

COPD:

Using Disease Management as a Learning Tool

David Tinkelman, MD

National Jewish Medical and research Center



What is Disease Management ?

DMAA Definition

“Multi-disciplinary, continuum-based approach to healthcare delivery that:

- 1. Supports the physician/patient relationship and plan of care**
- 2. Emphasizes prevention of exacerbations and complications utilizing cost-effective, evidence-based practice guidelines, and patient empowerment strategies**
- 3. Continuously evaluates clinical, humanistic, and economic outcomes with the goal of improving overall health**

Why Have Disease Management Programs?

- ◆ Provide high quality of care
- ◆ Improve quality of life for participants
- ◆ Reduce unnecessary costs within healthcare delivery system

Direct Correlation Between

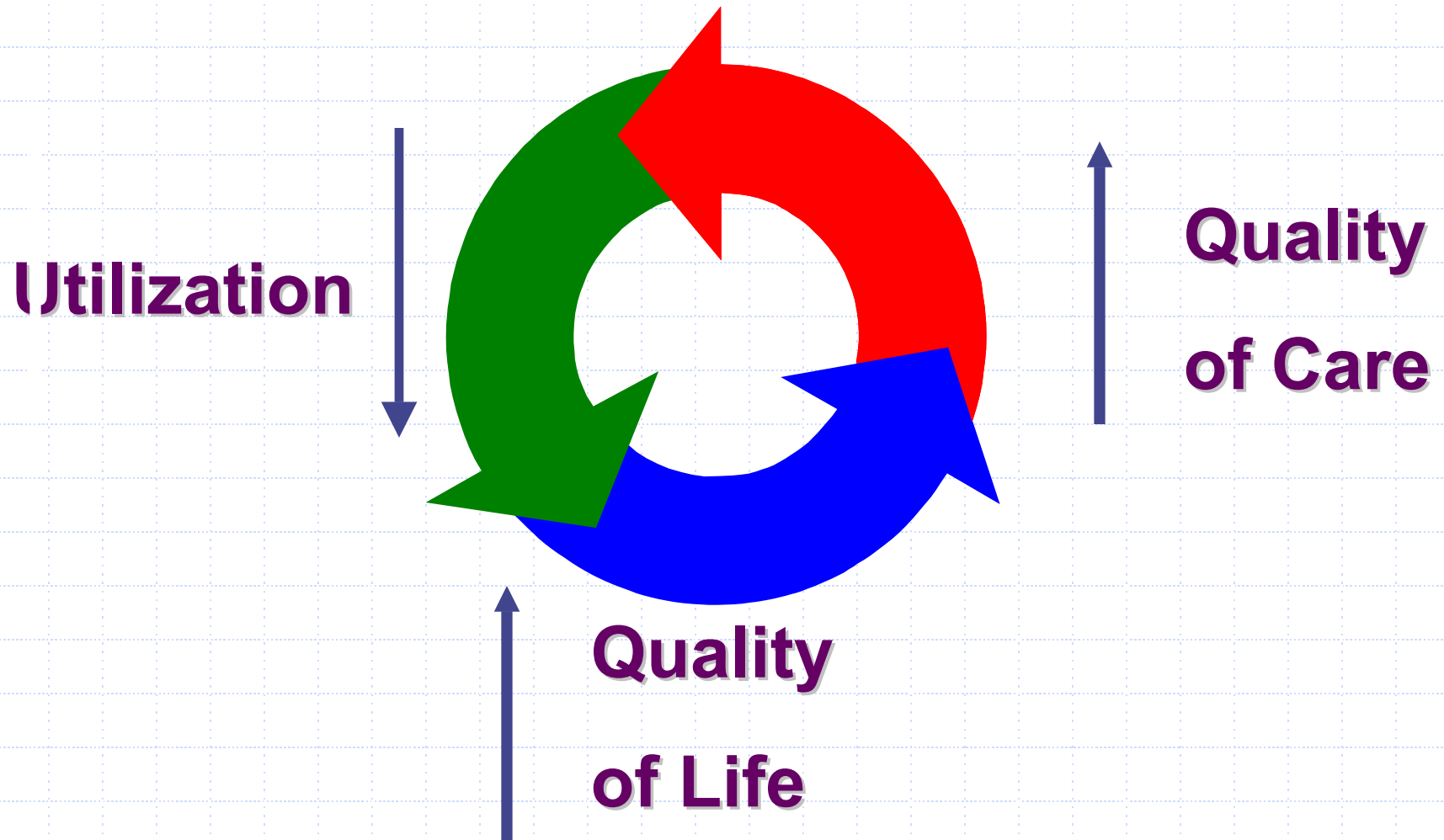
Quality of Care

Quality of Life

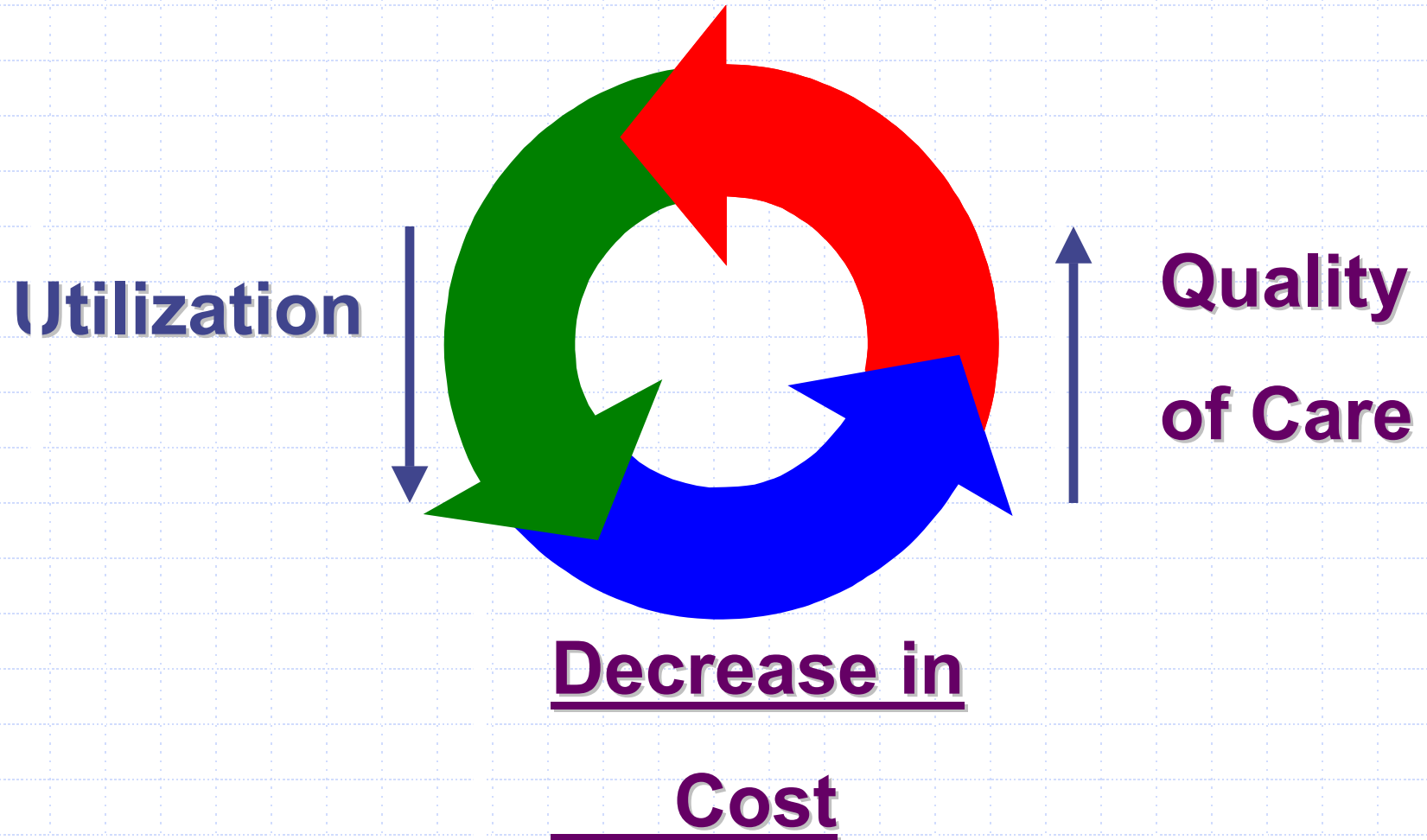
Utilization

Cost of Care

Clinical Quality Cycle



Value Quality Cycle



Essentials for a Successful DSM Program

◆ Reliable Communication Process

- For Patients
