

# HS 100: Lab 4

## Midterm Review Session

April 25, 2003  
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# Agenda

- Overview of Health Services
- History/Development of U.S. Healthcare
- Healthcare Financing
- Health Status and Determinants of Health Services
- Healthcare Personnel
- Hospitals
- Ambulatory Care
- Managed Care
- Public Health Agencies
- Access to Healthcare

# Health Services Overview

- Three core domains
  - Cost
    - 2000 expenditures: \$1.3 billion
    - Healthcare accounts for 12-14% of GDP
  - Quality
    - Not all care delivered is beneficial
    - Not all needs are met
  - Access
    - ~38 million in U.S. lack health insurance
- We want to increase access, decrease cost, and increase quality

# Health Services Overview

- Wennberg's Small Area of Variation Study
  - Procedure rates vary by geographic area
  - Dartmouth Atlas of Healthcare
    - Documents procedure rates by location
  - Why?
    - Distinction between need and “what gets done”
    - Differences in “practice patterns”
    - Coverage rates, # of MDs, distribution of MDs

# Health Services Overview

- RAND Appropriateness Studies
  - Researched “appropriateness” of elective procedures
  - Expert panel debated appropriateness
  - $\geq 55\%$  of procedures are “inappropriate”
  - Results used for preauthorization by insurers

# Health Services Overview

- RAND Health Insurance Experiment
  - Examined relationship between out-of-pocket costs, procedure rates, and health status
  - ER co-pays > Outpatient co-pays
  - Higher OOP correlated with lower rates, lower health status

# History & Development of U.S. Healthcare

- Healthcare System, Defined:
  - A combination of resources, organization, financing, and management that culminate in the delivery of health services to the population
- Four Sub-Systems
  - Employed, insured, middle-income
  - Unemployed, uninsured
  - Military
  - Veterans Administration

# History & Development of U.S. Healthcare

- Employed, insured, middle-income
  - “Standard” U.S. healthcare
  - Private, employer-based insurance
  - Private practice, private hospitals
  - FFS and Managed Care

# History & Development of U.S. Healthcare

- Unemployed, uninsured
  - May also be “under-insured”
  - City or county hospital clinics and EDs
  - Local health departments
  - University hospitals
  - Private, community clinics
  - Note that 80% of the uninsured are employed

# History & Development of U.S. Healthcare

- Military
  - Socialized U.S. healthcare
  - Active duty
  - Coordinated system of care
  - Ambulatory and inpatient care
  - Salaried professional providers
  - CHAMPUS --> TRICARE

# History & Development of U.S. Healthcare

- Veterans Administration (VA)
  - Predominantly male, low-income
    - Changing picture of VA use
  - Acute and chronic hospital care
  - VA benefits
  - University affiliations common
  - Salaried professionals

# History & Development of U.S. Healthcare

- Three public health “revolutions”
  - Infectious disease
  - Chronic disease
  - Health promotion
- 20th century:
  - Increased life expectancy from 45-75 years of age
    - 25 years because of public health (nutrition, sanitation, housing)
    - 5 years because of medical health
  - Increased quality of life

# History & Development of U.S. Healthcare

- 1850-1900:
  - Acute infectious disease
  - Minimal technology
  - Little to no social organization
    - Dependent on individual resources/out-of-pocket costs, charity/philanthropy

# History & Development of U.S. Healthcare

- 1900 to WWII
  - Acute infectious disease
  - Trauma care
  - Initial growth/expansion of science and technology
  - Start of social- and governmental-sponsored care for underserved and disadvantaged

# History & Development of U.S. Healthcare

- WWII to today
  - Chronic disease focus
    - Heart disease, cancer, stroke
  - Explosive growth of science and technology
  - Governmental role in healthcare finance and delivery
  - Healthcare viewed as a right?

