



*Engineering the flow of communication™*

# Value Based Pharmacy Benefits Design Observations from the Past Six Years

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# Overview

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- Background on Value-Based Benefits
  - Definition
  - Rationale
- Pitney Bowes Implementation
  - Impact
  - Comparisons
- Role of Disease Management

# Value Based Benefit Design : Definition

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- Multiple definitions and interpretations in today's marketplace
  - Emerging concept
- Original definition

*Value-Based Insurance Design (VBID) explicitly acknowledges and responds to patient heterogeneity. It encourages the use of services when the clinical benefits exceed the cost and likewise discourages the use of services when the benefits do not justify the cost.*

*M. Fendrick, et al*

# What's Different ?

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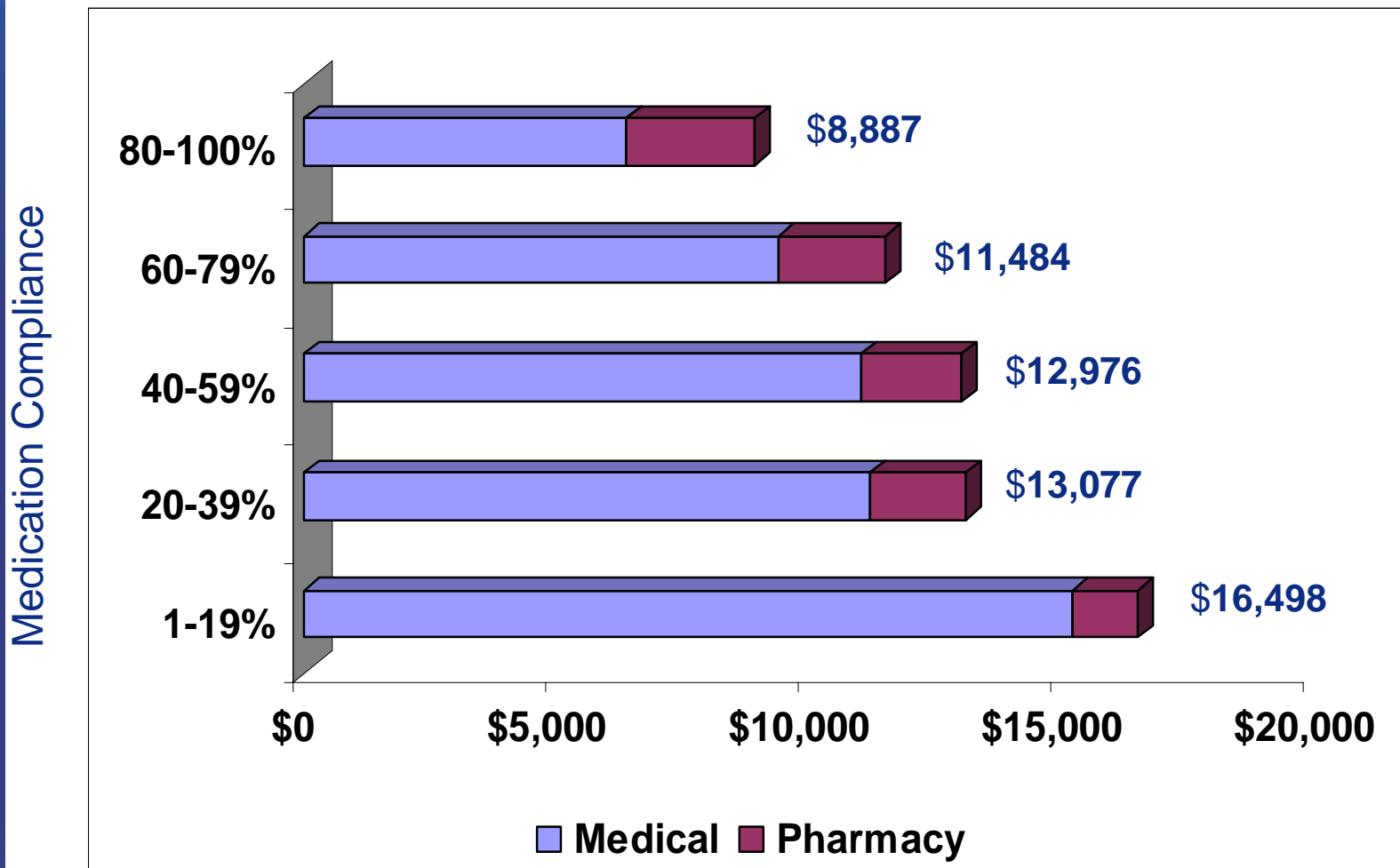
- Primary Focus on clinical outcomes
  - Not short-term cost management
- Member out of pocket contribution
  - Inversely linked to clinical outcome
  - Not acquisition cost of service
  - Varies based on clinical condition
  - Not uniform across an entire covered group
- Focus on total direct and indirect cost of condition
  - Not on line-item costs
- Integral to plan design/administration
  - Not an add-on incentive

# Rationale

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- Compliance with evidence based treatment essential in managing chronic medical conditions
  - Includes medication adherence
- Cost of treatment may present a compliance barrier
  - Elasticity of demand

# Compliance and Annual Cost of Diabetes Care



Sokol MC, McGuigan KA, Verbrugge RR, Epstein RS, *Medical Care* 2005 Jun;43(6):521-530



