

**Asthma COPD Coalition:
Improving Inpatient and
Outpatient Treatment of COPD:
What Local Coalitions Can Do?**

Sidney S. Braman MD FCCP
Professor of Medicine
Mount Sinai School of Medicine
New York, NY

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Sidney S. Braman, MD, FCCP

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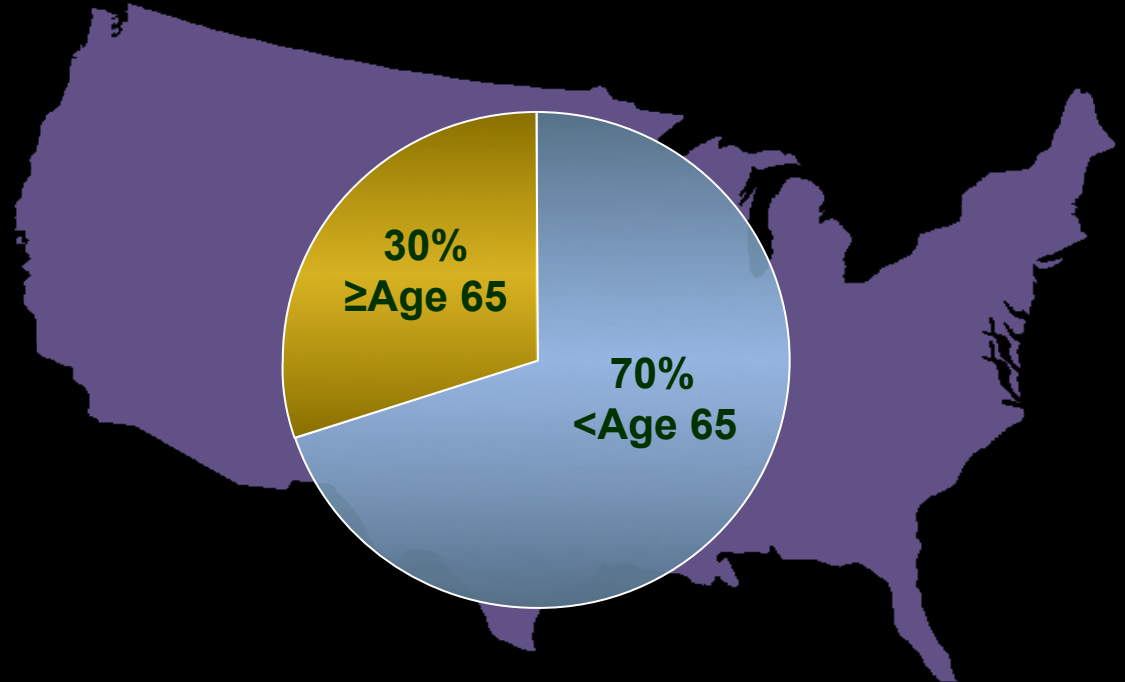
Objectives

- Recognition of the COPD Patient
- Improvements In Care for COPD
- Impediments to Optimal Care for COPD
- What Can COPD Coalitions do to improve outcomes?

Recognition of the COPD

Under Diagnosis of COPD in the United States

- Over 12.7 million people in the United States have been diagnosed with COPD¹
- Data from NHANES III indicate that approximately 24 million United States adults have evidence of impaired lung function indicative of COPD^{2,3}
- Most (70%) of patients with undiagnosed COPD are <65 years of age



Percent with Undiagnosed COPD

1. Pleis et al. Vital Health Stat. 2006;132: 1-153.
2. Mannino et al. MMWR Surveill Summ. 2002;51:1-16.
3. Mannino et al. Proc Am Thorac Soc 2007;4:502-306.

COPD Is a Major Public Health Problem

- **15 million office visits each year due to COPD**
- **721,000 hospitalizations each year for COPD**
 - **21% mortality rate at one year after being hospitalized for an exacerbation**
- **COPD is currently the 4th-leading cause of death in the United States**
- **On average, more people die every day from COPD than diabetes or breast cancer**
 - **357 per day from COPD**
 - **208 per day from diabetes**
 - **114 per day from breast cancer**

COPD is a disease that develops over decades:



Many teen-agers have cigarette addiction before their 18th birthday

COPD is a disease that develops over decades:



COPD



**The disease remains silent
in mid-life**

COPD is a disease that develops over decades:



COPD



**The disease remains silent
in mid-life**

COPD is a disease that develops over decades:



COPD



COPD



Symptoms often ignored:
“I am just getting older”

Lung function testing
underutilized

COPD is a disease that develops over decades:



COPD



COPD



COPD



The disease is finally recognized at an advanced age

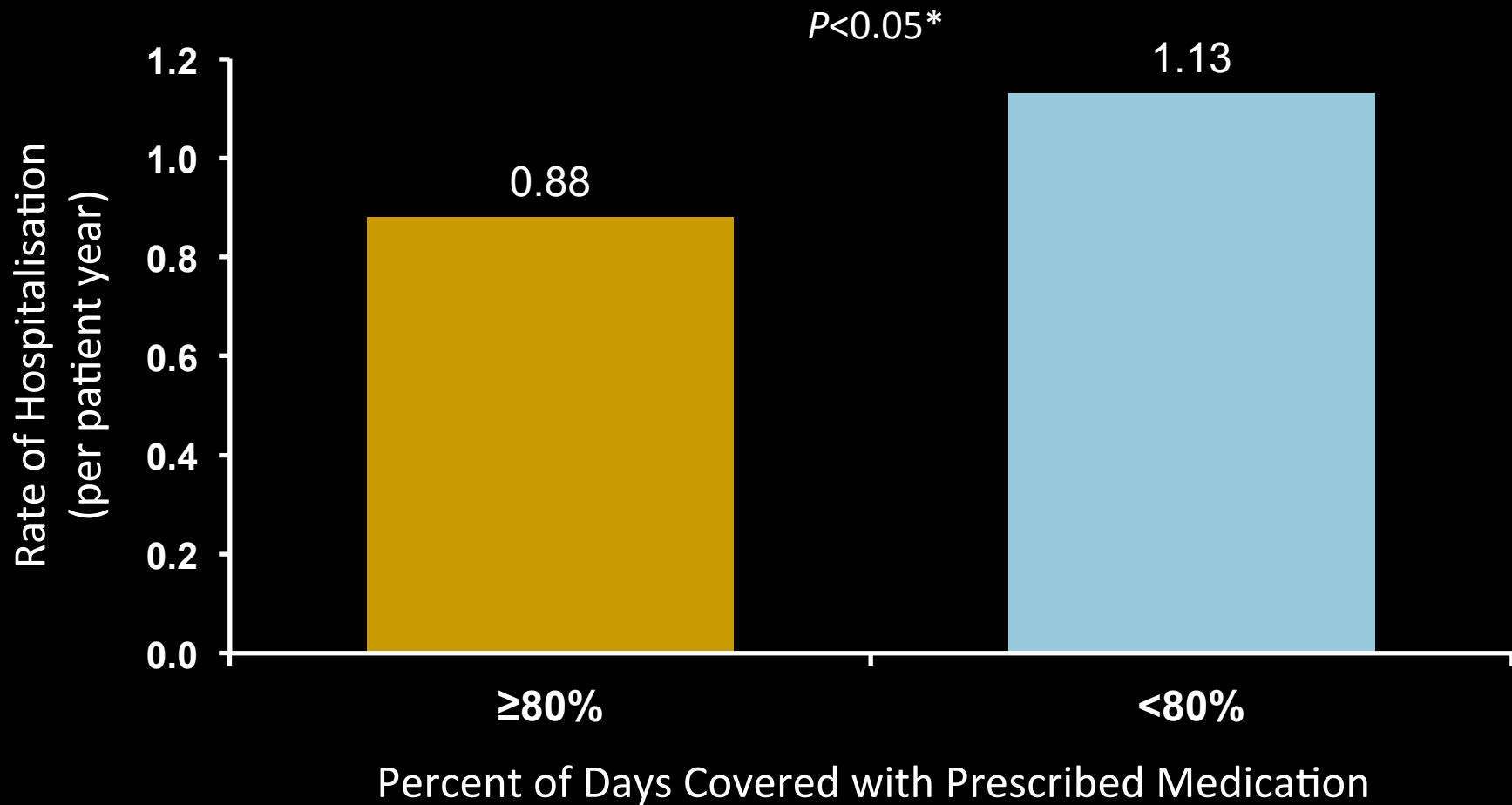
How can we improve care for
COPD?

