

Reinventing Health Care: The Barriers to Innovation

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A Tale of Health Care in Our Nation

"It was the best of times...

Unprecedented advances in medical technology, treatments, and pharmaceuticals can improve population health







It was the worst of times..."

The state of public health, unsustainable health care costs, the quality of medical care delivered and access to services challenge clinical care and overall health

From "A Tale of Two Cities"
By Charles Dickens



Challenges in the US health care system

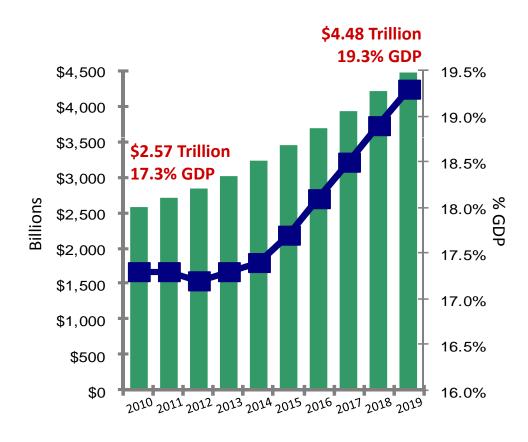
- Ranks last or next-to-last on:
 - Quality
 - Access
 - Efficiency
 - Equity
 - Healthy lives*

*The Commonwealth Fund – June 2010

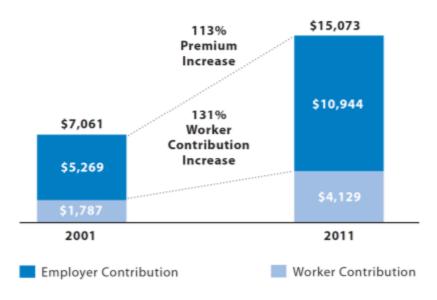
- Variation in quality and safety
- Escalating costs/technology advancements
- Aging population and increased chronic diseases
- Lack of information and infrastructure for optimal care
- Primary care shortage
- Fragmented system



Health Expenditures



Average Annual Health Insurance Premiums and Worker Contributions for Family Coverage, 2001–2011



2008 version of the National Health Expenditures (NHE) released in January 2010

Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2001-2011.



Invention Versus Innovation



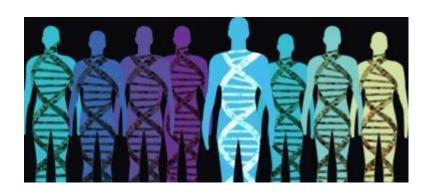




Discovery and Innovation

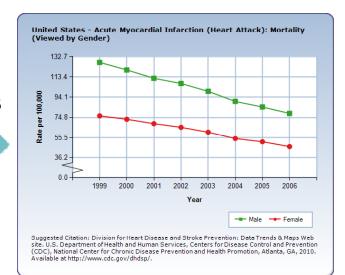


Personalized Medicine





Statins reduce cardiac deaths

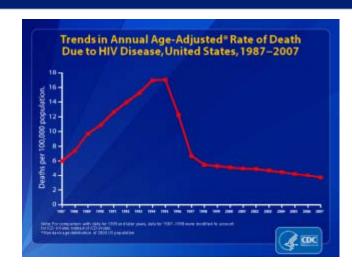




Discovery and Innovation

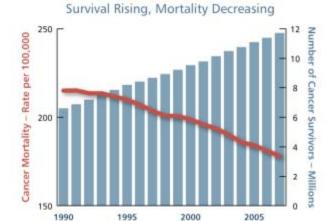


HIV Medications





Improved screening and drugs



Cancer in the United States, 1990-2007:

Data from the National Cancer Institute on estimated number of cancer survivors and age-adjusted cancer deaths per 100,000 people



Discovery/Invention and Clinical Care Innovation



Surgical Robots

Surgical Checklists





Payment Reform

Evidence-based decision-making





Genomics and Proteomics

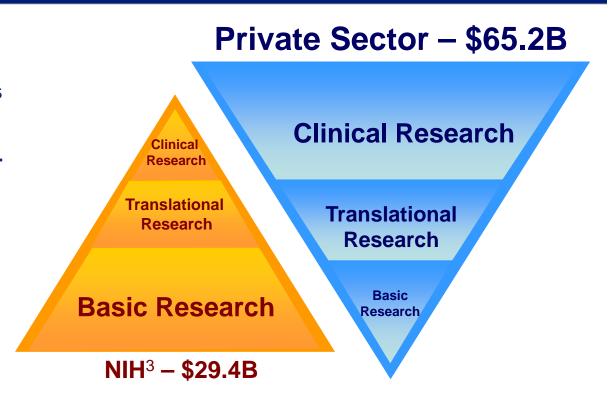
Specialty drug treatments





Academia, Government and Industry Research and Development

- 6 of the top 10 companies in global R&D expenditures are biopharmaceutical companies
- Over 2/3 of US patents in biopharma were issued to USbased life science companies
- U.S. leads the world in drug discovery: 2/3 new drugs in last 10 years from U.S.; currently 82% of world's biopharma pipeline from US



