TRENDS IN PHYSICIAN SUPPLY AND DEMAND

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Florida Board of Governors
Orlando
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TRENDS IN HEALTH EXPENDITURES
and the
DEMAND FOR ADVANCED CLINICAL SERVICES

MACRO-FORECASTING USING THE TREND MODEL

DEMAND

↗ *Economy* ➔ Relative
↗ *Population* Demand

TRENDS ~

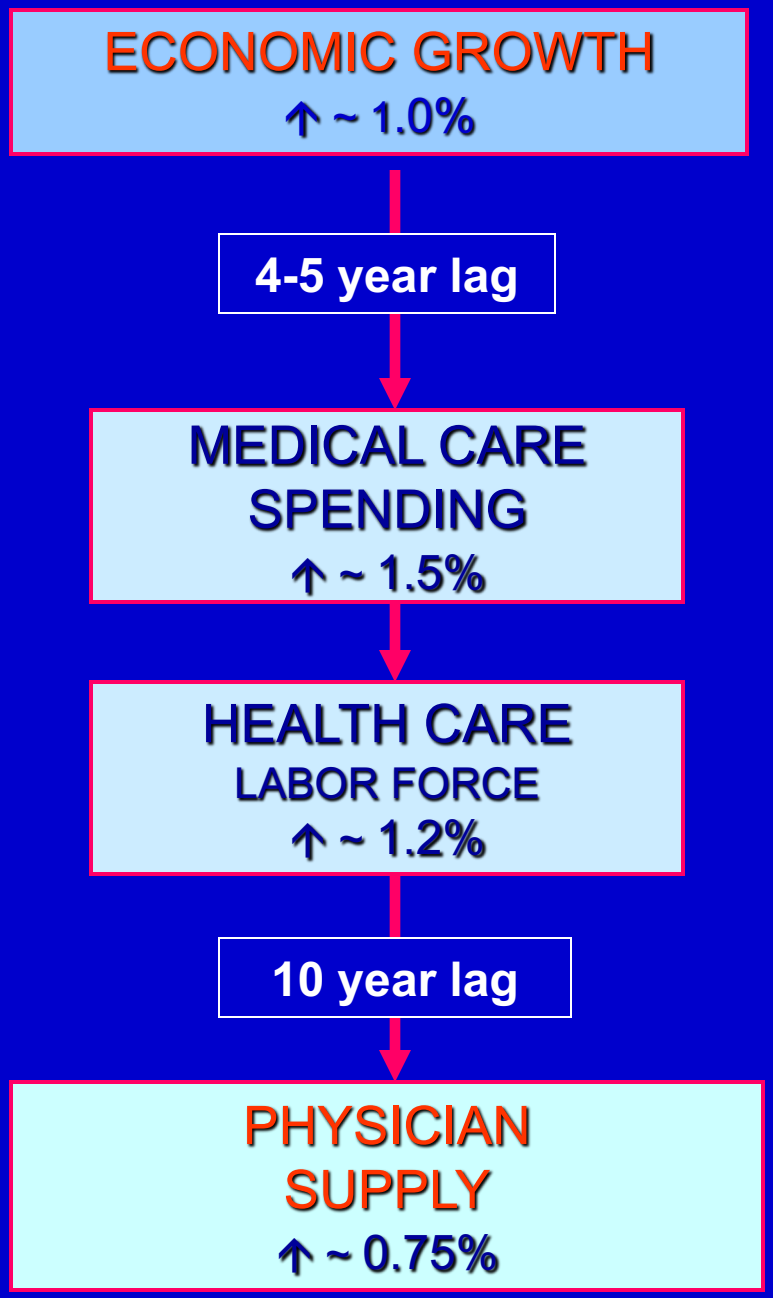
↘

FUTURE *Sufficiency* *

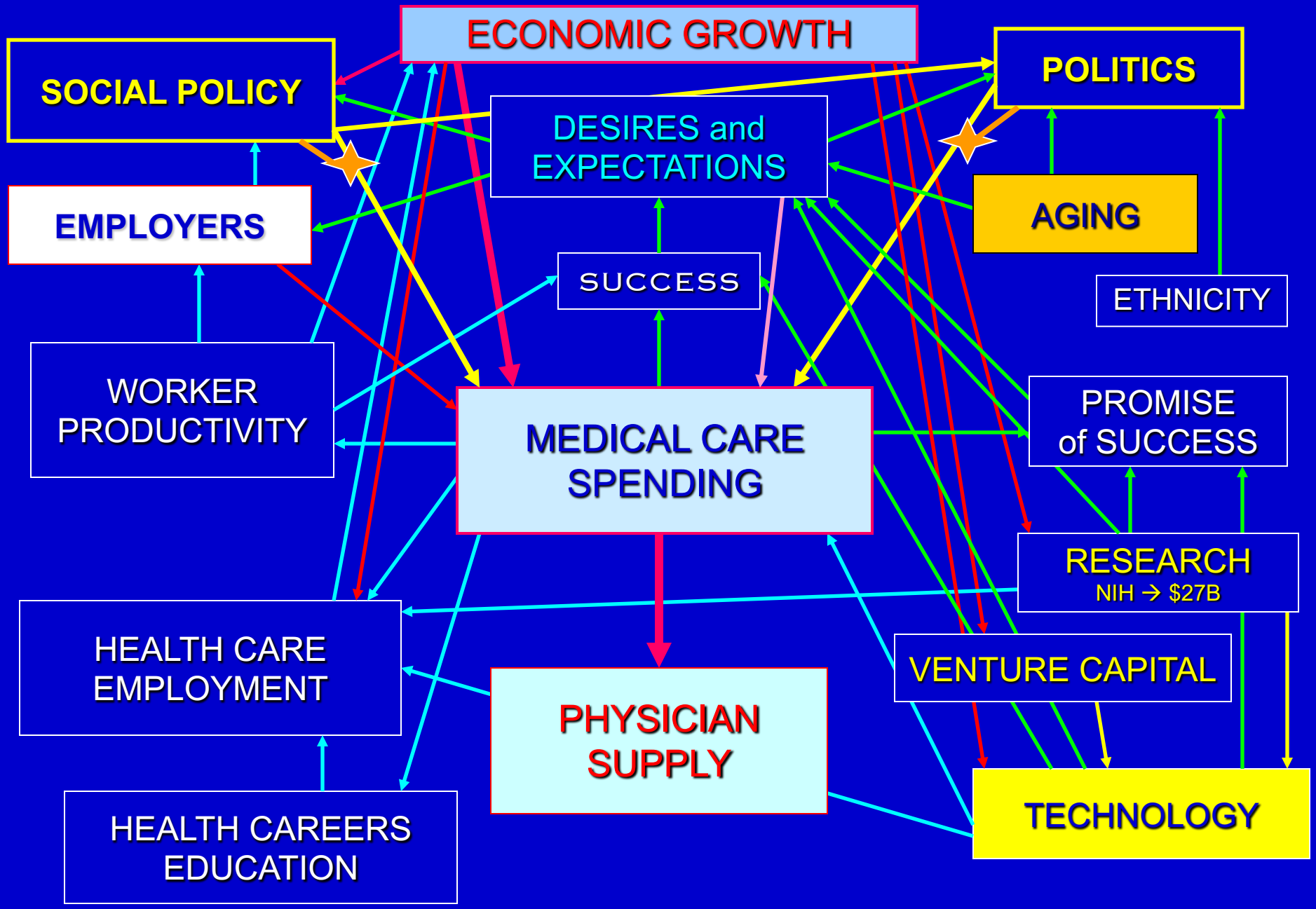
