



***Spending More on Pharmaceuticals:
Good News, Bad News or the Wrong
Question***

***Robert W. Dubois, MD, PhD November 17, 2000
Protocare Sciences***

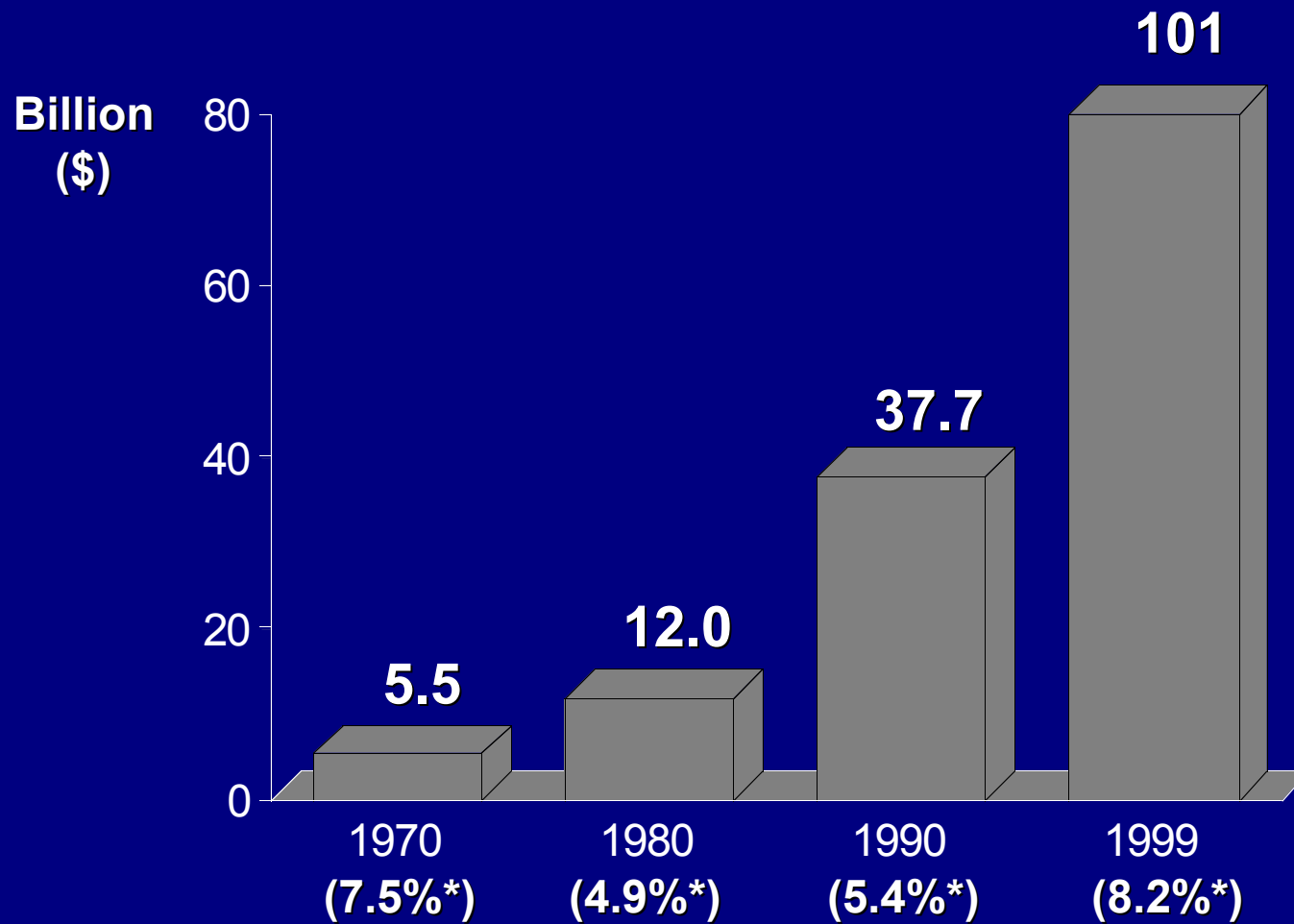


Outline: Pharmaceutical Spending

- 1. How much growth has occurred?**
- 2. What could cause growth?**
- 3. Is it price or volume?**
- 4. Is the volume appropriate?**
- 5. Is spending growth bad news or good news?**
- 6. Are we asking the right question?**



Prescription Drug Spending



***Percentage of health expenditures**

Iglehart, N Engl J Med, 1999, HCFA Office of the Actuary

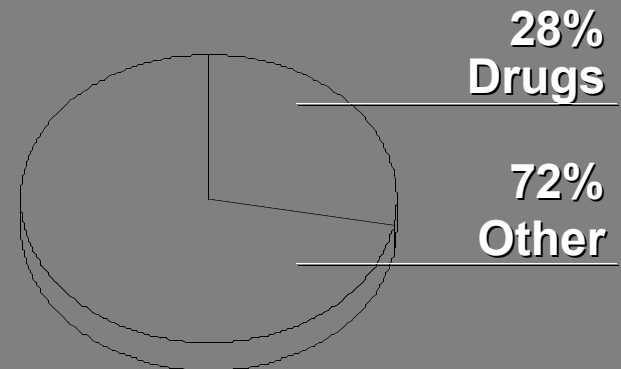


Do Rising Drug Costs Explain The Increase in Privately Covered Medical Costs?

