering care. These concerns are being addressed, in part, by technical advances in communication and security, implementation of mandatory-use EHR systems, growing recognition that e-visit “paper trails” can be assets in malpractice cases, and issuance of formal guidelines for the appropriate use of online services.

Potential for Increased Fragmentation. If multiple access points are not integrated effectively, patients may become entangled in a web of information and systems. The key is to make relevant data from all points of access transparent in real time to a care team that serves a coordinating role. Electronic health records can play a vital part in this effort.

Inappropriate Use of Access. As patients face a growing array of options to access care, some may be inappropriate in certain instances. Patients may choose an online portal, for example, when they really require a face-to-face visit. Patients must be guided to an appropriate access path, which takes extra effort from staff and may frustrate patients in the short term.

Benefits of PCA

Barriers notwithstanding, a well-executed PCA strategy can yield many enhancements. The evidence thus far (summarized below) is promising but is just starting to emerge.

Benefits of the Physical PCA Practice. Timely patient access to team-based medical assistance during regular and off-hours yields better outcomes, higher patient satisfaction, lower use of EDs, and lower overall costs. A Kaiser Permanente study found that patient access and satisfaction improved with a “shared
practice” model involving 2 PCPs and 1 NP who saw patients from both PCPs. A host of studies conclude that, for less complex conditions, NPs and PAs perform as well as (or better than) physicians on multiple dimensions, including patient outcomes and satisfaction, processes of care, and resource use. In a comparison of care access. In another study, patients who medical needs than did patients who lacked such access. In another study, patients who had access to extended hours through their usual source of care had total health care expenditures that, over 2 years, were 10% lower than for patients who reported no access to extended hours, without adverse effects on mortality.

After-hours access to primary care can markedly reduce patients’ use of EDs, lower costs, and improve continuity of care. Patients whose primary source of care offered extended hours had significantly fewer ED visits and unmet medical needs than did patients who lacked such access. In another study, patients who had access to extended hours through their usual source of care had total health care expenditures that, over 2 years, were 10% lower than for patients who reported no access to extended hours, without adverse effects on mortality.

Group visits have generally been found to improve quality of care, quality of life, patient awareness of their condition, and adherence to recommended screenings and health behaviors; to reduce specialist and ED visits; and, contrary to early concern about patient acceptance, to maintain or improve patient satisfaction. The data on clinical outcomes are not as clear. For example, among patients with type 2 diabetes, those who attended group visits experienced greater improvements in hemoglobin A1c levels than did controls in some studies but not in others. Profitability implications for practices that offer group visits have not been well researched.

Medical groups and health systems can incorporate the convenience of urgent care, retail, and employer-based clinics in their own PCA strategies. Most patients who use retail clinics are satisfied with the quality of care, qualifications of staff, and cost. In a comparison of care provided by retail clinics for otitis media, pharyngitis, and urinary tract infections (UTIs) with care provided by physicians’ offices, urgent care centers, and EDs, overall costs were found to be considerably lower at the retail clinics whereas quality of care and adequacy of preventive care were found to be similar.

Companies with onsite clinics benefit because employees need not leave the workplace to receive care. The software company SAS Institute saves millions of dollars annually with its onsite clinic, primarily owing to greater worker productivity and reduced health plan costs. A salient opportunity for some primary care groups is to partner with companies that need a qualified entity to operate an onsite or online clinic, or other satellites. The economics of these arrangements—negotiated payments vs insurance reimbursement—can be attractive.

Benefits of the Remote PCA Practice. Early reports on the benefits of remote health services are preliminary but encouraging. After 2 years of serving more than 40,000 patients with its virtuwell service, HealthPartners reports that replacing an office visit with a remote visit saves an average of $88 in claims’ costs per patient and 2.5 hours of the patient’s time; 94% of the patients surveyed highly recommend the service. In a study of 21 medical practices that extensively use electronic communications, patients view these methods as safe, effective, convenient, and satisfying, but physicians view them as increasing their workloads unless office visits are also reduced.