"There is an ecosystem of science and biotechnology. Public organizations, patient organizations, universities, Congress, FDA, all of this is an ecosystem that is envied in the rest of the world."

E. Zerhouni, Director of NIH

Sources: ¹Burrill & Company, analysis for PhRMA, 2005–2009 (Includes PhRMA research associates and nonmembers) in PhRMA, "Profile 2008, Pharmaceutical Industry;" PhRMA, "PhRMA Annual Membership Survey," 1996-2009; ²Adapted from E. Zerhouni, Presentation at Transforming Health: Fulfilling the Promise of Research, 2007; ³NIH Office of the Budget, "FY 2009 President's Budget Request Tabular Data", http://officeofbudget.od.nih.gov/ui/2008/tabular%20data.pdf



Increasing Specialty Drug Development and Associated Costs

- Highly sophisticated protein structures derived from recombinant DNA technologies, most often given by injection or infusion.
- Specialty pharmaceuticals now represent 24% of all drug costs, projected to 40% by 2014
- Expenditures exceed \$73 billion annually, rising at twice the rate of conventional drugs
- Average cost per prescription is nearly \$2,000, with annual treatment costs ranging from \$5,000 to \$350,000
- Over 600 specialty drugs in development for 100 different diseases, including
 - 250 for cancer,
 - 160 for infectious diseases,
 - 60 for autoimmune diseases,
 - 35 for HIV/AIDS



Payment Innovation: Improving Value and Affordability

Old Model:

Rate increases not tied to value

Reward unit cost

Inadequate focus on outcomes

Payment sometimes aligned with quality

New Model:

Rate increases tied only to quality, safety, and value

Align all payment with quality

Lower cost without adversely affecting outcomes

Improve quality



Hospital Quality: Q-HIP® Hospital Quality Program

Q-HIP® Hospital Pay-for-Performance rewards quality, safety, outcomes, and patient satisfaction

Patient Safety Section (35% of total Q-HIP® Score)

- Computerized Physician Order Entry (CPOE)
 Adoption (Stage 1 Meaningful Use Criteria)
- IHI Improvement Map Medication Reconciliation
- WHO Surgical Safety Checklist
- NQF Recommended Safe Practices
- NQF Emergency Care Standards
- NQF Perinatal Measures

Member Satisfaction Section (10% of Total Q-HIP® Score)

• H-CAHPS Survey Results

Patient Health Outcomes Section (55% of total Q-HIP® Score)

PCI Indicators

• 4 ACC-NCDR/Indicators for Cardiac Catheterization/PCI

Joint Commission/CMS Nat'l Hospital Quality Measures

- Acute Myocardial Infarction (AMI) Indicator
- Heart Failure (HF) Indicator
- Pneumonia (PN) Indicators
- Surgical Care Improvement Project (SCIP)
 Measures

NSC Indicators

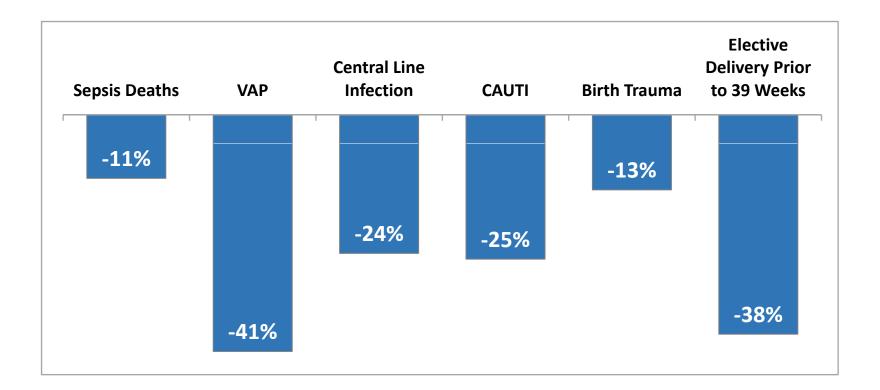
• 4 JC/NQF Nursing Sensitive Care Indicators