- For Physicians

◆ Physician Buy-In

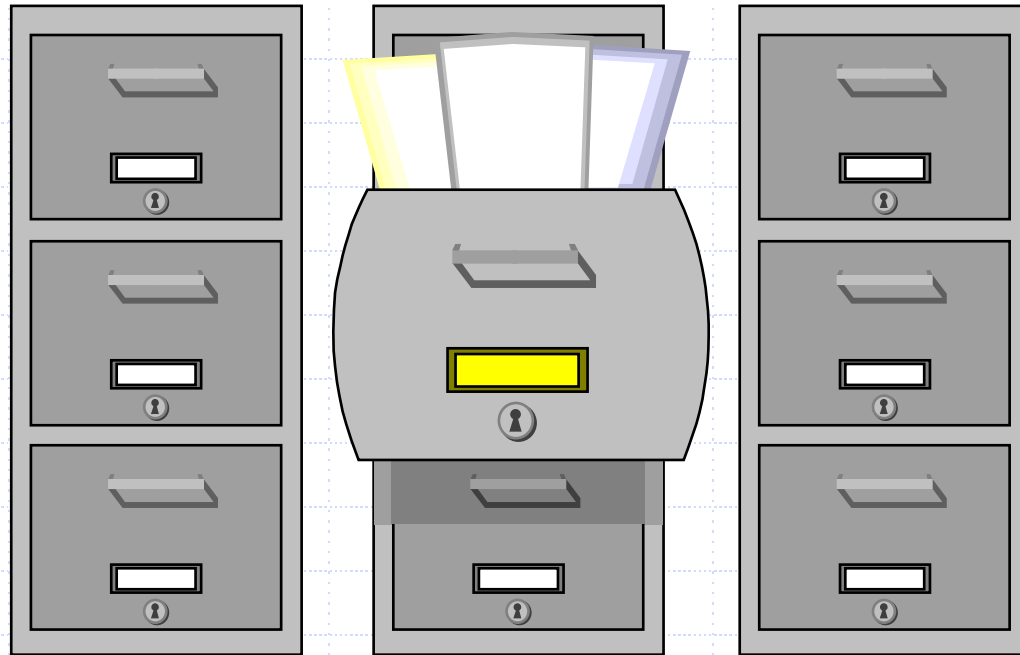
◆ Accurate, real time Data

◆ Reliable Outcomes Process

What is another Real Value of
Disease Management?

Data

Data Can Be More Than Files Full Of Charts



Data Has To Be A Process

- ◆ Steps to Insure Accuracy of Data
- ◆ Means of Data Collection
- ◆ Data Entry
- ◆ Data Analysis
- ◆ Data Management

What Kinds of Data Are There in Disease Management



- ◆ Patient Data
- ◆ Physician Data
- ◆ Claims Data
- ◆ Pharmacy Data

COPD

Learning From Data In Disease Management Programs



Common Concepts About COPD

- ◆ Disease of the Elderly
- ◆ Disease of the Unemployed
- ◆ Disease of Men
- ◆ Disease of Smokers
- ◆ Nothing You Can Do Once Diagnosed

National Jewish Medical and Research Center

- ◆ Started in 1899 as TB hospital
- ◆ Developed treatments for TB 1940's and 1950's
- ◆ Now focus is on Pulmonary, Allergy and Immunology
- ◆ #1 Respiratory Center in US last 5 years from USNWR

National Jewish Disease Management Programs

- ◆ Started in 1996 with Asthma
- ◆ Added COPD in 1998
