

Demonstrating High Performance at an On-Site Corporate Health Center

Employers need to control health costs while also keeping their workers healthy, productive and on the job. To those ends, BP America leased space to a full-service health and wellness center clinic on its Houston West-Lake campus, where rates of asthma, diabetes, coronary artery disease and other chronic conditions are high. Despite growing interest in worksite clinics, there is remarkably little quantifiable evidence demonstrating their value. This study uses a comprehensive value-chain approach to compare utilization, clinical outcomes and medical and pharmacy costs for medical center users and nonusers in Houston and other BP locations. Return on investment is also estimated. Overall utilization at the WestLake campus spiked in the 2012 plan year, pushing medical and pharmacy cost trends higher and highlighting the importance of shifting community-delivered services to the worksite medical center. Medical center users had fewer emergency room, inpatient hospital and outpatient hospital visits than nonusers as well as higher generic dispensing rates. While ROI fell slightly short of the break-even point in the medical center's first year based on an "intent to treat" methodology, indicators suggest that utilization and outcomes are moving in the desired direction.

by **Karl Dalal** | *BP America*, **Allan Khoury, M.D., Ph.D.** | *Towers Watson* and **Steve Nyce, Ph.D.** | *Towers Watson*

The Experience of BP America

Employers are exploring many avenues to control rising health care costs while keeping workers healthy, productive and on the job. Historically, employers have tended to focus on cost incentives and other demand-side strategies to encourage workers to seek out high-value health services, such as preventive care and chronic condition management.

Now interest is growing in the supply side of the equation:

managing the health care delivery system. To that end, employers are adopting payment reforms and provider strategies, such as direct contracting, to enhance the quality of care and encourage provider accountability.

The Affordable Care Act has also magnified some employer concerns, especially about the availability of prompt access to primary care for employees.

Worksite medical clinics can help companies with large workforces in a single location to both manage costs and

TABLE I

BP Member Cost Sharing for Clinic Visits and Other In-Network Services, 2011 and 2012 Plan Years

	On-site clinic	Other in-network provider
Deductible	\$0	\$300 single/\$900 family
Out-of-pocket maximum	n/a	\$2,000 single/\$5,000 family
Office visit copayment		
Preventive care	\$0	\$0
Primary care physician	\$10	\$20
Specialist	\$10	\$30
Diagnostic services (including lab/x-ray)	\$0	20% coinsurance after deductible
Physical therapy copayment	\$10	\$25
Prescription drug copayments (three-tier)		
30-day	\$5/\$25/\$45	\$5/\$25/\$45
90-day	\$12/\$65/\$125 (drugs available on site)	\$12/\$65/\$125 (mail order)

offer an attractive and valuable benefit to employees. On-site clinics in at least one location are now offered by 32% of large employers, and another 7% plan to offer them in 2015.¹ These clinics enable employees, and often their family members, to quickly and conveniently obtain a comprehensive range of medical services, including primary care, acute care, select out-patient procedures, pharmacies and ancillary services, such as dental and vision care. Health services are either free or low-cost at many clinics. For employers, on-site clinics provide several key advantages: (1) improving access and getting employees back to work sooner, (2) enhancing targeted interventions for specific populations, (3) avoiding fee-for-service

inefficiencies by providing direct contracting with performance-based guarantees, (4) integrating clinic care with services by local providers and with the company’s wellness and chronic disease management programs, and (5) providing a platform for integrated reporting to support health initiatives for high-risk populations.

Despite the growing interest and advantages, however, there is remarkably little quantifiable evidence that demonstrates the value of worksite clinics. A recent meta-study of peer-reviewed literature revealed a wide range of methods used to estimate return on investment (ROI).² Several studies adopted a cost-benefit approach that measured clinic value by overall reduction in

health care costs or by comparisons with the cost of comparable community-provided services. After one year, ROIs ranged from 1.6:1 up to 7:1.^{3,4,5} According to one of these studies, a new clinic broke even—i.e., its operating costs approached those of comparable community services—at three months.⁶

Many of these studies lack details and, thus, fail to clearly identify how clinic services affect health care cost trends. They do not show changes in medical claims costs for those with and without access to the clinic or among those with access for clinic users versus nonusers, making it difficult to attribute cost reductions back to the clinic. Similarly, few existing studies demonstrate measurable improvements in utilization patterns or clinical outcomes. Perhaps most important, many of the analyzed clinics provided only limited primary care services or acute episodic care, which typically account for less than 10% of total expenditures in employer programs, so the potential savings from direct patient care are a fraction of those achievable in clinics that manage acute and chronic conditions.