Productivity ➔ Relative

↘ *Substitution* ~~Supply~~

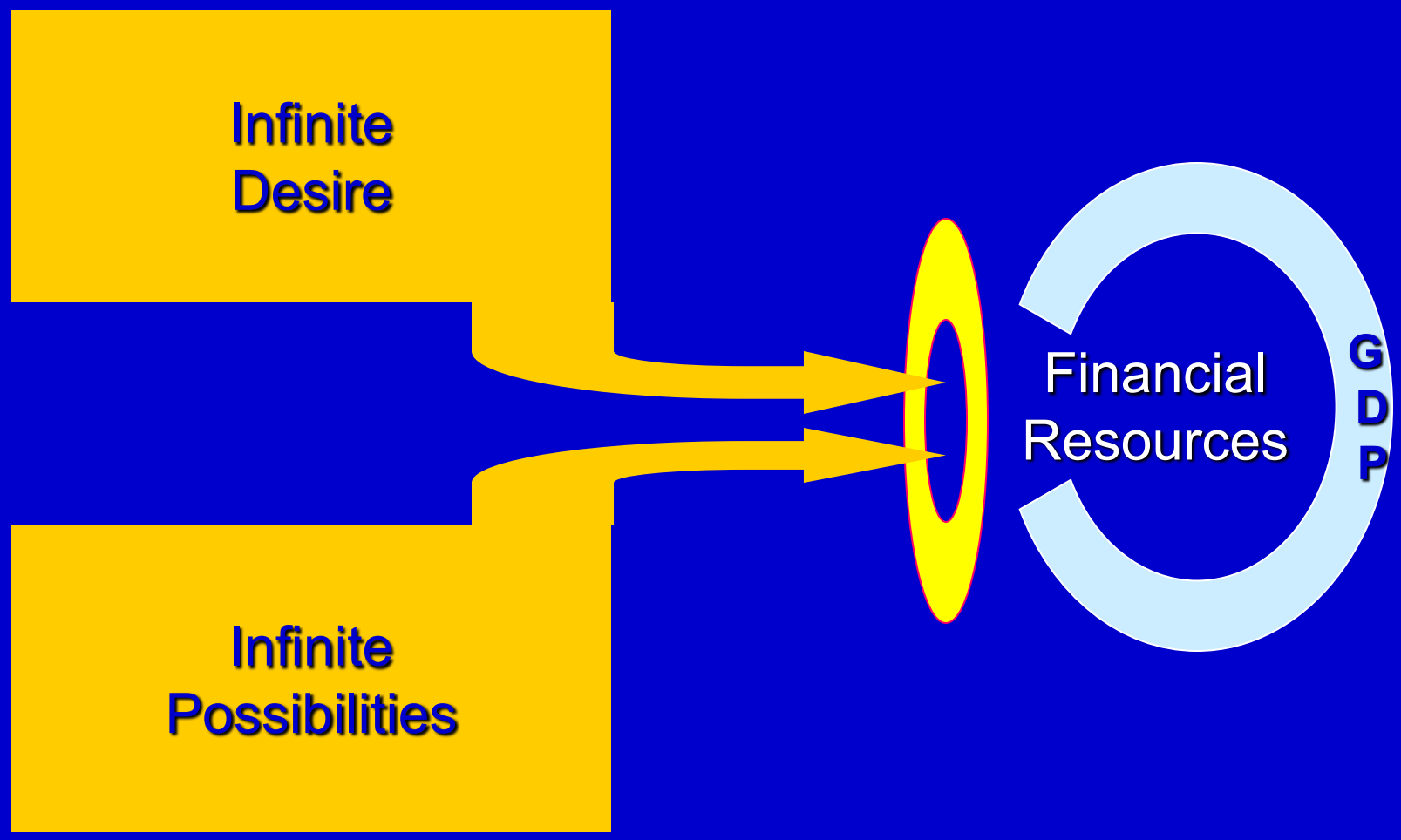
SUPPLY


ECONOMIC GROWTH
↑ ~ 1.0%
4-5 year lag
MEDICAL CARE SPENDING
↑ ~ 1.5%
HEALTH CARE
LABOR FORCE
↑ ~ 1.2%
10 year lag
PHYSICIAN SUPPLY
↑ ~ 0.75%