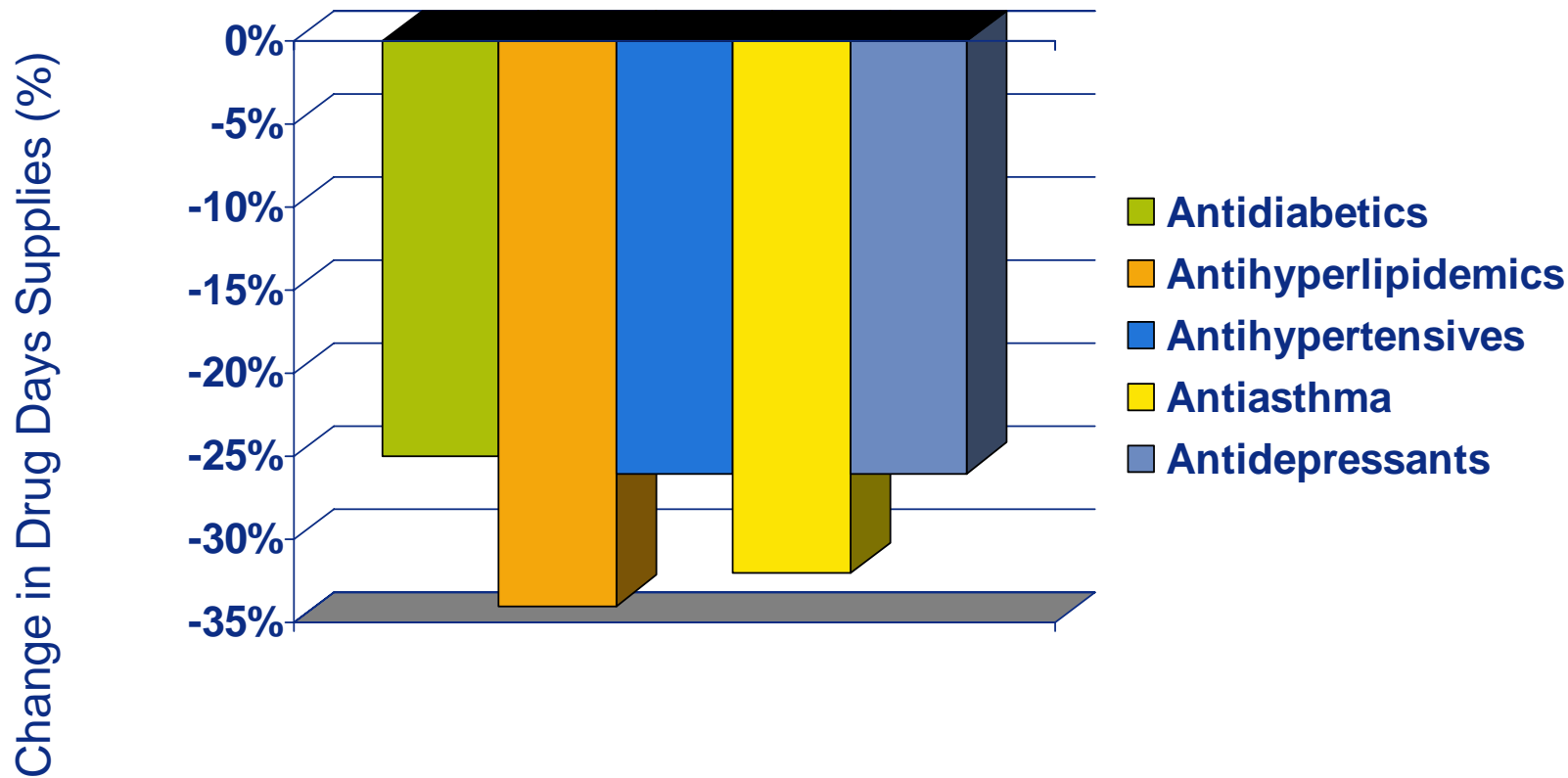


# Noncompliant Behavior Across Income Groups

*In the Past 12 Months, Have you not taken medication due to out of pocket costs*

	All Adults	Less than \$15,000	\$15,000 To \$24,999	\$25,000 To \$34,999	\$35,000 To \$49,999	\$50,000 To \$74,999	\$75,000 And Over
Did not fill RX	22%	59%	40%	26%	18%	17%	12%
Took Smaller Dose	14%	31%	24%	16%	12%	10%	4%
Took Less Frequently	16%	21%	30%	20%	12%	14%	5%

# Impact of Doubling Copays on Adherence



Goldman DP et al, JAMA 2004;291:2344-2350

# Impact of Medication Cost Sharing: Overview of 132 Peer Reviewed Publications

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- Increased cost sharing is associated with:
  - 10% increase in cost sharing associated with a 2% to 6% decrease in prescription drug spending
- Decreased drug spend due to:
  - Lower rates of drug treatment
  - Worse adherence among existing users
  - More frequent discontinuation of therapy

# Impact of Decreasing Copayments on Medication Adherence Within A Disease Management Program

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- Lowered copayments improved adherence for
  - Diabetic agents
  - Beta blockers
  - ACE/ARBs
  - Statins
- Magnitude of adherence improvement similar to reported decreases associated with increasing copayments

# Questioning Value Base Design

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Editorial in JMCP questioning key components of study

- Comparability of Study Groups
  - Relevance to Large Employer Populations
- Study/Benefit Design
- Clinical Relevance of Interventions
- Cost of Intervention
- Enrollee Bias
- Study Sponsorship

Fairman, KA et al JMCP 2008 March 14 (2) 198-204

# About Pitney Bowes

- 80-plus year legacy
- Fortune 500 company
- \$5.9 billion global provider of integrated mail and document management solutions
- Global team of more than 35,000 employees
- Presence in more than 130 countries worldwide
- More than 2 million customers