- ◆ Have taken care of over 20,000 clients in over 40 health plans, employer groups, DOD
- ◆ Quality of Care and Quality of Services are most important business concepts for National Jewish

DMAA Definition

“Multi-disciplinary, continuum-based approach to healthcare delivery that:

- 1. Supports the physician/patient relationship and plan of care**
- 2. Emphasizes prevention of exacerbations and complications utilizing cost-effective, evidence-based practice guidelines, and patient empowerment strategies**
- 3. Continuously evaluates clinical, humanistic, and economic outcomes with the goal of improving overall health**

The Problem:

COPD is the fourth leading cause of mortality nationwide and results in significant human, societal and economic burdens

Can There Be A Broader Benefit From Disease Management?

Typical Patient With COPD

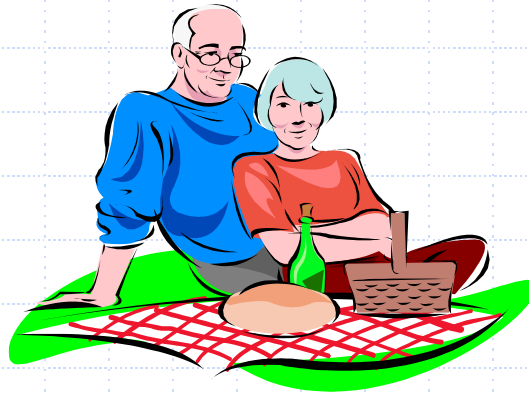
(Abstract at ATS, paper submitted)

- ◆ Retrospective analysis of subset of patients
 - 2129 clients referred to DMP:COPD
- ◆ Evaluate the data obtained upon entry into the program