"COMPLEX ADAPTIVE SYSTEM"



ECONOMIC DETERMINANTS OF HEALTH CARE SPENDING AND THE DEMAND FOR PHYSICIANS



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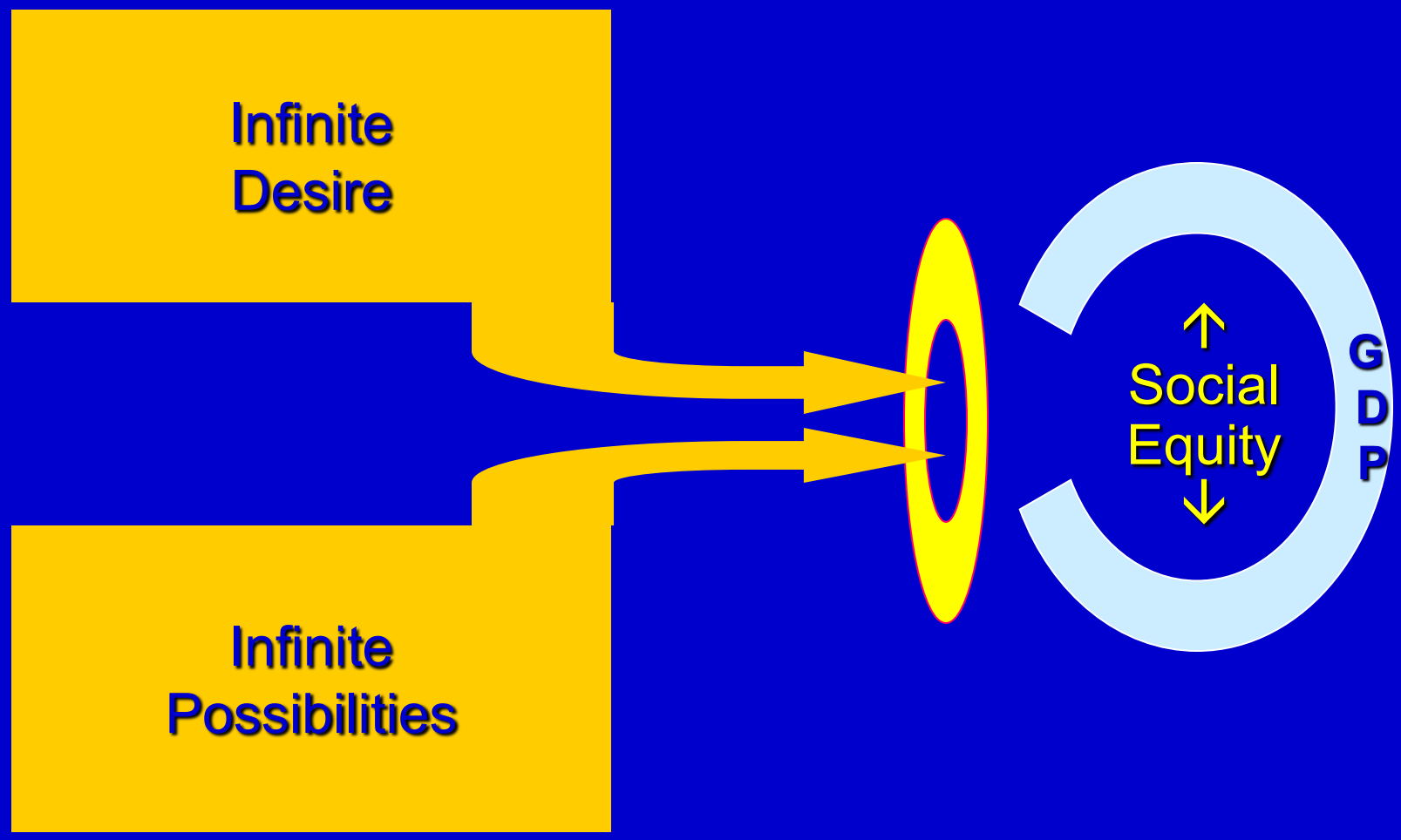
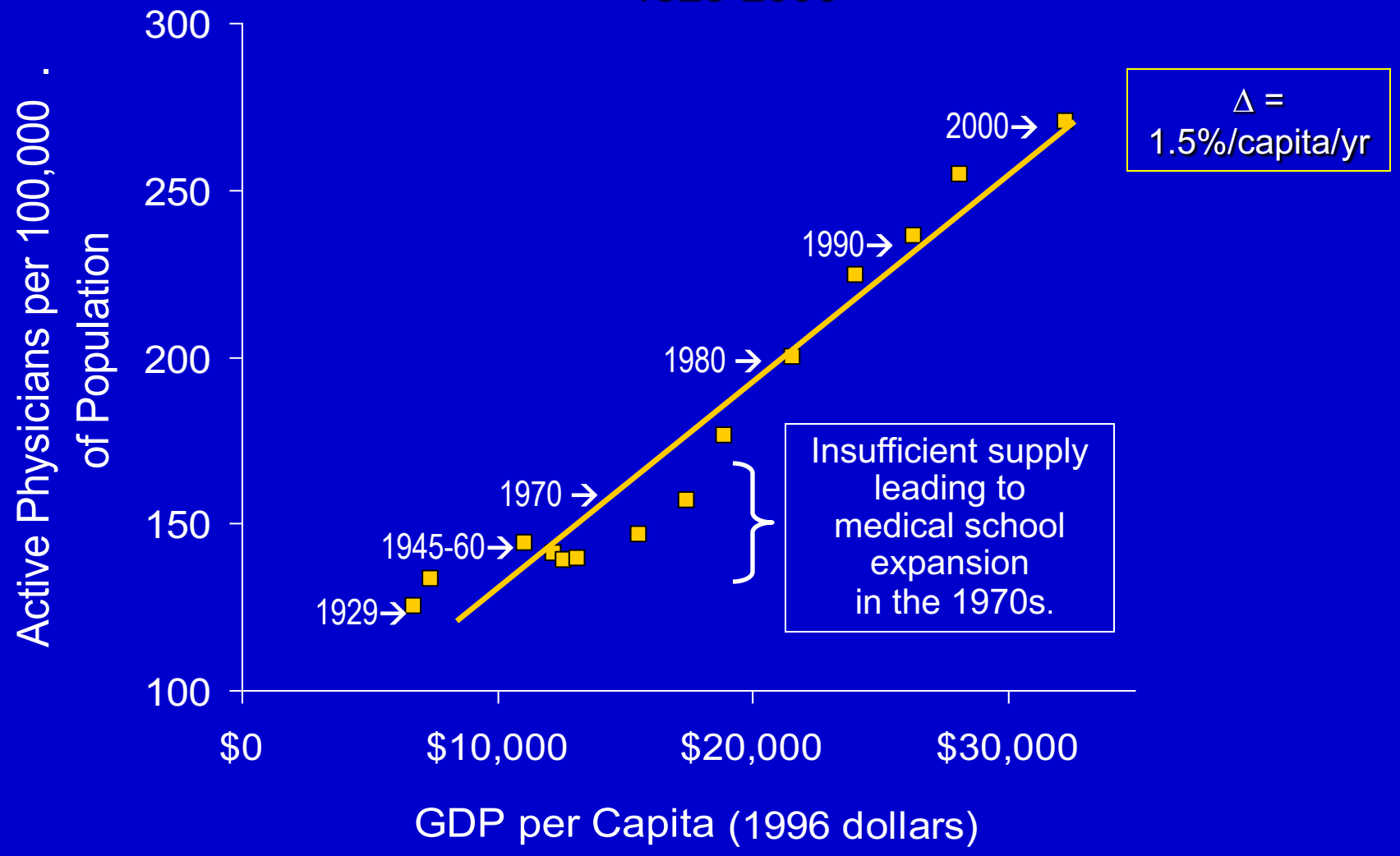