Drug Cost Increase 13.8%

Drug Component
of Health Care x 12.4%

**1.7% of Total Increase (6%)
Due to Drugs**



**Proportion of Increase
Due to RX**



Conceptual Model for Growth in Drug Expenditures

Demographic Changes

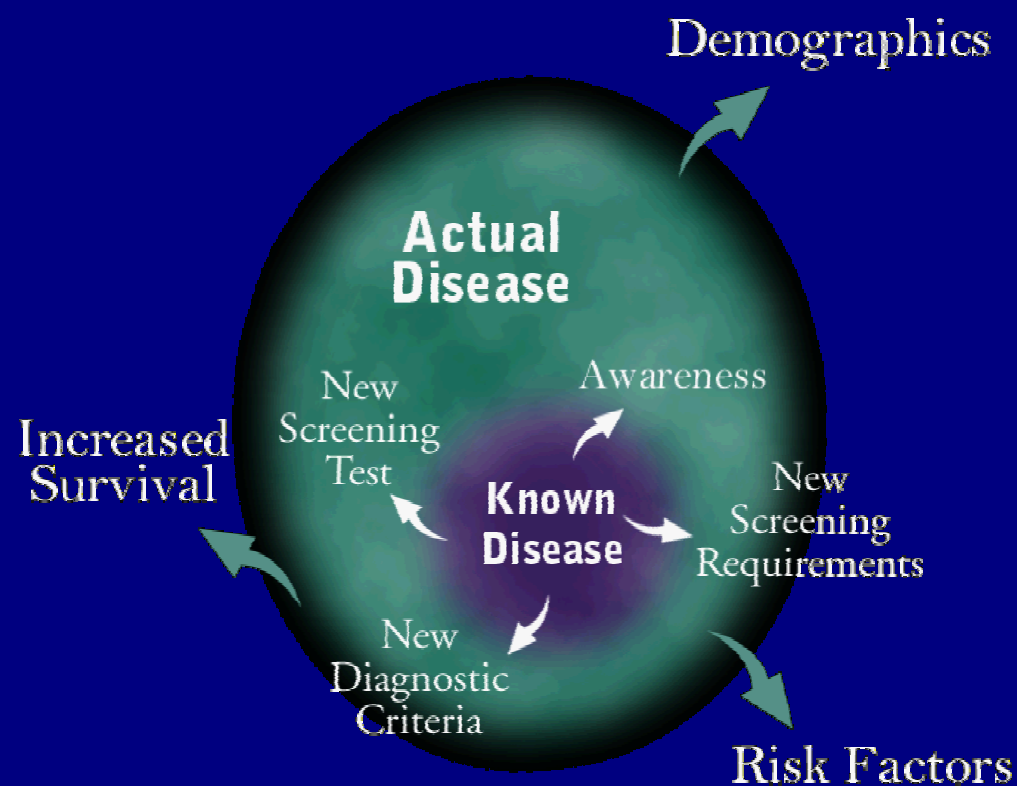


- Multiple medical problems
- Disease Progression



Conceptual Model for Growth in Drug Expenditures

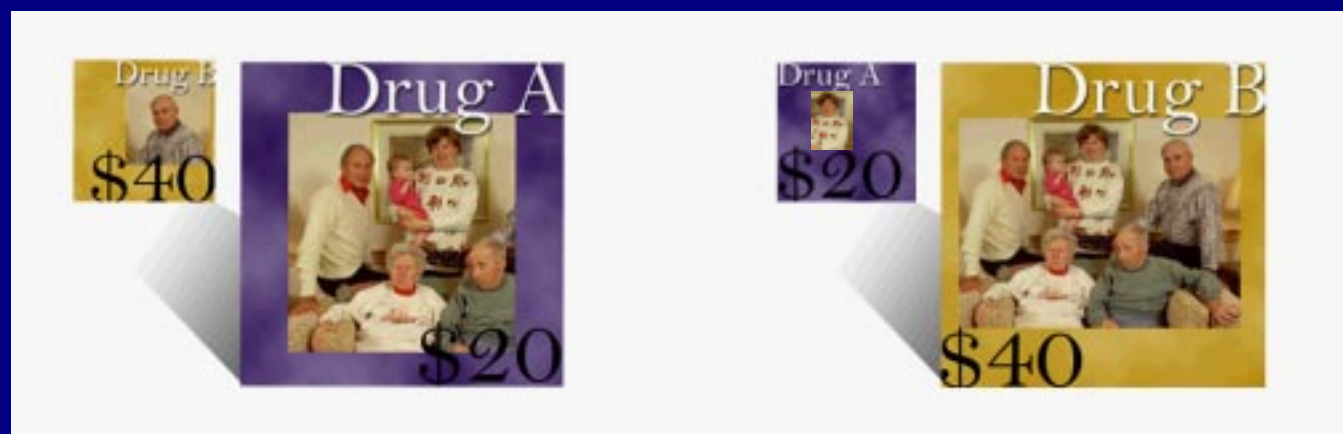
“Prevalence” (or patient volume)