# Pitney Bowes Health Plans

Mixture of Self-insured (90%) and Fully-insured (10%) plans, with common benefit designs

Pharmacy “carved-out” of all self-funded plans



**HMO providers: 46 local and national carriers**

**PPO providers: 5 national carriers**





*“How soon can you start?”*

*“We need a new benefits manager.”*

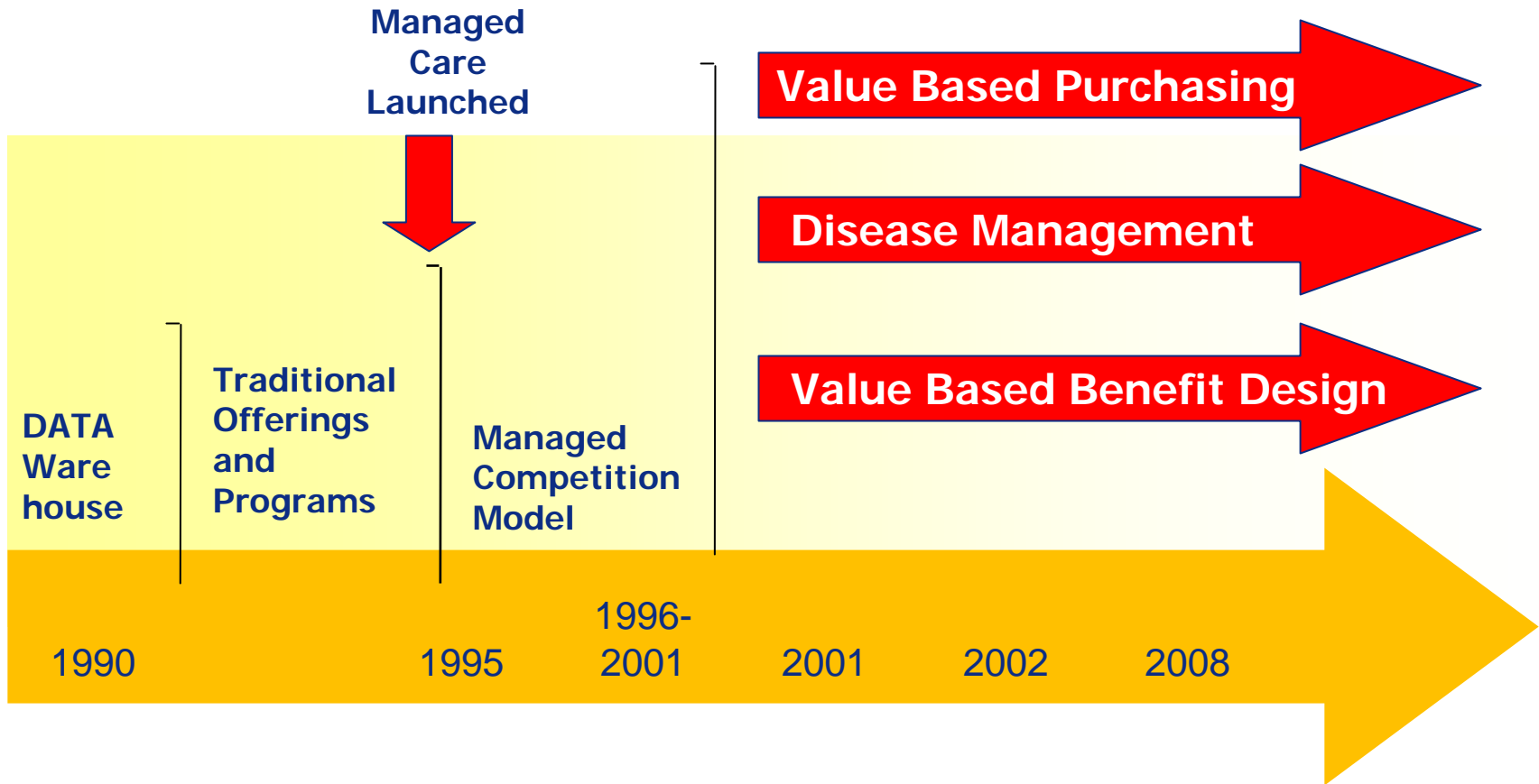
# Strategic Goals

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- **Maintain and Improve Employee Health**
  - **Encourage Appropriate Utilization of Health Care Services**
  - **Choice of Health Plans**
  - **Affordable for PB and the Employee**



# The Pitney Bowes Timeline



# Change in Drug Tiering Effective January, 2002

## “Traditional” Rx Benefit

Tier 1
Most generic drugs

**10% Coinsurance**

Tier 2
Most preferred brand name drugs, including those for: <ul style="list-style-type: none"><li>• Asthma</li><li>• Diabetes</li><li>• Hypertension</li></ul>

**30% Coinsurance**

Tier 3
Non-preferred brand name drugs, including those for: <ul style="list-style-type: none"><li>• Asthma</li><li>• Diabetes</li><li>• Hypertension</li></ul>

**50% Coinsurance**

## New Rx Access Benefit

Tier 1
Most generic drugs and all brand name drugs for: <ul style="list-style-type: none"><li>• Asthma</li><li>• Diabetes</li><li>• Hypertension</li></ul>