CABG Indicators

4 STS Coronary Artery Bypass Graft (CABG)
 Measures



California Patient Safety First















PCMH Results



- Quality measures for diabetes care improved
- 32% lower costs compared to rest of New Hampshire
- 17% lower ED visits compared to rest of New Hampshire



- Inpatient rate 12% 23% lower for PCMH providers
- ER rate 11% 17% lower for PCMH providers
- Total medical and Rx cost for PCMH members was 14.5% lower than for members seeing non-PCMH providers



COLORADO

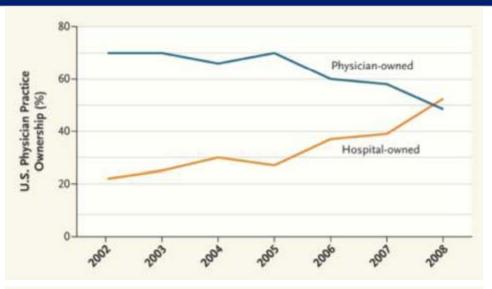
- 18% decrease in acute IP admissions compared to 18% increase in control group
- 15% decrease in total ER visits compared to 4% increase in control group
- Specialty visits remained flat compared to 10% increase in control group



Hospitals and Physicians: An Evolving Landscape

- Half of US physicians are employed by hospitals/ integrated delivery systems
- MGMA: In 2009 more than 65% of established physicians and 49% of physicians post residency/fellowship placed in hospital-owned practices
- Hospitals lose \$150,000-\$250,000 per year over the first 3 years of employing a physician
- Hospitals absorb this loss to influence referrals to their specialists or to create ACOs

Source: Robert Kocher, M.D., and Nikhil R. Sahni, B.S. N Engl J Med 2011; 364:1790 -1793 and MGMA Physician Placement Starting Salary Survey; 2010 Report based on 2009 Data







Insurers and Providers: An Evolving Landscape











- \$475M contribution to 5-hospital West Penn Allegheny
- This "affiliation" will enable West Penn to move from fee for service to salaries for physicians and offer incentives for quality and efficiency goals

Concentra

- 300 medical centers in 42 states: 240 worksite health-care facilities
- Will provide urgent care, wellness programs, and physical and occupational therapy to 3 million Humana members near a Concentra center



- United's OptumHealth services unit acquires Monarch: 2300 doctors; 30+ urgent care centers; access to 20 hospitals in **Orange County**
- OptumHealth: previously entered into management agreements of two California groups, AppleCare Medical **Group and Memorial** HealthCare Independent **Practice Association**



- Provides Medicare Advantage coverage and coordinated care for 54,000 people in California, Arizona and Nevada
- CareMore's 26 Care Centers are models for integrated health care and include a variety of services including medical evaluations and diabetes care



Patient-Centered Primary Care

Aligning economic incentives and providing tools for success



Value-based reimbursement

- Fee Schedules
- Coordination fees
- Shared savings



Expanded access, i.e. alternatives for visits "after hours," virtual visits



Payment for care management



Exchange of meaningful information, i.e. identifying high risk individuals



Measuring Success



Increased Quality and Efficiency Performance

- Increase compliance with evidence based care and preventive health guidelines
- Reduction in avoidable ER, admissions and readmissions
- Appropriate use of advanced imaging
- Increase in persistent medication usage
- Increased Care Management engagement and follow up
- Pharmacy utilization: Brand vs. generic
- PMPM Target Management
 - Risk adjusted costs compared to established medical cost targets.
- Increased Patient Satisfaction



Improving Primary Care: Comprehensive Primary Care Initiative

- CMS led private-public initiative testing a primary care service delivery and payment model in 5-7 locations
- INNOVATIONS .cms.gov

- Service delivery model:
 - Risk-stratified Care Management
 - Access and Continuity
 - Planned Care for Chronic conditions and Preventive Care
 - Patient and Caregiver Engagement
 - Coordination of Care
- Payment Model: monthly care management fee to primary care practices for fee for service Medicare beneficiaries; potential to share savings in 2-4 years; compensation from other private payers in the initiative





Dartmouth-Hitchcock ACO Results



- ✓ Integrated Delivery System
- ✓ Academic Medical Center
- √ >1200 PCP's and specialists

First Year Outcomes

- 5.81% decrease in acute IP admissions
- 18.0% decrease in ER visits where diagnoses have been flagged as "avoidable"
- 10.7% decrease in total ER visits
- Brand RX usage, measured by brand PMPM as percent of total RX PMPM, decreased by 2.9%
- 13.21% decrease in inpatient days
- Total PMPM reduction of 3.4% relative to projected costs