This analysis highlights a state-of-the-art medical facility built by BP America at its WestLake campus in Houston, Texas. BP asked Towers Watson to conduct an independent assessment of the medical center’s effectiveness. This article reports initial findings and showcases a holistic approach to evaluating medical center performance. The analysis goes beyond an ROI evaluation, adopting an in-

TABLE II**Demographics and Risk Scores for BP Employees and Houston Benchmark Population, April 2012 Plan Year**

	BP Houston	Other BP locations*	Houston benchmark
Demographics			
Total members	17,121	15,777	1,012,536
Employees	6,242	5,548	491,713
Average age			
Employees	43.9	44.0	n/a
Dependents	24.5	24.2	n/a
Percentage female			
Employees	32%	25%	n/a
Dependents	60%	62%	n/a
Composite factor score**	1.068	0.975	1.000

* Totals for four other large U.S. BP locations.

** The composite factor scores are based on age/gender, geography and prospective risk scores calculated as the product of individual factors and weighted by the number of members in the Houston benchmark population.

depth value-chain approach to assess initial performance over 18 months. The effort shows the progression of utilization metrics, clinical outcomes and medical and pharmacy costs for those BP medical plan participants who had access to the medical center compared with the Houston market in general and other BP locations. This work should help other employers considering similar facilities by providing key metrics for evaluating the performance of a clinic as it progresses from startup to maturity.

WestLake Health & Wellness Center

One of the world's largest energy companies, BP has more than 80,000 employees around the globe and employs approximately 20,000 people in the U.S. U.S. operations are head-

quartered at BP's WestLake campus in Houston, which has more than 6,000 employees and 4,000 contractors on site. Houston employees are mostly men (60%) and tend to be well-educated. These employees generally are highly motivated to be healthy but have busy and demanding schedules.

Houston is an ideal medical center location, given its proximity to a large BP population and the headquarters being a hub for visiting employees. Moreover, Houston employees report high utilization of medical services compared with other BP locations. The oil industry is highly competitive in the area, so the availability of a medical center on BP's campus serves as a key differentiator in the ongoing competition for talent. Wellness has played an important role in BP's value proposition to employees in all locations, with

the company offering employees a robust array of on-site activities, health management and chronic disease management programs and personalized coaching. The medical center availability plays an important role in driving participation in those programs and providing an integrated experience for employees.

BP opened the WestLake Health & Wellness Center on October 4, 2011 in a centrally located 14,000-square-foot facility on the Houston campus. Before the grand opening, BP launched a major communication campaign to generate excitement, including open houses, fliers and other promotional materials. The medical center was designed to stand apart from the office environment and create a "wow" factor for employees, while still fitting into the campus. It is open to all employees and

TABLE III

Number of Medical Center Users

	10/2011 to 3/2012	4/2012 to 3/2013
Total members	15,102	17,121
Employees	5,472	6,242
Total number of medical center users	1,493	5,090
Employees	1,095	3,505
Percentage of all members using medical center	10%	30%
Percentage of employees using medical center	27%	56%
Percentage of spouses/dependents using medical center	4%	13%

Note: Based on active employees and their dependents.

their dependents, contractors, retirees and community members. Take Care Employer Solutions (Take Care) leases the facility and is responsible for providing or arranging for the staffing and management of all medical center operations. BP does not take part in any of the medical care decisions delivered on site.

The goal of the facility is to provide availability to a “one-stop shop” for all health care needs. Visitors to the medical center have access to primary and acute care, pediatric care, lab services and dental, vision and radiology procedures. There is an on-site pharmacy as well as physical and occupational therapists, and the clinic houses representatives from the employee assistance program. There are 24 full-time and three part-time staff members, including three physicians, five registered nurses (with one full-time registered nurse dedicated to disease management), two nurse practitioners, four medical assistants, a physical therapist and two lab technicians.

The medical center’s proximity to the workplace clearly conveys an advantage, speeding access to a wide range of services. And many employees take a “day at the clinic,” signing on for a full range of preventive services, including an annual physical, dental checkup and vision care.