Conceptual Model for Growth in Drug Expenditures

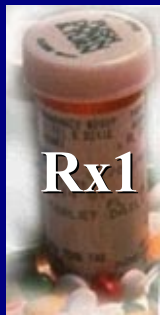
Changes in Drug Mix



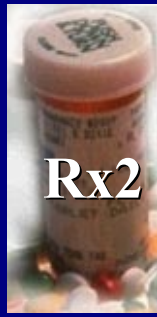
Conceptual Model for Growth in Drug Expenditures

Quantity

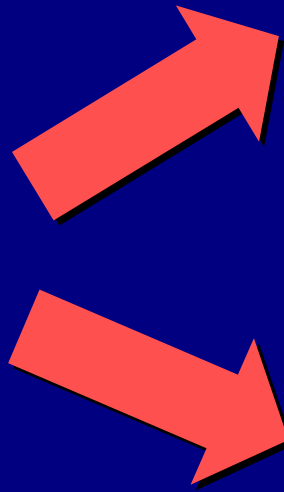
“Use PRN”



March 1



Sept. 1



Change in Days Supply
“Use Daily”



Rx1

March 1



Rx2

Sept. 1



Rx1



Rx2

Change in Scripts/Pt. - Year
“Use on Chronic Basis”



Rx1

March 1



Rx2

April 1



Rx3

May 1



Rx4

June 1



Conceptual Model for Growth in Drug Expenditures

New Products

\$3,000



\$40,000



- Reliability
- Comfort
- Crash Survivability
- Smog Emission



Conceptual Model for Growth in Drug Expenditures

Price Inflation



\$2



\$3



A R E P R I N T F R O M

HEALTH AFFAIRS

Explaining Drug Spending Trends: Does Perception Match Reality?

ROBERT W. DUBOIS, ANITA J. CHAWLA, CHERYL A. NESLUSAN,
MARK W. SMITH, AND SALLY WADE

March/April 2000 Volume 19 Number 2

Published by Project HOPE



Study Methodology

- Performed by Protocare Sciences and Medstat
- Data from health plans and employers
- 3 year time interval (1994 vs. 1997, 1995 vs. 1998, 1997 vs. 1999)
- Controlled for changes in population
- Examined **actual** expenditures
 - Pharmacy charge (co-pay, Plan benefit)



Methodology of Current Study (cont'd)

- Disease/Class specific analysis
 - Anti-diabetics
 - Anti-depressants
 - Anti-lipidemics
 - Gastrointestinal drugs
 - Hormone replacement therapy
 - Anti-histamines
 - Asthma