Evidence-based Measures That Improve COPD Outcomes

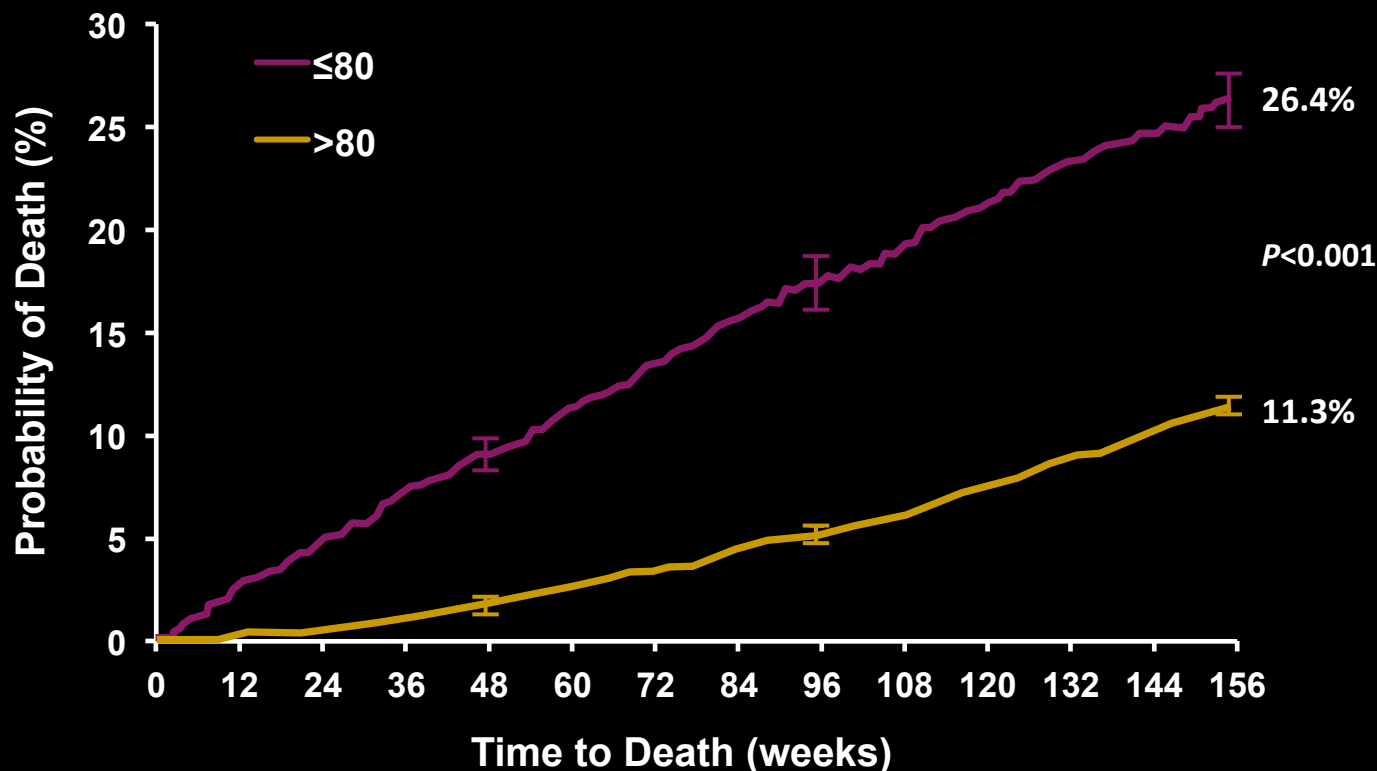
- Reduce risk factors
- Immunizations
- Medications
- Pulmonary rehabilitation
- Supplemental oxygen
- Integrated patient education programs

Do These Measures
Work?

