James G. Lee
Gaurov Dayal
David Fontaine

starting a medical home
better health at lower cost

By using its employee health plan to learn how to better manage population health, Adventist HealthCare reduced its per-member-per-month costs by 35 percent and its high-risk patient population by 48 percent.

Healthcare costs for U.S. companies have been steadily increasing by double digits over the past several years. To bend the cost curve, Congress passed the Affordable Care Act in 2010 to address coverage and payment reform. Although the results of this act are yet to transpire, significant changes in how companies are approaching their healthcare costs are already being seen.

Rockville, Md.-based Adventist HealthCare (AHC) is affected by these issues both as a provider of healthcare services and as an employer. Seeking to improve health, lower costs, and learn more about how to succeed in an accountable care framework, AHC decided to pilot a medical home delivery model. The pilot has shown how improved care coordination of patients with chronic conditions, supported by IT, can help position a health system for success as payment increasingly rewards value rather than volume.

Background

Like many larger companies, AHC assumes the financial risks of providing health care to its employees through a health plan, in this case, Adventist HealthNet. HealthNet is not a formal health plan with the infrastructure and requirements of a commercial or Medicare plan; rather, it is the self-funded employee benefit plan that pays for the healthcare needs of AHC employees and their dependents. HealthNet has approximately 7,200 covered lives with annual claims expenditures around $24 million.

HealthNet is governed by a cross-functional team of AHC executives who form the HealthNet Steering Committee, which is chaired by the senior vice president and chief medical officer. The executive sponsors of the committee are AHC's executive vice president and COO and the executive vice president and CFO. The committee meets regularly to review HealthNet's financial performance, utilization trends, and other issues, and to discuss potential plan changes. HealthNet does not have any dedicated employees; rather, it is supported by the steering committee members and other AHC employees as needed.

HealthNet contracts for third-party administration services, including claims data warehouse and reporting, medical management services,

AT A GLANCE

At Adventist HealthCare, a patient-centered medical home pilot project:

- Helped improve the health of high-risk members while increasing the efficiency of healthcare delivery
- Supported the primary care physicians treating the high-risk patients
- Reduced the costs of treating the patients

and medical management outcome tracking system. All HealthNet claims are processed and paid by the third-party administrator, and the claims data from all providers, including those external to the health system, are aggregated for standard and ad hoc reports to the steering committee.

The claims data are augmented by medical management information recorded by nurses who coordinate care needs of HealthNet members. This extensive reporting allows the steering committee to quantify problems, identify the available primary care physicians (PCPs) treating members, establish the major diagnostic categories, and sort through all the utilization by specific categories of care, among many other analyses available.

From 2004 to 2008, HealthNet annual expenditures rose at a rate of about 4.2 percent on average. In comparison with industry or national increases in cost, HealthNet's cost increase was significantly lower; however, actuaries warned the plan could experience a large cost increase at any time. That time came in 2009, when claims expenditures rose by more than 12 percent.

Further analysis showed that the increase was driven by 454 plan participants, or 6.3 percent of the covered lives, whose costs represented 60 percent of the total cost for the year.