50% of
Total Rx
Dollars

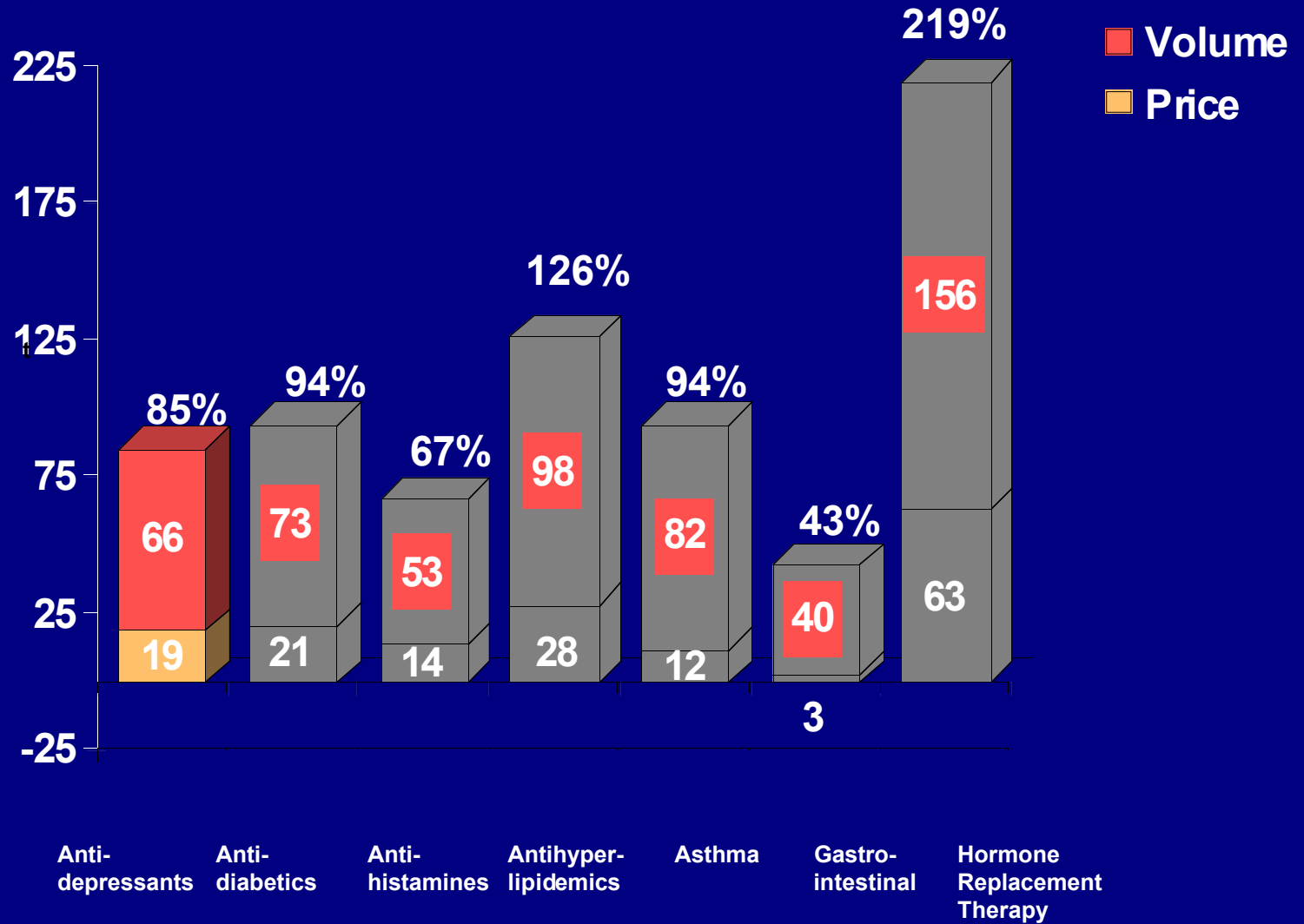


*Examples from Key Diseases and Drug
Classes*

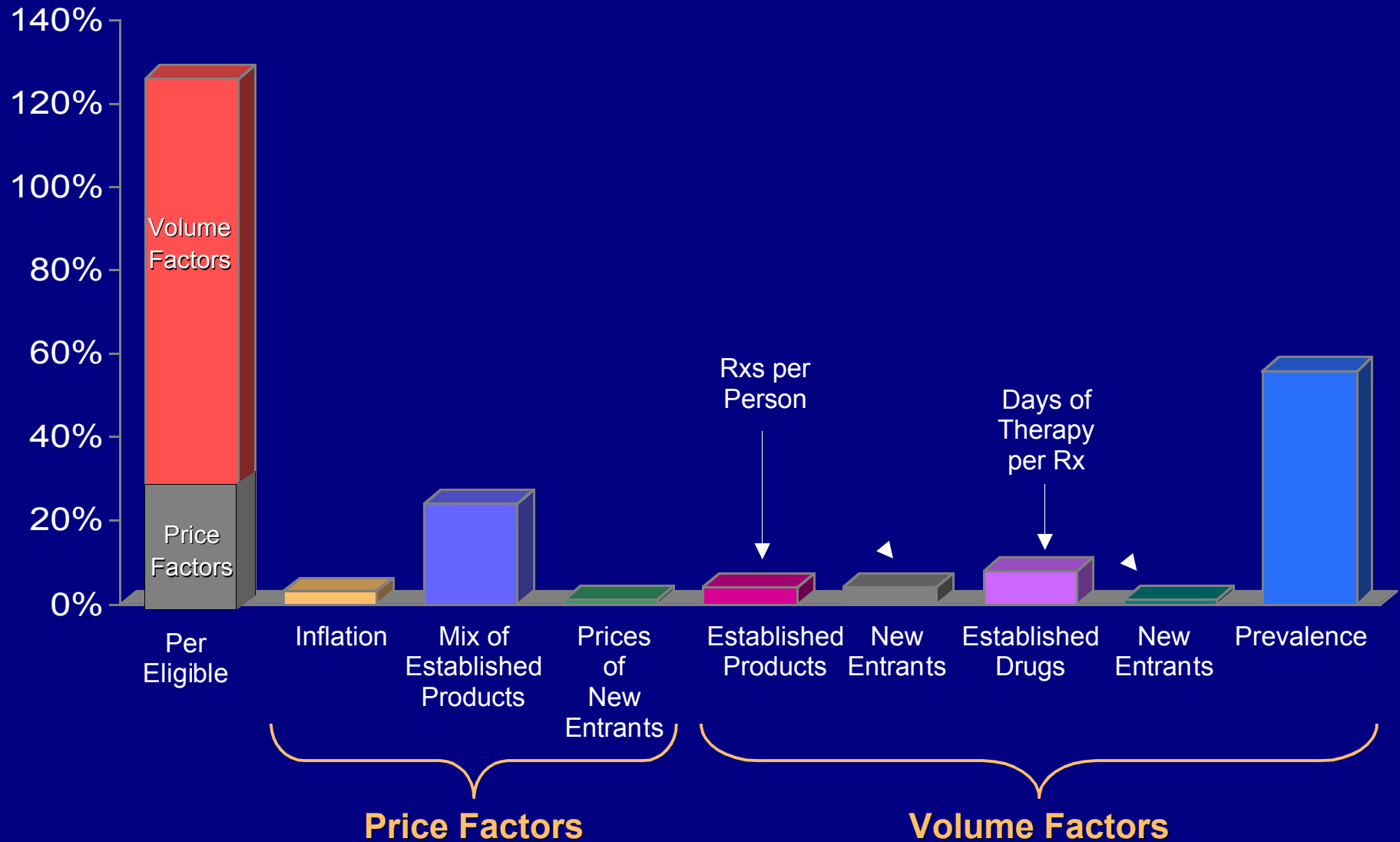


All Diseases

3 Year Growth



Factors Responsible for Growth in **Antihyperlipidemics** 1997-1999