BP recognizes that its employees have many provider options in the Houston area and wants to make the on-site medical center the first choice for BP medical plan participants. Compared with other network providers, medical services for BP medical plan participants may be subsidized by the BP medical plan in the form of lower copays or no deductible (Table I). The combination of convenience and lower costs is meant to drive clinic utilization among the BP medical plan participants, which is critical for its success.

A Value-Chain Approach

The study uses an integrated medical program value chain to evaluate the

medical center’s performance over its first 18 months. This approach examines a range of cost, quality and utilization metrics to determine whether rising engagement is linked to improved health outcomes. The figures that follow report key metrics over the April 2011 and 2012 plan years. The metrics are commonly used to evaluate program performance, including engagement rates, place of service and pharmacy performance.

Many research studies use ROI methodologies to evaluate on-site clinic performance, and an ROI metric offers the convenience of a single, well-understood measure. However, we believe that limiting the evaluation to ROI is premature for a medical center with only 18 months of operating experience.

A new medical center must persuade users to disrupt their established health routines and relationships and form new ones. This can be challenging in the face of entrenched patient-doctor relationships, particularly for BP in Houston, where employees historically have been heavy users of the health care system. And some employees seem to be using the medical center on a trial basis while continuing to visit their longstanding physician. So BP might need to wait as long as another 12 to 24 months to see meaningful shifts in the way medical plan participants access care. A value-chain approach more directly captures changing dynamics in engagement and utilization metrics, thus opening a window into early movements in employee behaviors.

TABLE IV**Prevalence of Chronic Conditions and Clinical Risks, April 2012 Through March 2013**

	Medical center nonusers	Medical center users	Medical center heavy users (3+ visits/year)	BP other locations
Prevalence of chronic conditions per 1,000 members				
Asthma	81.0	73.9	95.8	68.3
COPD	4.2	5.9	4.4	6.0
Congestive heart failure	3.8	5.0	1.5	6.6
Coronary artery disease	15.8	34.4	28.0	16.7
Diabetes	61.6	105.3	99.5	57.0
Prospective risk score	1.04	1.36	1.44	1.00

Note: Restricted to members with 12 months of continuous enrollment in the BP medical plan during the plan year. Medical center nonusers are BP plan members who had all of their care delivered through providers in the Houston community that are not located at the WestLake Health & Wellness Center.

TABLE V**Health Care Utilization, April 2012 Through March 2013, as Compared With the Baseline Period**

	WestLake Health & Wellness Center			Houston benchmark	Other BP locations
	2011	2012	% Change	2012	2012
PCP visits/1,000	2,490.1	3,115.0	+25%	1,320.5	1,950.8
Specialist visits/1,000	3,194.0	3,593.2	+12%	1,045.6	2,723.5
Emergency room visits/1,000 members	158.5	186.5	+18%	212.4	127.0
Inpatient stays/1,000 members	45.6	45.4	0%	60.6	36.6
Outpatient hospital visits/1,000 members	1,436	1,632	+14%	4,379	1,304.9
Diagnostics (labs, radiology)	7,716	8,588	+11%	7,223	5,535.1

The primary data for this study are from BP's data warehouse. The study uses de-identified medical and pharmacy claims data for BP's active medical plan members for the April 2011 and 2012 plan years to estimate a range of utilization, quality and cost metrics for the WestLake campus population, with three addi-

tional months of run-out to account for the claims processing cycle. Two additional benchmarks are included to compare with BP's Houston population. The first is an intracompany benchmark for other BP locations without a medical center, including Anchorage, Alaska; Bellingham, Washington; Chicago, Illinois; and

Gary, Indiana. This benchmark provides consistency across the corporate culture, including similar wellness activities and their effect on demand for services. The second is a community benchmark for Houston to account for local market differences in utilization and provider practice patterns. Towers Watson

