

Affecting the Cost Drivers of Health Care

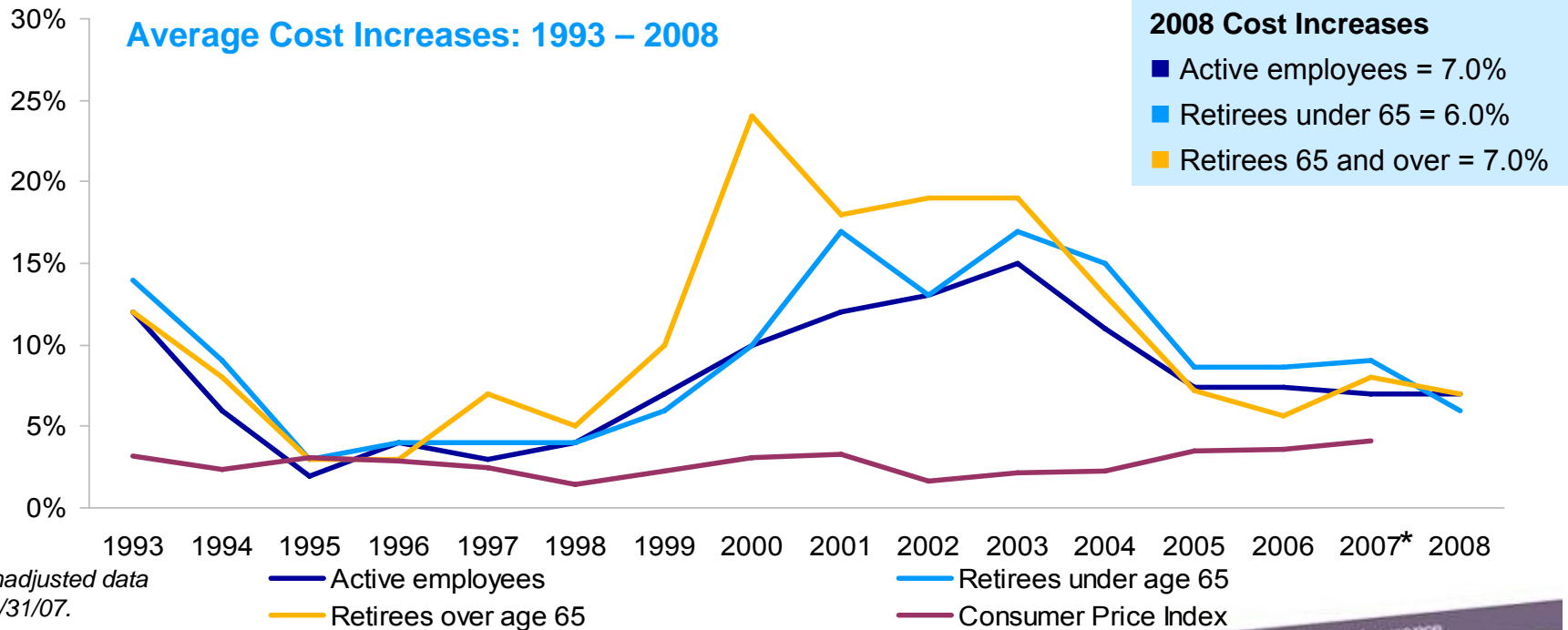
2008 CPEEHCC 10th Annual Training Conference

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Costs and Cost Drivers

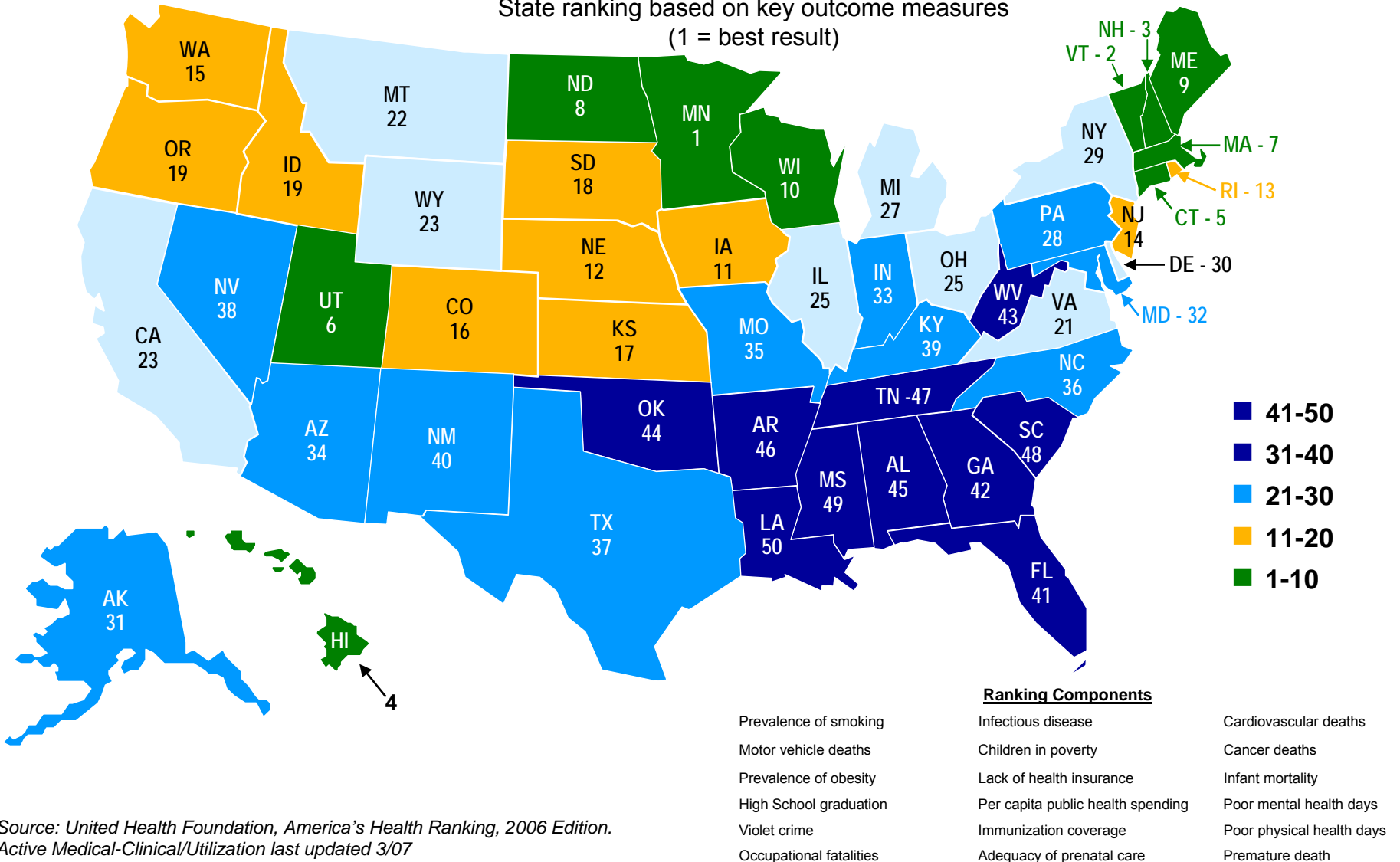
Medical cost increases



Source: Towers Perrin *Health Care Cost Survey (1993 - 2007)* (active employee data) and Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation, April-April, 1988-2006, Bureau of Labor Statistics.