# History & Development of U.S. Healthcare

- Future...
  - Chronic disease continues
  - Mental health
  - Health promotion
  - Continued growth of science/technology
    - Attempts to “personalize” and “perfect” technology
  - Expanded role of government in organizing and financing healthcare

# History & Development of U.S. Healthcare

- Criteria for improving health systems
  - Access
    - Potential/actual entry of a population group to the healthcare system
  - Equity
    - Fair allocation of benefits/burdens among those who are deserving of care and those who are in a position to pay for it
  - Efficiency
    - Minimizing costs while maximizing quality
  - Effectiveness
    - Quality of care improves health outcomes

# Healthcare Financing

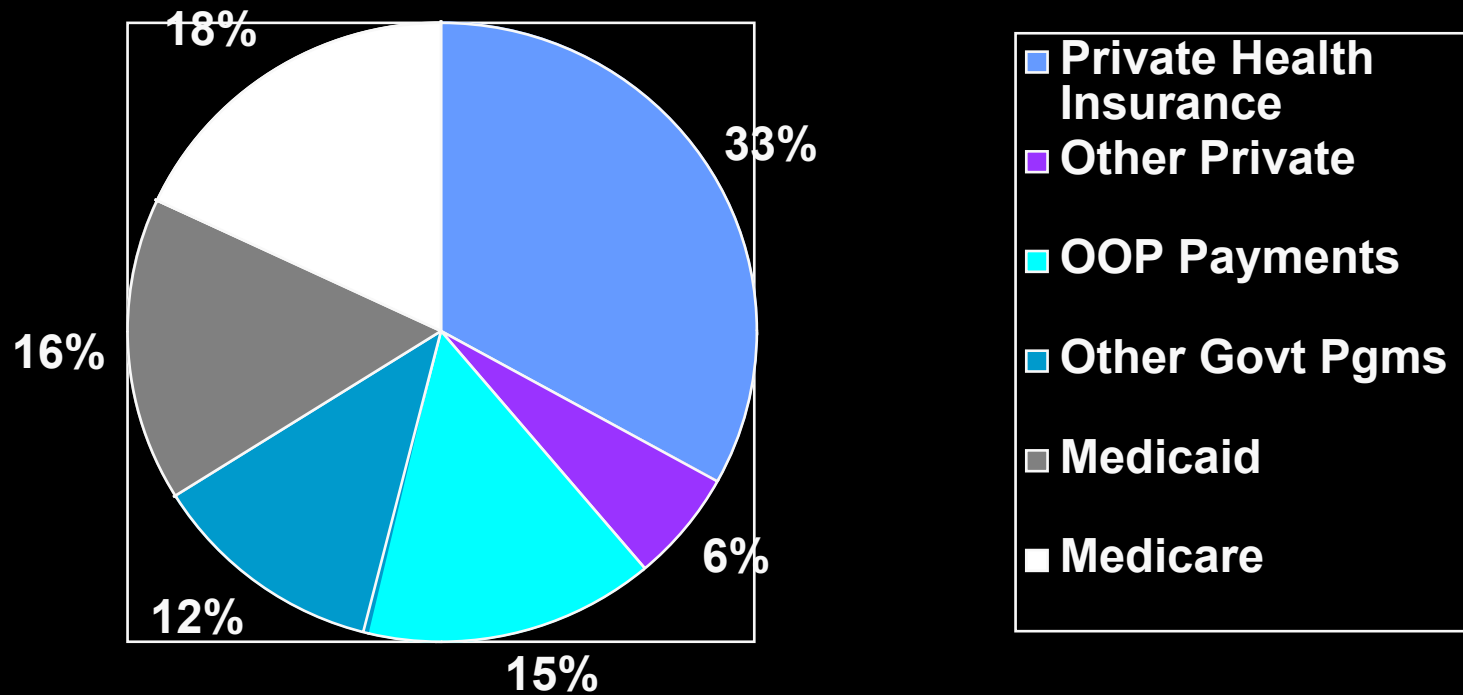
- Healthcare does not function like a normal capitalistic market
  - Clinicians are “suppliers”
  - Patients are “consumers”
  - Healthcare services are “goods”
  - Consumers do not pay for goods
    - Third party responsible = insurers
    - Costs are thus not a major consideration for consumers

# Healthcare Financing

- Why do we have the highest healthcare costs in the world?
  - Pre-WWII, healthcare was 2-4% GDP
  - Socialized healthcare systems have lower administrative costs and centralized systems
  - Healthcare inflation > General inflation
    - Healthcare = 10-20% per year
  - Different philosophy of U.S.
  - Increased intensity of services/technology
  - Consumerism
  - Demography