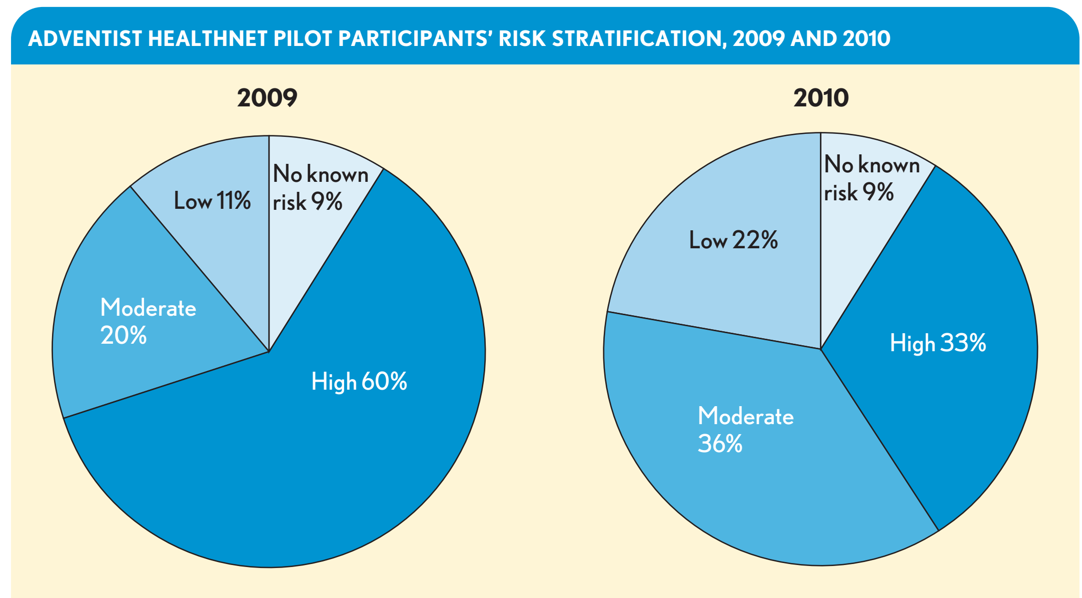
Patient-Centered Medical Home Pilot

Although HealthNet's expense inflation had been significantly lower than the national average over the past few years, the hypothesis was that better management of the system's employees would lead to better outcomes and lower costs. To test this hypothesis, the first phase of a patient-centered medical home (PCMH) was launched as a pilot in late 2009, with the Washington, D.C., metropolitan area serving as its primary service area.

The steering committee established the pilot program with four objectives:

> Help the high-risk members improve their health
> Increase efficiency of the healthcare delivery for these members
> Support primary care physician (PCP) practices treating these members
> Moderate health plan cost escalation

ADVENTIST HEALTHNET PILOT PARTICIPANTS' RISK STRATIFICATION, 2009 AND 2010



As part of the PCMH pilot, the steering committee narrowed the focus of significant healthcare utilization. Of all HealthNet members who were considered high risk, 121 were "poly" users, meaning that in 2009, these members saw at least 15 different providers and had at least nine prescribing physicians. In short, these members were significant users of healthcare services who were not receiving the coordination necessary for their complex health needs.

Methodology

The first step of the PCMH pilot was to identify the high-risk members to be enrolled in the pilot and the PCPs who would manage their care. All members of HealthNet are initially risk stratified by the third-party administrator claims database system, which has specific triggers that assign risk levels to members. The triggers may include inpatient stays, diagnostic codes, pharmacy utilization, or even financial thresholds.

Members may fall into four different levels of risk:

- *No known risk*: Those who have no quantifiable risk need for management
- *Low risk*: Low risk scores that produce no immediate need for management
- *Moderate risk*: Moderate risk scores with conditions that can benefit from management with special attention to ROI
- *High risk*: High risk scores, usually multiple co-morbidities, expected to spend 50 to 70 percent of the plan's annual cost

With assistance from the third-party administrator's medical director, HealthNet then identified 46 of the 121 "poly" members to participate in the pilot and eight PCPs to manage their care needs.

The third-party administrator's physician portal allowed PCPs to access the personal health records of the high-risk members participating

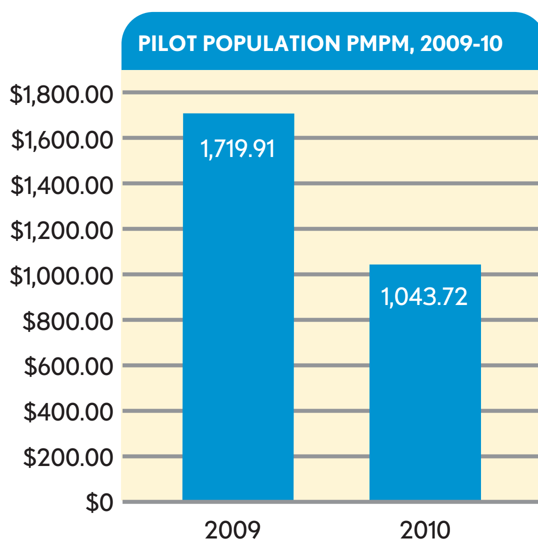
CATEGORY OF CARE PER-MEMBER-PER-MONTH (PMPM) COST FOR 46 PILOT MEMBERS

Category of Care	2009	2010	Variance
Inpatient hospital	$393.26	$268.44	–$124.82
Prescription drugs	$261.20	$246.52	–$14.68
Medicine	$363.10	$196.84	–$166.26
Procedures	$144.84	$124.27	–$20.57
Facility	$216.22	$118.88	–$97.34
Evaluation and management	$171.79	$89.94	–$81.86
Outpatient radiology	$194.32	$73.27	–$121.05
Outpatient laboratory	$72.78	$52.78	–$20.00
Anesthesia	$43.84	$42.22	–$1.62
Emergency department	$29.40	$27.54	–$1.86
Outpatient pathology	$50.70	$23.52	–$27.17
Other outpatient services	$5.42	$17.50	$12.08
Medical management	$19.67	$5.51	–$14.16
Undefined services	$13.86	$1.77	–$12.09
Ambulance	$0.67	$1.22	$0.54
Totals	**$1,981.13**	**$1,290.26**	**–$690.87**

in the pilot and all their HealthNet patients. The personal health record is a claims-based record that discloses all diagnoses, procedures, inpatient stays, and prescriptions for a patient. The PCPs could easily review records, prescriptions, and activities between patient visits and monitor each patient's health.