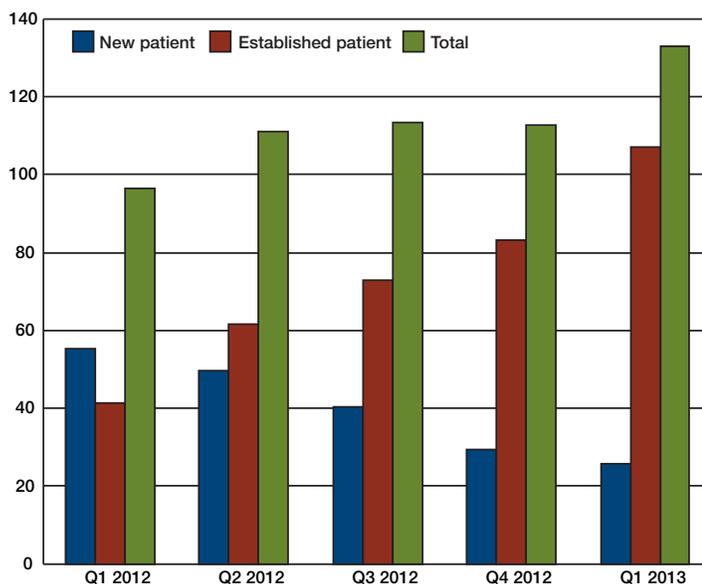
licenses Truven's MarketScan™ database, which includes average service utilization and unit cost metrics for the Houston area.

Cohort groups were created from the WestLake campus population to compare utilization patterns between medical center users and nonusers. Medical center users are those who paid at least one medical visit to the medical center between April 1, 2012, and March 31, 2013. To be counted as a medical center visit, the individual would need to see one of the health care providers and have a corresponding diagnosis and procedure code. To dig even deeper, the study also added a cohort of heavy users, made up of those who made three or more medical visits to the medical center over the same period. Medical center nonusers are those who made no visits in the April 2012 plan year. All cohort members had at least 12 months of continuous service.

To eliminate the effects of demographic and regional cost variations, actuarial and clinical adjustment factors were developed for age, gender and geography for each member group (employees, spouses and children/other). The analysis applied these adjustment factors to cost data at all operating locations outside Houston to ensure that all projected allowed costs are comparable. To normalize the claims experience to the Houston populations, factors of expected health claims risks were applied to the various cost benchmarks using the Episode Treatment Group® methodology for the Optum

FIGURE

WestLake Health & Wellness Center New Patient Visits and Established Patient Visits per 1,000 Members, January 2012-March 2013



Reporting and Insights data warehouse.

Summary composite measures that pool across age/gender, geography and prospective risk factor were estimated for the intracompany benchmarks to resemble the overall profile of the Houston population. A composite score above 1.0 indicates that the WestLake population is expected to use more health care services than the reference population. The composite score for WestLake is 1.068 and for other BP locations is 0.975. Table II summarizes the demographic and clinical risk differences for the April 2012 to March 2013 period.

Although the predominant approach is a value-chain analysis, ROI is also estimated for the introductory period (October 2011 to April 2012) and the first full year (April 2012 to March 2013). Take Care provided operating budget information along with monthly and quarterly claims reporting, which was used in estimating annual investment in the WestLake Health & Wellness Center—a key component of ROI estimates. As the initial infrastructure charges were absorbed by BP as the owner of the land and building rather than amortized as ongoing medical center costs, they are not reflected in BP Houston's costs in this analysis.

TABLE VI**Health Care Utilization, April 2012 Through March 2013**

	Medical center nonusers	Medical center users	Medical center heavy users (3+ visits/year)
Primary care physician visits/1,000	2,831.1	3,384.5	4,241.0
Specialist visits/1,000	3,186.5	4,554.5	5,625.6
Emergency room visits/1,000 members	178.8	154.9	165.8
Inpatient stays/1,000 members	25.3	14.8	15.5
Outpatient hospital visits/1,000 members	1,533.9	1,562.6	1,706.0
Diagnostics (labs, radiology)	7,557.0	9,585.0	9,464.3
<i>Preventive care</i>			
Breast cancer screening	72%	81%	80%
Influenza vaccination	24%	66%	59%

Note: Restricted to WestLake area members with 12 months of continuous enrollment in the BP medical plan during the plan year. Results are not risk-adjusted.

Key Results***If You Build It, Will They Come?***

Despite a major communication campaign around the October 2011 grand opening, foot traffic was somewhat slow for the first six months. As shown in Table III, roughly one in four employees visited the medical center during the six-month period, and even fewer spouses and dependents visited. But BP continued to promote the medical center, positive word-of-mouth reviews began to circulate and member participation jumped from 10% to 30% over the next six months. In fact, more than half of employees (56%) visited the medical center during the April 2012 plan year. The Take Care medical staff at the medical center increasingly

became viewed as a source of medical care for the entire family. Between April 2012 and March 2013, nearly one-third of medical center users were spouses or children of BP employees—people who would not typically be on the BP work-site during the day.

