Physician Engagement is Critical to the Success of any Accountable Care Organization

Anthony N. Akosa, MD, MBA

Summary

Physician engagement is critical to the success of any program where physicians are accountable for the quality, cost and overall care of an assigned population of patients like an accountable care organization (ACO). It is well known that physicians control the majority of health care cost. However, as overall health care cost is a factor of unit cost and utilization rate of services, physicians could impact utilization of services but still not be able to control overall health care cost due to lack of control of cost of hospital-based services and outpatient procedures. The ACO could mitigate this problem through price transparency – where providers are given ready access to the unit price of certain high-cost services by the provider and facility so they can direct their patients to lower cost settings/providers assuming the quality of care is comparable. The ACO could also provide the referring physicians a list of preferred specialists or hospitals with not just lower pricing but also better outcomes.

Key Points

- The level of physician engagement could directly affect the level of achievement of the triple aim – better care for individuals, better health for populations and lower growth in expenditures.
- Physicians make decisions that control 87 percent of health care costs.[1]
- Alignment of incentives will increase physician engagement.
- Overall cost is determined by both utilization of services and unit cost of services.
- Physicians, especially primary care physicians (PCPs), have very little control over the cost of hospital- based services and most outpatient procedures.
- To improve overall cost, providers should partner with hospitals to reduce both utilization and unit cost of services. Although ACOs sponsored by physician groups have seen more growth recently, the majority of ACOs are still sponsored by hospitals[5]. To remain competitive in the post health care reform environment, these hospital-sponsored ACOs have to reduce overutilization of services and lower their pricing. The lost revenue from reducing unit cost and decreasing over utilization of services could be recouped from the shared savings agreements with payers.

Introduction

ADVANTAGE HEALTH SOLUTIONS, INC. (AHS), a local health plan that insures many employer groups in Indiana, wanted to test the hypothesis that provider engagement with aligned incentives could improve outcomes on a specific population with a benefit structure typically not amenable to usual health plan interventions. One of the large employer groups insured by AHS with about 5,000 employees and dependents has a benefit plan that does not discourage over utilization of certain low-value but high-cost medical services and is not amenable to the usual utilization management strategies. For example in 2011, the copayment for PCP office visits was $25; copayment for emergency room visits was $0; copayment for advanced imaging services such as computed tomography (CT), magnetic resonance imaging (MRI) and positron emission tomography (PET) scans was $0; and the cost differential between generic and brand name drugs was just $5.

There was overutilization of emergency room services for nonemergent problems that was neither cost effective nor safe for the members. Most of these nonemergent conditions like upper respiratory illnesses (URI), urinary tract infections (UTI) and