Higher Adherence to Therapy Lowers Risk for Hospitalization in COPD

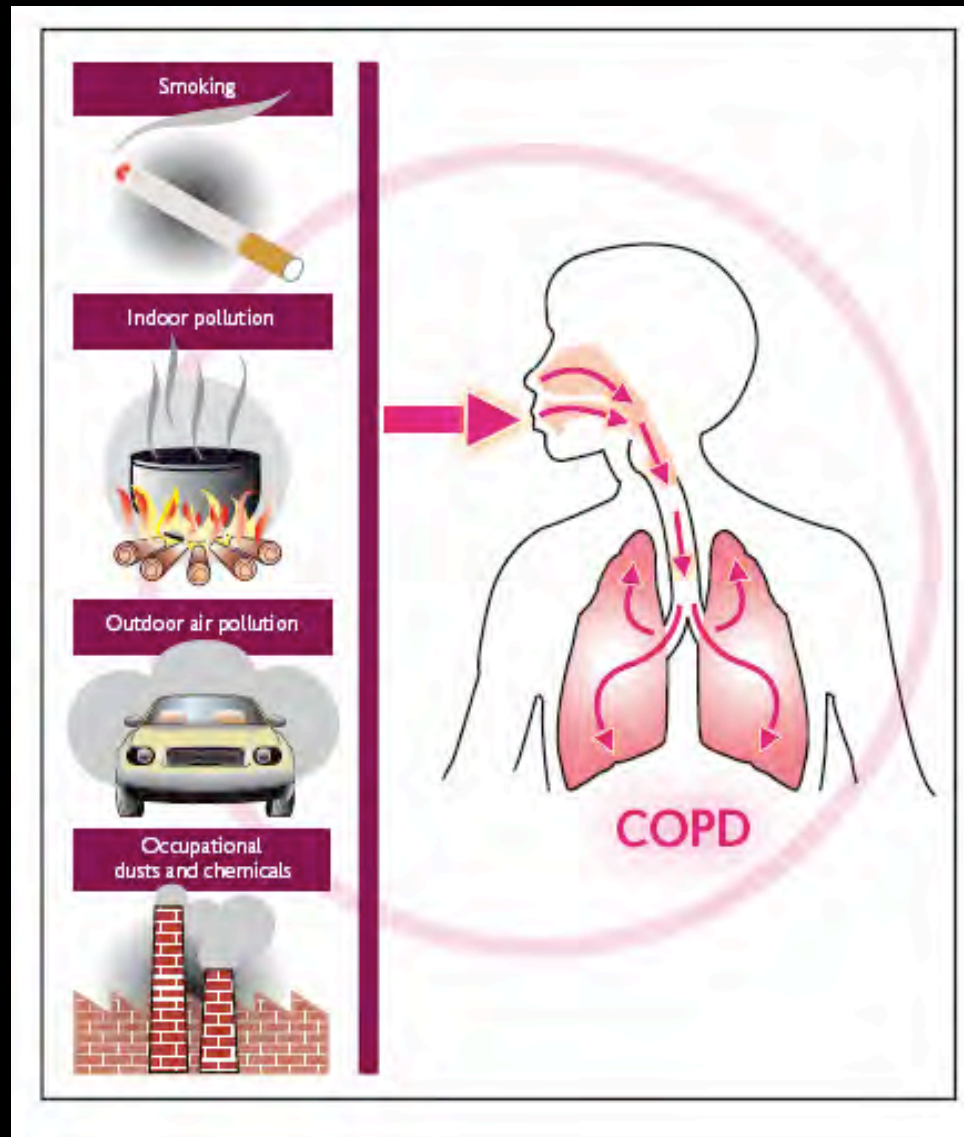


Higher Adherence to Therapy Is Associated with Decreased Mortality in COPD



Good adherence was associated with a 60% mortality risk reduction independent of study therapy

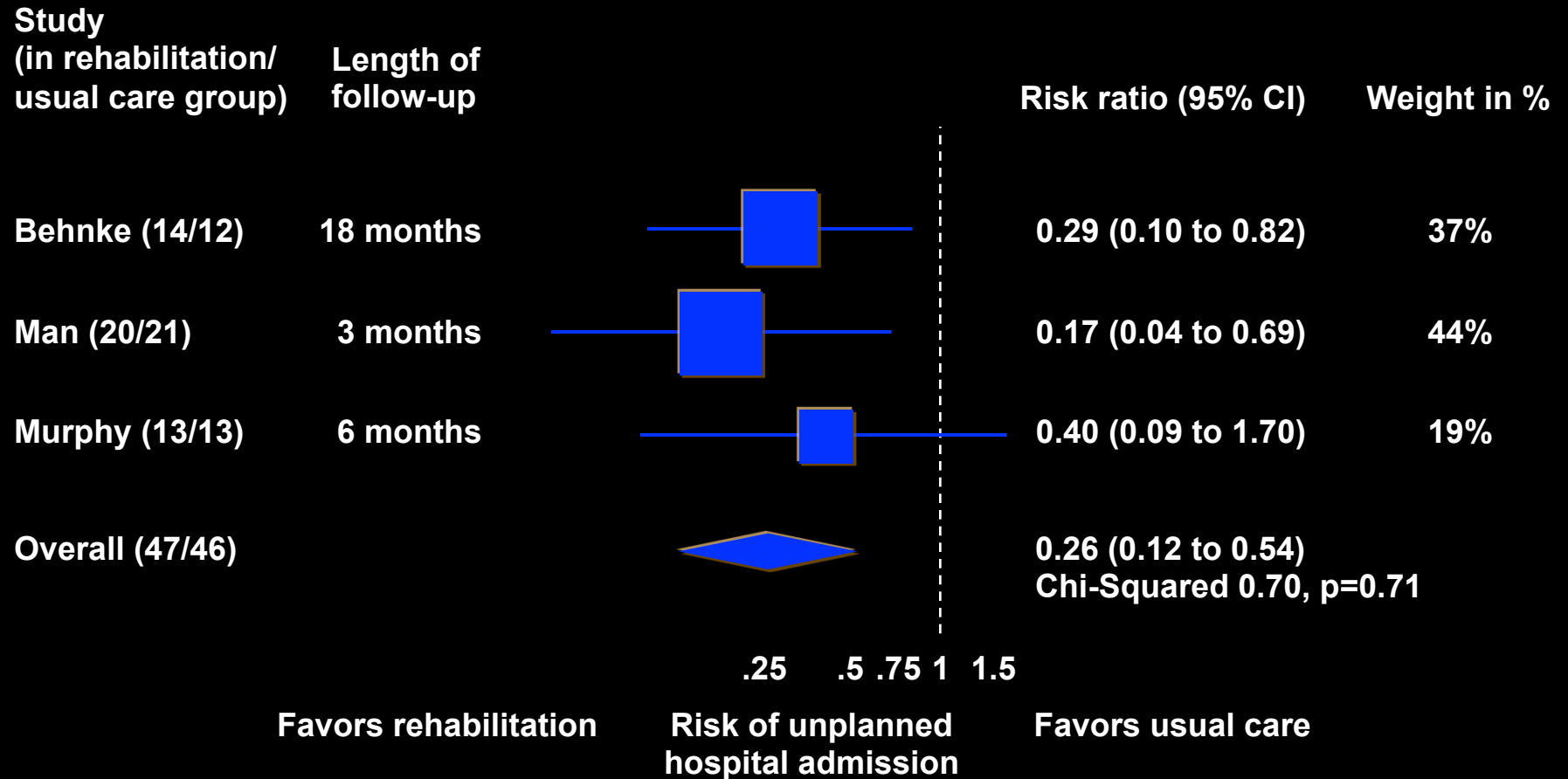
Reducing Risk Factors for COPD Reduces Exacerbations⁴