American Medical Home Runs*









"Medical home runs": 4 primary care sites with 15-20% less cost (risk-adjusted) without lower quality

Common features:

- Exceptional individualized treatments for chronic illness
- Efficient service provision
- Careful selection of specialists
- Successful innovation in an unsupportive environment

Source: "American Medical Home Runs," Arnold Milstein and Elizabeth Gilberston, Health Affairs, September/October 2009 vol. 28, no.5 1317-1326



Targeting Super-Utilizers, "Hot Spotters"



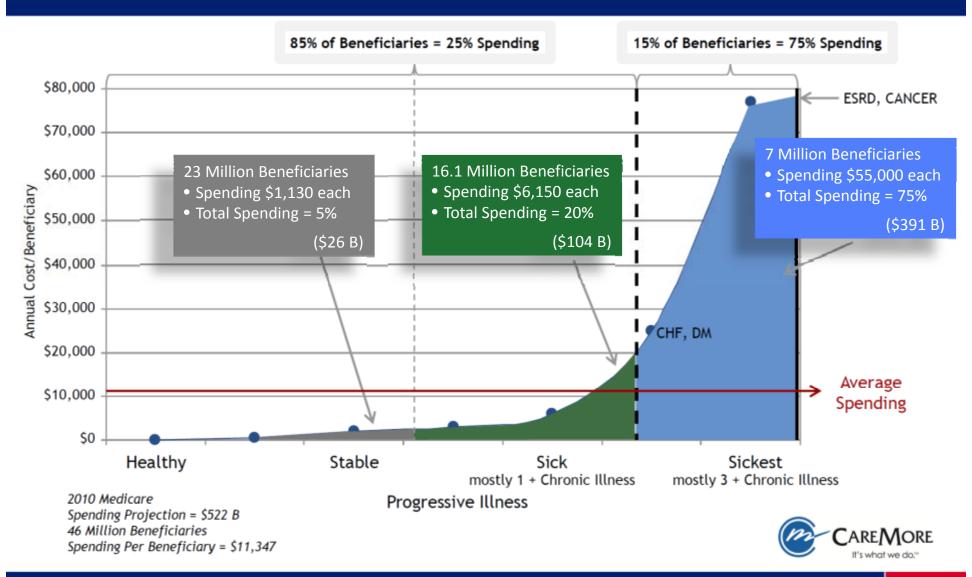


- Atul Gawande*: focus on "superutilizers" to cut medical cost
- 1% of patients in Camden cause 30% of medical cost; For WellPoint, 1% incur 28% of total costs
- A physician led team including a nurse practitioner and social worker helps super-utilizers with medical issues and preventive health efforts
- Results for first 36 patients:
 - 40% reduction in average monthly hospital and ER visits
 - 56% reduction in average hospital bills

^{*} The New Yorker, January 24, 2011



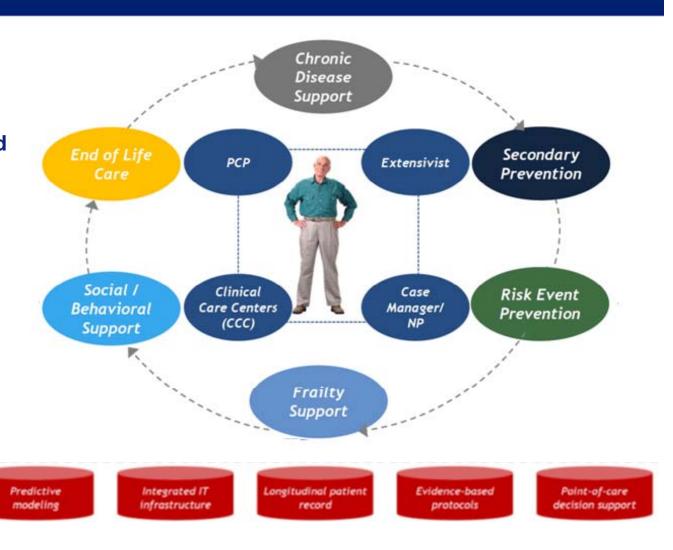
Healthcare Costs are Concentrated





CareMore: Care Innovation

- Care Centers provide a "Healthy Start" initial evaluation and integrated care that combines wellness and medical supervision and offers personalized health planning
- Extensivists intensively manage chronically ill members
- Biometric monitoring applied to care management