Exhibit 1: Advantage Health Solutions, Inc.[sm] —

acyclovir (ZOVIRAX)
albuterol soln neb (ACCUNEB)
Allopurinol
amitriptyline (ELAVIL)
amitriptyline hcl/perphenazine (ETRAFONE/FORTE)
amitriptyline hcl/perphenazine (TRIAVIL)
amitriptyline/chlordiazepixide (LIMBITROL)
amoxicillin & k clavulanate (AUGMENTIN)
amoxicillin & k clavulanate susp (AUGMENTIN SUSP)
amoxicillin (AMOXIL)
antipyrine/benzocaine (AURAGLAN)
atenolol (TENORMIN)
atropine sulfate (ISOPTO ATROPINE)
baclofen (LIORESAL)
belladonna alkaloids (ANTI-SPAS)
belladonna alkaloids (DONNATAL)
benazepril (LOTENSIN)
benzonatate (TESSALON PEARLS)
benztropine (COGENTIN)
betameth/propylene glycol (DIPROLENE AF)
betameth/propylene glycol (DIPROLENE)
betamethasone dipropionate (DIPROSONE)
betamethasone dipropionate (MAXIVATE)
betamethasone valerate (VALISONE)
bisoprolol (ZEBETA)
bumetanide (BUMEX)
buspirone (BUSPAR)
captopril (CAPOTEN)
captopril/hctz (CAPOZIDE)
carbamazepine (TEGRETOL)
carbamazepine sr (TEGRETOL XR)
carvedilol (COREG)
cephalexin (KEFLEX)
chlorhexidine (PERIDEX)
cimetidine (TAGAMET)
ciprofloxacin (CILOXAN)
citalopram (CELEXA)
clonidine (CATAPRES)
clonidine hcl/chlorthalidone (COMBIPRES)
cyclobenzaprine (FLEXERIL)
dexamethasone (DECADRON)
dexamethasone (HEXADROL)
diclofenac ophth sol (VOLTAREN OPHTH SOL)
diclofenac potassium (CATAFLAM)
diclofenac sodium (VOLTAREN/XR)
dicyclomine (BENTYL)
digoxin (LANOXIN)
diltiazem (CARDIZEM/SR/CD)
diltiazem (DILACOR XR)
diltiazem (TIZAC)
doxazosin (CARDURA)
doxepin (SINEQUAN)
doxycycline hyclate (PERIOSTAT)
doxycycline hyclate (VIBRAMYCIN)
doxycycline hyclate (VIBRA-TABS)
enalapril (VASOTEC)
enalapril/hctz (VASERETIC)
erythromycin base (EMGEL)
erythromycin base (E-MYCIN)
erythromycin base (ERYCETTE)
erythromycin base (ERYDERM)
erythromycin base (ERYGEL)
erythromycin base (ERYMAX)
erythromycin base (T-STAT)
erythromycin base/benzoyl peroxide (BENZAMYCIN)
erythromycin ethylsuccinate (E.E.S.)
erythromycin ethylsuccinate (ERY-PED)
erythromycin stearate
erythromycin/sulfisoxazole (PEDIAZOLE)
estradiol (ESTRACE Tabs)
estropipate (OGEN)
estropipate (ORTHO-EST)
famotidine (PEPCID)
fluconazole (DIFLUCAN)
fluconazole susp (DIFLUCAN SUSP)
fluocinolone acetonide (SYNALAR)
fluocinonide (LIDEX/E)
fluoxetine (PROZAC)
fluphenazine hcl (PERMITIL)
fluphenazine hcl (PROLIXIN)
furosemide (LASIX)
gentamicin (GARAMYCIN)
gentamicin (GENOPTIC)
glimepiride (AMARYL)
glipizide & metformin (METAGLIP)
glyburide (DIABETA)
glyburide (GLYCRON)
glyburide (GLYNASE)
glyburide (MICRONASE)
glyburide/metformin (GLUCOVANCE)
guanfacine (TENEX)
hctz/amiloride (MODURETIC)
hctz/atenolol (TENORETIC)
hctz/bisoprolol (ZIAC)
hctz/propranolol (INDERIDE)
hctz/triamterene (DYAZIDE)
hctz/triamterene (MAXZIDE)
hydralazine (APRESOLINE)
hydralazine/hctz (APRESAZIDE)
hydrocortisone (CORTEF)
hydrocortisone (CORTENEMA)
hydrocortisone (HTYONE)
hydrocortisone (LACTICARE-HC)
hydrocortisone (NUTRACORT)
hydrocortisone (PENECORT)
hydrocortisone (PROCTOCORT HC)
hydrocortisone acetate (ANUSOL HC)
hydrocortisone acetate w/pramoxine cr (ANALPRAM-HC)
hydrocortisone acetate/urea (CARMOL HC)
hydrocortisone butyrate cr (LOCID)
hydrocortisone valerate (WESTCORT)
ibuprofen (MOTRIN)

suture removals could have been easily handled by the members' primary care physicians.

Creating a medical home for every member would give them access to personalized, coordinated and comprehensive primary care when it is convenient for them. This would improve both the quality of care provided to the members and member satisfaction. AHS also felt that physician engagement would be the key to decreasing the overutilization of some of these low-value but high-cost services as physicians serve as key advisors to patients and make decisions that control 87 percent of personal health spending.[1]

Program Goals and Objectives

The goals of the program are similar to achieving the Institute for Healthcare Improvement (IHI) Triple Aim: improve the health of the population, enhance the patient experience of care (including quality, access, and reliability); and reduce, or at least control, the per capita cost of care.[2]

The program objectives are: avoidance of unnecessary utilization, especially emergency room and advanced Imaging (CT, MRI and PET scans); utilization of services at the right place and right time; for example, encouraging the members to utilize urgent care centers after hours for nonurgent problems like URI instead of going to the ER; partnering with providers to promote outreach, health prevention and patient engagement; improving generic utilization rate when appropriate by providing generic alternatives at point of care (provider practices); and improving member satisfaction of overall care provided.