Overall health ranking

State ranking based on key outcome measures
(1 = best result)

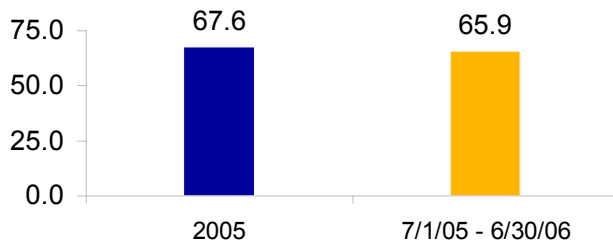


Source: United Health Foundation, America's Health Ranking, 2006 Edition.
Active Medical-Clinical/Utilization last updated 3/07

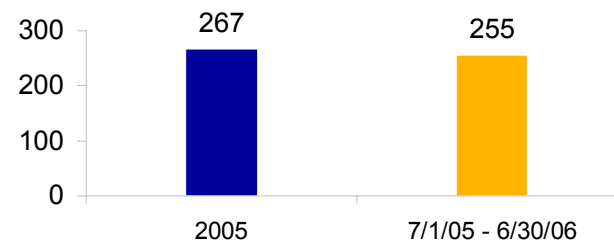
Inpatient utilization statistics

Key utilization statistics for an active population

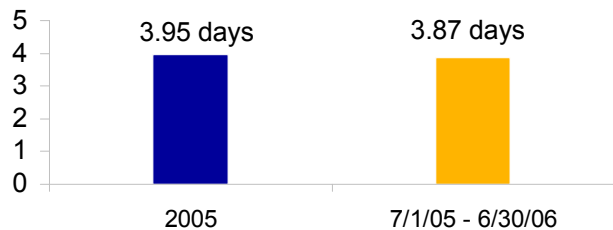
Inpatient admissions per 1,000



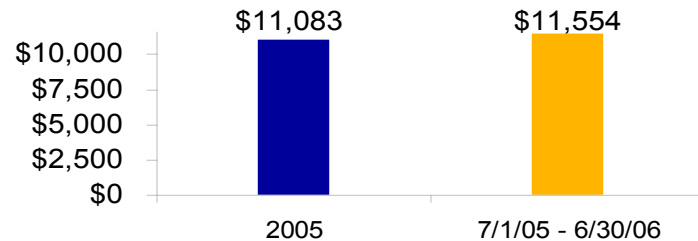
Inpatient hospital days per 1,000



Average length of inpatient stay



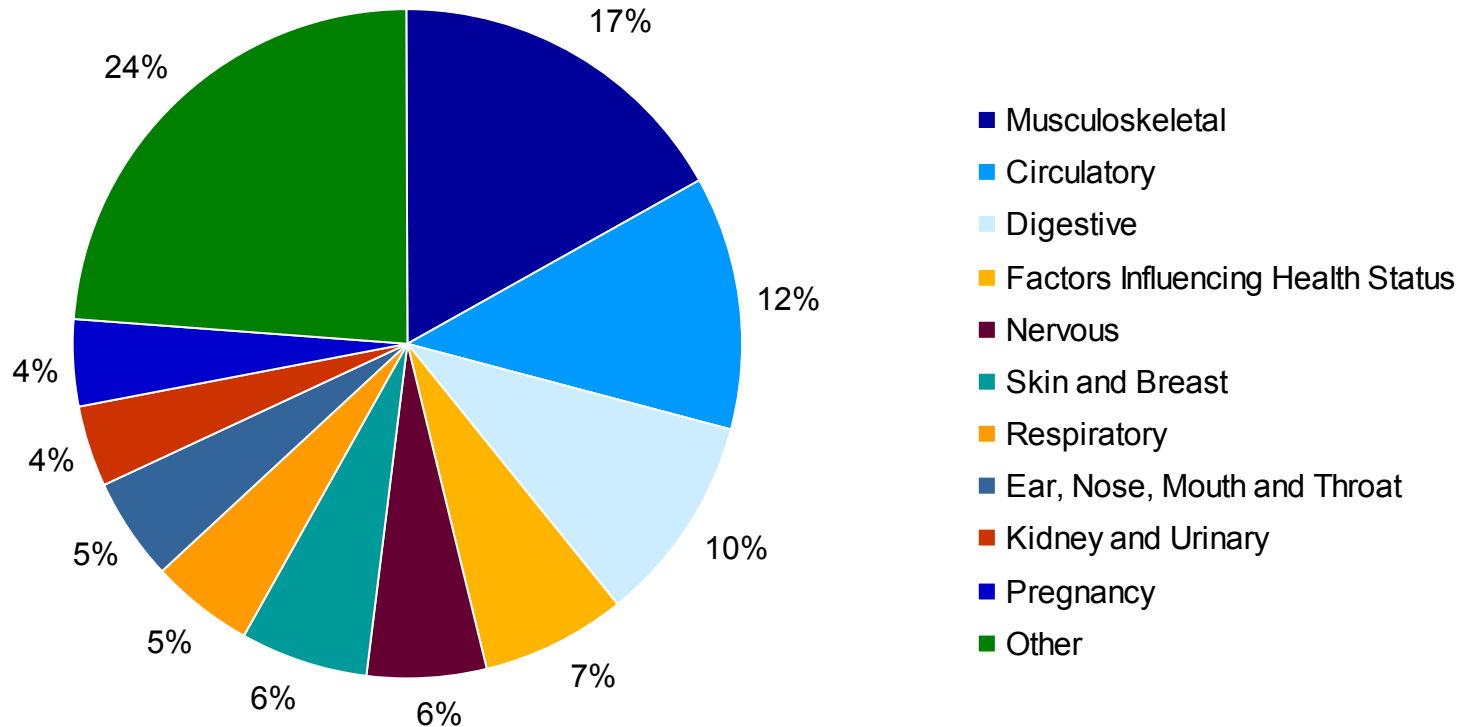
Average amount paid per admission



Source: Medstat Marketscan data, 2005-2006.

Top 10 MDCs by benefits paid

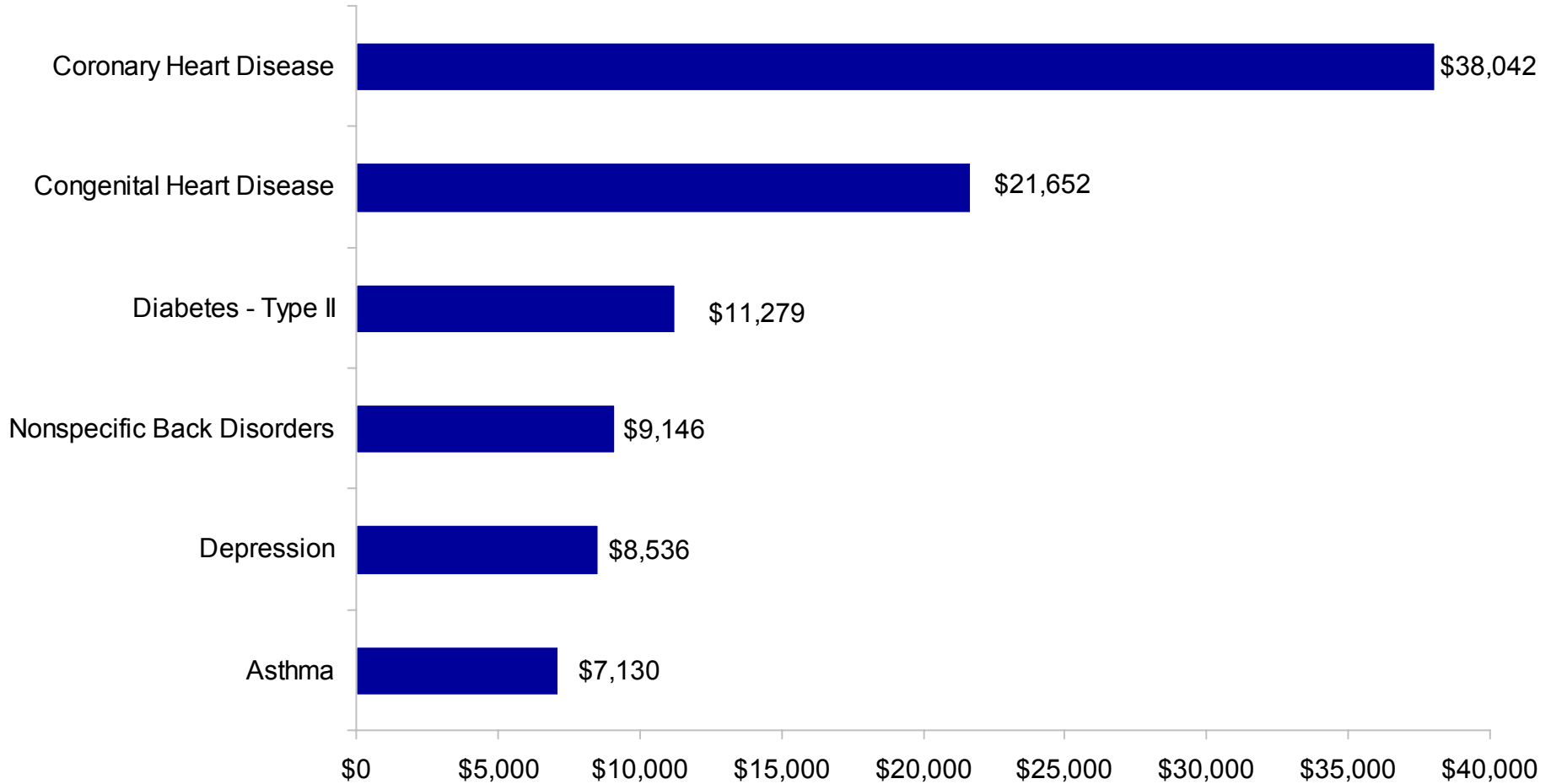
Top 10 major diagnostic categories by benefits paid



Source: MedStat MarketScan, 2007 (data period 7/1/2005 – 6/30/2006).