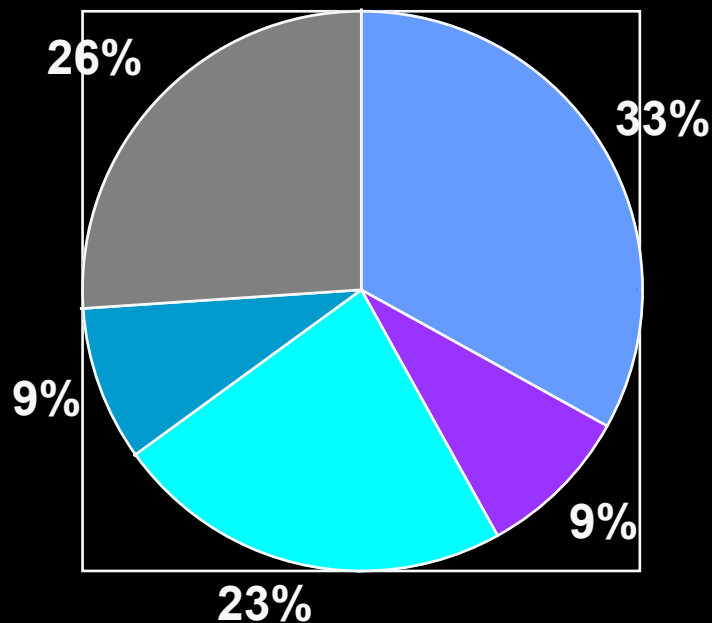
# Healthcare Financing

## Where the \$ Came From (p. 94)



# Healthcare Financing

## Where the \$ Went (p. 94)



# Healthcare Financing

- Health Insurance
  - Dates back to 1800s in Europe
  - Based on the concept of “distributive risk”
  - WWII: wage and price freezes
    - Employers began providing health insurance
  - Three type of insurance
    - Voluntary (employer-based)
    - Social (Medicare)
    - Welfare (Medicaid, safety net)

# Healthcare Financing

- Health Insurance Vocabulary
  - Moral hazard
  - Adverse selection
  - Cherry-picking/Cream-skimming
  - Co-pay
  - Deductible
  - Experience rating
  - Community rating

# Healthcare Financing

- Indemnity Insurance
  - Pay premiums
  - Any MD
  - MD bills insurer
  - Insurers often pay UCR (usual, customary, and reasonable) rate

# Healthcare Financing

- Managed Care
  - Reversed financial incentives for providers
  - Insurers pay negotiated amount to cover care for a given population
  - Capitation is common reimbursement mechanism

# Healthcare Financing

- RBRVS
  - Established in 1992
  - Resource Based Relative Value Scale
    - Work-unit schedule
  - Fixed-price “menu” of MD services
  - Physicians bills insurers by service

# Healthcare Financing

- PPS
  - Prospective Payment System
  - For our purposes, a synonym for DRG
  - Fixed payment per diagnosis
  - Changed financial incentives for hospitals and transferred risk

# Health Status and Utilization

- Leading causes of death
  - 1900: Influenza and pneumonia
  - 1990: Heart disease, cancer, stroke
- Disparities
  - Race and ethnicity
  - Age
  - Gender
  - SES
  - Access to care

# Health Status and Utilization

- Definitions of health
  - Disease vs. illness: biomedical model
  - WHO definition: bio-psychosocial
    - “Health is the state of complete physical, mental, and social well-being, and not merely the absence of disease”
  - Quality of life: consumer-focus
    - Ability to engage in ADLs
    - Perceived well-being