What Is the Profile of Medical Center Users?

A comprehensive on-site medical center can enable employees and their families—especially those with chronic conditions—to receive more convenient and coordinated care, and the WestLake Health & Wellness Center has been attracting visitors with greater health needs (Table IV). The overall medical risk level was higher in Houston than in other BP locations as

measured by the *prospective risk score*, an index of expected health care spending for the next 12 months. According to the risk scores, expected medical plan costs for nonusers of the WestLake Health & Wellness Center were 4% higher than the average for other BP locations, while expected costs for users and heavy users were 36% and 44% higher, respectively.

These higher risks reflect BP Houston's higher prevalence of several chronic conditions, including asthma, diabetes and coronary artery disease. But among the BP Houston population, the incidence of asthma was 18% higher for heavy users than for nonusers, while the incidence of diabetes and coronary artery disease was more than 50% higher for heavy users. These indicators suggest that the medical center is reaching a segment of the BP population with a strong need for medical care and chronic disease management.

Do Utilization Patterns Differ Between Users and Nonusers?***Medical Program***

The 2012 plan year at the WestLake campus witnessed a significant spike in utilization compared with 2011 in every category except inpatient stays (Table V), which pushed medical and pharmacy cost trends substantially higher. Physician visits to the WestLake Health & Wellness Center far outpaced community and intracompany benchmarks; however, the higher utilization was offset by considerably lower outpatient hospital visits compared with the Houston benchmark. The use of diagnostics at the WestLake Health &

TABLE VII

Distribution of BP Houston Employee Primary Care Visits by Intensity Level

Type of visit	Medical center visits			Medical center nonvisits		
	Q1 2012	Q1 2013	Percentage point (PP) change	Q1 2012	Q1 2013	PP change
Level I (CPT code 99201)	0%	0%	0	2%	2%	0
Level II (CPT code 99202)	22%	13%	-9	8%	7%	-1
Level III (CPT code 99203)	57%	77%	20	58%	62%	4
Level IV (CPT code 99204)	18%	10%	-8	29%	27%	-2
Level V (CPT code 99205)	3%	1%	-2	3%	3%	0

Note: Visits for established patients. Medical center nonvisits include both medical center users and nonusers.

TABLE VIII

Generic Dispensing Rates (Percentage of All Scripts)

	WestLake Pharmacy			Other BP locations			
	2011	2012	2012: Medical center nonusers	2012: Medical center regular users	2012: Medical center heavy users	2011	2012
Lipid	42%	57%	57%	58%	59%	50%	65%
Ulcer	58%	59%	57%	64%	66%	75%	72%
Depression	67%	81%	80%	85%	85%	72%	85%
Diabetes	49%	53%	53%	56%	70%	52%	53%
Hypertension	67%	74%	74%	76%	81%	73%	83%
All scripts	72%	75%	75%	77%	82%	76%	79%

Wellness Center was also significantly higher than the two benchmarks and is rising.

While the spike in utilization cannot be attributed to any one factor, people considering switching to a new health care facility often initiate more office visits as part of the process. As shown in Table VI, the rate of primary care visits was about 20% higher for medical center users than for nonusers, and the difference was 43% for specialist visits.

Visitors to the medical center were also heavy users of lab tests and radiology—The rate of diagnostics was roughly 27% higher for medical center users than for nonusers. Some of this higher utilization is to be expected because medical center users tend to have more health issues and, thus, need more frequent medical attention. And, in some ways, the higher visit rate is encouraging, as the incidence of preventive screenings was higher among medical cen-

TABLE IX**Medication Adherence Rates**

	WestLake Pharmacy			Other BP locations			
	2011	2012	2012: Medical center nonusers	2012: Medical center regular users	2012: Medical center heavy users	2011	2012
Antidepressants	19%	18%	18%	20%	19%	20%	19%
Asthma	15%	14%	14%	15%	15%	16%	15%
Blood pressure	27%	28%	28%	29%	29%	28%	28%
Cholesterol	25%	25%	25%	25%	26%	24%	24%
Diabetes	22%	23%	23%	23%	22%	22%	23%
Ulcer disease	20%	20%	20%	20%	20%	20%	21%

ter users than nonusers. However, the high utilization suggests the potential for BP medical plan members to shift more of their visits from community settings to the medical center, with Take Care medical staff managing the appropriateness of radiology services more closely as the medical center matures.