Average cost of chronic illness

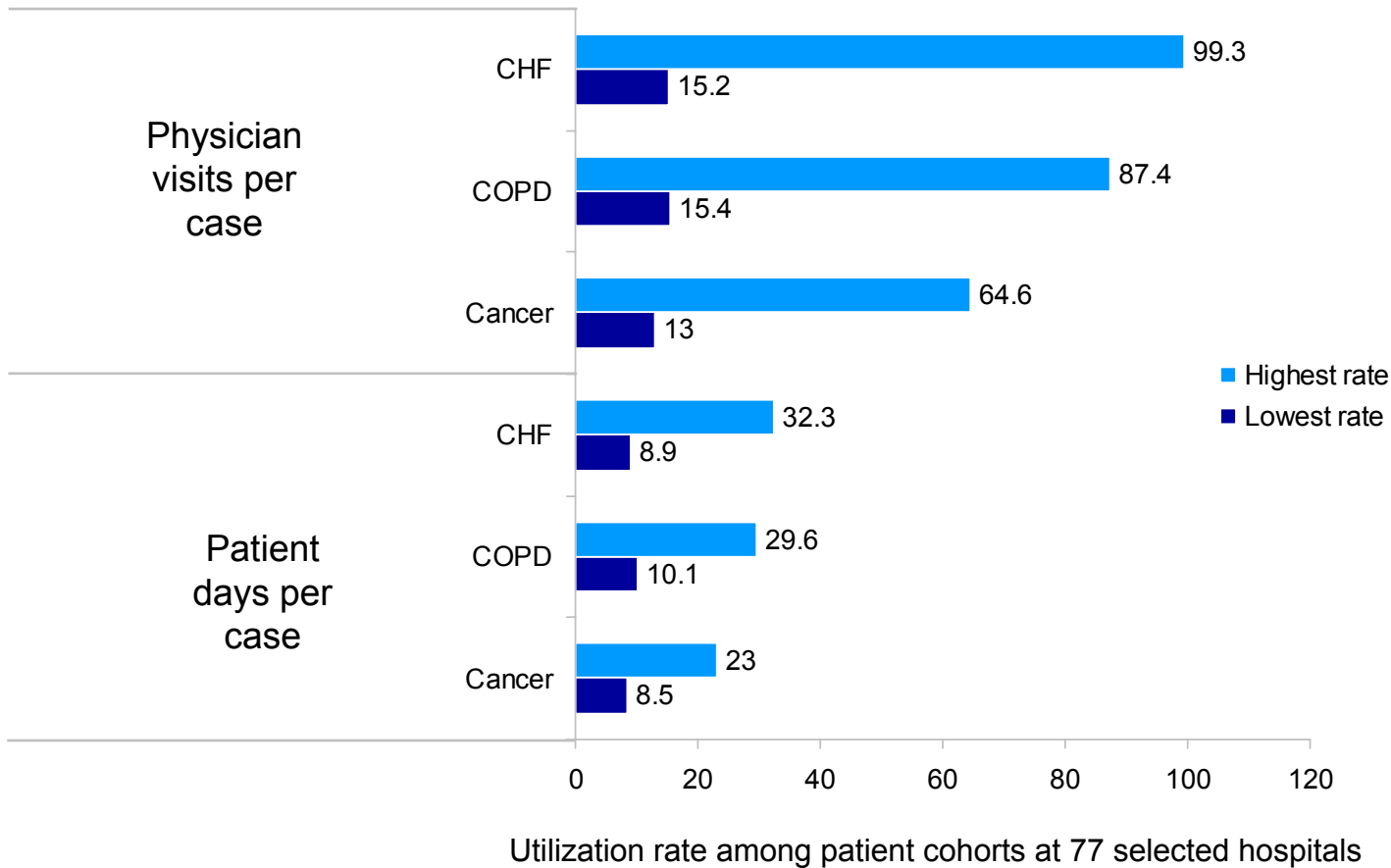
Average annual payment per patient for selected chronic illnesses



Source: Medstat 2005 Disease Profiler.

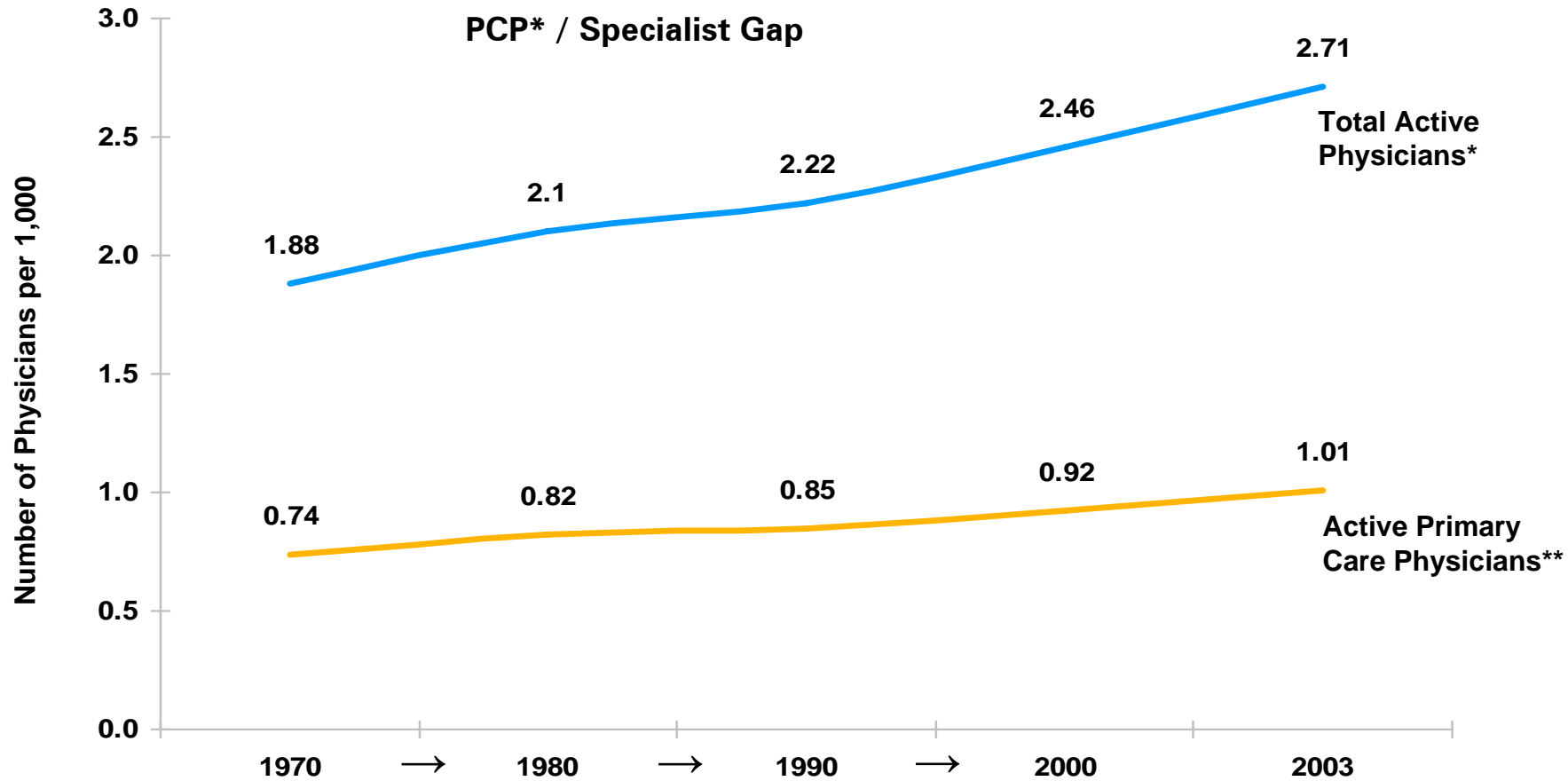
Variation in utilization by physicians/hospitals

Variation in the amount of care provided to patients with three common chronic conditions



Source: Wennberg, John, et al. "Use of Medicare Claims Data to Monitor Provider-Specific Performance Among Patients with Severe Chronic Illness", Health Affairs, Web Exclusive, 7 October 2004. Based on analysis of Medicare claims data from 1999-2000.