Dramatically Improved Outcomes for Chronic Diseases

Diabetes



Result

7.08 average HbA1c for those attending our diabetic clinic

End Stage Renal Disease



Result

50% reduction in hospital admission rate in 5 months

Congestive Heart Failure



Result

56% reduction in hospital admission rate in 3 months



Results Demonstrate Model Efficacy

	CareMore 2010 *	Medicare FFS 2009
Days/1000	870	1842
Admits/1000	241	335
Average Length of Stay	3.6	5.5
Readmission Rate	14%	20%

Source: CareMore data Source: Kaiser Family Foundation

^{*} CareMore statistics inclusive of ESRD, are adjusted for risk [1] and for prevalence of ESRD [2]

^[1] Risk adjustment based on CareMore average Part C RAF score in CY2010 of 1.17 relative to an assumed Medicare FFS RAF score of 1.0

^[2] CareMore has a higher prevalence of ESRD patients, about 1.8% of total members than Medicare FFS, which is about 0.5% of total eligibles.



Personalizing Care Management

Case Mgmt via Web Cam





Video Chat

Wireless Biometrics



HDTV Case

Management



Live Physician On Line



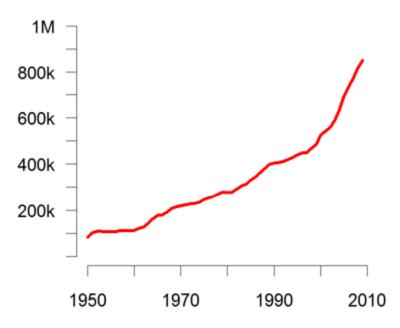


Potential of Artificial Intelligence

Artificial Intelligence offers unique value for clinical input

- Ability to manage large amounts of unstructured data, even in natural language form (e.g. a normal journal article or an MD clinical summary)
- Influence evidence-based care by providing real-time, value-added, actionable insights to clinicians
- Unique capability to learn, train, and optimize its own algorithms from historical decisions
- Probability based diagnosis and treatment recommendations
- Defined by Evidence Based Medicine
- Streamlined authorization/approval of procedures and treatment

MEDLINE-indexed articles published per year



- Over 21 million articles in Medline
- Almost 1 million new articles per year
- ◆ 1.6 billion searches in 2010



IBM Watson: Potential to Help Doctors Make Better Decisions—Faster

Potential Knowledge Sources May Include:

- •Latest medical research
- Population health info
- Patient medical history
- Lab results
- Data analysis
- Complex treatment protocols



Our data

Extensive provider networks



Targeted treatment options

IBM Watson technology to assist by analyzing data and providing responses



The Need for Evidence-Based Medicine

History: Bone Marrow Transplant

- Bone marrow transplantation (BMT) for breast cancer entered medical market in the 1980s before meaningful effectiveness studies were done
- Between 1988-1998, 30,000 procedures and \$5 Billion in medical costs
- Congress and States enacted mandatory coverage legislation in 1994
- 1999 research showed no difference in survival and lower quality of life
- Delayed research and introduction of promising therapies

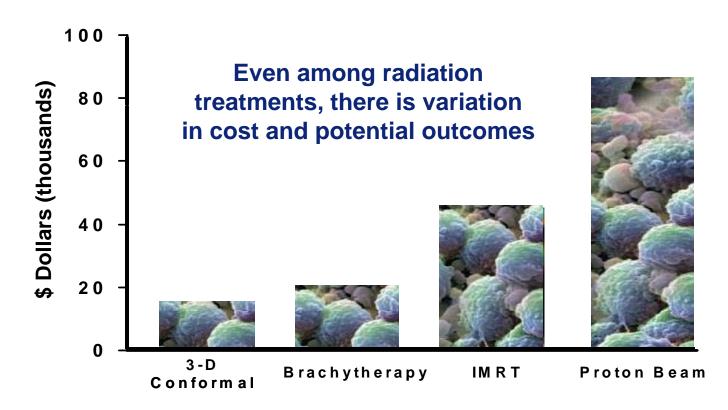
Today: HER2 Genetic Testing

- 215,000 new breast cancer cases annually; 25-30% of women with breast cancer express the HER2 protein
- Trastuzumab (Herceptin®) is a recombinant DNA monoclonal antibody that targets tumor cells that over express the HER2 protein
- In 2005, two new major clinical trials expanded indications for this biotechnology



Emerging Medical Technologies and Comparative Effectiveness

Diagnosis and Treatment of Prostate Cancer is Controversial



Comparative effectiveness can assess outcomes, quality of life, and survival



Back Pain Treatment Options, Risks, and Benefits

Facts on Back Pain

- 9 of 10 Americans experience back pain
- #1 cause of lost work productivity
- \$90B spent nationally on treatment
- Most pain resolves within 6 weeks independent of treatment