There were three provider groups in one of the counties in Indiana to whom all the members were assigned and they were named Provider Group 1 (Group 1), Provider Group 2 (Group 2) and Provider Group 3 (Group 3). AHS met with Group 1 and Group 2 to explain the program, the provider incentive and the Provider Dashboard for each provider. Group 3 was not engaged in the program and did not meet with AHS. Although Group 3 was not engaged, AHS still sent information about the program to the members assigned to them.

The program was called a Shared Savings Incentive Program and comprises:

- Member engagement activities

Zero Copayment Prescription Drug Listing for 2011

indapamide (LOZOL)
indomethacin (INDOCIN/SR)
ipratropium (ATROVENT NASAL SPRAY)
ipratropium/albuterol neb soln (DUONEB)
isoniazid & rifampin (RIFAMATE)
isoniazid (ISONAZID)
isoniazid (NYDRAZID)
isosorbide dinitrate (DILATRATE-SR)
isosorbide dinitrate (ISORDIL)
isosorbide dinitrate (SORBITRATE)
isosorbide mononitrate (IMDUR)
lactulose (CEPHULAC)
lactulose (CHRONULAC)
lactulose (DUPHALAC)
lactulose (ENULOSE)
levobunolol (BETAGAN)
levothyroxine (LEVOTHROID)
levothyroxine (SYNTHROID)
levothyroxine (UNITHROID)
lidocaine cr (LMX 4)
lisinopril (PRINIVIL)
lisinopril (ZESTRIL)
lisinopril/hctz (PRINZIDE)
lisinopril/hctz (ZESTORETIC)
lithium carbonate (ESKALITH/CR)
lithium carbonate (LITHOBID)
lithium carbonate (LITHONATE)
lithium citrate
loratadine (CLARITIN) OTC
lovastatin (MEVACOR)
medroxyprogesterone (PROVERA)
medroxyprogesterone IM (DEPO-PROVERA)
megestrol (MEGACE)
meloxicam (MOBIC)
metformin (GLUCOPHAGE)
metformin XR (GLUCOPHAGE XR)
methyldopa (ALDOMET)
methyldopa/hctz (ALDORIL)
methylprednisolone (MEDROL)
metoclopramide (REGLAN)
metoprolol succinate er (TOPROL XL)
metoprolol tartrate (LOPRESSOR)
metronidazole (all forms)
nadolol (CORGARD)
naproxen (EC-NAPROSYN)
naproxen (NAPROSYN)
naproxen sodium (ANAPROX DS)
neomycin suf/polymy/buffers/hc (PEDIOTIC)
neomycin sulfate/hc
neomycin sulfate/polymyxin/hc (CORTISPORIN)
neomycin/bacitracin/polymyxin (NEOSPORIN)
neomycin/polymyxin/dexameth (DEXACIDIN)
neomycin/polymyxin/dexameth (MAXITROL)
nortriptyline (AVENTYL)
nortriptyline (PAMELOR)
nystatin (MYCOSTATIN)
nystatin (NILSTAT)
oxybutynin (DITROPAN)
oxybutynin sr (DITROPAN XL)
paroxetine (PAXIL)
paroxetine cr (PAXILCR)
paroxetine susp (PAXIL SUSP)
penicillin
phenazopyridine (PYRIDIUM)
pilocarpine hcl (SALAGEN)
pilocarpine hcl (PILOCAR)
pilocarpine hcl/epinephrine (E-PILO)
polymyxin b sulfate/tmp (POLYTRIM)
pravastatin (PRAVACHOL)
prazosin (MINIPRESS)
prednisone (DELTASONE)
prochlorperazine edisylate (COMPAZINE)
promethazine (PHENERGAN)
propranolol (INDERAL)
ranitidine (ZANTAC)
selenium sulfide (EXSEL)
selenium sulfide (SELSUN)
silver sulfadiazine (SILVADENE)
sodium citrate/citric acid (CYTRA-2)
sotalol (BETAPACE/AF)
spironolactone (ALDACTONE)
spironolactone/hctz (ALDACTAZIDE)
sulfacetamide sodium (BLEPH 10)
sulfacetamide sodium lot (SEBIZON/KLARON)
sulfacetamide/prednis sp (VASOCIDIN)
sulfacetamide/prednisolone ac (BLEPHAMIDE)
sulfacetamide/sulfur, sublimed (NOVACET)
sulfacetamide/sulfur, sublimed (PLEXION)
sulfacetamide/sulfur, sublimed (SULFACET-R)
terazosin (HYTRIN)
terbinafine (LAMISIL)
tetracycline (ACHROMYCIN)
thioridazine (MELLARIL)
thioridazine (MELLARIL-S)
thiothixene (NAVANE)
timolol (BLOCADREN)
timolol (TIMOPTIC/XE)
tobramycin (TOBREX)
tobramycin/dexamethasone (TOBRADEX)
trazodone (DESYREL)
triacinolone acetonide (ARISTOCORT)
triacinolone acetonide (KENALOG)
triamcinolone acetonide (KENALOG W/ ORABASE)
trihexyphenidyl (ARTANE)
verapamil (CALAN/SR)
verapamil extended-release (ISOPTIN/SR)
warfarin (COUMADIN)