At the same time, members of BP's WestLake campus—especially medical center users—were less likely to experience severe and expensive episodes of care. BP Houston employees visited emergency rooms more often than employees at other BP locations but less often than employees at Houston-area peer employers, and medical center users visited emergency rooms less often than nonusers. Inpatient and outpatient hospital utilization largely followed the same pattern, despite the BP Houston population's higher overall health risks.

A closer look at medical center visits

suggests that employees have been establishing stronger relationships with the Take Care medical staff. The overall rate of medical center visits has grown steadily from 96.6 visits per 1,000 members in the first quarter of 2012 (the second quarter of clinic operations) to 133.1 visits/1,000 in the first quarter of 2013 (Figure). This growth was driven by quarter-over-quarter increases in return visits by established patients. By contrast, new patient visits fell off by about half between first quarter 2012 and first quarter 2013. This is partly by definition, since a person can be a new patient only once. Yet, with penetration in the April 2012 plan year at 56%, there is still potential for new users who might be a good fit. Likewise, many medical center users went outside the medical center for some services, so there is considerable opportunity to achieve deeper penetration with established patients.

The intensity pattern of medical center visits also evolved between 2012 and 2013. The standard current procedural terminology (CPT) system classifies physician visits into five levels of increasingly intensive and specialized care. As Table VII shows, medical center visits to Take Care medical staff became increasingly concentrated in the moderate Level III category, while Level II and Level IV visits dropped off. By contrast, there was little change in the pattern of visits to physicians outside the medical center. About 60% of off-site visits were at Level III, roughly 30% were at Level IV, and there were relatively few Level I and II visits.

The pattern of visits appears to be moving in a favorable direction in two ways:

1. Most visits to the medical center medical staff were moderate- to high-intensity visits, with seven of eight visits at Lev-

TABLE X

Year-Over-Year Change in Per Member, Per Year Health Care Costs

	BP Houston (at budget rates)	BP Houston (at market rates)	Houston benchmark	Other BP locations
Medical + Rx				
April 2011 to March 2012	\$4,669	\$4,787	\$4,427	\$3,814
April 2012 to March 2013	\$5,102	\$5,072	\$4,693	\$4,035
<i>Year-over-year change</i>	<i>9.3%</i>	<i>6.0%</i>	<i>6.0%</i>	<i>5.8%</i>
Medical only				
April 2011 to March 2012	\$3,805	\$3,810	\$3,654	\$3,153
April 2012 to March 2013	\$4,007	\$3,994	\$3,874	\$3,298
<i>Year-over-year change</i>	<i>5.3%</i>	<i>4.8%</i>	<i>6.0%</i>	<i>4.6%</i>
Rx only				
April 2011 to March 2012	\$864	\$977	\$773	\$661
April 2012 to March 2013	\$1,024	\$1,078	\$819	\$737
<i>Year-over-year change</i>	<i>18.5%</i>	<i>10.3%</i>	<i>6.0%</i>	<i>11.5%</i>

Notes: Budget rates represent the actual costs budgeted and paid by BP to Take Care for medical services. Per member per year costs at market rates repriced the value of services provided by in-network medical providers for BP’s insurance administrator’s rates for the Houston market. All costs were actuarially adjusted for age, gender, geography, plan design and clinical risk to reflect the Houston population.

el III or above. This suggests that medical center users perceive the Take Care medical staff as providing a level and scope of services comparable to standard physician offices. To attract more visits, employees must view the Take Care medical staff as competitive with outside providers.

2. Relatively complex Level IV visits were considerably more prevalent outside the medical center, even though nonusers had lower medical risk levels than medical center users (Table IV). This could be caused by variations in coding practices between the Take Care medical staff and the Houston provider community. The provider community might have an incentive to “upcode” visits at a relatively high level of complexity to maximize insurance reimbursement. At the WestLake Health & Wellness Center, the largely fixed cost-payment structure with Take Care medical personnel minimizes such incentives; thus, coding practices by Take Care medical staff

might reflect the complexity of physician visits more accurately.