• Study of 172,000 Anthem Members in 6 States

- 1,000 surgeries during first 6 weeks
- 35,000 imaging procedures within first 6 weeks
- Care dependent on initial treating physician

Value and Benefits

- Collaboration with American Academy of Family Physicians
- New payment models including bundling of payments
- Educate members/physicians on treatment options















WellPoint Position: CER Promotes Value and Innovation

Collaboration amongst health care system stakeholders is central to making CER work

- Address unsustainable health care costs
 - Limited resources threaten innovation
- Help patients choose more effective treatments
 - Fewer unnecessary services = health system savings
- Quality first, then affordability
 - Superior treatments deserve our nation's investment
 - Comparable treatments should be chosen on value
 - Selectively effective personalized treatments should be managed by physicians and patients
 - Remove inappropriate/ineffective treatments

SUPERIOR

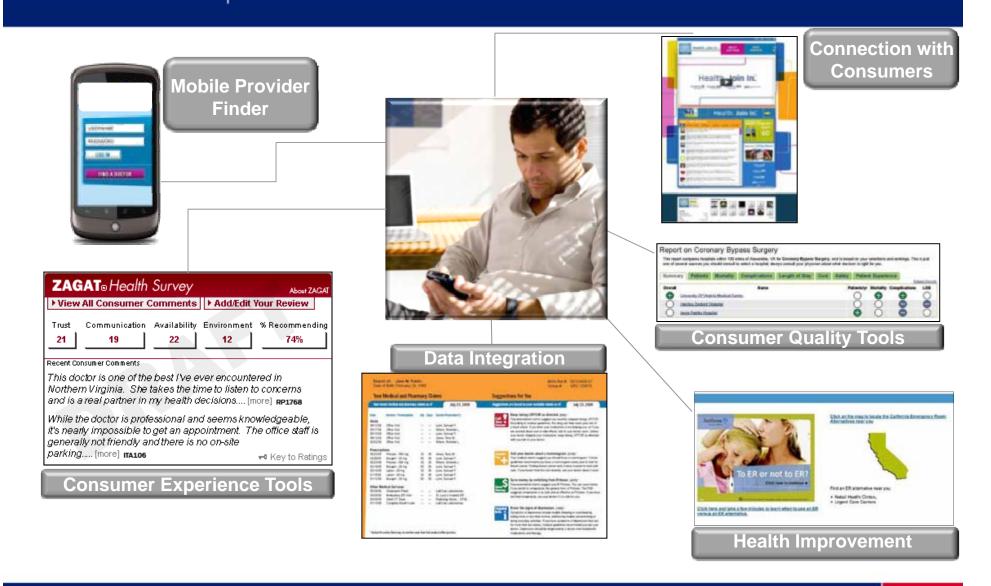
COMPARABLE

PERSONALIZED

INEFFECTIVE



Engaging Consumers in Health Care





Closing Gaps in Evidence-Based Care

Report of: Adam

Birth Date: February 28, 1946

Member ID: 00123456-01 Group Number:

ORX 123875

Your Medical & Prescription Claims

Your recent medical and prescription claims as of

May 23, 2008

Suggestions for You

Suggestions are based on your available claims as of

May 23, 2008

Date	Service/Prescription	Qty	Days	Doctor/Prescriber(*)	Paid(**)
Visits					
图 经收益额	Office Visit:			Ugara, Samuel F.	985.00
85/17/86	Office Vielt			Wilson, Michello L.	\$85,00
85/15/98	Officer Visit.			Cymre, Samuel C.	865,00
\$4712/55	Office Vielt			Janas, Torry M.	\$85.00
02/02/08	Office Viel:		-	Vilkon, Afichello L.	\$10£.00
Prescript	iane				
05/01/06	McNormin - 990 ang	20	30	Jenes, Tony M.	\$16.90
	Mothermain - 5000 ang	8:3 (300	Wilson, Michelle I	\$45.50
\$2/1 2/ 44	Ugitor - 90 mg	20	30	Lgan. Gamuel F.	909.93
81/18/88	Ligitar - 20 mg	184	30	Lgare, Gamuel FL	971-46
\$3,707.5	Assupril - 23 mg	400	30	Lean, Samual FL	\$66.99
弗尔门森特特	Annugrii - 20 mg	468	20	Lgam, damuel fil	666.40
01/12/08	Assupril 23 mg		30	Lown, Sembal FL	906.99
\$2/12/88	Maskum - 20 mg	14	-90	Lgam, Gamuel F.	@115.00
81710/69	Alcoium - 90 mg	28	30	Upon, Semod I .	\$116.93
Other Me	dical Services				
	Circlastered Panel		-	LabCorp Laboratorius	61115.40
84/29/79	Medical Equipment			Lannaged Medical Mart	\$100,00
83/38/83	Australiatory ER Visit			©: Lung's Hospital ER	6764.50
83/89/89	Adotofostie Panell			LabCarp Laboratorios	8116.40
82/04/68	CT X-Ray, Showers			Radiology Assoc SPRL	2004.39
8171986	DT 3-Nos. Simposs			Alongo (Regolfal - Had	9864.98