- Provider engagement activities
- Health Navigator activities

Member Engagement Activities

Marketing collateral to educate members about the program was completed in the first quarter of 2011. The educational campaign informed the members how the program would benefit them by providing improved access to providers, $0 copayment for specific generic drugs, decreased unnecessary emergency room (ER) and advanced imaging utilization to improve patient safety. It is known that unnecessary use of all forms of ionizing radiation, especially CTs in children, could increase cancer risk. Frequent ER visits for nonurgent conditions could increase the risk of nosocomial infection and uncoordinated care with poorer outcomes.

AHS developed a zero copayment drug list for 2011 (Exhibit 1) and the plan paid 100 percent of the cost of any of the drugs on this list in 2011. If the provider felt the drugs on this list were not appropriate for the member or the member requested a brand name drug, then the member would be responsible for the appropriate copayment specified in the employer's Prescription Drug Coverage Benefit. AHS identified members who were on brand name drugs that were available generically. These members were sent a letter listing all their brand name drugs, generic alternatives and annual cost savings if their providers switched them to generic alternatives (Exhibit 2.)

To make it more convenient for the members to obtain their prescription medications, AHS partnered with a local pharmacy that offers concierge services to members such as the delivery of medications to home and place of work. The pharmacy also has branches at two provider practices. The pharmacy could dispense drugs prescribed by the providers at point of care, thereby increasing adherence and generic utilization. Members could still utilize other pharmacies of their choice and do not have to use the pharmacy AHS partnered with.

AHS also embedded a Health Navigator in one of the provider practices to work directly with the providers and members. Her role was to facilitate care management processes to promote awareness and compliance by identifying members with chronic conditions that AHS has Disease Management (DM)

Exhibit 2

June 2011

JOHN DOE
ABC DRIVE
CITY, STATE ZIP

RE: Generic Alternatives / Copay Savings

Dear ADVANTAGE Member:

We want you to know that you may be able to save money on some of your prescription drugs. As you may know, many brand name drugs are available as a generic. For those drugs not yet available generically, there may be a different drug like it that has a generic.

You may be able to save money on your copays by talking to your doctor about other choices. The next page shows a list of your drugs with a different drug available as a generic for lower copay.

Read the list and see how much money you could save! We know these changes are not right for everyone. Only you and your doctor can decide if a change is right for you. This change could lead to savings on your copay up to the amount you see listed over the course of a year.

If you have questions about your prescription drugs, ask your doctor or pharmacist for more information. Also, you could save even more by using the mail order pharmacy. Visit www.advantageplan.com to find out more about your prescriptions, the mail order pharmacy, the **Care-ADVANTAGE** program, or the special Chrysler Only Zero Copay Medication List.

Sincerely,
ADVANTAGE Health Solutions, Inc.

Common Brand Name Medications and Alternatives

Retail Prescription Drugs -Up tp 30-Day Supply				
Drug	Copay	Alternative	Copay	Annual
SINGULAIR (montelukast)	12	zafirlukast (ACCOLATE)	6	$72
CRESTOR (rosuvastatin)	12	simvastatin (ZOCOR)	0	$144
Total savings in 12 months $216				

programs for whom the Disease Management Educators were unable to contact. The Health Navigator worked with providers' offices to find out when members who did not respond to AHS's DM campaign were scheduled to see their PCP and discussed DM participation and incentive/benefits with the PCP and/or member. The Health Navigator also referred members who qualified for case management and behavioral health management programs based on the health plan's identification process.