Continued relative growth of specialists vs.. PCPs



→ = 10 year interval

Active physicians include physicians who are not retired, semi-retired, working part-time, temporarily not in practice or not active for other reasons.

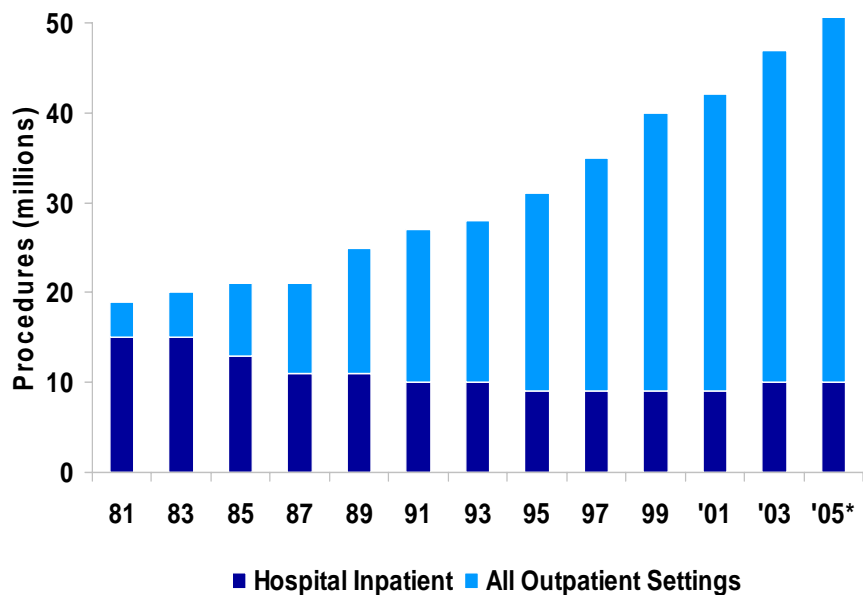
****Primary care includes office-based physicians, resident and hospital staff physicians.**

Source: BlueCross BlueShield Association, Medical Cost Reference Guide, 2006 (American Medical Association, 2000, 2003, 2005).

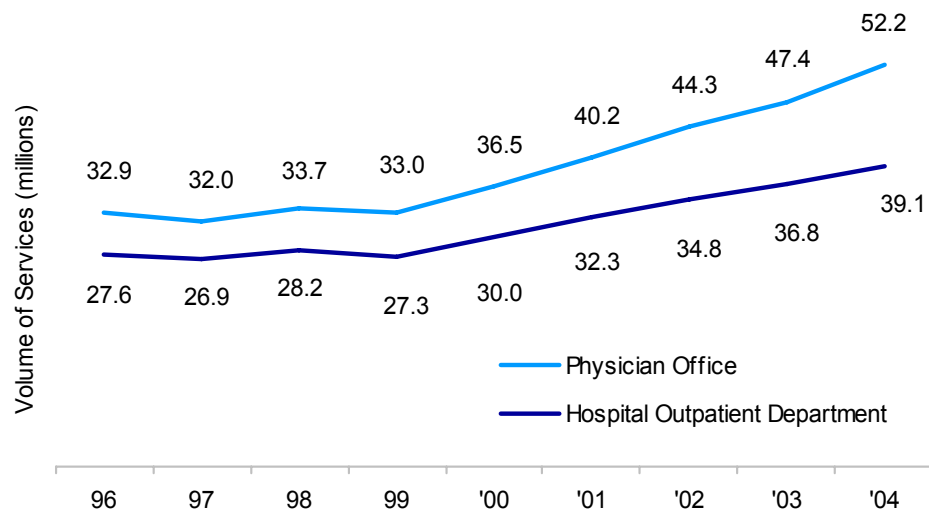
Active Medical-Clinical/Utilization last updated 7/06.

Growth in surgical and imaging procedures

Inpatient vs. Outpatient Surgery Volume, 1981-2005



Volume of Medicare Imaging Services Delivered, 1996-2004



Note: The most common ambulatory surgery center procedures include those in ophthalmology, gastroenterology and orthopedics.

Source: Avelere Health analysis of Verispan's Diagnostic Imaging Center, Profiling Solutions 2004, and American Hospital Association Annual Survey data for community hospitals, 1981-2004. *2005 values are estimates.

Source: July 2006, American Hospital Association, Trendwatch.

SOURCE: Avelere Health analysis of Plan B Physician/Supplies Procedure Summary Master Record.

Depression as a co-morbid condition exacerbates health care cost challenges

- Between 5%-10% of the adult population suffers from depression
- Depression is a co-morbid condition with many chronic diseases

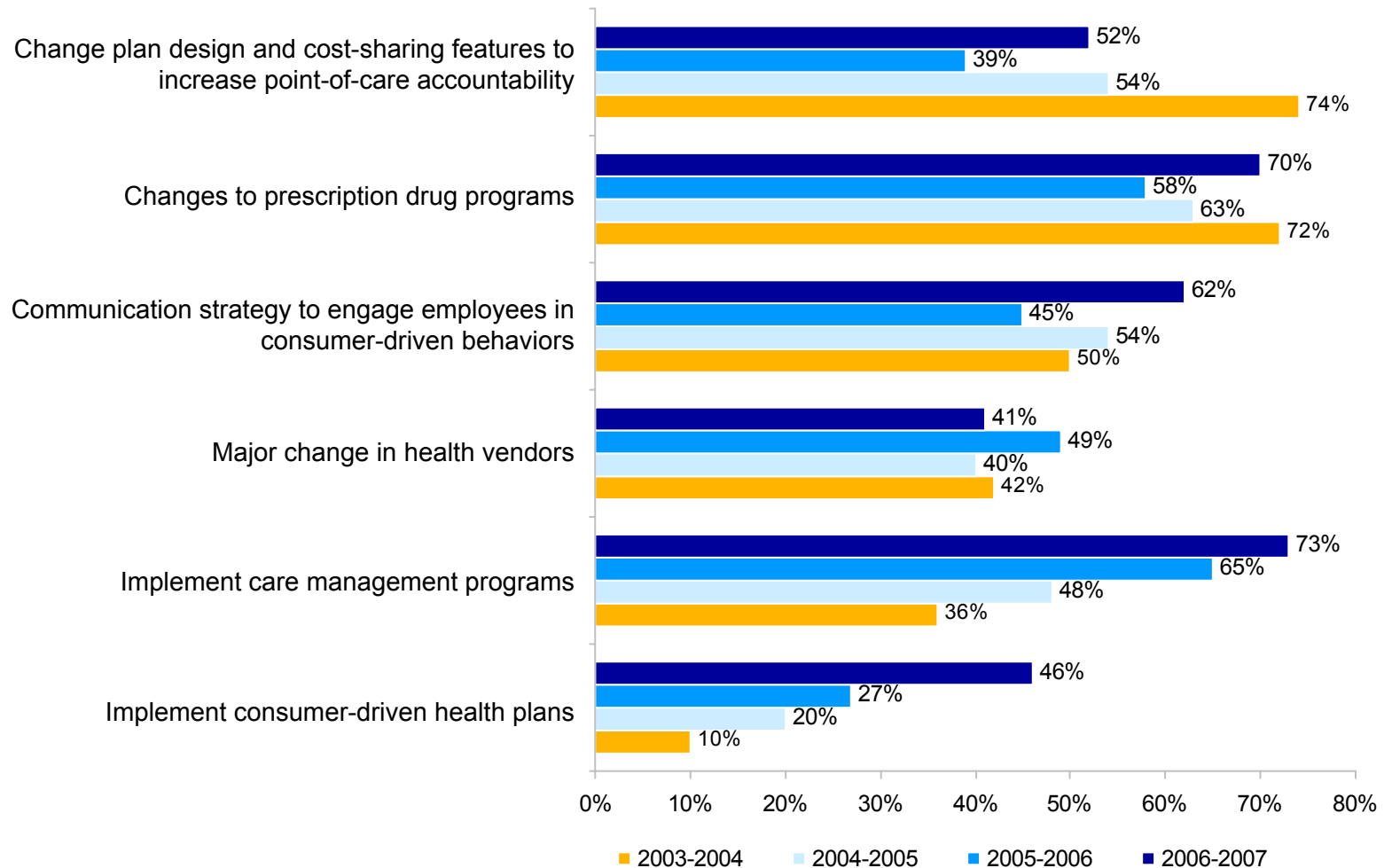
Condition	% with Depression
Cancer	30%
Coronary Heart Disease	35%
Hypertension	22%
Diabetes	23%