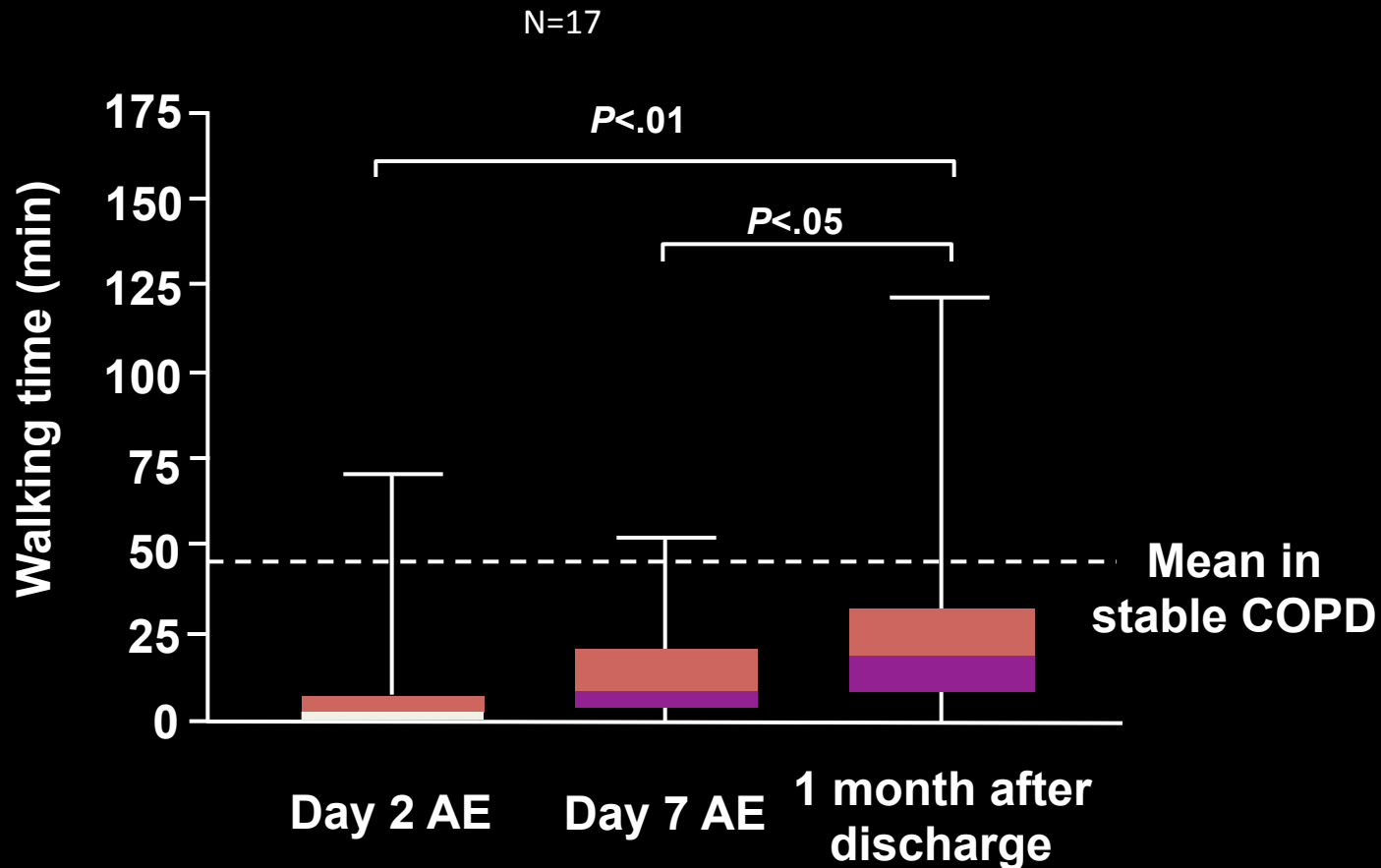
Underutilization of Long term Oxygen Therapy is Associated with Higher Risk of Hospitalization²³

- In a multivariate model the following cause higher hospitalization rates:
 - ❖ Three or more COPD admissions in the previous year, (OR 6.21 P=0.008)
 - ❖ Underprescription of long term oxygen (OR 22.64) P=0.007

Pulmonary Rehabilitation Reduces Risk of Unplanned Admission



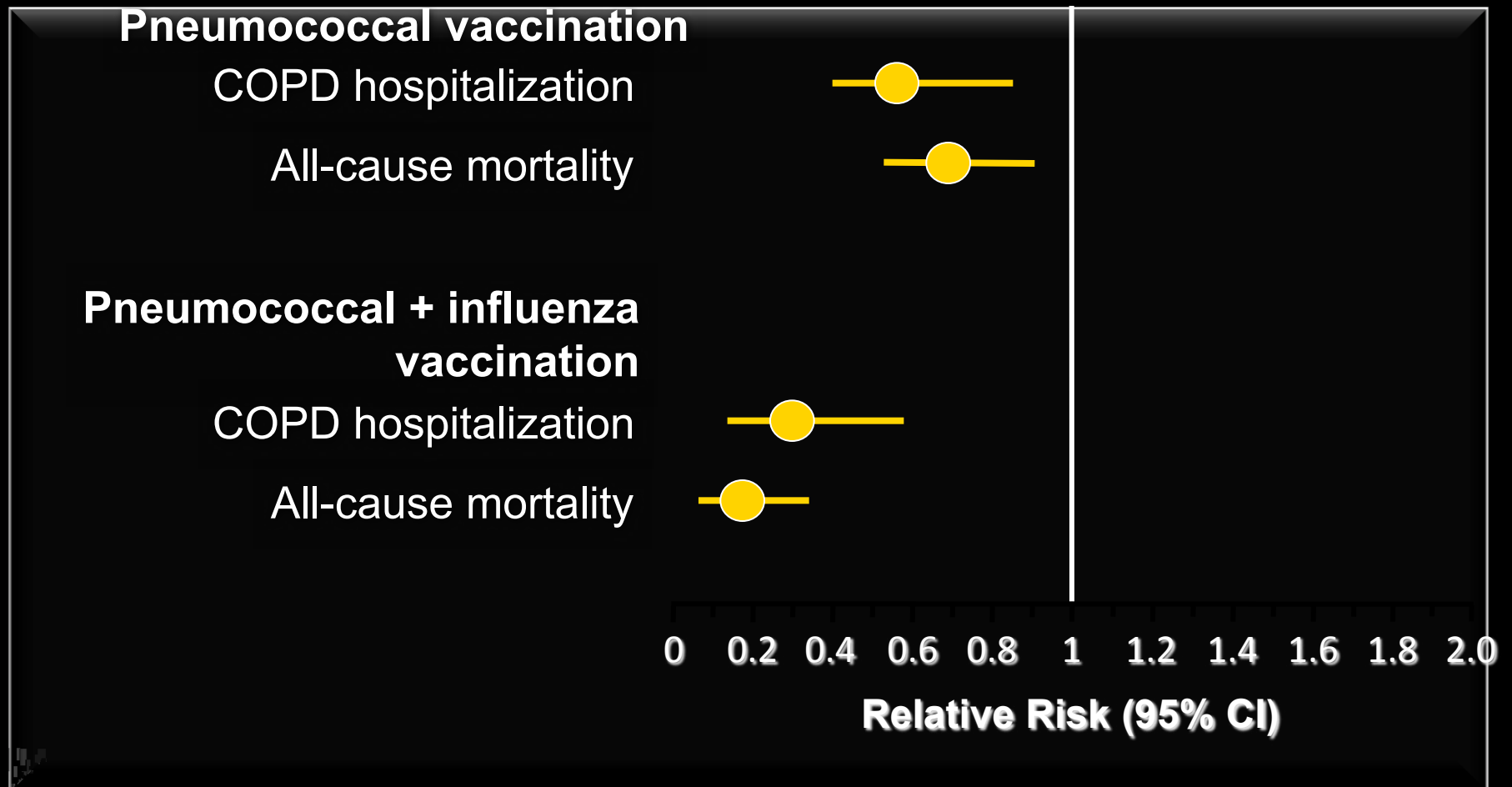
Following Hospitalization for an Acute Exacerbation, Walking Time Is Reduced