Source: Medstat



Changes in Lipid Care*

New Science

- Lipid reduction can stop progression and may reduce atherosclerosis

Best Practice

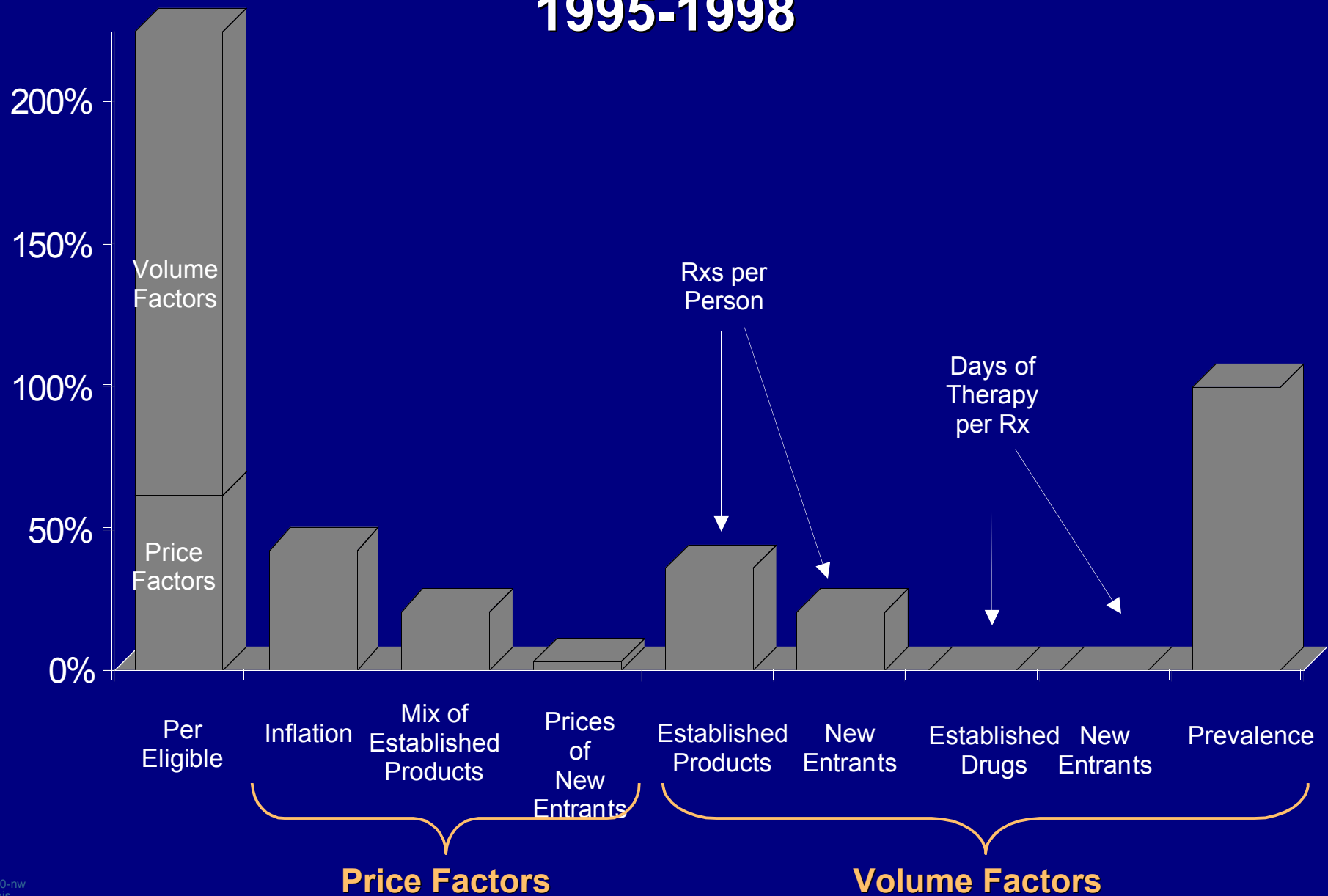
- Routine lipid screening
- Ease of statin use improves compliance