Ask your doctor about blood thinner medication (1922) * Your medical planne decar you have a heart condition called chief farillation. soul your presyntation cisions along you are not taking a taked lithmer medication. Ainsi fibrillation is an unexan hearthast that can cause blood duly and shukes. Glaud this my can proved blood duty and lower your nak of a stroks. Ask your dector econ if you should take a blood thurser.



Keep taking Metformin as directed (118) *

on Assugail York sour doctor if pulnegail is don't for you.

Your prostalgibin claims alrest you take molitornin. Although you recently relited year presertation, your doines show you are not reliting it as after are step, referred. This elegan date halve import stear thick of heart directors, obtains and blindrass. If you thick your medication is not helping you, or if you ore evanise) alread good or side officets, talk to your divitor acon. Make tables metformin as directed until you talk to your declar.



Save \$396 - Ask your dector about switching from Accupil (2582)* Your proparyblica claims show you take Assuptil. You see care money if you take entropyll, a generic drug that is an enterand effective.

Grug Name **Water Coak** Yeur Anemai Cast Vieu (Strate Assuppiil - \$2 mg 0.000 Gulmerti - 20 mg 97 28.64 35.00

[&]quot; This arrows to the total gold or you sed your health glan.

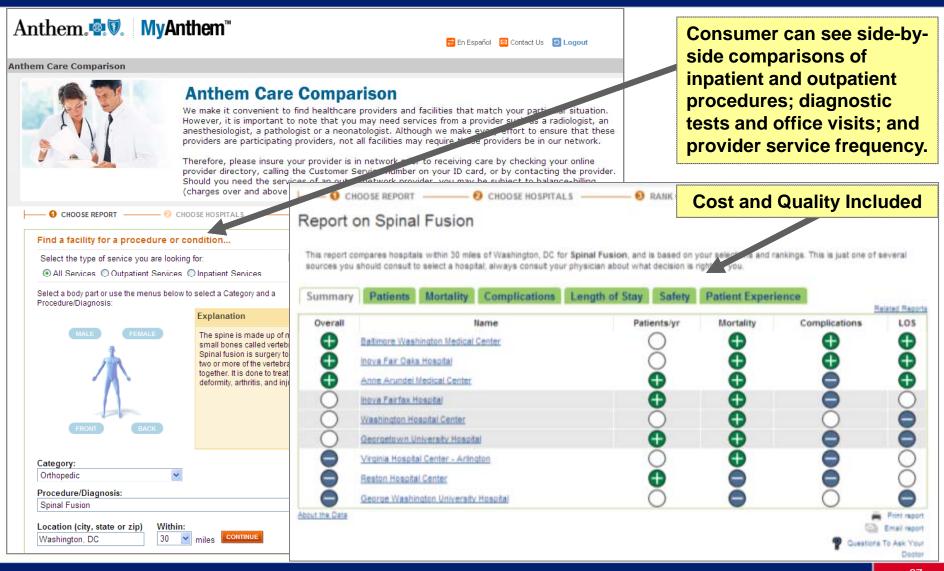




Declay/Proceiver listed mee to another name from that medical efficienceive.