Pharmacy Program

The WestLake Health & Wellness Center includes a full-service pharmacy, also staffed by Take Care personnel, with 90-day refills as an option in lieu of the BP medical plan’s normal mail-order requirement for maintenance medications. Over its first 18 months, the medical center was modestly effective in encouraging greater use of generic drugs (Table VIII). In 2011, BP members at the WestLake campus lagged behind other BP locations in using generics, which emphasizes the merits of this location.

In general, the WestLake Pharmacy’s generic dispensing rates (GDRs) ranged from roughly 50% to 85%, depending on the condition and medical center utilization level, and were rising. Given improving generic use at other BP locations, plan design and newly available generic alternatives are clearly contributing to these trends.

TABLE XI**ROI Based on Actuarially Adjusted Costs**

	2011	2012
<i>BP Houston total per member per year cost</i>	\$4,669	\$5,102
WestLake Health & Wellness Center total	\$91	\$359
Medical	\$51	\$191
Drug	\$40	\$168
Community providers total	\$4,579	\$4,742
Medical	\$3,755	\$3,886
Drug	\$824	\$856
<i>Houston benchmark per member per year cost</i>	\$4,427	\$4,693
BP Houston savings/(cost) vs. Houston benchmark	(\$242)	(\$409)
ROI based on Houston benchmark	0.95	0.92
<i>Other BP locations per member per year cost</i>	\$3,814	\$4,035
BP Houston savings/(cost) vs. other BP locations	(\$855)	(\$1,067)
ROI based on other BP locations	0.82	0.79

Notes: All costs were actuarially adjusted for age, gender, geography, plan design and clinical risk to reflect the Houston population.

However, medical center users, especially heavy users, had higher GDRs than nonusers for lipids, ulcers, depression, diabetes and hypertension. And for costly diseases like diabetes, heavy users of the medical center obtained generics at significantly higher rates than members with the same disease in other BP locations. However, the WestLake Pharmacy could potentially drive up GDRs to best practice standards—to as high as 90% across all scripts.

By another measure, however, users of the WestLake Pharmacy have had less short-term impact on medication adherence rates (Table IX). Medication adherence was calculated by reviewing the number of prescriptions filled by Houston members and the quantity of medication dispensed

per prescription, compared with the estimated 365-day supply of medication required annually. The percentage of patients taking prescribed medicines as recommended for six common conditions ranged from 14% to 29%. Within BP Houston, WestLake Pharmacy users had slightly higher adherence rates than nonusers for depression, asthma, blood pressure and cholesterol medications. There was little difference between Houston and other BP locations.

Have Cost Trends Improved?

Cost trends at the medical center are promising. This is crucial because medical and drug costs per person were higher among BP medical plan participants at BP Houston than at other BP locations or among other

Houston employers, even after adjusting for demographic and risk differences. For 2011, Houston BP's total costs at budget rates were 22% higher than costs at other BP locations and 6% higher compared with other large employers in Houston.

After factoring in all medical center costs, the overall year-to-year cost increase was higher at BP Houston than either community or intracompany benchmarks. As measured by the budget rates BP actually paid for care at the WestLake Health & Wellness Center, costs increased by more than 9% between 2011 and 2012, compared with roughly 6% at other BP locations and other large Houston employers. (See Table X.) This reflects the utilization spike described above, some of which may reflect a typical phase-in period characterized by additional office visits and diagnostic tests. The higher cost trends were also symptomatic of atypical experience in 2012, with a spike in high-cost claimants that can be difficult to avoid in any given year.

When medical center services were repriced to reflect prevailing market rates, health care cost trends approximated those in the community and were only 20 basis points higher than those at other BP locations. And isolating medical services from pharmacy costs provides a clearer picture of BP's cost drivers in Houston. Specifically, drug costs increased by 18.5%, about 1.5 times the trend at other BP locations and about three times the trend for Houston employers. Boosting penetration and generic dispens-

ing rates at the WestLake Pharmacy may help control these costs in the years ahead.

On the flip side, medical-only cost trends at budget rates and after repricing medical center services at market rates trailed those in the local market and were roughly the same as averages at other BP locations. This is promising in light of the unfavorable 2012 experience. These results are also impressive given the broad-based increase in the use of health care services at WestLake. But the cost trends also magnify the importance of shifting plan member participation in community-delivered services to the WestLake Health & Wellness Center to help manage down high utilization at BP's Houston campus.

What Is the Return on Investment?