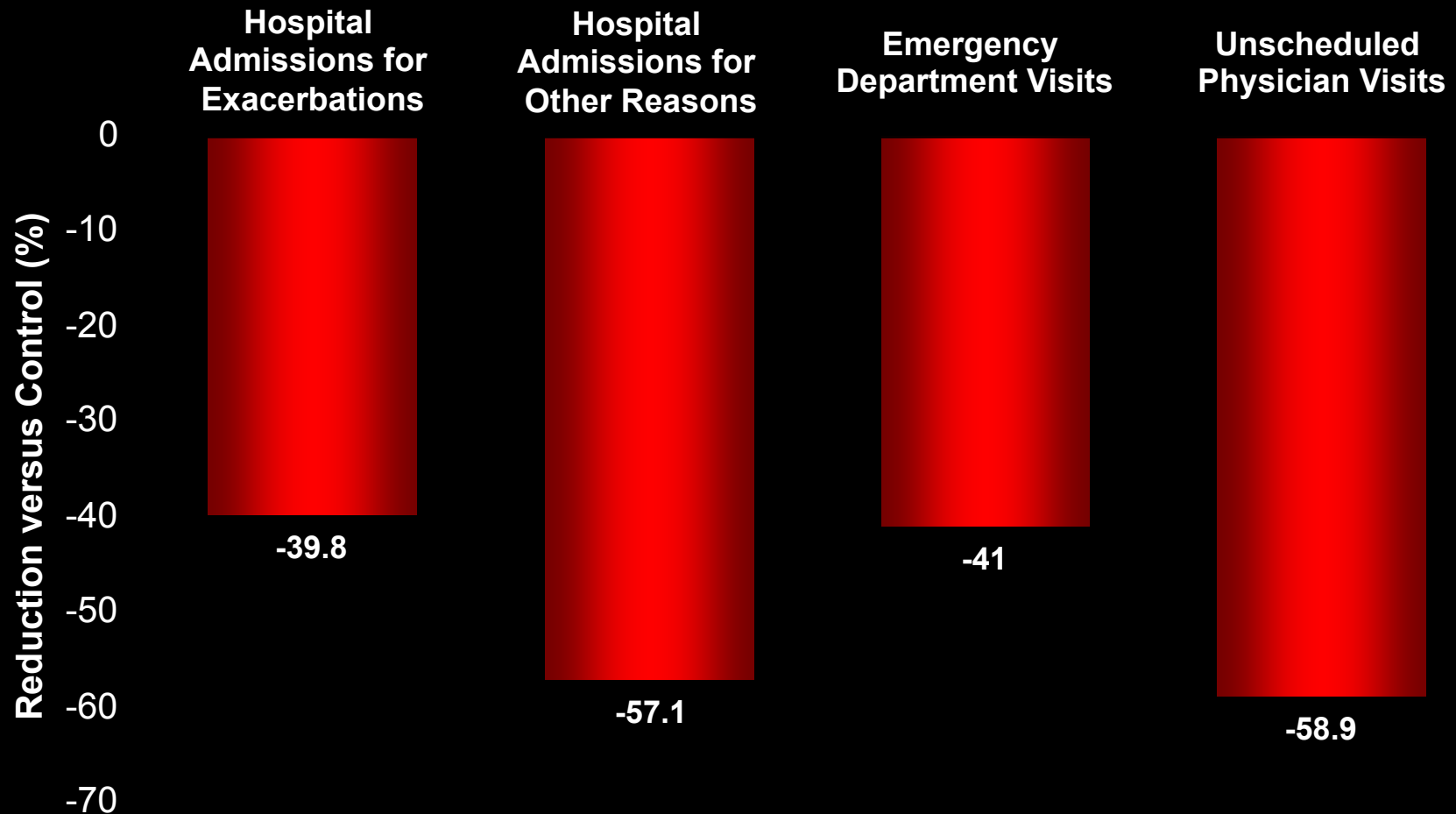
AE=acute exacerbation.

Data are shown as box plots with the lower portion (dark blue) representing the 25% percentile, the center line reflecting the median, and the upper portion (light blue) representing the 75% percentile.

Pneumococcal and Influenza Vaccinations Reduce COPD Exacerbations



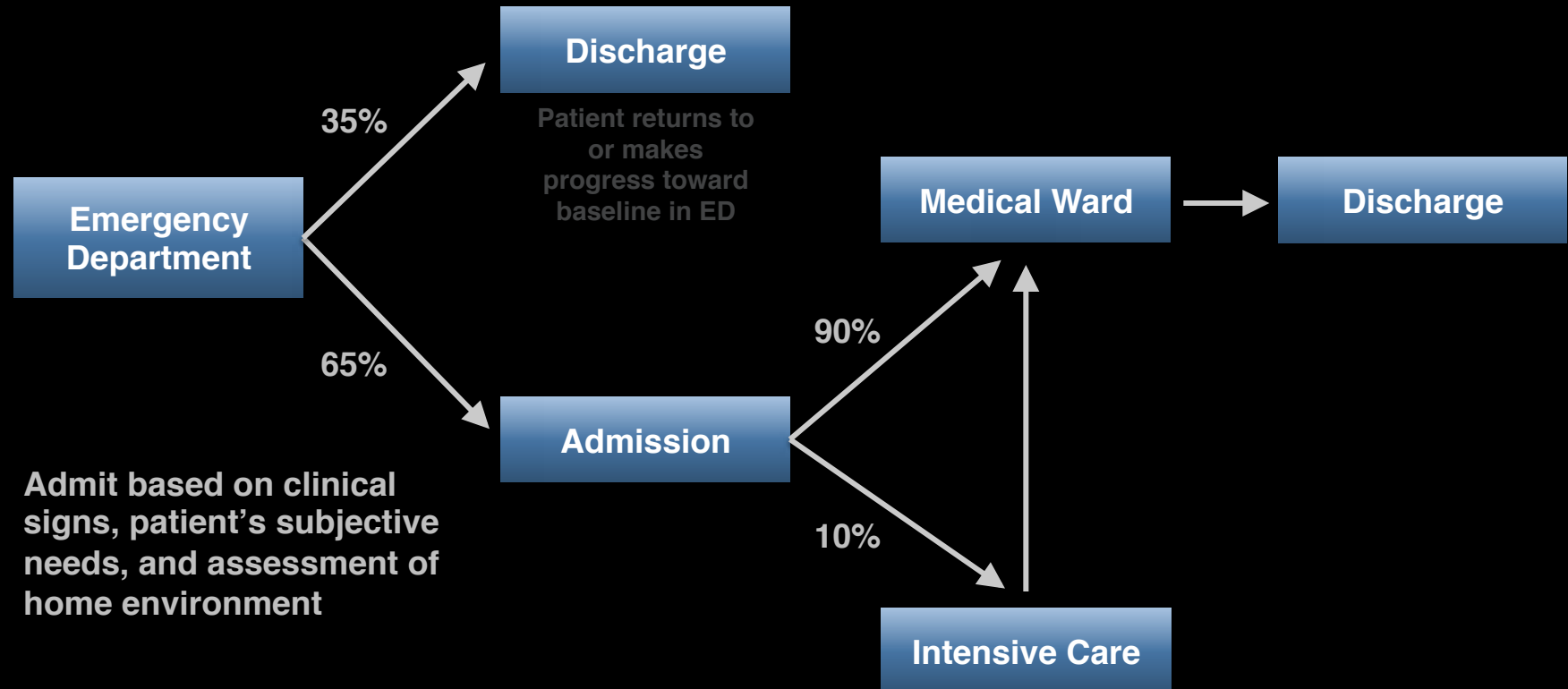
Patient Education in COPD Reduces Exacerbations