All the members received a provider survey at the beginning of the second quarter of 2011 utilizing the CAHPS® (Consumer Assessment of Healthcare Providers and Systems) Clinician & Group Survey, and a follow-up survey with the same tool was sent out to the same members 12 months later.

Provider Engagement Activities

Before and after the program, AHS tracked four categories of metrics by provider groups that includ-

ed utilization, member satisfaction, and quality and disease management participation.

The providers were incentivized based on their individual performance on the three utilization metrics compared to the benchmark that was AHS Commercial average rates. The utilization metrics were: utilization of generic prescription, utilization of ER and utilization of advanced imaging (CT, MRI and PET.) Two-thirds of the total incentive was allocated to improving generic prescription utilization because it was felt that was the metric that would be easiest for the providers to impact, and it

Exhibit 3

Benchmarks		
Generic Utilization Percentage	Advanced Imaging Rate /1000	ER Rate/1000
75%	216	214

Provider Metrics				
Date	Number of Members	Generic Utilization Percentage	Advanced Imaging Rate/1000	ER Rate/1000
January 11	187	68.63%	64.17	705.88
February 11	187	64.05%	128.34	192.51
March 11	188	71.51%	255.32	319.15
April 11	189	67.54%	698.41	571.43
May 11	189	66.77%	63.49	444.44
June 11	188	63.00%	63.83	382.98
July 11	197	69.01%	304.57	487.31
August 11	197	67.59%	-	1,035.53
September 11	194	65.15%	123.71	123.71
October 11	193	62.55%	186.53	746.11
November 11	197	64.60%	60.91	365.48
December 11	197	66.67%	243.65	487.31

Payout Calculation											
Date	Number of Members	Generic 50% Level	Generic 75% Level	Generic 100% level	Advanced Imaging 50% Level	Advanced Imaging 75% Level	Advanced Imaging 100% Level	ER 50% Level	ER 75% Level	ER 100% Level	Monthly Total
January 11	187						467.50				467.50
February 11	187						467.50			467.50	935.00
March 11	188	940.00			235.00						1175.00
April 11	189										-
May 11	189						472.50				472.50
June 11	188						470.00				470.00
July 11	197										-
August 11	197										-
September 11	194						485.00			485.00	970.00
October 11	193						482.00				482.50
November 11	197						492.50				192.50
December 11	197				246.25						246.25
Grand Totals		$940.00	-	-	$481.25	-	$3,337.50	-	-	$952.50	$5,700.25

(chart cont. next page)

Exhibit 3 (cont.)

Payout Distribution Schedule			
	Date	Method	Amount
Distribution #1	6/30/2011	50% of 1st Quarter 2011 Earnings	$1,288.75
Distribution #2	9/30/2011	50% of (2011 YTD Earnings LESS Distribution #1	$471.25
Distribution #3	12/31/2011	50% of (2001 YTD Earnings LESS Distribution # 1 and #2	$485.00
Distribution #4	3/31/2012	Total 2011 Earnings LESS Distributions #1, #2, #3	$3,466.25

Provider Payout Metrics	
Utilization of Generic Prescriptions	
Utilization Rate	Amount of Payout $10pmpm/Total $15pmpm
70% - 72.4%	50% = $5.00 pmpm
72.5% - 74.9%	75% = $7.50 pmpm
75%	100% = $10.00 pmpm
Utilization of Emergncy Services	
Utilization Rate	Amount of Payout $2.5pmpm/Total $15pmpm
239 - 263	50% = $1.25 pm pm
215 - 238	75% = $1.87 pmpm
0 - 214	100% = $2.50 pmpm
Utilization of Advanced Imaging Services (CT, MRI, PET)	
Utlization Rate	Amount of Payout $2.5pmpm/Total $15pmpm
238 - 262	50% = $1.25 pmpm
217 - 237	75% = $1.87 pmpm
0 - 216	100% = $2.50 pmpm

was also the metric that had the highest variance from the AHS benchmark. The other two metrics combined accounted for a third of the incentive. Each provider received a quarterly report of his/her performance on these three metrics and also the incentive payout for that quarter (Exhibit 3). The providers also received a report comparing them to their peers – all the other providers in that particular group excluding their names (Exhibit 3). Group 3 providers did not get any incentive or quarterly report of their performance.