- Patients with a mental health diagnosis have 2 to 4 times more medical claims and 7 times more emergency room visits
- Prescriptions account for approximately 48% of behavioral health treatment spend
- Mental illness is the primary diagnosis in 20% and the secondary diagnosis in 65% of all disability claims

Source: Towers Perrin, 2004.
Active Medical-Clinical/Utilization last updated 7/06.

Selected interventions to control costs

Percent of employers implementing interventions to control health care costs



Source: Towers Perrin 2007 Health Care Cost Survey.

Discovering the Cost Drivers

Different funding and location require different responses

- Insured vs.. self funded
 - Over the long run, insured plan sponsors have just as much to gain by influencing cost drivers
- HMO/POS vs.. PPO/EPO
 - PPO/EPO have more opportunities because they are generally more inefficient (but much more flexible in design), but HMO/POS sponsors can have an impact
- Rural vs.. Urban/suburban
 - Urban/suburban provider competition and density provides more opportunity to impact cost drivers
 - Rural plan sponsors may be a bigger relative purchaser of services
- Geographic spread of membership
 - Member concentrations allow for more significant impacts

There is always something you can do to impact costs — regardless of whether you are self-funded or insured.

Assumes the following has been done or evaluated

- You are only paying for the people who are truly eligible under your plan
 - Eligibility audits
- Insured
 - Periodic RFPs to market
- Self-funded
 - Periodic evaluation of fees and services
 - Negotiated most favorable arrangements for fees and expenses
- Evaluated unit costs paid to providers in your geographic area for the doctors and hospitals that you use most
 - Contract payment arrangements can vary from 1% to 10% between competing insurers and administrators for the same services in the same market
- Determined the optimal provider mix for your population
 - Too many or too few can drive up costs
- Measured the health risks between insurers/administrators
- Audited claim payments

Components of cost

- Unit costs for a service
 - Physician/hospital charges (CPT-4, per diem, discount, FFS)
 - Site of treatment (mail/retail Rx, ambulatory facility, hospital, onsite clinic etc.)
- Usage
 - Number of services ordered by physicians and/or sought by employees
 - Driven by physicians and/or by members
 - Number of days supply of drugs
 - Type of service (e.g., CT scan vs.. X-ray, one drug vs. another drug)
 - Errors or unnecessary treatment

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- 1. Monitor contract costs**
- 2. Change the site of treatment**
- 3. Inform and engage the consumer**

- 1. Avoid the need**
- 2. Intervene earlier**
- 3. Review the necessity**
- 4. Improve the quality**
- 5. Engage the physicians**
- 6. Inform and engage the consumer**

Discovering your cost drivers

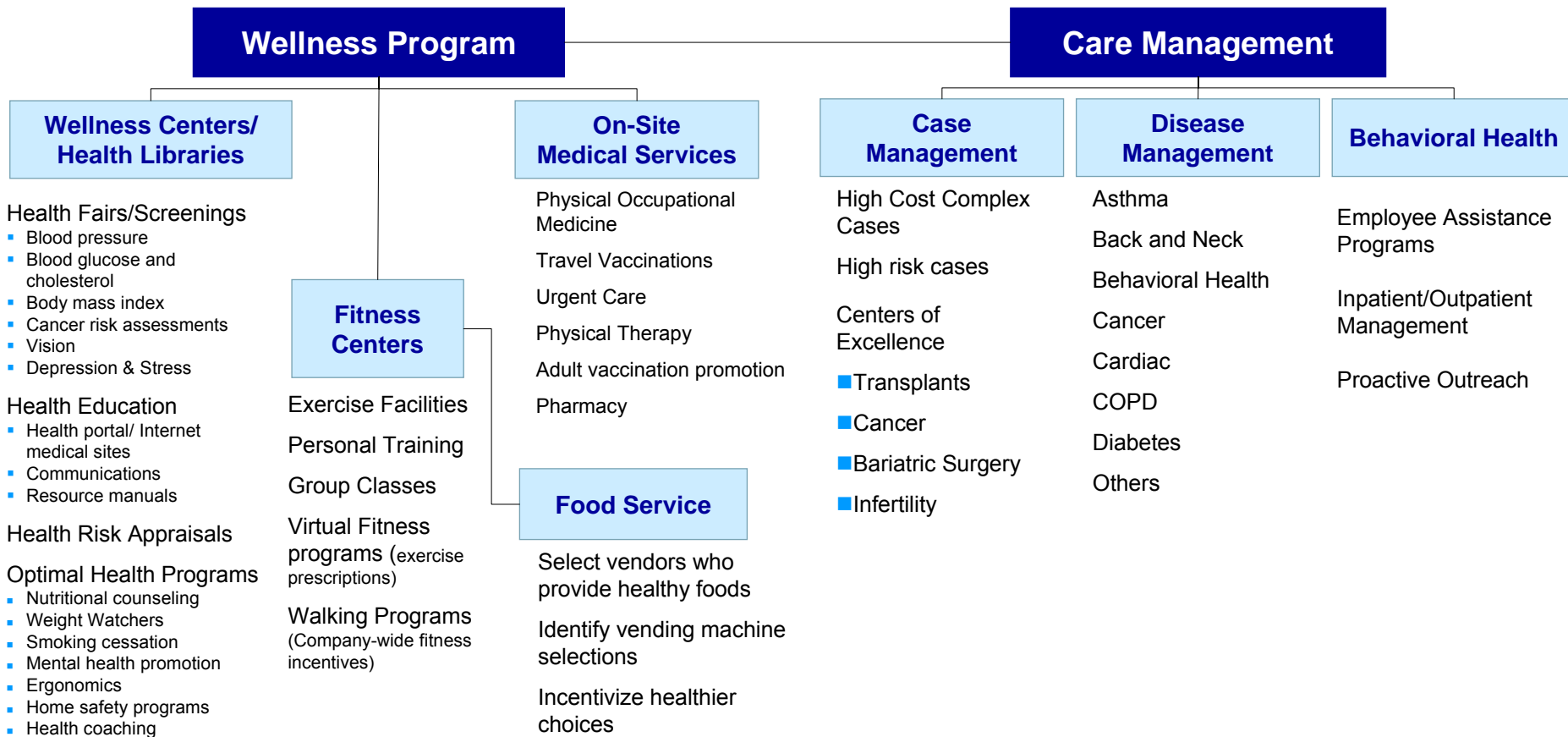
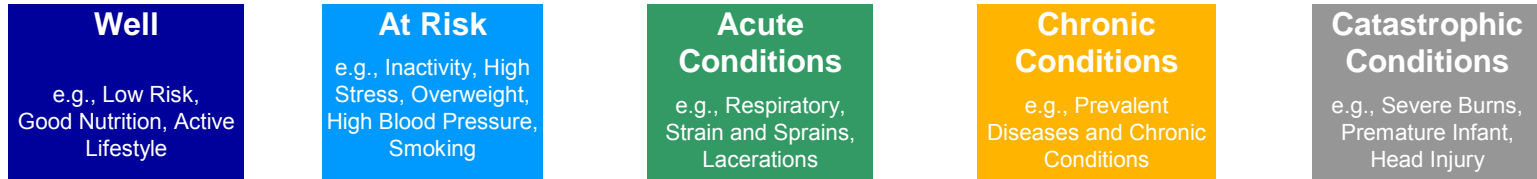
- Utilization changes that are significant one year over the next and are higher than expected
- Unit cost increases that are significant one year over the next and are higher than expected
- Utilization metrics that are over benchmarks for two years or more (adjusted for age-sex and geography) or under benchmarks (e.g., preventive screenings)
- Unit costs that are over benchmarks for two years or more
- Costs between actives, retirees (Medicare, non-Medicare), and dependents
- Leading drivers by disease state (e.g., ETG, ICD-9, PEPY, claimants)