More Patients

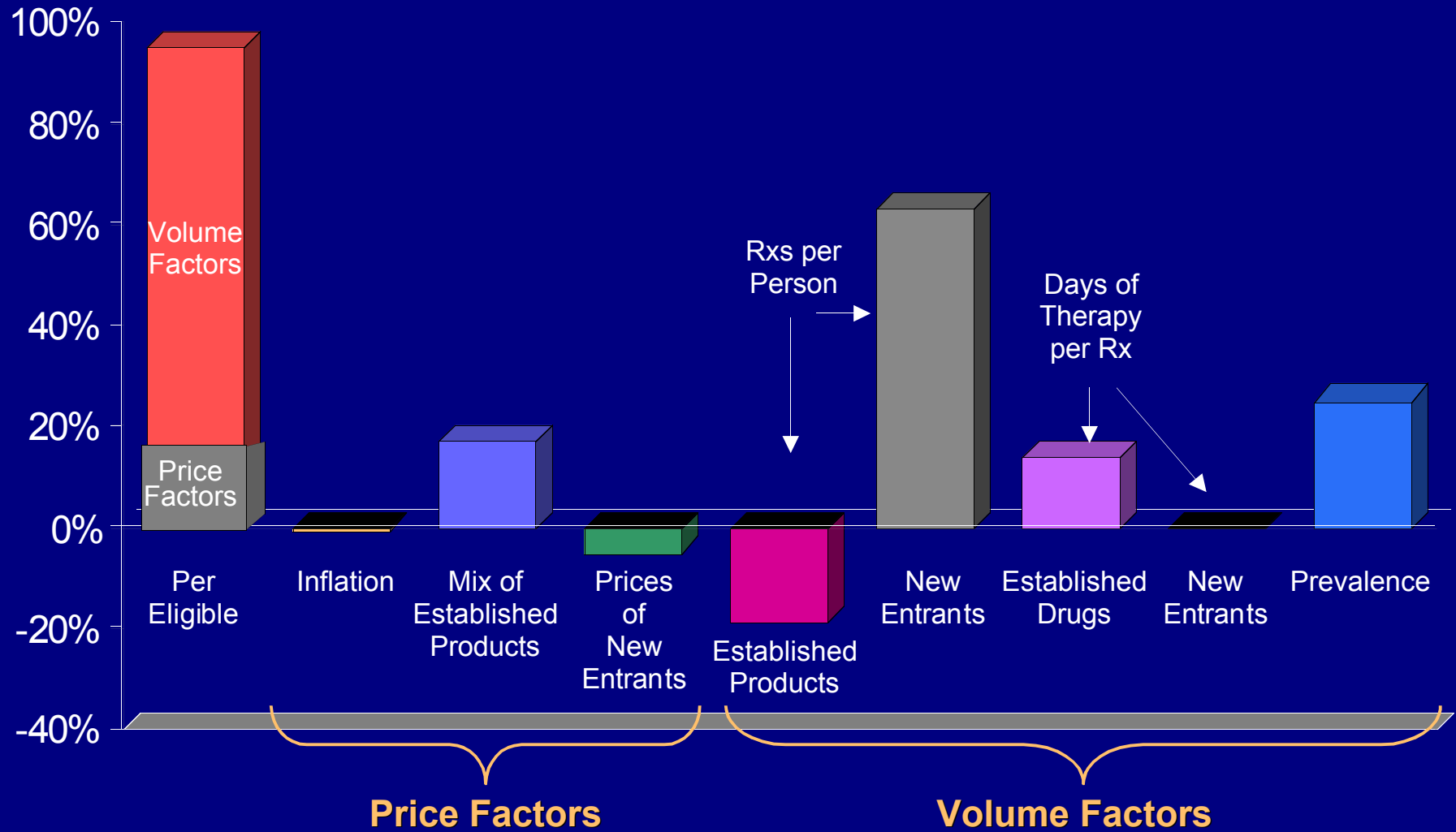
- ✓ ✓
- Result of screening
- Patient awareness

*1997 vs. 1999 (66,270 patients in '99)

Growth in Hormone Replacement Therapy 1995-1998



Factors Responsible for Growth in all Asthma-Related Therapy 1995-1998





Appropriateness of Lipid Therapy

Hierarchy

- ① Prior “event” (MI, CABG/PTCA)
- ② Vascular Disease (Angina, PVD, CVD)

- ③ Diabetes or Multiple Risk Factors
- ④ Single Risk Factor
- ⑤ Hypercholesterolemia
- ⑥ No Reason