To support the PCPs with their work in the pilot, a personal health nurse from the third-party administrator was assigned to each PCP, and along with the third-party administrator's medical director, provided an orientation of the pilot and the tools available to manage the care needs of the members. The nurse's role in the pilot included engaging the high-risk member to participate in the pilot and establishing a personal health plan for the member in consultation with the chosen PCP.

The personal health plan might mean dietary counseling, appointments for baseline screenings, follow-up appointments, an exercise plan, or pharmacy assessments for a member. The personal health nurse would also facilitate compliance to the healthy living plan with the member and report to the PCP on the member's progress. Members would get to spend one hour a month with their PCPs, who would receive a care management fee for their time. Additionally, the health plan paid the PCPs for actual time spent with the patient, regardless of the code for the visit.



Results

The first year showed significant quantitative and qualitative indicators of progress toward the original objectives. Overall, the members participating in the pilot became healthier, they were using the healthcare system more efficiently, the cost per member was reduced, AHC strengthened relationships with the PCPs, and HealthNet was better able to measure the plan's progress.

Healthier members. By monitoring the movement of HealthNet members within risk categories, HealthNet can assess whether its members' risk level is increasing or decreasing. Because of the pilot, the number of high-risk members seen by PCPs participating in the pilot was reduced by more than 48 percent. Most of those members moved into the moderate- and low-risk categories, as shown in the exhibit on page 72.

Efficient utilization. The third-party administrator's information system allowed HealthNet to measure the utilization by dollars spent in categories of care, as shown in the exhibit on page 73. Spending in most of the categories of care declined for the pilot participants, while the utilization cost for all other members in the HealthNet plans rose slightly in most cases.

Cost savings. The reduction of overall utilization had a direct impact on the overall plan per-member-per-month (PMPM) performance, including prescription drug costs. Pilot participants' PMPM costs dropped 35 percent, from $1,981 in 2009 to $1,290 in 2010. At the same time, the PMPM costs for HealthNet members not participating in the pilot increased 0.9 percent, from $296 in 2009 to $299 in 2010.

The ROI was significant as well. Based on a total pilot cost of $31,204, the directly recorded savings of $87,365 represent an ROI of 2.79, and, more important, an annual PMPM cost reduction of $381,630, which represents an ROI of 12.

For costs excluding drug costs, the total claims dollars of the high-risk pilot participants dropped from $949,890 in 2009 to $576,130 in 2010. The exhibit on page 74 shows pilot participants' PMPM costs, which declined 39 percent from 2009 to 2010 for an ROI of 4.3.

Benefits to patients and physicians. Anecdotally, patients and physicians indicate they view the experience with the pilot positively. Patients feel less confused about accessing the system appropriately and feel better as they become healthier.

In one case, a member with multiple providers and multiple medications was unclear about his treatment plan and was hesitant to ask questions of his providers. The personal health nurse persisted in contacting the member and his wife, and

PHYSICIAN PORTAL

Patient Lookup

Show me Results for: My Patients | My Practice | All Enrollees

Last Name: First Name: Plan: All Years: 1 Year

	Name	Address	Date of Birth	Plan	Last Seen On	View
1	Smith, Alan	1234 Coldspring Rd Baltimore, MD 21220	01/01/1961	GEHA	01/01/2010	Chart | Referrals | Claims Enrollment
2	Smith, Bob	5 Coldspring Rd Baltimore, MD 21220	01/01/1961	Blue Cross/Blue Shield	01/01/2010	Chart | Referrals | Claims Enrollment
3	Smith, Cathy	234 Coldspring Rd Baltimore, MD 21220	01/01/1961	GEHA	01/01/2010	Chart | Referrals | Claims Enrollment
4	Smith, Deborah	1234 Coldspring Rd Baltimore, MD 21220	01/01/1961	GEHA	01/01/2010	Chart | Referrals | Claims Enrollment

My Population's Management Needs

Toggle View

Risk Level	Total	Nurse Assigned	No Nurse Assigned
High	421 (8%)	133 (31%)	288 (69%)
Moderate	734 (14%)	129 (18%)	605 (82%)
Low	1,429 (28%)	64 (4%)	1,365 (96%)
No Known Risk	2,574 (50%)	30 (1%)	2,544 (99%)
Total	5,158	356 (7%)	4,802 (93%)