AHS met with Group 1 and 2 providers to explain the program and get buy-in. The series of meetings with the providers were completed in April 2011. Group 1 providers met with AHS initially and their management team subsequently had multiple meetings with these providers to explain the program and quarterly results. Group 2 providers met with AHS only once and there were no subsequent meetings with the providers.

The Provider Dashboard reports were available to the providers monthly and displayed utilization, financial and quality metrics by providers benchmarked against their peers. The Provider Dashboard had over 40 metrics, including the three that the providers were incentivized on. The providers were initially given a hard copy of their individual dashboards and were instructed to inform the Health Navigator to provide them with monthly updates from the health plan's web-based reporting platform. The providers also had access to each of his/her patients' Member Dashboard reports through the Health Navigator, and it displayed gaps in care, chronic conditions, medications and prospective risk score for each provider's patient panel. The prospective risk score is used to predict

Exhibit 4

Group 1 4th Quarter 2011							
	Provider	Provider Address	Provider City	Provider State	Provider Zip	Values Sum of 4th Quarter 2011 Payout	Sum of Members
Physician 1	Dr. Jane Doe	123 River Road	Indianapolis	IN	46240	3,466.25	197
Physician 1						2,880.39	122
Physician 2						3,837.69	224
Physician 3						2,983.75	242
Physician 4						942.22	111
Physician 5						3,296.88	149
Physician 6						3,466.25	193
Physician 7						1,825.46	158
Physician 8						1,283.75	64
Physician 9						3,547.50	200
Grand Total						27,530.14	1,660

future health care cost based on the chronic disease burden of the particular member, and it is normalized for that particular population. For example, a member with a score of 10 is expected to cost the plan 10 times the average cost of that particular population in 12 months.

Health Navigator Activities

As cited previously, AHS also "embedded" a health navigator in one of the provider offices, but she traveled to the other practices to meet with the PCPs and their office staffs. The embedded Health Navigator worked closely to engage the providers to coordinate the care of the assigned plan members, implement up-to-date coordinated care plans and communicate with the whole health care team on behalf of the assigned plan members. She acted as a resource and liaison with providers regarding the programs that make up AHS care management programs and other related health plan initiatives. The health navigator was also available for questions that the providers had about the program and a few of the providers took advantage of this.

She educated provider offices on the use of Provider Portal (especially for prior authorization requests) to improve efficiency and provider satisfaction. AHS piloted Automated Prior Authorization (Auto Auth) system utilizing Milliman Care Guidelines with all the providers to improve efficiency in their offices and reduce the number of calls they have to make to the health plan to request prior authorization. The Auto Auth system allows the provider or office staff to enter an authorization request and if it meets the Milliman evidence-based clinical guidelines, the requester would immediately receive an approval notice, thereby avoiding a phone call or fax to the health plan. The Health Navigator also informed providers of the partnership with the local pharmacy to provide easy access to generic drugs at point of care for patients.

The Health Navigator was also responsible for coordinating the member satisfaction surveys, tracking the quality metrics and care coordination activities. Member satisfaction was measured with the CAHPS® Clinician & Group Survey results. Quality metrics include breast cancer screening rates, colorectal cancer screening rates, and comprehensive diabetic care eye exam rates. The disease management participation rate was the percentage of members with chronic diseases that were enrolled in these programs. The chronic diseases that were targeted include hypertension, diabetes mellitus, coronary artery disease, congestive heart disease, chronic obstructive pulmonary disease, asthma and migraine.

The Health Navigator worked with the local hospitals in the area to set up daily emergency room (ER) and inpatient notification processes. This helped AHS contact members who were seen in