Bourbeau et al. Arch Intern Med. 2003;163:585-591

COPD Exacerbations Result in Hospitalizations

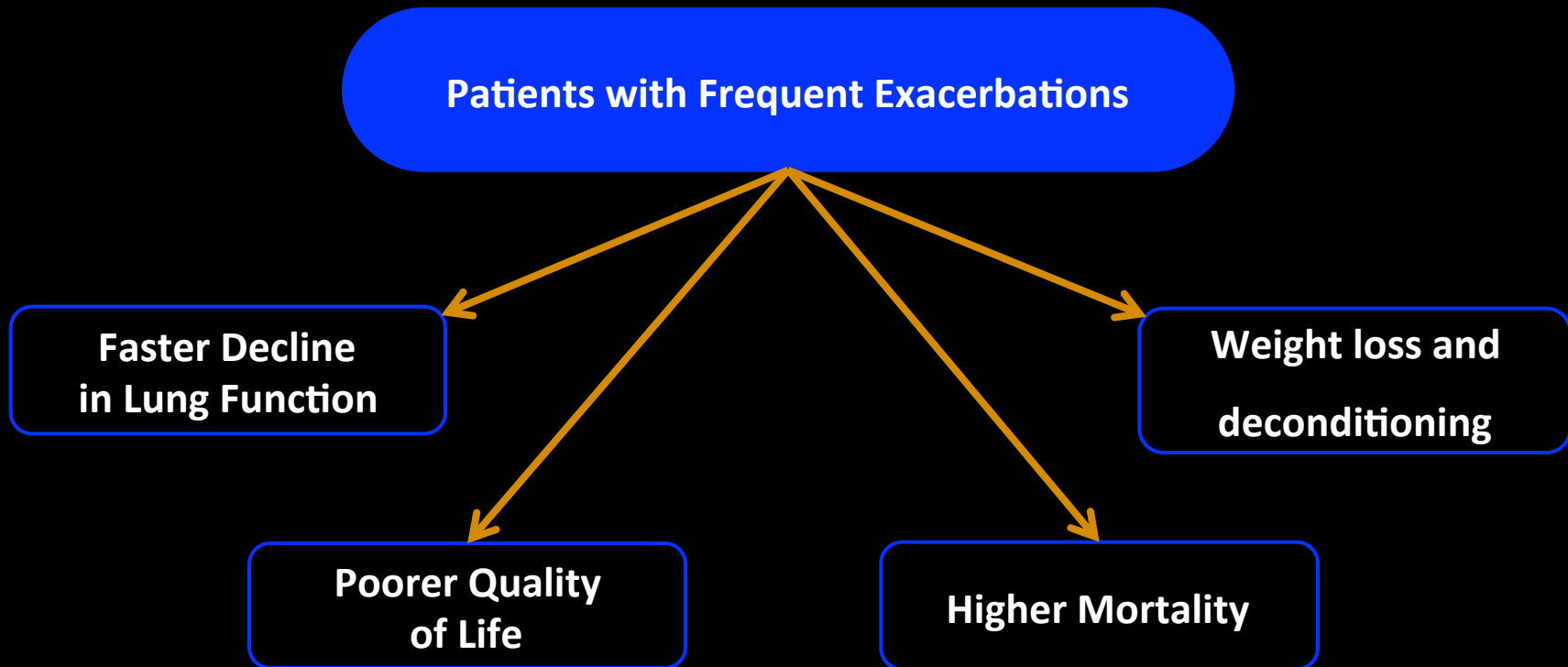
In US, 1.5 MM Emergency Department visits due to COPD exacerbations annually



Mannino DM. *Respir Care* 2003;48:1185–91.

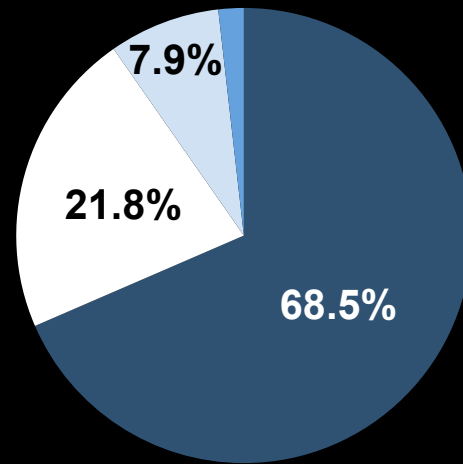
Based on market research data of healthcare providers within hospital settings, including ED, hospitalists, pulmonology (n=70).

COPD Exacerbations Lead to Poor Patient Outcomes



Direct Costs for COPD

**Total estimated direct costs of COPD in the US
are \$29.5 Billion¹**



Direct medical expenditures in COPD patients²

- Hospital admissions
- Outpatient visits
- Prescribed drugs
- Emergency room visits

The costs that are presented here are not exclusively related to COPD exacerbations

1. National Heart, Lung, and Blood Institute. National Institutes of Health. Morbidity and Mortality: 2009 Chartbook on Cardiovascular, Lung and Blood Diseases. www.nhlbi.nih.gov/resources/docs/2009_Chartbook.pdf. Accessed October 15, 2011.
2. Strassels SA et al. *CHEST*. 2001;119:344-52.

CMS Readmissions Reduction Program

- Readmission occurs when a patient is discharged from a hospital and then readmitted to the same hospital or another hospital within a time period specified by the Secretary of Health and Human Services (HHS).
- In 2012, **CMS** will reduce Medicare payments to hospitals with excessive **readmissions** of patients admitted for heart attack, heart failure, or pneumonia.
- In 2013, the list will expand to include **COPD**, bypass surgery, and other heart and vascular procedures
- The reduction in payments will begin in 2013

30-Day Readmission Rates Among COPD Patients in 15 States

	Percentage of Index Admissions Followed by a Readmission		
	COPD is Principle Diagnosis	COPD is Any Diagnosis	All-Cause Readmissions
Total	7.1%	17.3%	20.5%
40-64 years of age	7.8%	16.2%	19.8%
≥65 years of age	6.8%	17.9%	20.8%
Male	7.6%	18.6%	21.6%
Female	6.7%	16.3%	19.6%
Race/ethnicity (data from 12 states that provide information on patient's race)			
White	7.2%	17.8%	20.5%
Black	8.0%	17.6%	23.1%
Hispanic	6.1%	15.1%	20.4%
Asian or Pacific Islander	6.1%	15.2%	19.1%
Median household income			
1 st quartile (lowest income)	7.8%	17.9%	21.5%
2 nd quartile	7.1%	17.1%	20.2%
3 rd quartile	6.6%	16.8%	19.6%
4 th quartile (highest income)	6.4%	17.1%	20.2%