**10% Coinsurance**

Tier 2
Most preferred brand name drugs

**30% Coinsurance**

Tier 3
Non-preferred brand name drugs

**50% Coinsurance**



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# Other Approaches

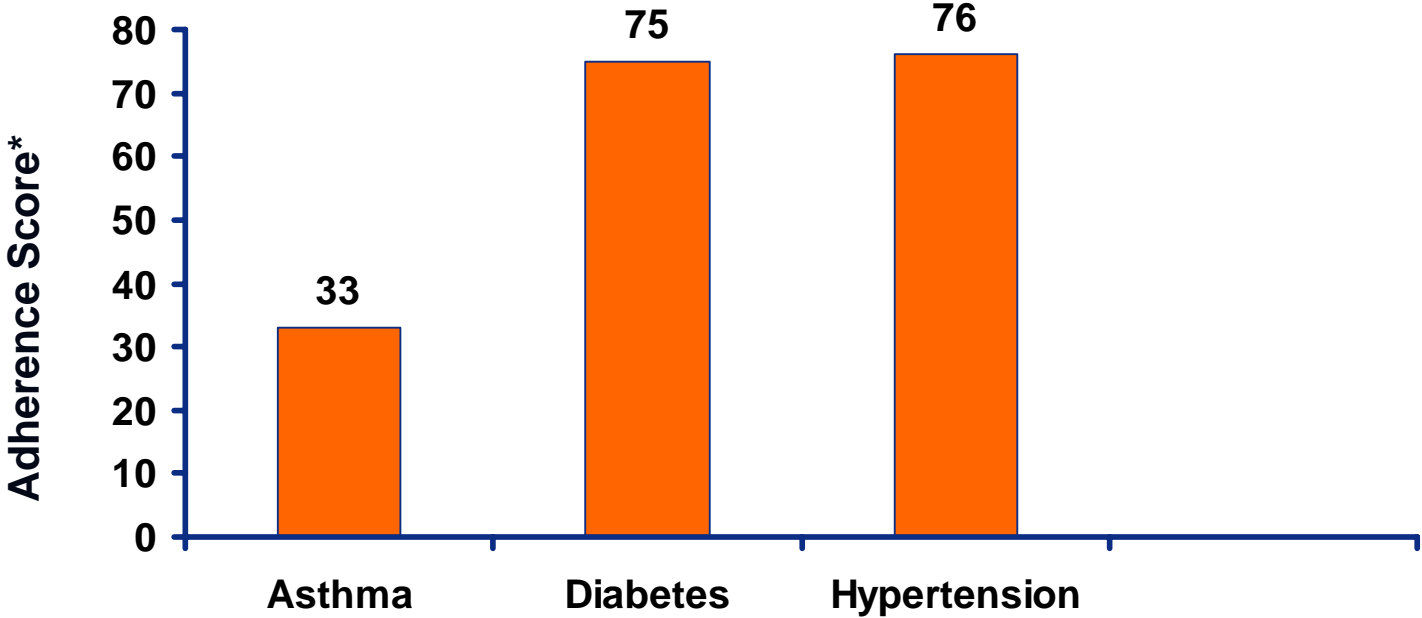
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- Conditions
  - Diabetes 90%
  - Asthma 70%
  - CAD 50%
- Tiering
  - Eliminate copays for generics
    - Reduce brand copay (50%)
  - Move all target medications to lowest cost tier
    - ? Moral hazard with flat copays
  - Create new tier for target medications