While the value-chain approach provides a clear picture of changing utilization patterns within the WestLake community and thus the forces driving cost trends, a more traditional ROI evaluation is also useful in evaluating the medical center's early financial performance. The ROI evaluation in Table XI compares medical center costs with actuarially normalized costs for location, gender and clinical risks to reflect the Houston market. Based on Houston-area benchmark costs, ROI for the medical center fell slightly short of 1.0 (the breakeven point) and was about 12 to 15 points lower than ROI based on expenditures at other BP locations. And both measures of ROI remained relatively stable over the first 18 months of operation.

Summary

Evaluating the performance of an on-site health clinic is multidimensional. Every employer's approach is unique, and it is the differentiating facets that determine whether the program succeeds over time. The differences range from the scope of services, financial advantages embedded into the pricing and plan design, promotional backing, proximity to the workforce and fit within the company's culture. Success ultimately depends on changing the way employees use health care, which is without question the most difficult challenge for any employer.

In program evaluation, the outcomes should bear some relation to the intervention. For an on-site clinic,

AUTHORS

Karl Dalal is director of health and protection benefits at BP America. He leads a team responsible for all aspects of the design, delivery and administration of BP's health and welfare benefit programs offered to more than 80,000 employees and retirees. Dalal holds an M.S. degree from Purdue University and an M.B.A. degree from Duke University.



Allan Khoury, M.D., Ph.D., is a senior health management consultant at Towers Watson, where his consulting practice includes the creation of worksite health centers, health care delivery, population health improvement and the ROI for clinical interventions. He previously was the senior medical director for clinical solutions for Walgreens, the chief medical officer of Take Care Health Systems, the chief medical officer of Whole Health Management, Inc., and the associate medical director for medical information and clinical innovation at Kaiser Permanente of Ohio. Khoury holds a medical degree from the University of Miami and a doctorate degree in biophysics from Pennsylvania State University. He is board-certified in internal medicine.



Steve Nyce, Ph.D., is director of the Research and Innovation Center for Towers Watson. His research interests include workforce demographics, behavioral aspects of private pensions, and public and private retirement policy. Nyce holds a B.A. degree in economics from LaSalle University and a Ph.D. degree in economics from the University of Notre Dame.



the complexity of the intervention demands a more robust evaluation. The value-chain approach used in this analysis examined several critical questions to assess the WestLake Health & Wellness Center's implementation and early operations. Did BP pick the right location? Are

employees using the medical center, and do users match the targeted profile? Are utilization patterns moving toward higher quality care? Do users' clinical outcomes suggest the medical staff at the center is improving users' health? And, ultimately, is financial performance measurably improving?

The WestLake Health & Wellness Center medical ROI is encouraging for several important reasons. First, utilization patterns in the BP Houston population are promising. Medical center users had fewer emergency room visits, inpatient hospital stays and outpatient hospital visits than nonusers. The evidence suggests that many medical center users are forging ongoing relationships with the Take Care medical staff. Moreover, there are attractive opportunities for building on current momentum in shifting plan participant behaviors. Notably, rising medical center participation rates coupled with the high rate of outside office visits suggests significant potential for attracting more visitors to the Take Care medical staff at the medical center, thus spreading fixed operational costs among more members. There is similar potential for WestLake Pharmacy operations. Only about 5% of medical center users filled all their prescriptions at the WestLake Pharmacy in the April 2012 plan year, but GDRs were higher for users than for nonusers. In all, increasing participant engagement with the Take Care medical personnel is critical to the medical center's success. Without improvement in GDRs and in pharmacy use, the current cost trends will reduce the WestLake Pharmacy ROI.

Moreover, as a highly valued benefit, the availability of the WestLake Health & Wellness Center plays an impor-

tant role in BP America's value proposition to employees. This is especially important for a company like BP, which operates in a highly competitive industry and depends on long-tenured employees. The medical center's convenience should also have markedly positive impacts on productivity, minimizing the hassle of trips to the doctor far away from the office. While this evaluation of the medical center's performance did not consider these aspects, future analyses should reflect their value.

BP's investment in this state-of-the-art facility reflects the company's long-term vision and commitment to its employees. Changing behavior takes time, and boosting the use of preventive care requires a significant investment for a large employer with a self-insured plan, albeit an investment that should pay off. The evidence so far suggests that the WestLake Health & Wellness Center is establishing a strong on-campus presence, and utilization and outcomes are moving in a healthy direction. 

Endnotes

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