Anthem Care Comparison: Cost and Quality Information for Consumers





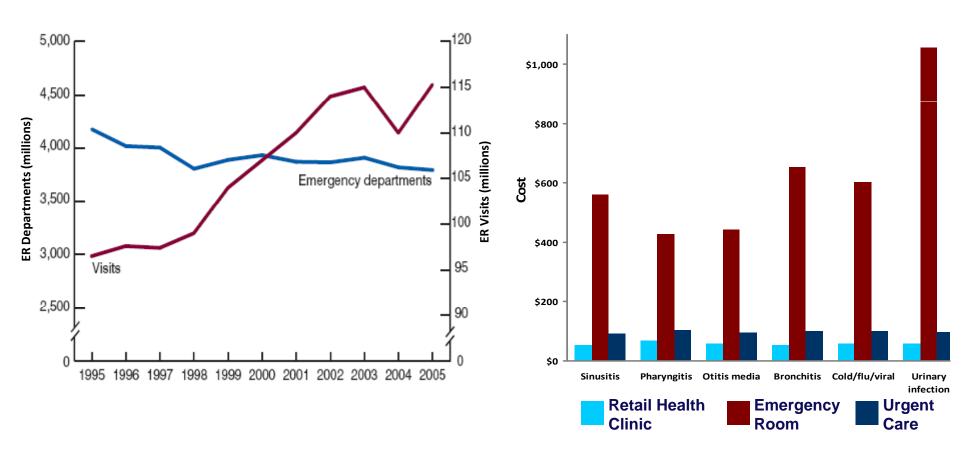
Anthem Care Comparison: Variance in Cost for Spinal Fusion

This report compares providers within 5 miles of Washington, DC for Spinal Fusion (Posterior). This is just one of several sources you should consult to select a service provider; always consult your physician about what decision is right for you.

Name	Location	Distance	Typical Cost Low	Typical Cost High	Number of Services/Year	Blue Distinction Center
▼	▼	ਯ	▼	▼	▼	₩.
George Wash Univ	900 23rd St NW Washington, DC 20037 202-715-4000	2 mi (<u>map</u>)	\$41,805	\$47,030	N/A	Blue Distinction [®] Spine Surgery
Washington Hospital Center	216 Michigan Ave NW Washington, DC 20017 202-877-7000	2 mi (<u>map</u>)	\$41,805	\$47,030	N/A	
Georgetown Univ	3800 Reservoir Rd NW Washington, DC 20007 202-444-1400	3 mi (<u>map</u>)	\$62,707	\$67,933	N/A	
Montgomery General Hospital	18101 Prince Philip Dr Olney, MD 20832 301-774-8882	17 mi (<u>map</u>)	\$38,807	\$43,119	N/A	Blue Distinction [®] Spine Surgery
Fair Oaks Hospital	3600 Joseph Siewick Dr Fairfax, VA 22033 703-391-3600	19 mi (<u>map</u>)	\$50,213	\$54,579	143	Blue Distinction® Spine Surgery
Baltimore Washington Medical Center	301 Hospital Dr Glen Burnie, MD 21061 410-787-4000	27 mi (<u>map</u>)	\$25,921	\$29,624	N/A	Blue Distinction [®] Spine Surgery
Saint Agnes Hospital	900 Caton Ave Baltimore, MD 21229 410-368-6000	31 mi (<u>map</u>)	\$47,350	\$51,654	N/A	Blue Distinction ^o Spine Surgery
Mercy Medical Center Inc	301 Saint Paul St Baltimore, MD 21202 410-332-9000	34 mi (<u>map</u>)	\$34,436	\$38,741	N/A	Blue Distinction ^o Spine Surgery
University of Maryland Medical Center	22 S Greene St Baltimore, MD 21201 800-373-4111	34 mi (<u>map</u>)	\$38,741	\$43,045	N/A	Blue Distinction [®] Spine Surgery



ER Appropriate Use and Cost Provides Opportunity for Alternate Sites for Care



Source: CDC/NCHS National Hospital Ambulatory Medical Care Survey, American Hospital Association



Non-Emergent Care From ER to Alternative Sites

Educate Members on ER-alternatives

- Video on member websites
- Educational brochures, letter, and e-mail
- 24/7 Hotline provides care guidance and educates on appropriate setting for condition

Google-Map and Smart Phone Applications

- Point-and-click contact info, hours, location
- Directions from home or location

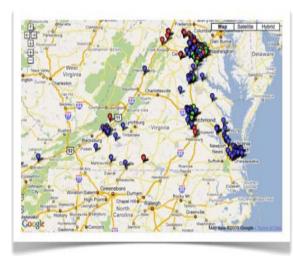
Member Incentives

A co-pay increase for ER visits

Results

- Non-emergent ER use decreased 20%
- Members in program twice as likely to choose retail clinic











National Drug, Vaccine, and Biologic Safety









34 million members' claims, pharmacy, and laboratory data enables population safety and public health research

- FDA Vaccine and Biologics Safety Surveillance: H1N1 Vaccine
- FDA Drug Safety Surveillance
- More than 110 Research Projects Underway
 - Breast cancer, asthma, rheumatoid arthritis, low back pain, multiple sclerosis

