Data Courtesy of Center for Health Value Innovation

# Medication Adherence at Baseline Based on Condition Category

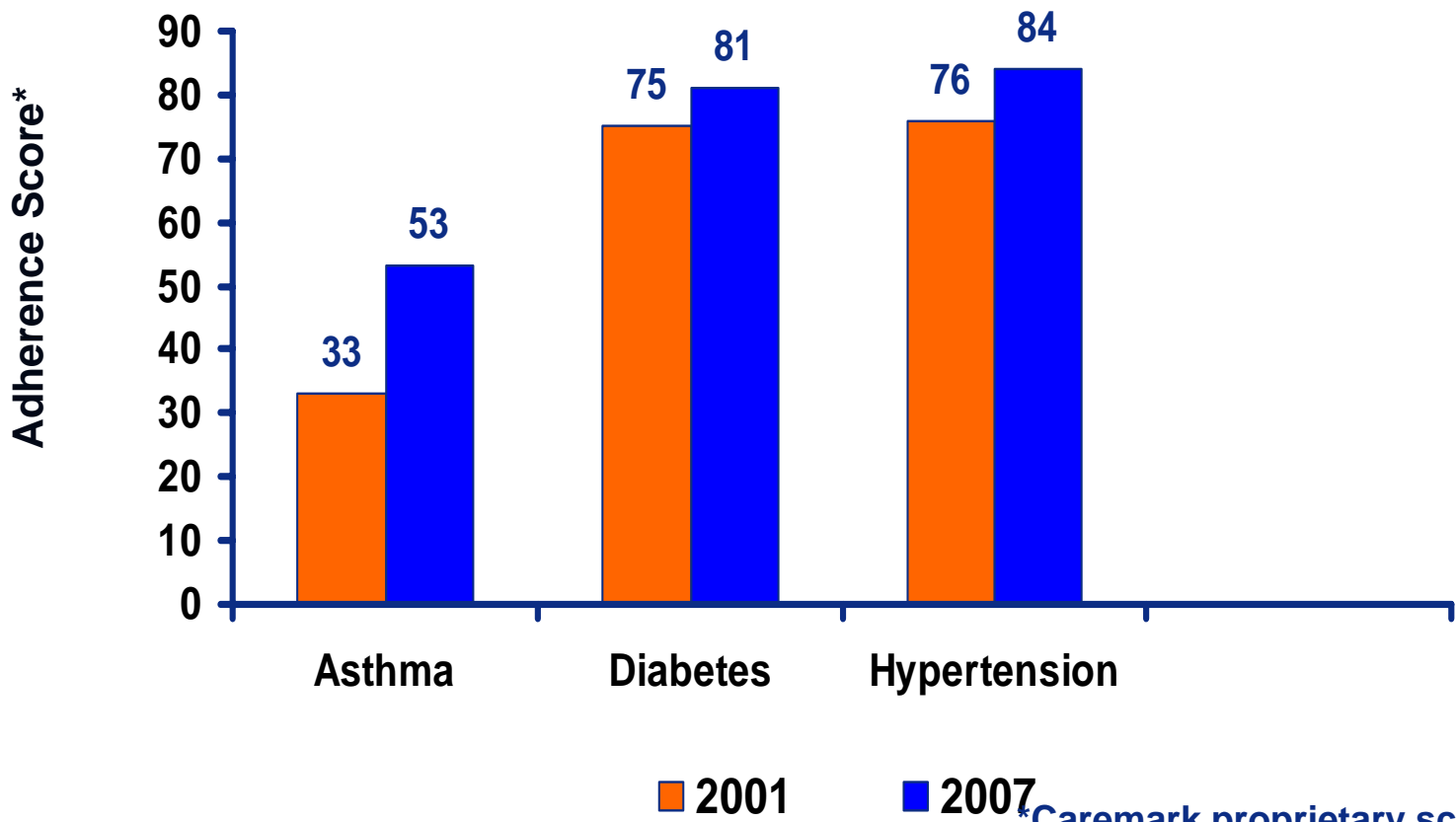


2001

\*Caremark proprietary scoring system



# Five Year Change in Medication Adherence



Caremark proprietary scoring system

# Comparators







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- State of Colorado
- Carle Clinic
- P&G
  
- Added “value-based” tier and/or moved medications for targeted conditions to a lower tier
- Disease management programs in place



Data Courtesy of Center for Health Value Innovation

# Asthma Comparison

	Carle Clinic	Pitney Bowes
Controller Drug Users	 24%	 35%
Exclusive use of rescue drugs	 24%	 35%
MPR > 0.8	 32.7%	 33%



Data Courtesy of Center for Health Value Innovation

# Some Comparisons

## Medication Possession Ratio - Diabetes

State of Colorado	↑	7.2%	69% - 74%
P&G	↑	1%	
Pitney Bowes	↑	8%	75% - 81%

## Optimal Compliance ( > 0.8 ) - Diabetes

Carle Clinic	↑	10.6%	76% - 85%
State of Colorado	↑	12%	50% - 56%
Pitney Bowes	↑	12.5%	72% - 81%



Data Courtesy of Center for Health Value Innovation

# Limitations

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- Small sample size
- No control group
- Pre/Post comparisons
- Issues with:
  - Type 1 vs Type 2 diabetes
  - Disease progression

# The Role of DM Programs

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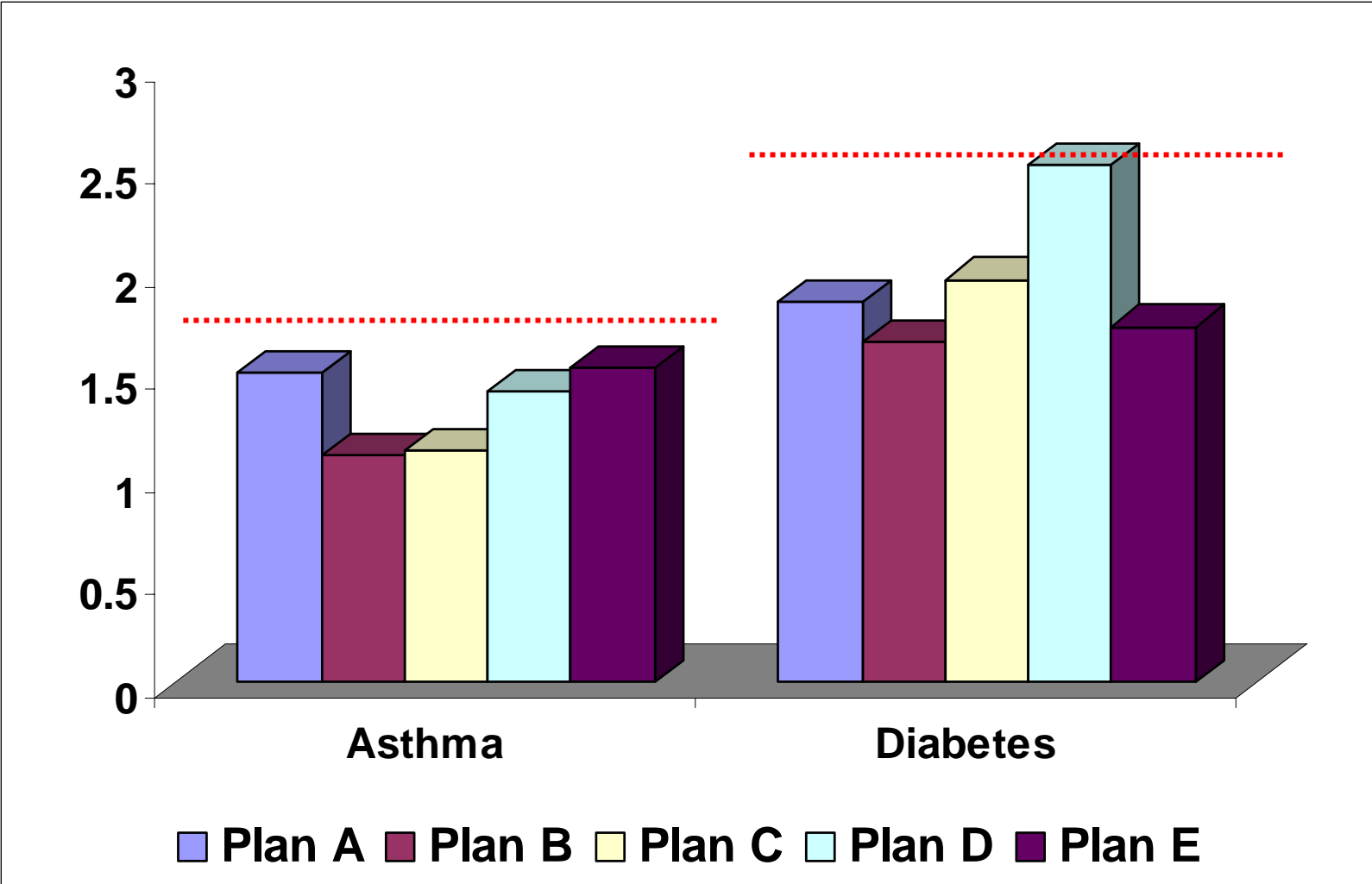
## Process