2° Prevention

1° Prevention



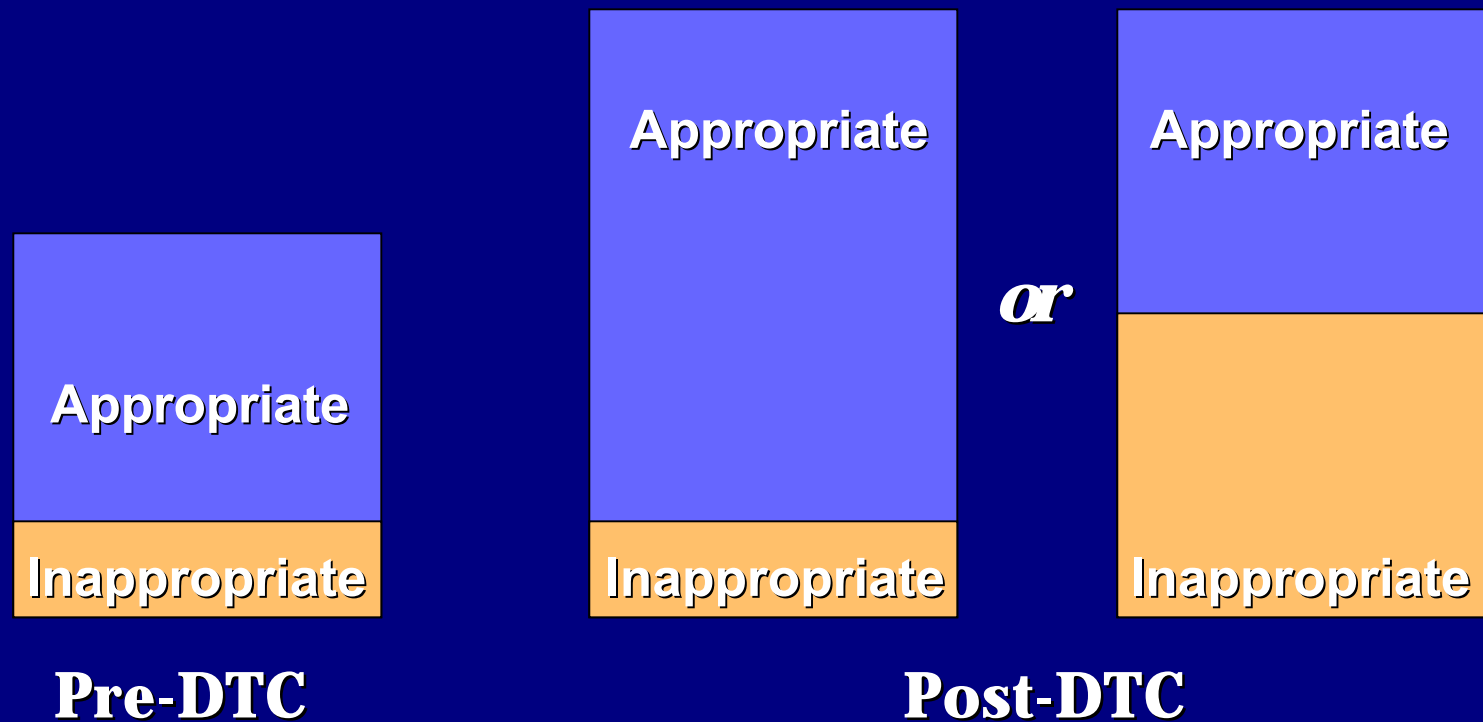
Outline: Pharmaceutical Spending

1. How much growth has occurred?
2. What could cause growth?
3. Is it price or volume?
4. Is the volume appropriate?
5. **Is it bad news or good news?**
6. Is it the right question?



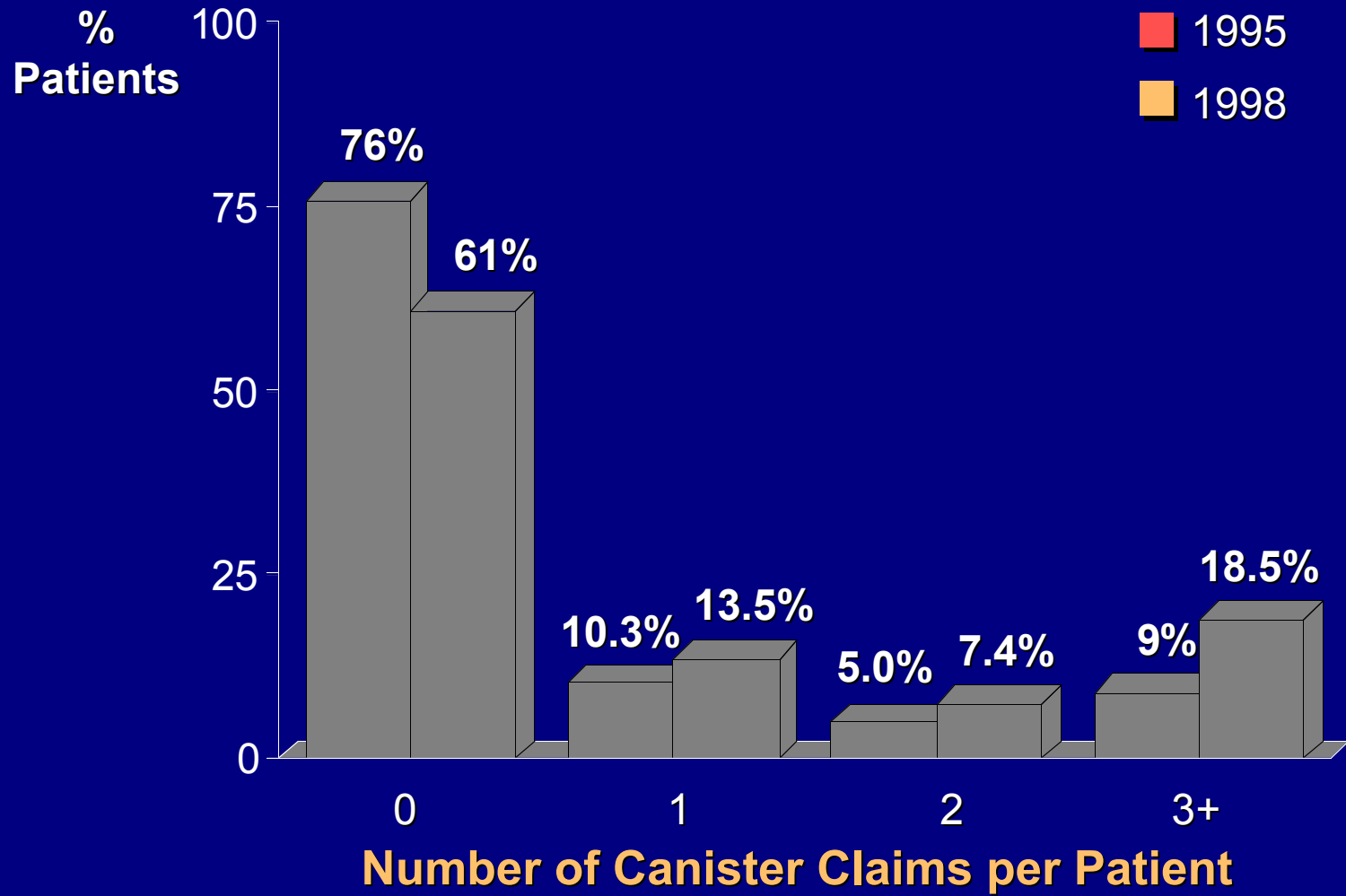
Cause of Rising Volume

Hypothesis: Are the increases in volume due to more patients receiving more prescriptions for appropriate/high value situations?