My Population's Conditions

Toggle View

Condition/Screening	Total Patients	Compliant	Non-Compliant
Asthma	4 (50%)	0 (0%)	4 (100
Atrial Fibrillation	1 (12%)	1 (100%)	0 (0
Breast Cancer - part 1	0 (0%)	0 (0%)	0 (0
Breast Cancer Screening (National Standard)	1 (12%)	1 (100%)	0 (0

My Performance

Category of Care	Index Score
Total	2.32
Emergency Room	0.4
Inpatient hospital	7.4
Ambulance	4.2

Episodes	45
Local Cost Per Episode	$9,375
Expected Base Cost Per Episode	$4,048
Extrapolated Variance	$239,703
Case Mix Index	6.03

My Communications

Total Referrals | Claims 8 50% 50%

Patient	Status	Date	Service	Ref. Number
Smith, Alan	Approved	04/17/2010	Diabetes Testing	83669
Smith, Amanda	Approved	04/19/2010	Outpatient Visit	95555

Source: InforMed, LLC. Used with permission.

through his wife, the nurse was finally able to reach the member and coordinate his care through the various providers. Due to the efforts of care coordination, the member became more trusting of the nurse and gradually became responsive to education regarding his chronic conditions. He began to attend appointments with his specialists and PCP as recommended and to take interest in self-management of his health with improved diet, exercise, and medication compliance. Evidence of his improvements come from the participant's self-reports of satisfaction, his PCP's reports of his improvement in self-management and clinical data, and his reduced health plan costs, which declined 65 percent from more than $116,000 in 2009 to less than $41,000 in 2010.

Physicians consistently express appreciation for the personal health record, which has helped them make sound decisions. In addition, the personal health nurse is a professional service that makes their job easier. And the third-party administrator's physician portal allows the physicians to access many other reports and tools they could not access previously. The exhibit on page 75 illustrates the information that is accessible at the physician portal.

The PCMH pilot results for 2010 not only proved AHC's hypothesis, but also provided valuable lessons and experience on how to prepare for more extensive population-based healthcare management that may become the basis for future payments to participating hospitals and physicians.

About Adventist HealthCare

Adventist HealthCare (AHC) is a not-for-profit health system comprising five hospitals, a home health division, and other related services. AHC is based in Rockville, Md., and its primary service area encompasses the Washington, D.C., metropolitan area and northwestern New Jersey. The health system employs approximately 7,000 full- and part-time staff and has 1,300 volunteers, and its patient capacity consists of 855 hospital beds.

Lessons Learned

The PCMH pilot was possible due to several years of work between HealthNet and its third-party administrator to develop reports meaningful to the organizations' development of capabilities to address utilization and care management issues. Providing key decision makers with access to relevant data led to the pilot's development, and leveraging the infrastructure from the third-party administrator made the implementation of the pilot a reality. Technology played a key role by linking the member, the personal health nurse, and the PCP together to design, build, and reinforce the personal health plan.

One challenge of the pilot was the small size of HealthNet for most PCP practices. PCPs had to be convinced to participate in the pilot even though their financial gain was small and the largest commercial insurer was simultaneously rolling out a new pay-for-performance plan for PCPs. Despite HealthNet's small size, the availability of the personal health nurse and access to the personal health record and the physician portal showed the PCPs that HealthNet was committed to improving its members' health.

Another challenge was the physical constraint of having one personal health nurse supporting multiple PCPs and multiple members. As a result, the personal health nurse could not be everywhere at the same time for everyone, so the nurse:member and nurse:physician ratios were not always efficient.

Financial and utilization measurement were a lot easier to capture than the clinical measures and outcomes, for which HealthNet is still building

and testing models. Although AHC knows that HealthNet is spending less on high-risk members who are not receiving unnecessary services and that the population as a group is getting healthier, the health system still needs to refine the process to measure the value-added quality outcomes on an individual basis and at the disease level.

Next Steps

Because the results of the PCMH pilot were measured, AHC has increased the number of high-risk members in this program to include all 121 "poly" users and has recruited 14 additional PCPs, for a total of 22. By the end of 2011, HealthNet hopes to have approximately 450 high-risk members linked in the process and all PCPs in its network participating in the PCMH. HealthNet also plans to increase the numbers of personal health nurses employed by the third-party administrator and by AHC Home Health Services.