What We Found

Demographics

- ◆ 47% Males, 53% Females
- ◆ At time of referral, 41.5% Severe
- ◆ 49.7% less than 65 years old



What We Found

Employment

- ◆ **46.1% employed**
 - **Less than 65 yo, 56.3% employed**
- ◆ **In previous 6 months,**
 - **Missed an average of 4.6 days of work**
 - **In this population, missed a total of 4366 days of work**
 - **Of the individuals under 65 years of age who were in the program, 24.4% were unable to work because of their respiratory disease**
 - **Assume that many workdays have sub-optimum performance/productivity, as a direct result of COPD symptoms.**

What We Found

Medical

- ◆ 62.3% were smoking more than 1 pack of cigarettes a day at the time of the call
- ◆ Average number of pack-years was 41.5 years
- ◆ Within the past 6 months
 - **29.1% were hospitalized, average stay 3.8 days**
 - **15.2% had an ER visit**
 - **30% had an unscheduled physician visit related to their illness**

Common Concepts About COPD

- ◆ Disease of the Elderly
- ◆ Disease of the Unemployed
- ◆ Disease of Men
- ◆ Disease of Smokers
- ◆ Nothing You Can Do Once Diagnosed

Common Concepts About COPD

◆ Disease of the Elderly

- 49.7% less than 65 years old

◆ Disease of the Unemployed

◆ Disease of Men

◆ Disease of Smokers

◆ Nothing You Can Do Once Diagnose

Common Concepts About COPD

- ◆ Disease of the Elderly
- ◆ **Disease of the Unemployed**
 - **46.1% employed**
 - **Less than 65 yo, 56.3% employed**
- ◆ Disease of Men
- ◆ Disease of Smokers
- ◆ Nothing You Can Do Once Diagnosed

Common Concepts About COPD

- ◆ Disease of the Elderly
- ◆ Disease of the Unemployed
- ◆ **Disease of Men**
 - **47% Males, 53% Females**
- ◆ Disease of Smokers
- ◆ Nothing You Can Do Once Diagnosed

Common Concepts About COPD

- ◆ Disease of the Elderly
- ◆ Disease of the Unemployed
- ◆ Disease of Men
- ◆ **Disease of Smokers**
 - **62.3% smoking > 1 pack per day at call**
- ◆ Nothing You Can Do Once Diagnosed

What Can We Learn From The Data?

- ◆ Disease of the Elderly
- ◆ Disease of the Unemployed
- ◆ Disease of Men
- ◆ Disease of Smokers
- ◆ **Nothing You Can Do Once Diagnosed**

NOT CORRECT

What Can We Learn From The Data?

- ◆ Early diagnosis is critical
- ◆ Smoking cessation programs early in the course of COPD can save morbidity and mortality
- ◆ Need greater focus on women and smoking for prevention
- ◆ Programs to keep people at work important

What Can We Learn From The Data?

- ◆ **Early diagnosis is critical**
- ◆ Smoking cessation programs early in the course of COPD can save morbidity and mortality
- ◆ Need greater focus on women and smoking for prevention
- ◆ Programs to keep people at work important



Spirometry: A Key to Early Detection of COPD

Spirometry in primary care setting is crucial

- Simple, inexpensive, office-based
- Consider every smoker (past and present)

Decline in lung function is often undetected

- Patients may be asymptomatic or may unconsciously modify activity to compensate