Discovering Cost Drivers (sample)

- Distribution of total costs by hospital inpatient, hospital outpatient, professional, Rx, and other
 - Drill downs (e.g., admits/bed days separated by medical, surgical, maternity, mental health, substance abuse, step down facilities; diagnoses; re-admit rates; hospital-specific use data; average cost per day)
- Costs by status (e.g., active/retiree, employee/dependent)
- Changes in enrollment patterns due to changes in payroll deductions
- Changes between plans and underlying cost changes
- Rx
 - Costs per day of therapy by therapeutic class (before and after copays)
 - Generic dispensing patterns
 - Gross and net costs between retail and mail by drug and dose
 - Drug therapy compliance rates for diabetes, high cholesterol, cardiac conditions, RA, MS, Hepatitis C, and depression (as a secondary diagnosis)
 - Prescribing patterns for clusters of physicians
 - Costs by major pharmacy chain
- Complex radiology (and site of treatment) with costs, historical changes
- Costs for lifestyle (obesity, cardiac, etc.)
- ER use rates, costs, causes, historical changes
- Ambulatory surgery rates, sites, costs, and historical changes
- PMPM costs for the largest medical groups providing care (HMO or POS only)
 - Adjusted for age-sex or risk modifiers
- Hospital avoidable complication rates
- Independent ROI on programs intended to impact costs/utilization
- Costs by geography, as applicable
- Large claims (# per 1000, # repeats from last year, % of total claims, diagnosis group)
- Preventive screening rates (e.g., mammogram, colonoscopy, PSA, pelvic)

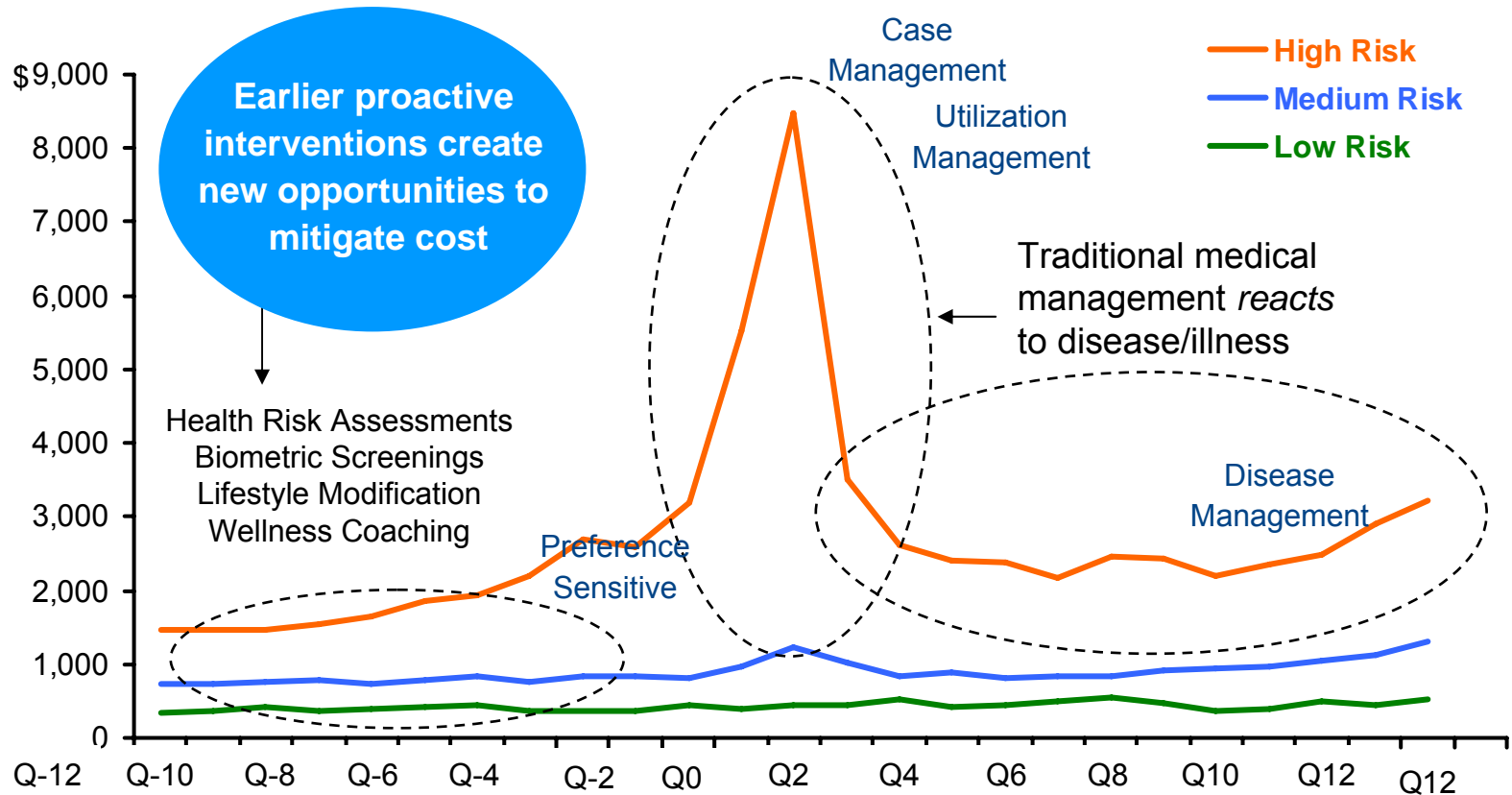
Examples to Impact Cost Drivers

Employers are using efforts directed at their own cost drivers



Reach your members as early as possible

Engage as early as possible to minimize risk, mitigate costs



“A system that waits for disease and illness to occur can never be optimally effective. The logical strategy is to maintain people at the lowest or most appropriate level of health care use possible.”

D. Edington, Ph.D., Director, Health Management Resource Center, University of Michigan, 2004.

Original chart source: Musich, Schultz, Burton, Edington. *DM&HO*. 12(5):299-326, 2004.

The Jury is Out #1 — Providing cash incentives for members to complete Health Risk Appraisals can lower health care costs

- Most often, HRAs are instruments where people who don't know what they have don't tell you they have it
- HRAs are acceptable instruments for
 - A teachable moment — but most often the moment passes without any changes by the member
 - Feeding data to disease managers
 - In a mature program, the nurses already have the claim history, drug history, and lab values for the member
 - Family history and readiness to change can be useful in prioritizing members who do not have claim history (but most disease managers will not reach out to these members unless they have meaningful claim history)
 - HRAs account for identification of about 1% of DM cases
- It's OK to encourage use of HRAs, but think hard before paying members to do it (the money could be used better elsewhere).