As AHC looks to learn from the pilot and expand its use within HealthNet, several areas of opportunity exist, including the following:

> Increase adoption of electronic medical records (EMRs) and physician portal utilization by the physicians

> Design a pay-for-performance plan with the PCPs, and expand the coordination of care among select specialists

> Employ the personal health nurses, or care coordinators, by AHC Home Health Services so they can serve not just HealthNet members, but also any payer's members who are part of a payment methodology like a medical home

> Expand the coordination of care not only to be available among various physicians, but also to include post-inpatient plans and services and any of the other health services provided by AHC

> Increase the use of tools and reports from the third-party administrator to measure clinical outcomes, compliance to evidence-based medicine, outcome comparative analysis, and specific management of major diagnostic categories

> Provide members with access to the participant portal of the PCMH so they will be able make appointments, check on prescriptions, track their personal health plan, and access AHC healthcare, personal, financial, and other social services

> Link results of a health risk assessment for individuals and the population to the third-party administrator's system and cull the high-risk people from those data as well

What AHC Has Learned as a Health System

It is unknown what payment methodology will prevail in the future. There is pressure from various fronts to move from a fee-for-service model to pay-for-outcomes model, such as bundled payment, medical homes, and accountable care organizations. The Affordable Care Act includes pilot programs for various payment methodologies. The uncertainty related to payment reform increases the difficulty for hospitals and health systems to make the necessary changes to conform with new payment methodologies.

Transitioning to a new payment model will require significant time and effort from hospitals to make all the necessary changes. The possibility that more than one payment methodology could be adopted further complicates the transition from fee-for-service. Despite the differences in the various potential payment methodologies being considered, certain components of care delivery are required. Hospitals should ensure that those components function well and can assume additional responsibilities. The components include coordination of care, IT integration, cost efficiency, and disease management.

Coordination of care. Lack of care coordination leads to overuse of services (e.g., duplicate tests, readmission). Even before a new payment

methodology is adopted, hospitals will soon be required to reduce readmission rates, so stronger care coordination addresses not only hospital care, but also post-hospital care, and patient compliance will be critical to lower those rates. Existing case management programs typically focus on obtaining continued stay authorizations and discharge planning. Hospitals should consider how to leverage the existing infrastructure to address post-hospital care and patient compliance needs.

IT integration. Hospitals lag behind other industries in adopting IT that facilitates the exchange of information among providers. The lack of access to information related to prior treatment plans, tests, and procedures often leads to duplication of tests and unnecessary delays in treatment. Increasing the integration among various providers (e.g., hospitals, physicians, and pharmacies) can benefit hospitals even in the current fee-for-service environment, where much of the inpatient hospitalization is fixed to a particular diagnosis. Fully integrated and coordinated care is difficult, if not impossible, to accomplish without an interconnected EMR.

Cost efficiency. For years, the United States has been looking for ways to bend the healthcare cost curve. Hospitals intent on increasing the value of their services will look to become increasingly cost efficient before the payment methodology changes take place. Care coordination is one of the largest opportunities to reduce cost by reducing duplication, overutilization, and inappropriate utilization.

Disease management. Although the most costly chronic conditions are well known by health systems, physicians, health plans, and patients, technology tools and the coordination of care that can improve outcomes and build efficiencies have not been widely adopted in the United States. In addition, the current fee-for-service payment methodology does not provide incentives for providers to improve chronic disease management.

Through the pilot, AHC has shown that increased care coordination and the moderate use of technology can make a meaningful impact on the overall cost of health care for its employees. To translate the lessons learned from the pilot to the health system, AHC has to continue its investment in EMRs, including inpatient, outpatient, and linkage across different providers. And as payment methodologies change, AHC needs to have a broader perspective on care coordination, moving beyond inpatient care coordination to overall healthcare coordination. Although many hospitals and health systems have not played this role recently, it will be a significant factor in determining how successful the country will be in bending the cost curve. ●

About the authors

James G. Lee, FHFMA, FACHE, is executive vice president/CFO, Adventist HealthCare, Rockville, Md., and a member of HFMA's Maryland Chapter (jlee@adventisthealthcare.com).

Gaurov Dayal, MD, is senior vice president/chief medical officer, Adventist HealthCare, Rockville, Md. (gdayal@adventisthealthcare.com).

David Fontaine is director, managed care, Adventist HealthCare, Rockville, Md., and a member of HFMA's Maryland Chapter (dfontain@adventisthealthcare.com).

Reprinted from the June 2011 issue of *hfm* magazine. Copyright 2011 by Healthcare Financial Management Association, Two Westbrook Corporate Center, Suite 700, Westchester, IL 60154. For more information, call 1-800-252-HFMA or visit www.hfma.org.