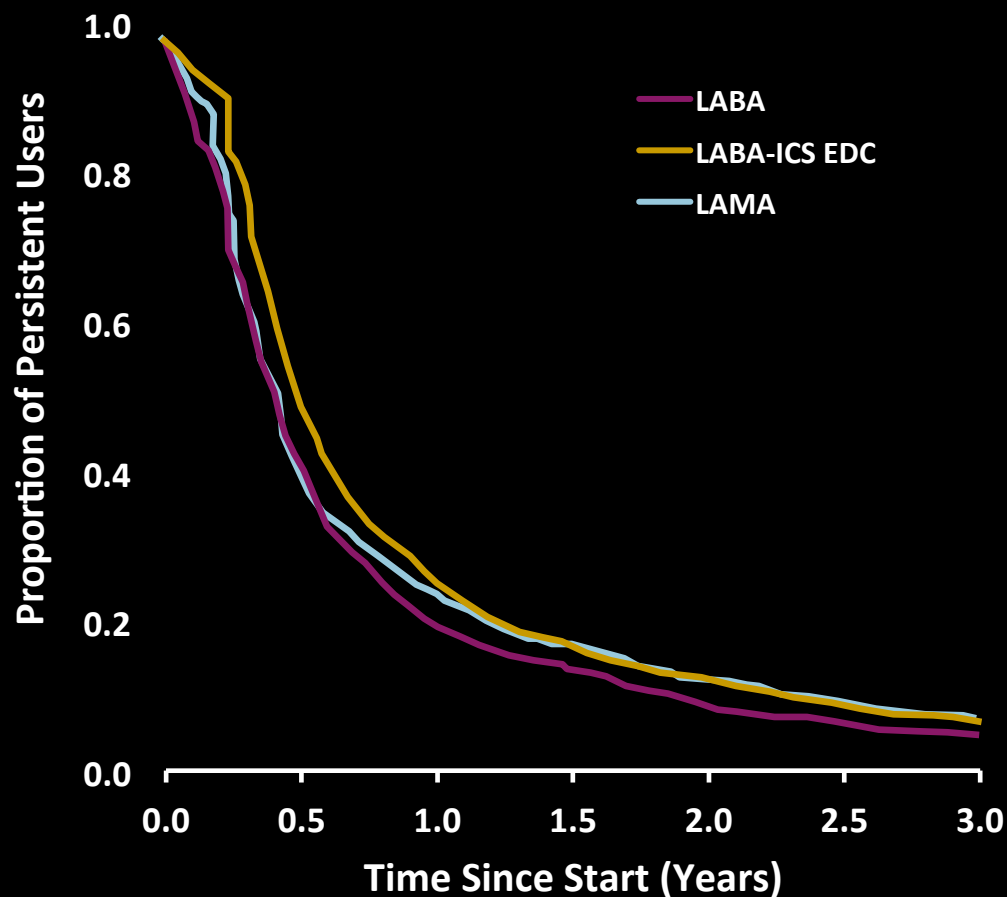
Elixhauser A, et al. *Healthcare Cost and Utilization Project (HCUP) Statistical Brief #121*. Rockville (MD): Agency for Health Care Policy and Research (US). 2011.

Barriers to Improved Care for COPD

Barriers to Improved Care for COPD

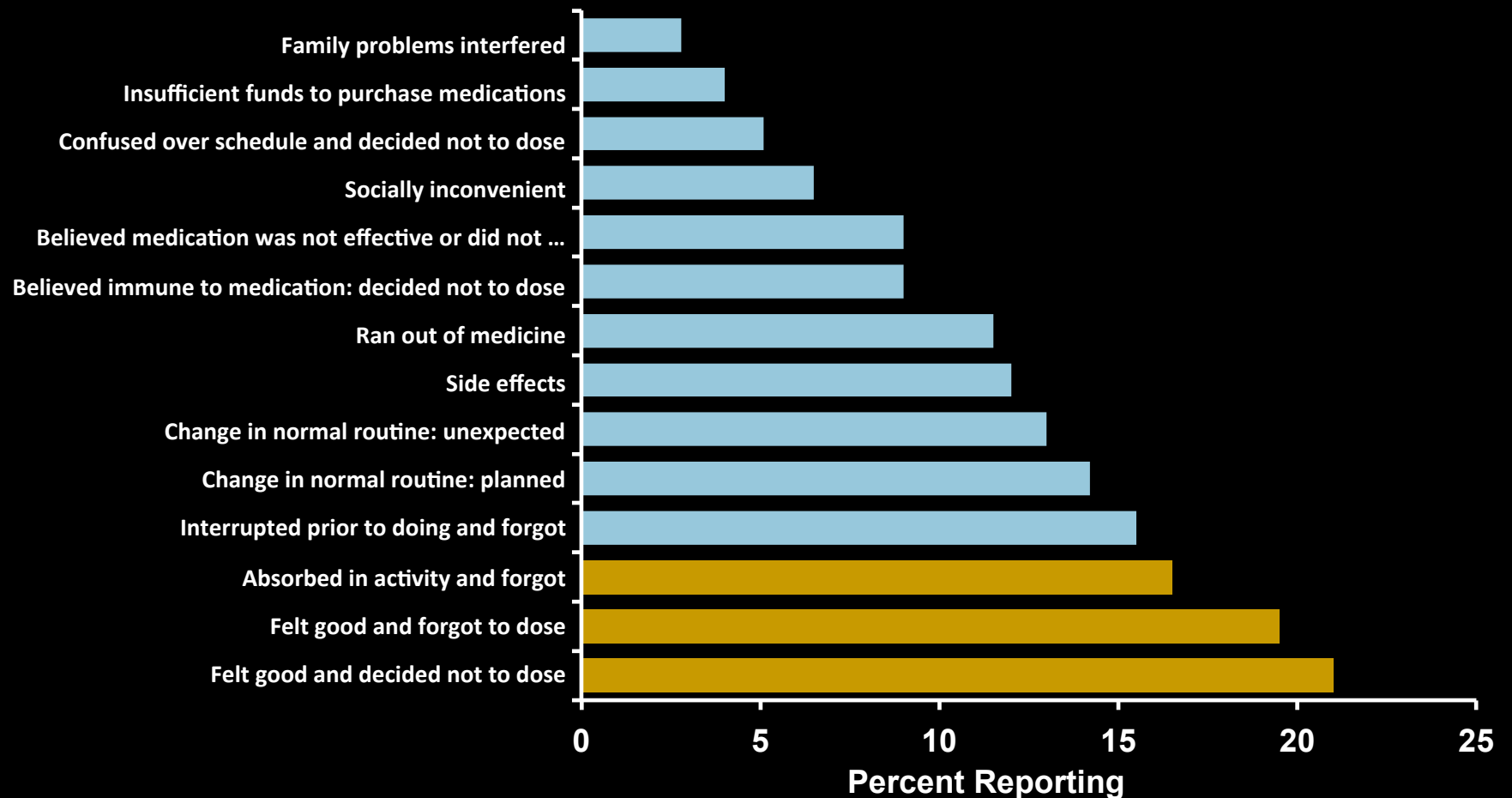
- Failure to communicate to patient need for medical treatment
- Poor patient self-management skills
- Inadequate follow-up in the post-discharge setting
- Community infrastructure and awareness problems
- Insufficient patient support, including support from family caregivers
- Medication discrepancies that occur during an initial admission or following a discharge and which may result in illness or harm to a patient.