- Determine risk-adjusted average cost of members in each plan with target conditions
  - Asthma
  - Diabetes
- Express average cost as a ratio of average overall cost of total claimants in the plan

## Considerations

- DM programs “carved-in” to health plans in 2004
- Value-based pharmacy “carved-out” to Caremark
  - All participants had the same pharmacy design
- Entire population has access to PB health improvement/wellness programs

# Relative Cost of Chronic Conditions



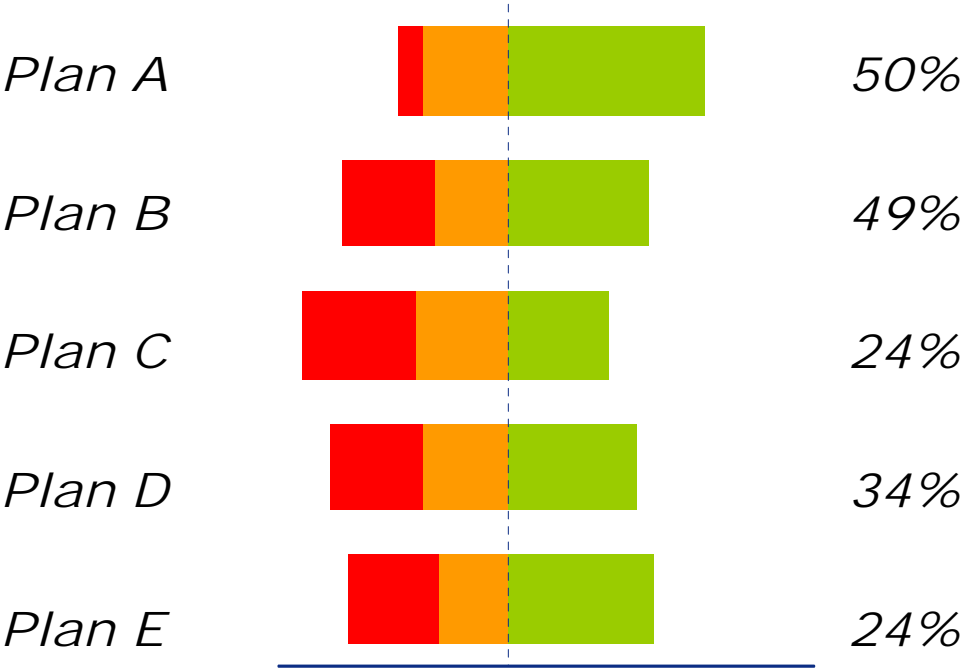
# Cholesterol Screening Rates Diabetes



**% of population  
who received *no*  
services**

**% of population whose care  
met recommended clinical  
guidelines**

# HgA1c Testing Diabetes



**% of population who received *no* services**

**% of population who received some services, but did not meet recommended clinical guidelines**

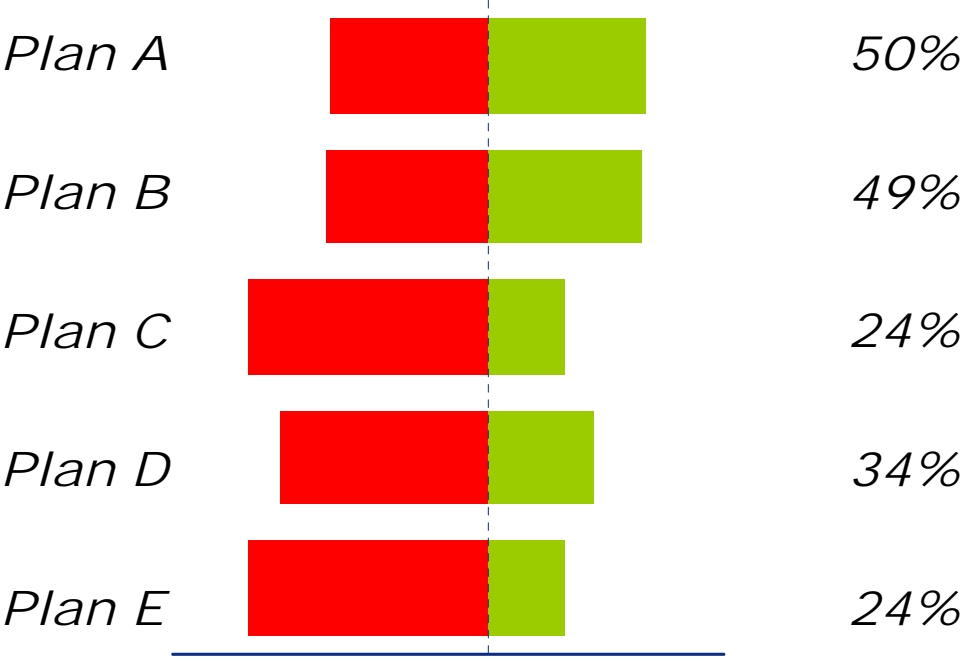
**% of population whose care met recommended clinical guidelines**