Exhibit 5

Measurement						
Utilization		Goal	Group 1	Group 2	Group 3	All Groups
Generic utilization rate %	Baseline	75%	62%	65%	67%	64%
	End of Program		67%	68%	70%	68%
	% Change		5%	3%	3%	4%
	p-value		<0.05	<0.05	<0.05	
Advanced Imaging Rate (CT,MRI,PET)/1000	Baseline	216	284	316	415	314
	End of Program		211	173	195	190
	% Change		-26%	-45%	-53%	-39%
	p-value		<0.05	<0.05	<0.05	
ER rate/1000	Baseline	214	232	296	229	264
	End of Program		214	283	233	251
	% Change		-8%	-5%	2%	-5%
	p-value		<0.05	<0.05	0.65	
Satisfaction						
Member Satisfaction Rate (Overall satisfaction for adult patients)	Baseline	88.42%				
	End of Program	88.25%				
	% Change	0.17%				
	p-value	0.97%				
Quality						
Breast Cancer Screening	Baseline		70%	63%	60%	66%
	End of Program		65%	56%	55%	60%
	% Change		-5%	-7%	-4%	-5%
	p-value		<0.05	<0.05	<0.05	
Colorectal Cancer Sreening	Baseline		40%	38%	37%	39%
	End of Program		46%	41%	49%	45%
	% Change		6%	3%	11%	5%
	p-value		<0.05	<0.05	<0.05	
Diabetic Eye Exam	Baseline		33%	22%	33%	28%
	End of Program		39%	21%	25%	29%
	% Change		6.3%	-4.0%	-7.6%	1.6%
	p-value		<0.05	<0.05	<0.05	
Disease Management Participation						
Care-ADVANTAGE participation rate	Baseline	42%				
	End of Program	41%				
	% Change	-1%				
	p-value	<0.05				

the ER in a timely fashion rather than utilize our current process where we use claims data that takes three months or more. The inpatient census helped improve our discharge coordination outreach and complex case management components of our care management program.

Results and Discussion

The Group 1 providers were considered highly engaged. Group 2 providers were considered moderately engaged, and Group 3 providers were considered unengaged. Group 3 was considered the control groups as these providers were not engaged

in the program but their patients received the same intervention letter that members assigned to Group 1 and 2 did (Exhibit 2). AHS compared 2010 (baseline) versus 2011 provider performance despite the fact that the series of meetings with the providers was not completed until April 2011.

The per member per month (PMPM) cost for the population increased by 5 percent from 2010 to 2011. However, most of the affiliated hospitals increased their charge master from 2010 to 2011 as evidenced by the increased unit cost for most services by 9 percent. The PMPM cost is a factor of utilization and cost of services. The providers can control utilization of most services but have very little, if any, control over the cost of hospital-based services. The providers did not have access to the unit cost of services and were required to refer patients within their network of providers unless the service was not available in their network.

When the 2011 PMPM was recalculated using 2010 cost of all services, the recalculated PMPM was down by 1.7 percent due to decreased overutilization of services. In comparison, the average annual growth rate for National Health Expenditure (NHE) from 2000 to 2010 was 5.6 percent.[3] When adjusted for average annual inflation of 2 to 4 percent, the recalculated PMPM was still lower than the average NHE annual growth rate.[4] We calculated the total cost savings for the three components of the program (generic drug, advanced imaging and ER utilization) divided by the total payout to all the providers in 2011, and the return on investment (ROI) on the program was 8:1.

The three objectives of the program were met for the employer group – increased generic utilization, decreased emergency room and advanced imaging utilization. However, some of the provider groups did better than the others. The generic utilization from 2010 to 2011 increased by 5 percent, 3 percent and 3 percent for Groups 1, 2 and 3 respectively, and all the increases were statistically significant (Exhibit 4). The overall generic utilization for all groups increased by 4 percent mainly due to provider incentive and member education. The group that was most engaged (Group 1) had the highest increase in generic drug utilization. The nonengaged group (Group 3) still had an increased generic utilization, most probably due to member education as the letter provided in Exhibit 2 was sent to all members regardless of whether their providers were engaged or not.

The emergency room utilization decreased by 8 percent and 5 percent for Group 1 and 2 respectively, but increased by 2 percent for Group 3. Although the Group 3 increase was not statistically significant, it is worth noting that AHS relied on providers to decrease unnecessary emergency room utilization. AHS will not deny any unnecessary ER visit if the member was directed to the ER by his/her provider regardless of whether the visit meets prudent layperson definition of an emergency or not. Like most health plans, AHS uses an auto pay list for ER services so that certain diagnosis of ER services such as fractures are automatically paid and not pended for medical review. We turned off the auto pay list for this employer on June 1, 2011 and manually reviewed all the ER visits. Before applying the prudent layperson rule as required by the state law, we contacted the member's provider to ask the office staff if they referred the member to the ER. If they did not, AHS then applied the prudent layperson rule in determining whether the visit would be approved or not.