Persistence with Inhaled Medications Declines to About 50% within 6 Months of Initiation

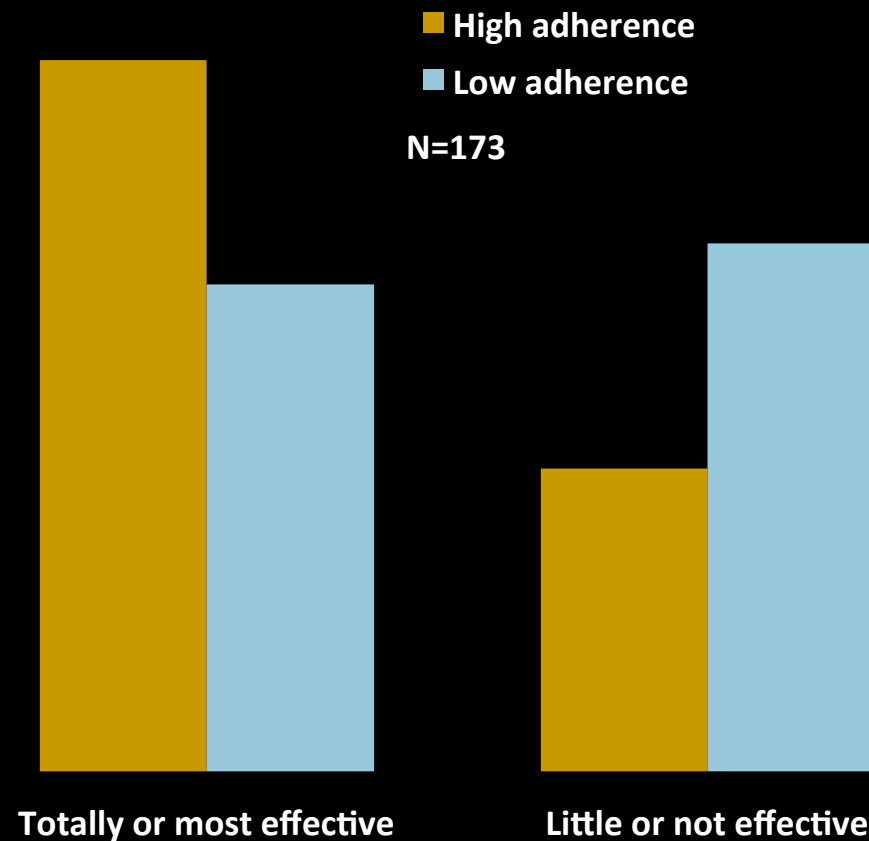


Persistence with any inhaler was 36%, 23%, and 17% at years 1, 2, and 3, respectively

The Most Common Reason for Nonadherence in COPD Patients Is Lack of Symptoms



Patient-related Factors: Belief in Treatment Efficacy Is Associated with Higher Adherence



Improving Care for COPD

Patients An Integrated Goal-directed Program

1. Develop COPD registry of all patients admitted with acute exacerbation
2. Patients will be identified by Respiratory Care Department when called for treatments
3. At discharge, patients are referred to follow up with multidisciplinary hospital COPD Care Team (physician, therapist, case manager?)
4. This single visit will take place approximately one week post discharge
5. Follow up phone calls will be done after visit by COPD Care Team

Improving Care for COPD

An Integrated Goal-directed Program

During visit COPD Care Team will:

- Confirm diagnosis and staging with spirometry
- Establish goals and review care plan for recovery period
- Confirm smoking cessation efforts/avoidance of risk factors
- Confirm immunization (influenza/pneumovax)
- Review medication list and patient adherence
- Teach proper technique with inhaled medications
- Teach proper breathing and cough techniques
- Assure adherence to oxygen prescription
- Assess eligibility for pulmonary rehabilitation

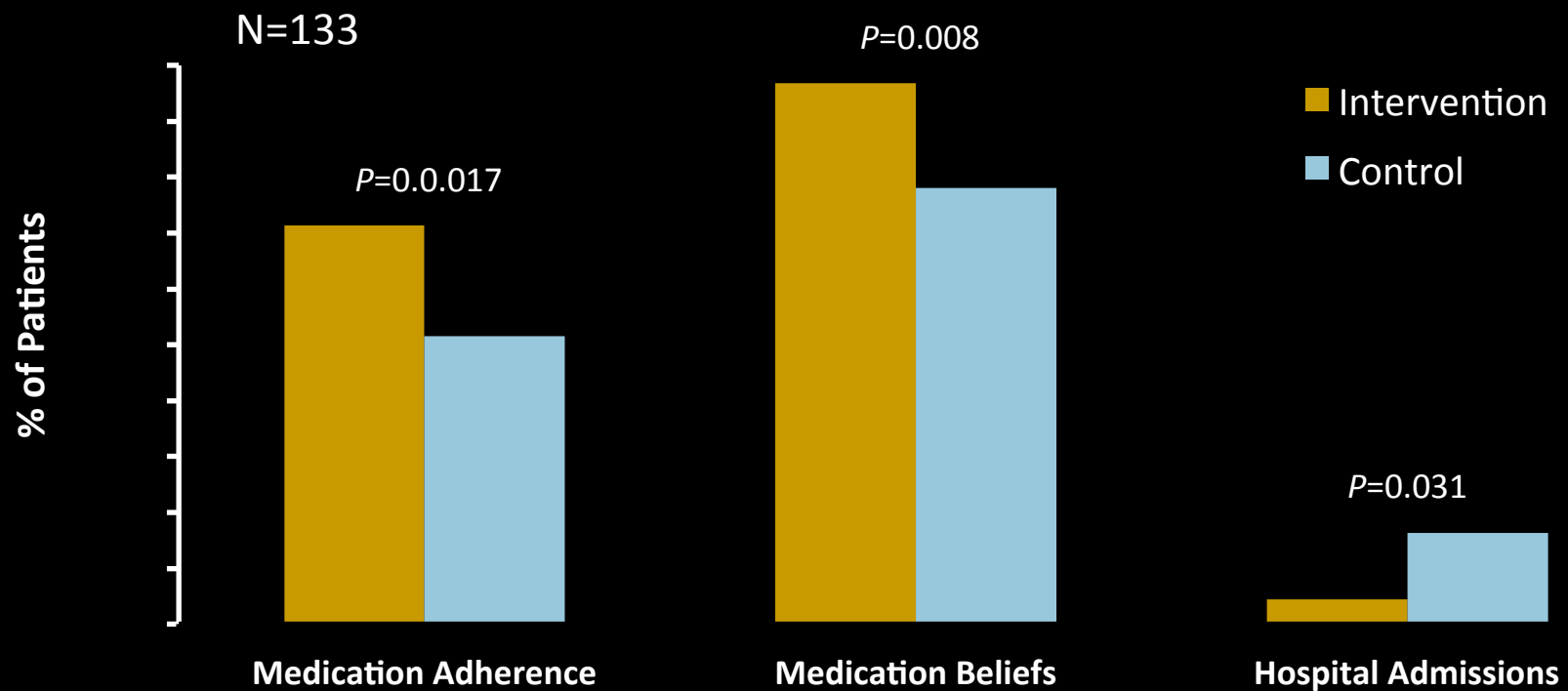
Improving Care for COPD

An Integrated Goal-directed Program

During visit COPD Care Team will:

- Assess for uncontrolled co-morbidities including:
 - Depression (administer depression scale)
 - Obstructive sleep apnea (Epworth sleep assessment)
 - Osteoporosis (assure recent bone density test)
- Review action plans for next exacerbation and for stress
- Discuss appropriate advanced directives
- Confirm next appointment with primary care practitioner or specialist and communicate with this personal physician
- Send letter to personal care provider with suggestions for ongoing care

Pharmacist-Led COPD Self-Management Program: Increased Belief in Treatment, Better Adherence, and Fewer Hospitalizations



What Can COPD Coalitions do to
improve outcomes?

What Can COPD Coalitions do to improve outcomes?

- To increase COPD awareness and education by connecting individuals with tools and resources that will improve their quality of life.
- To impact state and local government, employer and insurer policies related to COPD
- Improve and expand COPD surveillance and data collection and research