Kaiser Permanente Northern California (KPNC), with roughly 8000 Permanente Medical Group physicians serving 3.4 million members, offers more than 100 Internet, mobile, and video services that enable patients to review general health information, access personal health records, make appointments, order refills, securely e-mail clinicians, and participate in virtual rather than in-person care. More than 70% of the KPNC patients have registered at kp.org to use the remote services, and internal surveys reveal widespread patient satisfaction with them. KPNC’s virtual patient visits (email, telephone, and video) are expected to surpass its in-person visits by 2016.

A meta-analysis of 29 studies of Web- and telephone-based medical services exhibited a moderate positive association with better patient outcomes in some disease categories, such as cardiac and psychiatric conditions. Patients in a telephone-based osteoarthritis self-management program experienced moderate improvements in pain. In a 6-month study, patients with diabetes who received mobile text messages about self-care, such as checking their own blood sugar, significantly improved glycemic control. Patient satisfaction increased and costs decreased. When San Francisco General Hospital developed a Web-based referral and consultation system for PCPs, wait times for specialist
appointments declined (because of lower demand) and enabled virtual PCP—specialist comanagement of some patients.17 The system now covers more than 40 specialties, and other health organizations are implementing similar programs.17

In its first year offering a physician house-call benefit to employees and dependents (using an outside medical group), Microsoft saved an average of 35% when house calls replaced ER visits.22 Carena, the private company that provides house-call services for Microsoft and other firms, also offers “virtual” house calls—75% of these cases are resolved by webcam.23

Some studies offer reasons for caution. In a comparison of electronic and in-person care for sinusitis and UTIs, e-visits were less expensive and more convenient, but antibiotic prescribing rates were higher at e-visits, especially for UTIs. The researchers conclude that physicians are more likely to be “conservative” and prescribe antibiotics when they cannot examine the patient.24 At Kaiser Permanente Colorado, patients’ use of the online system for accessing medical records and communicating with clinicians, among other applications, was associated with increased use of other clinical services,25 contrary to earlier Kaiser findings.26,27 The researchers conclude that one mode of care does not necessarily replace another. For example, access to medical records may raise patients’ concerns about their health, leading to more utilization.28

Benefits to Clinicians. Transforming care delivery for patients can also benefit clinicians. PCPs who devote more of their time using their expertise, who confidently rely on clinical and nonclinical teammates to share the workload, who substitute certain synchronous encounters with nonsynchronous encounters, who streamline and automate formerly labor-intensive functions, and who serve patients when, where, and how they want to be served are more likely to be satisfied with their profession. In a study of 65 safety-net clinics in 5 states, physicians and clinical staff at clinics that invested in improved access, patient communication, and quality of care had greater morale and job satisfaction.28 In KPNC’s annual physician survey, more than 90% of the respondents indicated that online tools enabled them to provide higher-quality care.29

A PCA strategy is not a panacea—for patients or for those who serve them. It is a transformative commitment that warrants a clear-headed assessment of potential pitfalls and benefits. We now turn to examining how 1 health system is executing its PCA strategy.

ONE HEALTH SYSTEM’S PCA STRATEGY

Bellin Health—an integrated not-for-profit health system based in Green Bay, Wisconsin, that serves a regional market of more than 600,000 people—aims to make primary care an accessible, easy-to-use “front door” to its services. Bellin operated a hospital for more than 100 years but did not offer primary care until 1994. More than 60 full-service primary care locations are part of the Bellin Medical Group today.

Bellin designed its PCA platform with the intention to facilitate timely, convenient, appropriate access at the lowest possible cost for the identified health need. Its patient portal is a cost-effective initial access point for the broadest group of patients. Patients use the portal to view their EHRs, message physicians, and request medication refills, among other applications. Bellin offers 15 access paths in all; the costlier the path (eg, the ED), the fewer the patients who need to use it.

In 1996, Bellin opened a 24×7 call center staffed by nurses. In the current version of this service, branded Telehealth, nurses take all after-hours calls for the Bellin Medical Group. They have access to patients’ EHRs and triage patients to the appropriate service (emergency or next-day clinic appointments), advise patients on home care, and use protocols to treat minor illnesses. An extension of the primary care team, Telehealth nurses work up to the top of their license. The Telehealth service is widely used by patients: During 2013, calls exceeded 79,000 and appointments exceeded 35,000.