Advanced imaging utilization decreased for all three groups and all were statistically significant. AHS also implemented an automated precertification tool utilizing Milliman Care Guidelines in 2011 and Advanced Imaging was added to the prior authorization list. Although Group 3 had a higher decrease in Advanced imaging than the other two groups, this was probably due to the precertification requirement rather than provider engagement.

The quality metrics that were tracked were breast cancer screening, colorectal cancer screening and diabetic eye examination. The breast cancer screening decreased in all three groups in 2011 while the colorectal cancer screening increased. Group 3 had the lowest breast cancer screening decrease and the highest colorectal cancer screening increase of all three groups. Only Group 1 had an increase in diabetic eye examination rate (6.3 percent) and Group 3 had a higher decrease than Group 2 (Exhibit 4). The quality measure results were mixed probably because the providers were not incentivized on these measures and the program lasted for less than 12 months due to the longer than anticipated provider engagement process of four months.

The participation in care management (*Care*-ADVANTAGE program) also decreased from 42 percent in 2010 to 41 percent in 2011. The *Care*-ADVANTAGE program includes these disease states: diabetes mellitus, congestive heart disease, chronic obstructive pulmonary disease, hypertension, migraine, asthma and coronary heart disease. This is an opt-out program where members are enrolled automatically but have the option to disenroll themselves. The average AHS Commercial line of business participation rate in 2011 was 38 percent. However, the complex case management (CCM) participation rate for the sickest members (top 0.5 -1 percentile of the

population) increased by 53 percent from 2010 to 2011. This was mainly due to the ER and inpatient notification process managed by the Health Navigator. The CCM program is for members with complex medical needs regardless of diagnosis.

The Adult CAHPS® Clinician & Group Survey was administered to all the adult members and a follow-up survey was also sent out 12 months later to only those who responded to the initial survey. The overall satisfaction rate before and after the program for all the groups was 88.42 percent and 88.25 percent indicating no statistically significant change. The baseline survey results were not shared with the providers and this could have contributed to the results.

Conclusion

Engaged primary care physicians can bend the cost curve by effectively managing overutilization of services, especially for Medicare Shared Savings program (MSSP) and Pioneer ACOs where providers do not have to worry about unit cost variation especially for hospital-based services and outpatient procedures for which they have very little control over. This is because Centers for Medicare and Medicaid Services (CMS) is the sole payer for the MSSP and Pioneer ACO programs.

However, this strategy might not be as effective for Commercial ACOs with multiple payers due to price variations, but this could be mitigated by price transparency and empowering providers to utilize this information in their decision-making process. This relatively short pilot program produced an ROI of 8:1.

The providers were incentivized on the three utilization metrics (generic prescription, ER and advanced imaging rates) only and the engaged providers generally had a better outcome. This study did not show an improved outcome on the "better care for individuals" and "better health for populations" of the triple aim probably because the providers were not incentivized on the related metrics.

Anthony N. Akosa, MD, MBA is the VP of Medical Affairs and Informatics at ADVANTAGE Health Solutions, Inc.℠ and is an Assistant Professor in the Department of Family Medicine at Indiana University School of Medicine.

Acknowledgements

The author would like to extend his gratitude to the AHS employees listed below. The study would not have been possible without their commitment of time and effort. Shelly Leary, MBA, CCP (Health Navigator); Linda York, PhD., FNP, RN, CMC (Director Medical Affairs); Philip Yadon (Quality Analyst); Brian W. Musial, RPh (Director of Pharmacy), Toni Williams, BS (Care Management Analyst) and Hunter Heniser, MHA (Medical Affairs Intern).

References

1. Sager A. and Socola D., "Health Costs Absorb One-Quarter of Economic Growth, 2000–2005," Data Brief No. 8, Boston, MA: Boston University School of Public Health, February 2005. www.ihi.org/offerings/Initiatives/TripleAim/Pages/MeasuresResults.aspx

2. Health Care Costs: A Primer. Key Information on Health Care Costs and their Impact. May 2010. www.kff.org/insurance/upload/7670-03.pdf

3. Leavitt Partners: Growth and Dispersion of Accountable Care Organizations. June 2012 Update. www.usinflationcalculator.com/inflation/historical-inflation-rates/