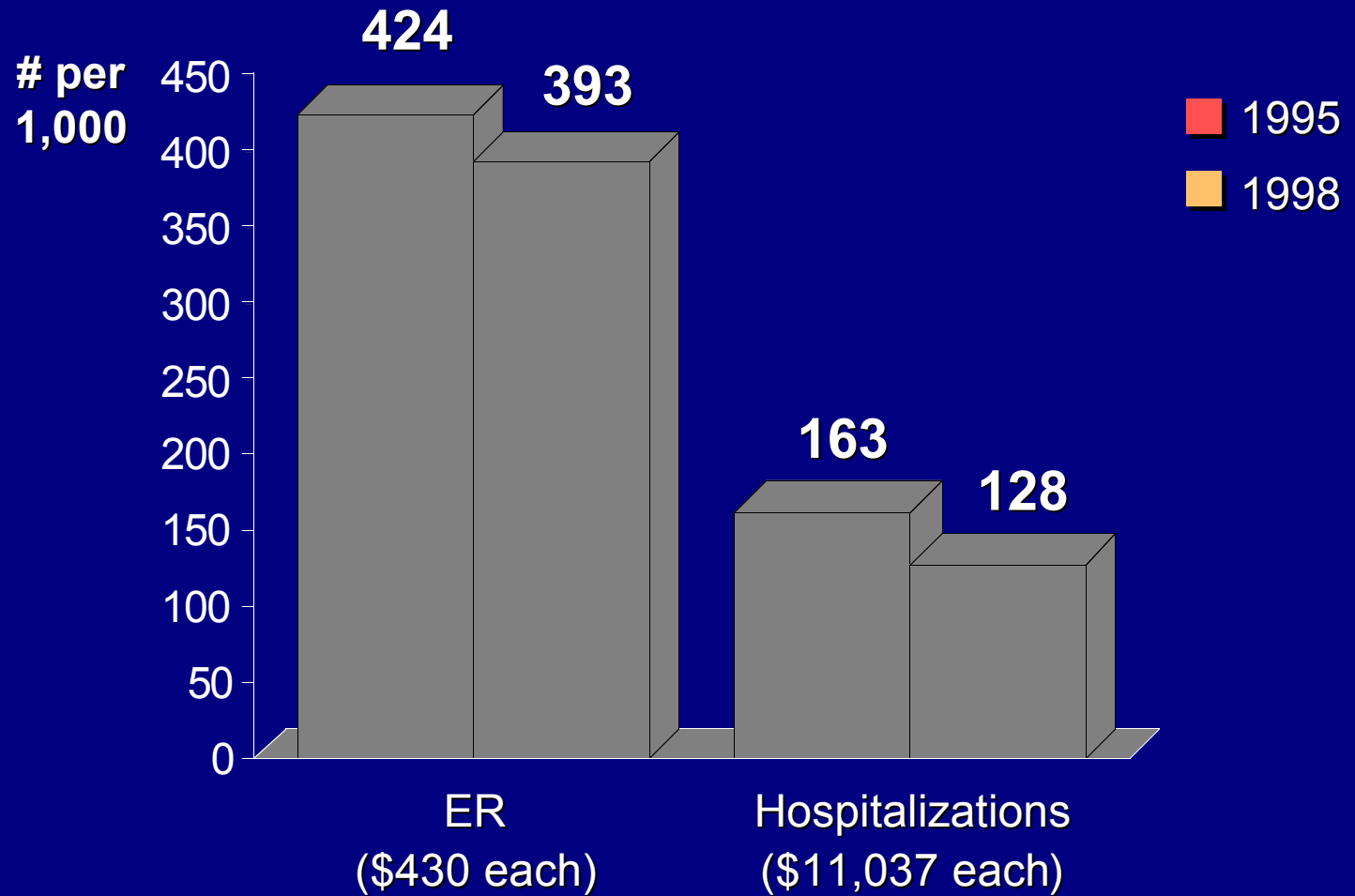
Utilization of Inhaled Corticosteroids



Source: Protocare Sciences



Asthma Related Hospital and ER Use



Rate per 1,000 Asthmatics

Source: Protocare Sciences



Resource Use Offset: Asthma



Source: Protocare Sciences



Outline: Pharmaceutical Spending

1. How much growth has occurred?
2. What could cause growth?
3. Is it price or volume?
4. Is the volume appropriate?
5. Is spending growth bad news or good news?
6. Is it the right question?



Market Responses to Rising Volume

- Be happy?
- Administrative
 - more excluded drugs
 - defined benefit (\$1000/year)
 - higher co-pays
 - prior authorization for chronic therapies