In 2000, Bellin decided to implement advanced access in the clinics. Multiweek waits to see a Bellin PCP were common, and leadership worked with the physicians to make short appointments available in less than 1 day and long appointments in less than 3 days. That meant restructuring schedules, labeling all appointments as either short or long, retraining the scheduling staff, and working longer hours to reduce the backlog of existing appointments.
The biggest change was cultural, moving from a physician-centered model to a PCA model.

In 2006, Bellin partnered with a local retailer to open in-store clinics called FastCare. Staffed by NPs or PAs, FastCare offers limited services with expanded hours as an extension of the primary care clinics. Bellin developed standardized evidence-based care protocols for FastCare clinicians who use Bellin’s EHRs to coordinate care, discuss gaps in care with patients, and schedule needed tests and examinations, thereby supporting PCPs’ work in providing preventive and chronic health services. FastCare clinics are open to all patients, and those without a PCP relationship are counseled to obtain a primary doctor and told which Bellin PCPs are accepting new patients. Bellin also works with other health systems to start and operate FastCare clinics in their markets. By December 2013, 29 FastCare clinics were being operated by 10 different health systems in the United States.

The Bellin teams that work with employers helped to incorporate FastCare into the employers’ benefit plans, encouraging employees to use this service rather than an ED when appropriate. Bellin did the same for its own health plan in 2008 with positive results: 73% less use of Bellin’s ED by employees and dependents from 2008 to 2012 as compared with other health systems in its insurance administrator’s database.

Primary care is provided at onsite employer locations that range from full-time clinics to onsite physical therapy. Employees cut their time away from work by an average of 4 hours when using an onsite clinic. Programs are designed specifically for the employer’s needs based on employee health-risk appraisal data. The clinics are staffed by Bellin clinicians, who use the common EHR system to monitor patients’ existing health conditions and to identify needed preventive services. Like the retail clinics, the employer-based clinics are extensions of Bellin’s primary care practice.

Bellin has been expanding its PCA platform. It now offers low-cost or free health screenings in conjunction with community events; initial and ongoing telephone health coaching for patients who have taken a health-risk appraisal; telemedicine services enabling patient access to certain specialists, diabetic educators, and care coaches; in-home monitoring of health status; and group medical appointments. Some of Bellin’s access paths are reimbursable and others not, at least not yet. Bellin, an accountable care organization, has built its PCA “business case” by positioning itself for an era of value-based reimbursement, strengthening relationships with employers, reducing unnecessary costs, and gaining market share in primary care. Bellin’s PCA strategy likely has played a key role in increasing by 12% from 2011 to 2013 the percentage of patients who consider a Bellin Medical Group clinician as their clinician of choice.

CONCLUSION

Successfully implementing a comprehensive PCA strategy is not a one-size-fits-all model. Each health care practice has its own populations to serve, financial and personnel limitations, and opportunities for reforming processes and building partnerships. But every organization, large or small, must recognize that how patients access primary care services is becoming a central element in delivering high-quality care efficiently. Leaders must honestly assess what their organization and its patients require to thrive in this rapidly changing environment.

Patient-centeredness starts with access. A sick child’s mother who phones a call center staffed by nurses at 11 PM and receives advice and an office appointment for the next morning, eliminating overnight anxiety, benefits from PCA. So does the nonambulatory patient who schedules an encrypted Web-based video visit with her physician, and the patient with diabetes who learns not only from his medical team but also from other patients at a group appointment. The imperative of PCA is to review the evidence and think strategically, as organizations discussed in this article have done, and thereby greatly increase the chances of success.

ACKNOWLEDGMENTS

We thank Steven DeMaio for his valuable assistance in editing the manuscript.

Abbreviations and Acronyms: ED = emergency department; EHR = electronic health record; KPNC = Kaiser Permanente Northern California; NP = nurse practitioner; PA = physician assistant; PCA = patient-centered access; PCP = primary care physician; UTI = urinary tract infection

Correspondence: Address to Leonard L. Berry, PhD, Department of Marketing, Mays Business School, Texas A&M University, College Station, TX 77845-8302. E-mail: lberry@tamu.edu
REFERENCES