Identification and aggressive intervention can improve prognosis

Spirometry

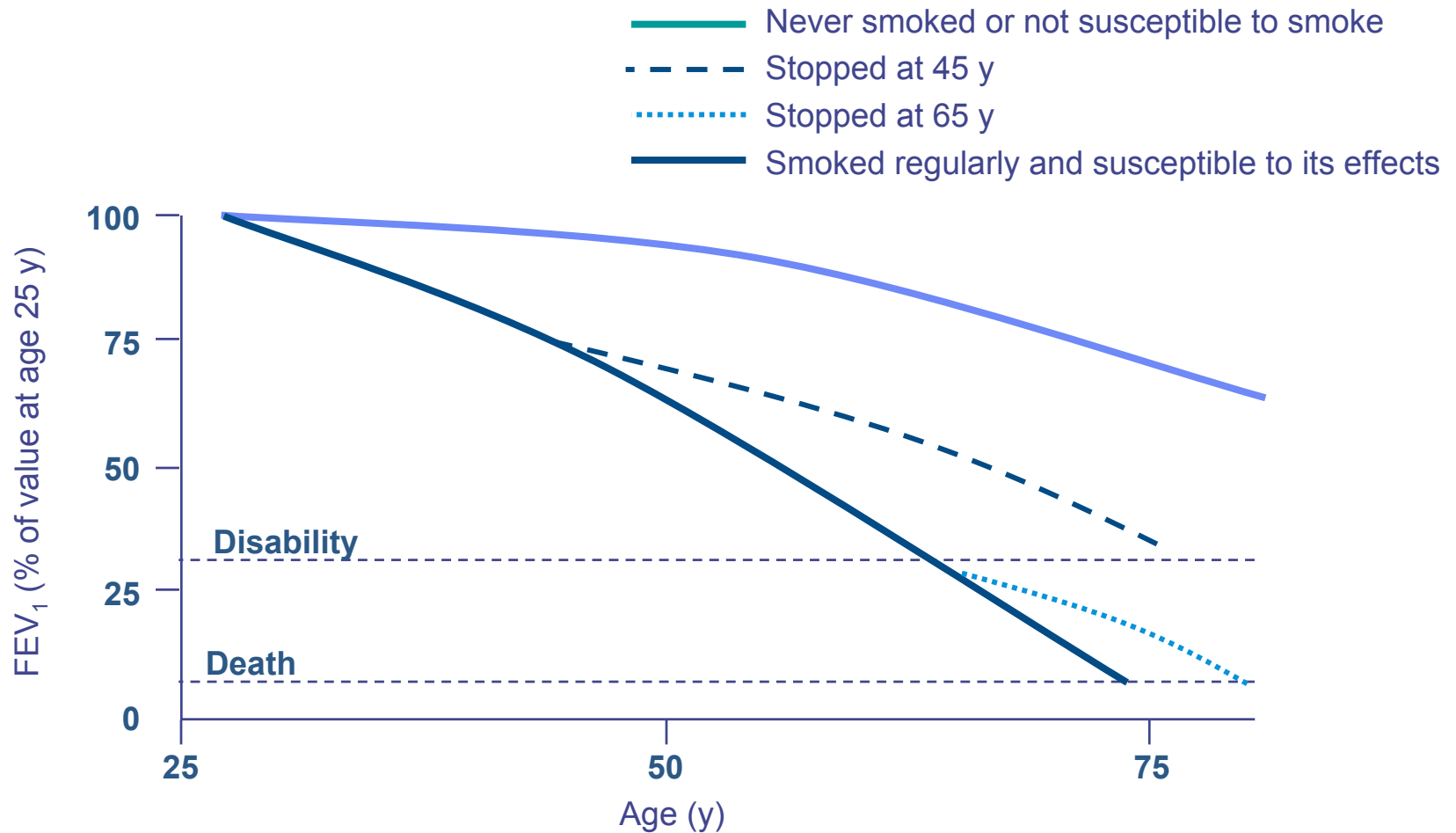
Annual Spirometry for every smoker over 40 years old or any person who has risk factors, including family history and occupational exposures.



What Can We Learn From The Data?

- ◆ Early diagnosis is critical
- ◆ **Smoking cessation programs early in the course of COPD can save morbidity and mortality**
- ◆ Need greater focus on women and smoking for prevention
- ◆ Programs to keep people at work important

Age-Related Decline in FEV₁ is Accelerated in Susceptible Smokers



What Can We Learn From The Data?

- ◆ Early diagnosis is critical
- ◆ Smoking cessation programs early in the course of COPD can save morbidity and mortality
- ◆ **Need greater focus on women and smoking for prevention**
- ◆ Programs to keep people at work important

What Can We Learn From The Data?

- ◆ Early diagnosis is critical
- ◆ Smoking cessation programs early in the course of COPD can save morbidity and mortality
- ◆ Need greater focus on women and smoking for prevention
- ◆ **Programs to keep people at work important**

Economic Burden of COPD

Annual cost in the US: \$30.4 billion

- – Direct cost: \$14.7 billion
- – Indirect cost: \$15.7 billion

Per capita Medicare expenditure nearly 2.5 times higher with a COPD diagnosis than without

- – \$8,482 vs. \$3,511 without COPD

Diagnosis of chronic respiratory disease is associated with a 172% increase in mean health care costs

Can We Change Behavior From The Data?

- ◆ Implement new Physician education strategies

 - Incent positive behavior

- ◆ Implement new patient education strategies

 - Incent positive behavior

Why Have Disease Management Programs?

- ◆ Provide high quality of care
- ◆ Improve quality of life for participants
- ◆ Reduce unnecessary costs within healthcare delivery system
- ◆ **Learn more about disease states to improve strategies for diagnosis and management of these diseases**

National Jewish Medical and Research Center