# A Behavioral Model of Health Services Use

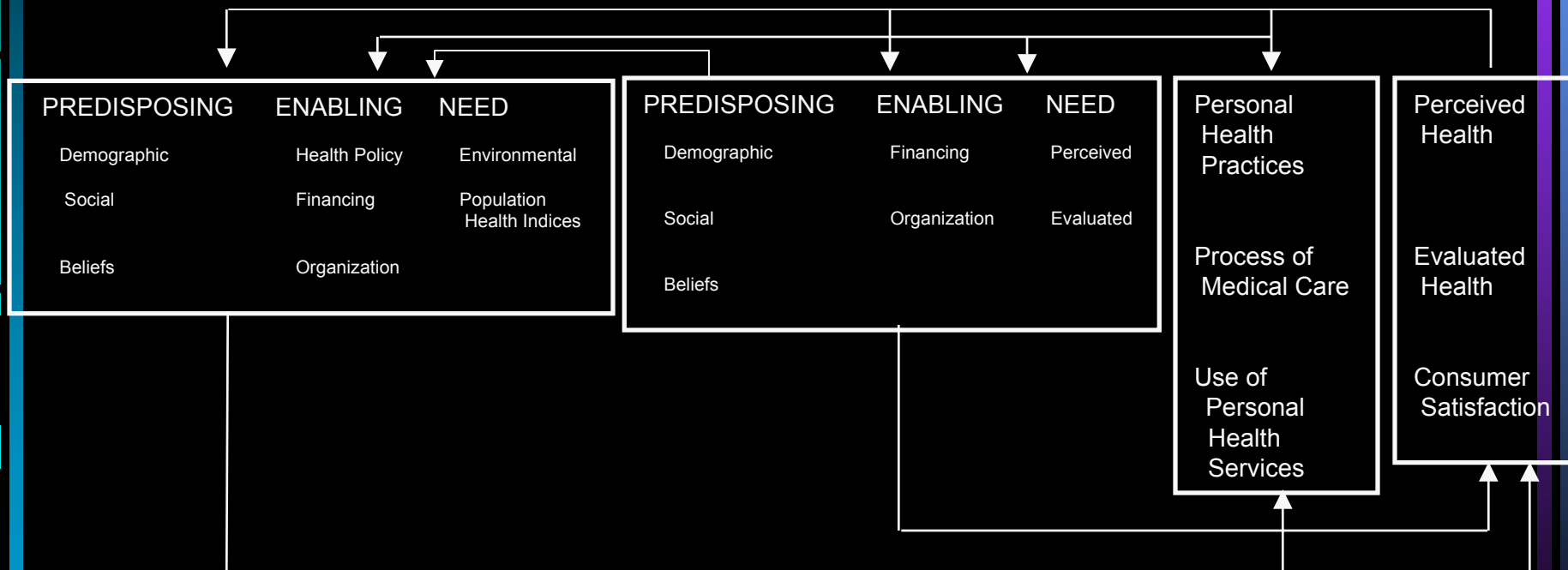
## Stressing Contextual as well as Individual Characteristics

Contextual Characteristics

Individual Characteristics

Behaviors

Outcomes



# Health Status and Utilization

- Andersen's Behavioral Model
  - A tool to assess and study healthcare access
- Access:
  - Realized use of health services
  - Includes inhibitors and facilitators of health service utilization
  - Bridge between healthcare systems and their target populations
  - Promotes social justice and health outcomes

# Healthcare Personnel

- Increase in overall health sector employment
  - 1970: 4.2 million workers
  - 2000: 11.6 million workers
  - Future growth projected in all subtypes
- Reasons for growth?
  - Emergence of the hospital
  - Insurance
  - Population growth
  - Technology
  - Specialization

# Healthcare Personnel

- Undergraduate Medical Education
  - 50% class size increase from 1970 to 1990
  - Stabilized at ~17,000
  - Increased female and minority enrollment
- Residency
  - Total: 65,000 in 1970 to 103,000 in 1995
  - ~5% unfilled
  - First year: 24,000 spots, 17,000 graduates
  - IMGs = 24%
- Top specialties: Internal Medicine, FP, Pediatrics
- Decreasing percentage of primary care physicians
- Are MDs employed by hospitals?

# Healthcare Personnel

- Nursing
  - Largest proportion of healthcare personnel (~60%)
  - 2-, 3-, or 4-year educational pipelines
  - 59% work in hospitals
  - 2000: 2.7 million nurses, <1% unemployment
  - High hospital vacancies and nurse turnover
  - Aging workforce
- AB 394: Nurse-Staffing Ratios
  - Shortage becomes greater problem

# Healthcare Personnel

- Why the nursing shortage?
  - Inadequate staffing
  - Heavy workloads
  - Stagnant wages
  - Increased dissatisfaction
  - Increased severity of patients and intensity of service delivery

# Hospitals

- History:
  - Early hospitals: poorhouses, government shelters for poor and homeless
  - Late 1700s: voluntary, philanthropy-funded, acute care hospitals
  - 1800s: first public hospitals
  - Late 1800s: acceptance and growth

# Hospitals

- Forces affecting hospital development
  - Scientific/technological advances
  - Development of professional nursing
  - Advances in clinical education
  - Growth of health insurance
  - Changing role of government

# Hospitals

- Types of hospitals (greatest to lowest percentage)
  - Non-government, not-for-profit community hospitals
  - State/Local government community hosp.
  - Investor-owned, for-profit community hosp.
  - Federal government hospitals
  - Non-federal LTC hospitals
  - Hospital units in institutions

# Hospitals

- Community Hospitals are 83% of all hospitals
  - Non-federal, short-term general, and other specialty hospitals
  - Excludes hospitals not accessible by the general public
    - VA, College infirmaries, etc.