Analysis Courtesy Thomson Reuters





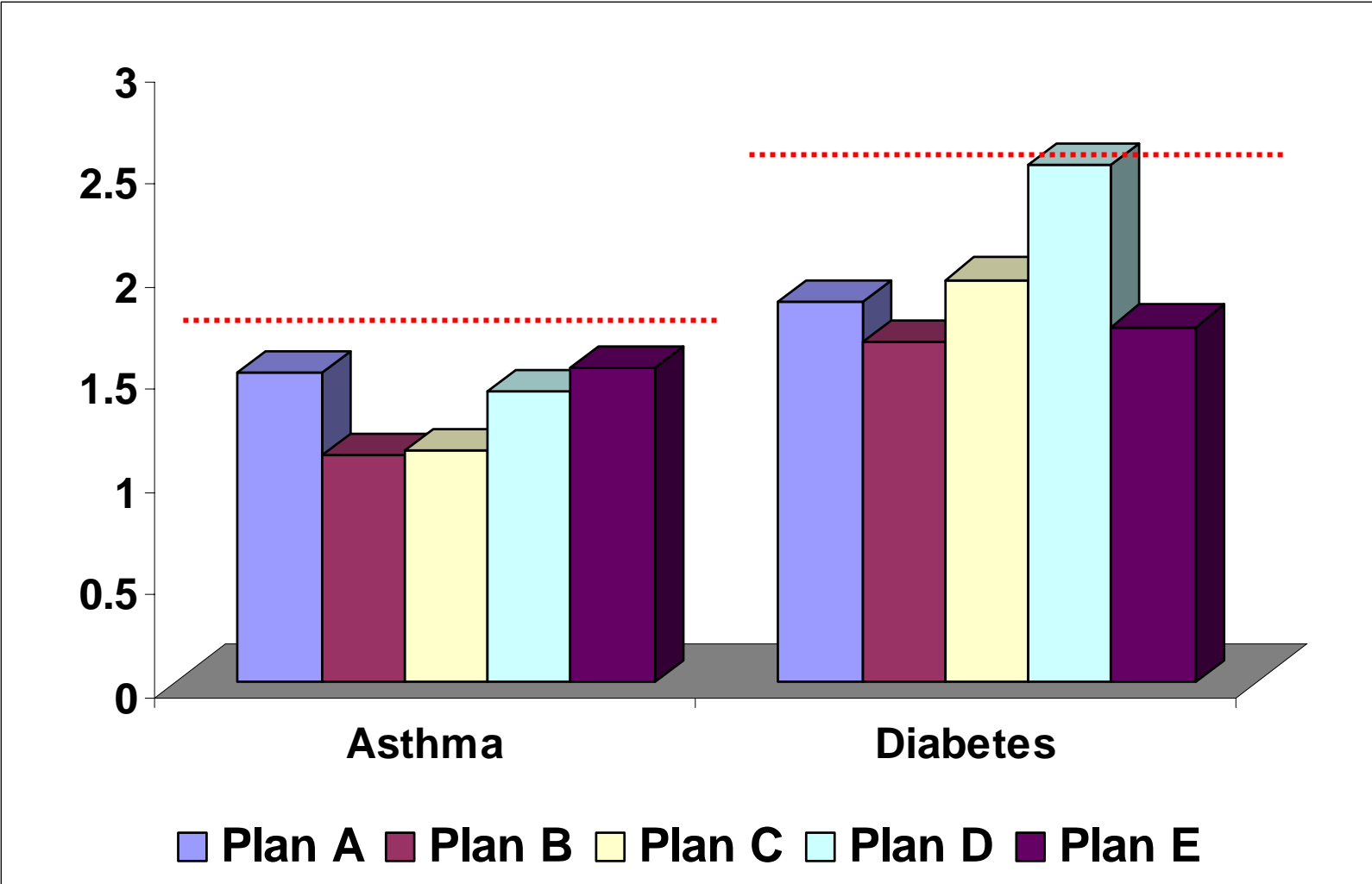
# Ophthalmology Visits Diabetes



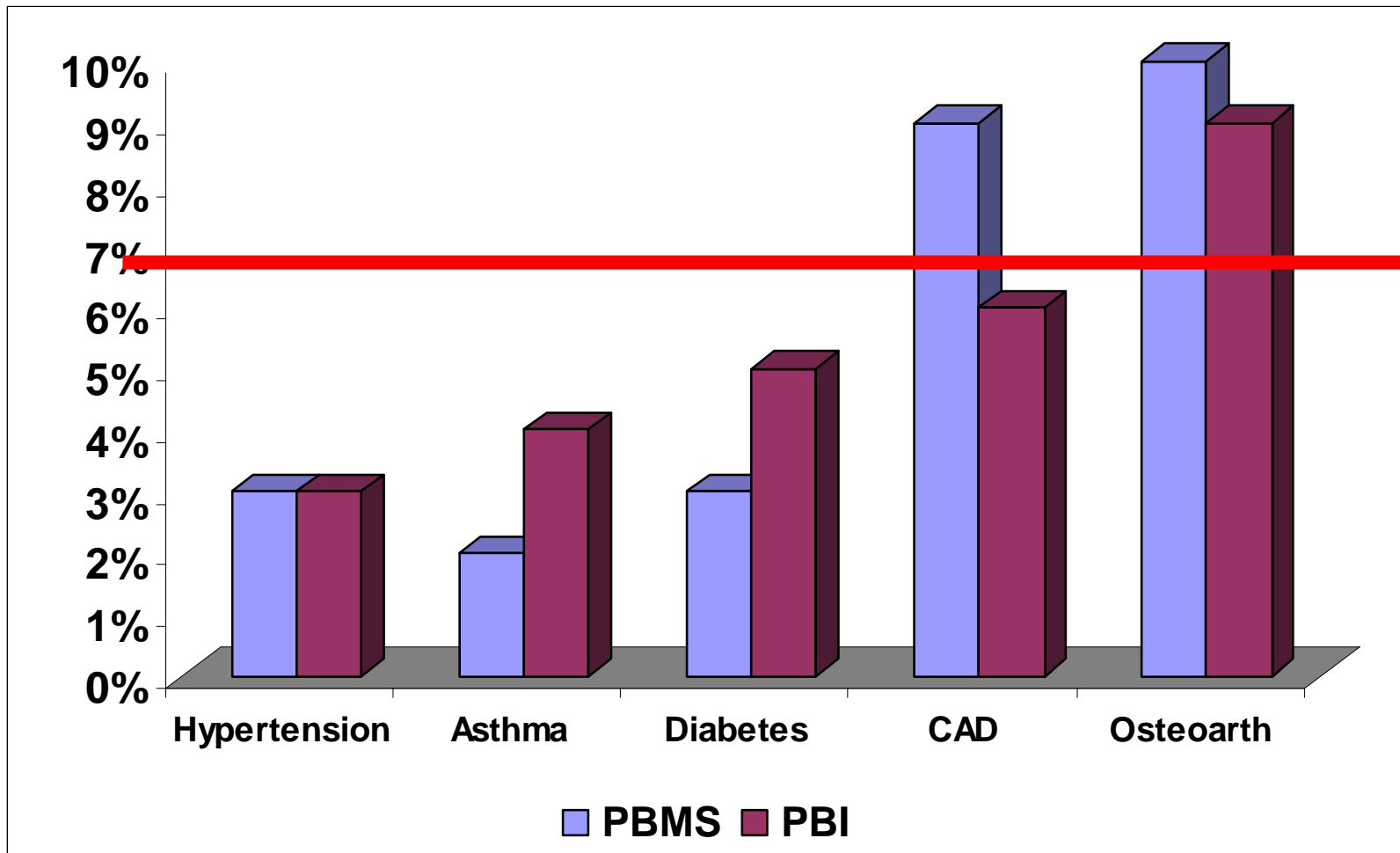
**% of population who received *no* services**

**% of population whose care met recommended clinical guidelines**

# Relative Cost of Chronic Conditions



# CAGR 2001-2007: Selected Conditions



# Assessing Savings

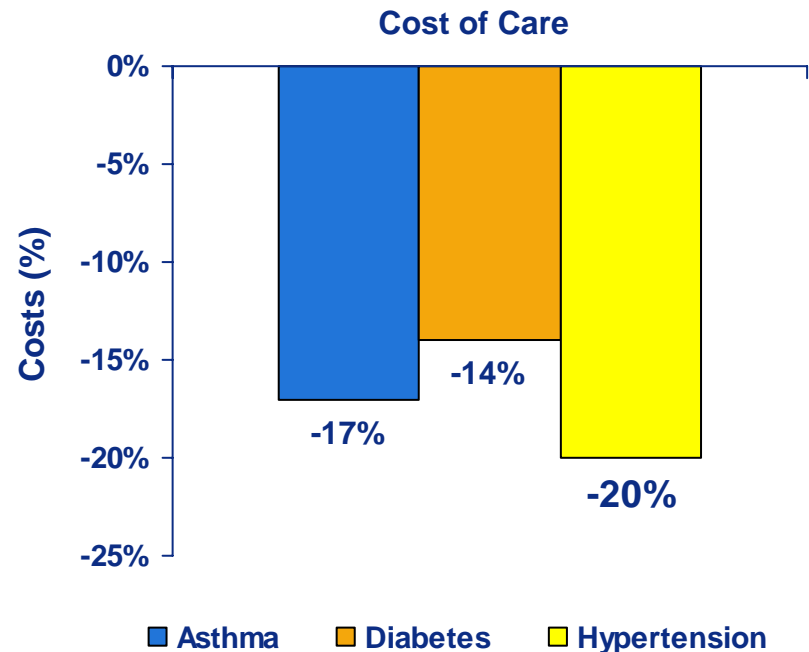
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- Existing baseline and interim data
  - Per episode cost for key chronic conditions
  - Annual total cost per member
    - Compound annual growth rate (CAGR) for each of the above
- Assume six-year chronic disease episode CAGRs increase at same rate as per member
  - Potentially underestimates actual growth rate

# Key Chronic Conditon Results

## Six Years Post Implementation

- Estimated 2007 cost offset against expected costs
  - 17% lower for asthma
  - 14% lower for diabetes
  - 20% lower for hypertension
- 17% for all three conditions combined



# Summary

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- Emerging evidence that must be confirmed with further study
- Some employers have found value-based pharmacy design in combination with disease management programs was effective in closing gaps in care for individuals with chronic medical conditions
  - Value based design alone is **not** a panacea
  - Must be implemented as part of an evidence-based approach to managing these condition
- Ultimately, results vary based on effectiveness of underlying care delivery system and programs