The Jury is Out #2 — Lowering Rx copays on maintenance drugs improves member compliance with therapy

- Medication compliance is a serious problem. However . . .
- Some of the top reasons people don't take their medications are “I forgot” or “I don't like the way I feel when I take the drug” — which aren't necessarily corrected by lowering copays.
- While it may be true that cost (copays/coinsurance) is a barrier for some of the lower paid*, there is little independent, statistically credible evidence that the broad base of members will take drugs more regularly if the copay is reduced.
 - In studies on consumer-driven plans where members pay the full cost, the sickest members were the most likely to continue therapy (discontinuance of therapy happened most often in classes like antihistamines where members switched to an OTC product for less cost to them)
- Before you attempt this one, make sure that you measure current compliance and set goals

**Significant increases in three-tier copays have been shown to decrease compliance rates across broader segments of the population.*

The Jury is Out #3 — Lifestyle coaching following an HRA leads to long-term improvements in health habits

- Changing behavior is the single highest hurdle in health care today
- Too often, the answer is “we don’t know” for many lifestyle coaching programs
- Many lifestyle coaching services do not actually track members long enough (2-3 years) to measure which changes were continued by the member and the results in terms of sick absence, ER use, hospital admits, Rx usage, etc. vs.. any type of control or benchmark group
- If you plan on doing this, understand how you will measure effectiveness before going in — if the you are skeptical of the measurement process, proceed at your own risk

Impacting Lifestyle: Lifestyle Condition Analysis: SAMPLE

Total	Net Pay Med	Patients	% of Members with Condition	Patients Per 1000	Net Pay Med Per Member
Obesity	\$4,783,297	3,255	11.8%	119.14	\$175.08
Lack of Physical Activity	\$4,112,928	3,098	11.2%	113.39	\$150.54
Poor Nutrition Practice	\$3,619,157	3,040	11.0%	111.27	\$132.47
Stress / Anxiety / Depression	\$2,009,854	2,202	8.0%	80.60	\$73.56
Tobacco Use	\$2,228,689	2,116	7.7%	77.45	\$81.57
Alcohol Abuse	\$3,055,887	1,691	6.1%	61.89	\$111.85
Noncontrolled Lipids	\$1,511,719	1,662	6.0%	60.83	\$55.33
Noncontrolled Hypertension	\$1,614,494	1,291	4.7%	47.25	\$59.09
Unsafe Sexual Behavior	\$186,231	600	2.2%	21.96	\$6.82
Excessive Sun Exposure	\$69,634	107	0.4%	3.92	\$2.55
Total Lifestyle Related Condition	\$6,737,191	6,062	22.0%	221.88	\$246.59

- 22% of members have a lifestyle-related condition
- Key conditions by member frequency are:
 - Obesity
 - Lack of Physical Activity
 - Poor Nutritional Practice
 - Stress/Anxiety/Depression
- These same lifestyle conditions are also driving current and future plan costs, as well as contributing to diminished productivity
- Note that the lifestyle conditions data presented on this page are understated as many people with these conditions do not have diagnoses or claims data that can be directly linked to a specific lifestyle condition

Lifestyle: Identifying “At Risk” — Beyond the HRA: Biometric Screenings

- Screening results can feed predictive modeling, identify gaps in care programs and target candidates for coaching programs
 - Can be linked to incentives for participation or health improvement
 - Significant participation even without incentives
- Results have been surprising
 - Significant numbers of members with previously undiagnosed diabetes, hypertension and high cholesterol
 - Some participants diagnosed with serious/life-threatening conditions
 - Physician follow-up rates are high
 - Impressive year-over-year improvement

Huge opportunity from uncovering previously undiagnosed, poorly controlled conditions.

Biometric Screening Results

Condition	% of Population with Condition Identified	% of Those Who Did Not Know About Condition
High Cholesterol	25.4%	24.0%
Elevated Glucose	4.7%	37.5%
High Blood Pressure	3.3%	33.9%
Liver Abnormality	4.5%	96.4%
Thyroid Abnormality	1.8%	91.7%
Elevated PSA	0.8%	18.8%
Kidney Abnormality	0.2%	50.0%

Impacting Radiology Costs: Complex Imaging

High Tech Radiology Procedure Code	Procedure Description	Hospital Amb Pd per Service	Freestanding Pd per Service	% of Services at Hospital	Cost Relationship
70553	Mri Of Brain W/O & W/ Contra	\$2,142	\$821	52.5%	38%
72148	Magnetic Resonance Imaging	\$1,329	\$534	39.0%	40%
73721	Mri- Any Lower Extremity Jnt	\$1,775	\$476	20.0%	27%
74170	Contrast Cat Scans, Abdomen	\$1,490	\$536	48.6%	36%
78465	Heart Image 3d Multiple	\$1,078	\$559	19.2%	52%
72141	Magnetic Image, Neck Spine	\$1,347	\$617	51.5%	46%
73221	Mri- Any Upper Extremity Jnt	\$1,137	\$460	41.7%	40%

- Complex radiology can be over 50% of radiology expenditures
 - Use of these procedures is up about 15% year-over-year
 - Unit costs have been rising +10% year-over-year

- Tools that can be used to impact costs
 - Imaging review programs certify for medical necessity
 - Up to 15% of tests may be deferred to a less expensive modality
 - Communicate the difference in price between hospital and ambulatory-based imaging (to members (in coinsurance plans where member is likely to save money)
 - Direct contract with a few local providers based on quality (clinical expertise at reading results) and negotiate preferred pricing
 - Direct members through design or network

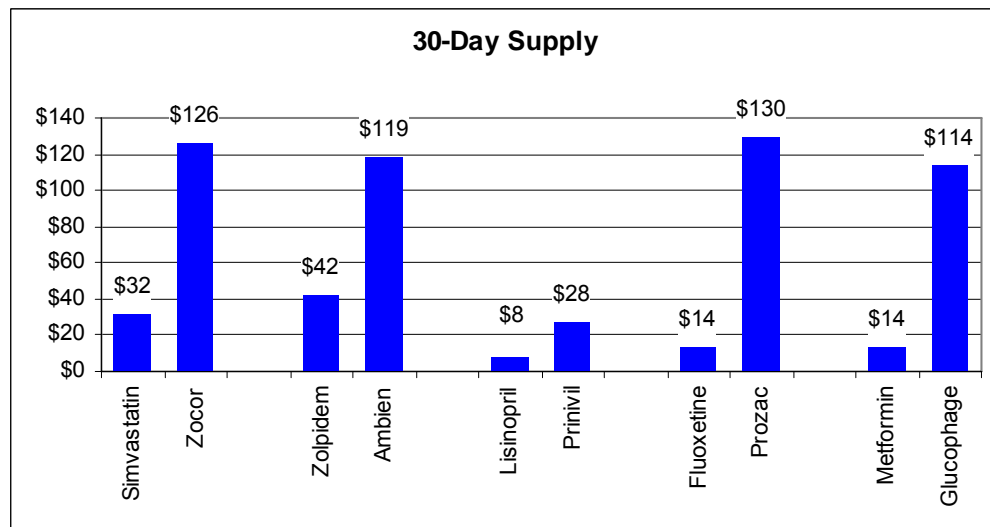
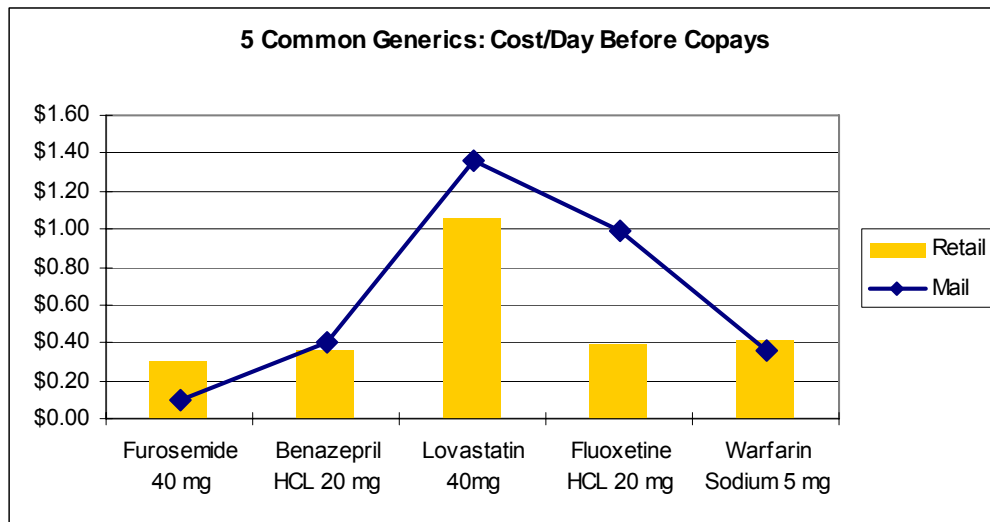
Impacting Pharmacy