# Hospitals

- Trends:
  - Decreased number of beds
  - Hospitals become more reliant on private payers to sustain finances
  - Private reimbursements > those of Medicaid and Medicare
  - Hospital closures are a reality
  - Decreased ALOS
  - Increased # of admissions
  - Increased uncompensated care
  - Changing proportions of revenue between inpatient and outpatient care
  - Consolidation

# Ambulatory Care

- Definition: outpatient care
- History
  - Early 20th century: nearly all ambulatory
  - Mid-20th century: hospital-centered care
  - 1980s-today: shift towards ambulatory care
- Settings
  - Private MD office
  - Hospital-based clinics
  - Surgery centers
  - UC/ED

# Ambulatory Care

- Primary prevention
  - Intersection of PH and primary care
  - Examples: wearing seatbelts, watching diet
- Primary care
  - “Routine” medical care
  - Gatekeepers
  - Internists, GPs, FPs, OB/GYN, Peds

# Ambulatory Care

- Secondary care
  - Routine hospitalizations, surgeries
  - Examples: appendectomies, routine hip replacements
- Tertiary care
  - High-tech aspects of medicine
  - Examples: transplants, shock trauma, ICU, open heart surgery

# Ambulatory Care (see p. 192)

- Solo practice
  - Decline in last 10 years
  - Very few remain, except in some rural areas
  - Advantages:
    - Independent professional/personal freedom
    - Appeal of self-employment
    - Self-determined income
    - Strong ID with patients/community

# Ambulatory Care (see p. 192)

- Group Practice
  - 3+ MDs
  - Rapid growth in 1970s-90s
  - Share expenses, overhead
  - Now most are multi-specialty (initially many began as single-specialty groups)
  - More stable income for MDs, more likely to be salaried

# Managed Care

- “An organized effort by health insurance plans and providers to use financial incentives and organizational arrangements to alter provider and patient behavior so that healthcare services are delivered and utilized in a more efficient and lower-cost manner”
  - Williams and Torrens, p. 125

# Managed Care

- What is “managed?”
  - Patient/doctor behavior
- Four components:
  - Payors, plans, providers, patients
- Spectrum of managed care options:
  - HMOs
    - Staff model, etc.
  - PPOs

# Managed Care

- HMOs
  - Legally contract with MDs to provide all care for a group patients at a given rate
  - PMPM
  - Capitation common
- Staff Model HMO (example = Kaiser)
  - MDs employed by payor on salary
  - Entire system is at risk
  - Well-integrated system of care

# Managed Care

- PPOs
  - MDs can participate in managed care with less risk
  - MD sees patients by plan at a discounted FFS rate
  - Plan normally negotiates FFS discounts

# Public Health Agencies

- Mission of Public Health
  - Fulfilling society's interest in assuring conditions in which people can be healthy
- Three core functions
  - Assessment
  - Assurance
  - Policy Development

# Public Health Agencies

- Services to Advance Health
  - Environmental Health Protection
  - Personal Health Services
    - Medical, dental, nursing care
  - Favorable Behavioral Conditions
    - Social milieu

# Public Health Agencies

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# Public Health Agencies

- International
  - WHO
  - International Epidemiology Association
- National
  - USPHS
  - NIH
  - FDA
  - EPA
  - NIOSH
  - OSHA

# Public Health Agencies

- State
  - CA DHS
  - All functions not specifically delineated to federal government fall on the state
- Local
  - County-level on West Coast
  - City-level on East Coast
  - Implement state-health policies, programs, regulations
  - Reflect local interests

# Access to Healthcare

- Actual use of personal health services
- Incorporates all factors that facilitate or impede the use of personal health services
- Conceptualization and measurement of access is key to understanding and formulating health policy
- Andersen Model