Mail/Retail

- It is not uncommon for generic drugs to cost more at mail than retail (up to 150% more in this actual example)
- For example, fluoxetine HCL 20 mg sells for \$.39/day at retail and \$.99/day at mail
 - Mail provider is probably buying fluoxetine for less than \$.39/day but is 'selling' it to plan sponsor for \$.99 and keeping the difference
- Depending on generic utilization at mail, this type of pricing can increase overall Rx plan costs by 1% to 3.5%

Generic vs.. Brand Costs

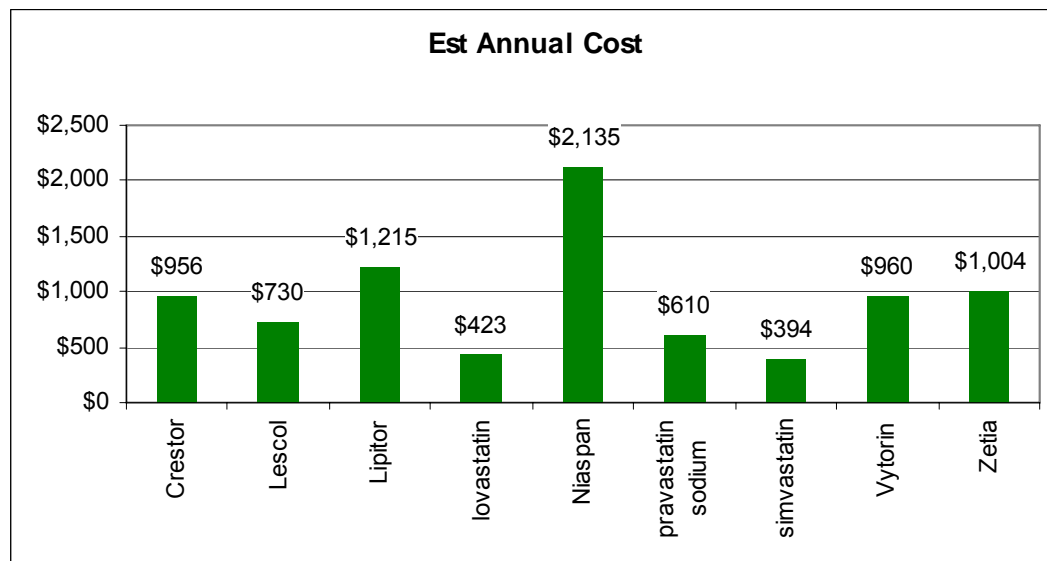
- Many popular brands have generic equivalents (exact same active ingredients and expected efficacy)
 - As shown here, the price difference on these common pairings can vary from \$20 to \$116 per month
 - Most copay structure subsidize the higher cost drug by only charging \$20 to \$35 per month in additional copay
- Consider modifying the copay for these types of brands to the generic copay plus the difference in price between the brand and the generic
 - Members who are unsuccessful on the generic can have the brand at the regular brand copay (<0.5% of users)



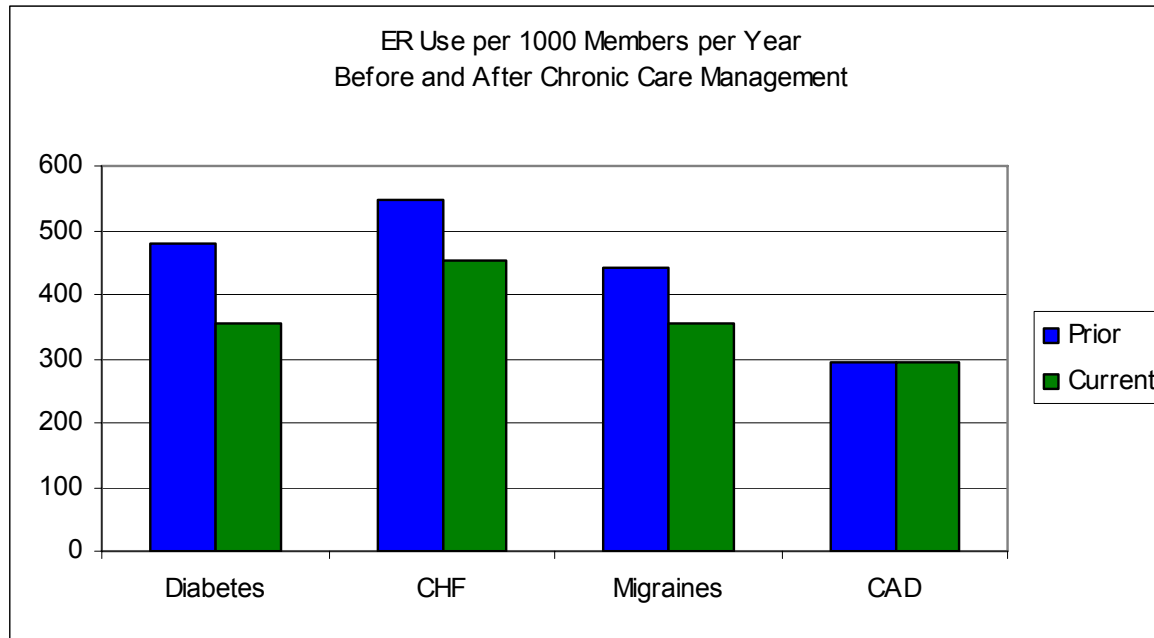
Pharmacy

Market share Costs

- This is an illustration of the most prominent drugs for cholesterol (the #1 Rx cost class for most plans)
- While there is some variability, most of these drugs will be effective for most patients, but the cost variation is over 500% in the class
- Net costs should reflect payable rebates to the extent fully paid to the plan sponsor (reduces savings but does not eliminate them)
- Plan sponsor gross costs can vary from \$700 to \$1,050 per user per year in this class; shift not only saves claim \$ but can have some impact on GASB liability
 - Incentive programs for members to switch (e.g., waive copays for 90-days for members who switch)
 - Step therapy programs requiring new users to try a generic before a brand will be approved
 - Narrow formulary consisting of generics, Zetia, and one other brand (including copay revision for non-formulary)



Chronic illness management



- Employer implemented a program for chronic illness which dealt with all major disease categories in the population
- ER use was a significant cost driver for this employer
- Focused programs were directed to target populations
- Results generally lowered ER rates for major conditions
 - Resulting savings of \$73 PMPY for this population
- Calculations were done independently of the 3rd party vendor providing services

Impacting Chronic and Catastrophic Cases: Disease Management, Health Coaching, and Case Management: Are You Getting What They Promised?

Why DM-type programs can fail

- Inadequate staffing to handle cases properly
- Unable to reach member (incorrect telephone number or no response)
- Members don't want assistance or drop out of program
- Failure to identify most cases before hospital admission
- Clinical programs operate in silos and at cross purposes
- Multiple, inaccessible platforms
- Key data not available to nurses on clinical system (e.g., recent clinical events, drug compliance)
- Lack of concrete goals for patient and ability to monitor progress
- Poor algorithms for identifying referrals
- Failure to integrate all resources in coaching or managing patient
- Nurses not well trained in telephone counseling
- Cases "closed" too early
- Lack of passion for member health improvement

Clinical Audit (DM, health coaching, case management)

- How does data integrate to identify patients early and how early are cases identified?
- What actions were taken? What actions should have been taken?
- Do nurses have complete information available in front of them or does it reside on other systems?
- What causes a case to be closed? What are the subsequent results for the patient? How many cases are subsequently reopened?
- How many members actually participate actively with nurses?
- Is there a demonstrable difference that the program has made for individual members?
- Can the nurses actually see drug and lab/radiology compliance on-line?
- Is the Medical Director used appropriately to improve results?
- How much peer-to-peer consultation is evidenced in the files?
- Are nurses and the clinical team going above-and-beyond to engage members?
- Are there sophisticated tools to assist in identifying depression candidates and monitoring compliance?

Questions and Answers