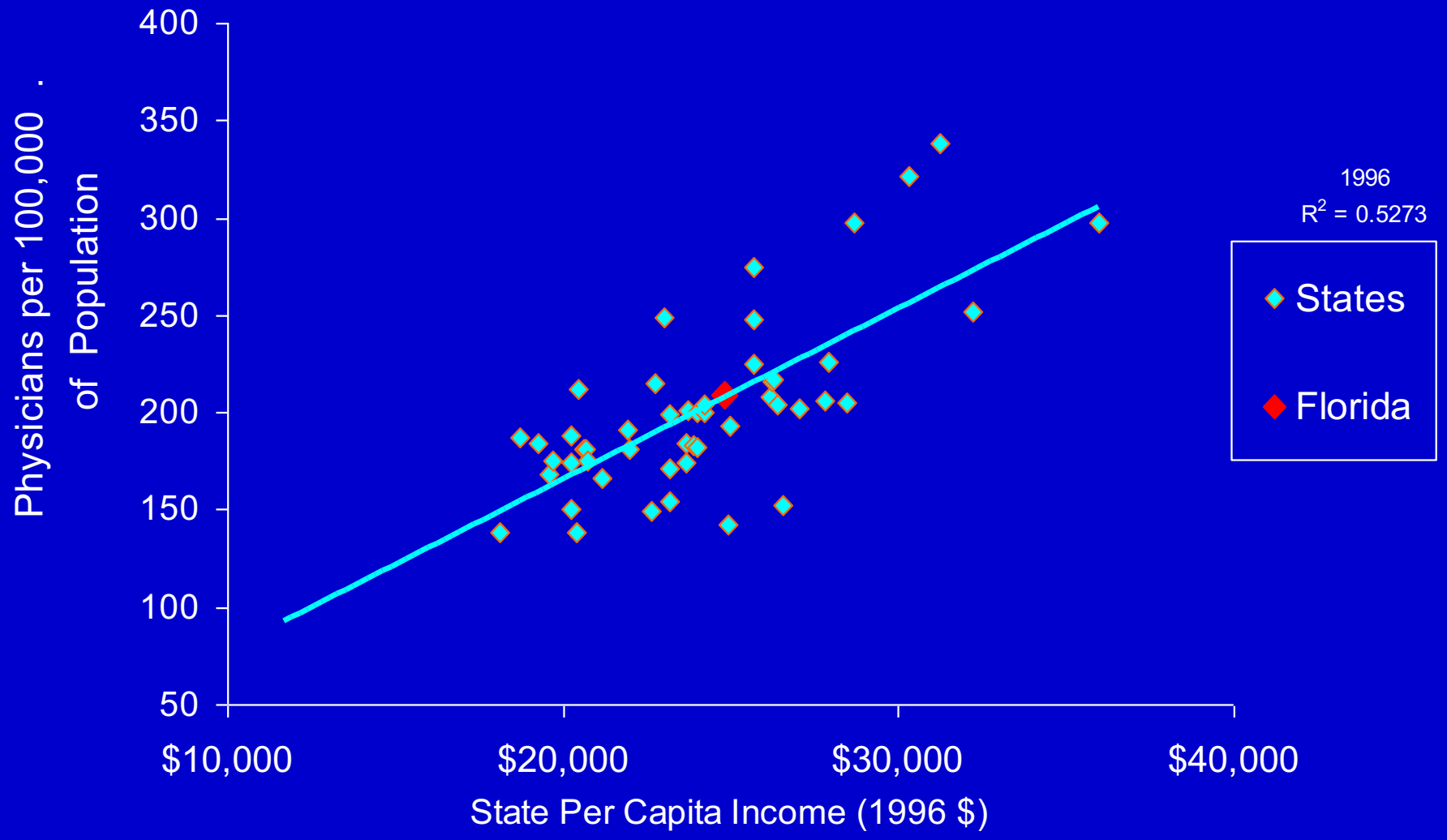


ECONOMIC CORRELATES RELATING TO THE DEMAND FOR PHYSICIANS

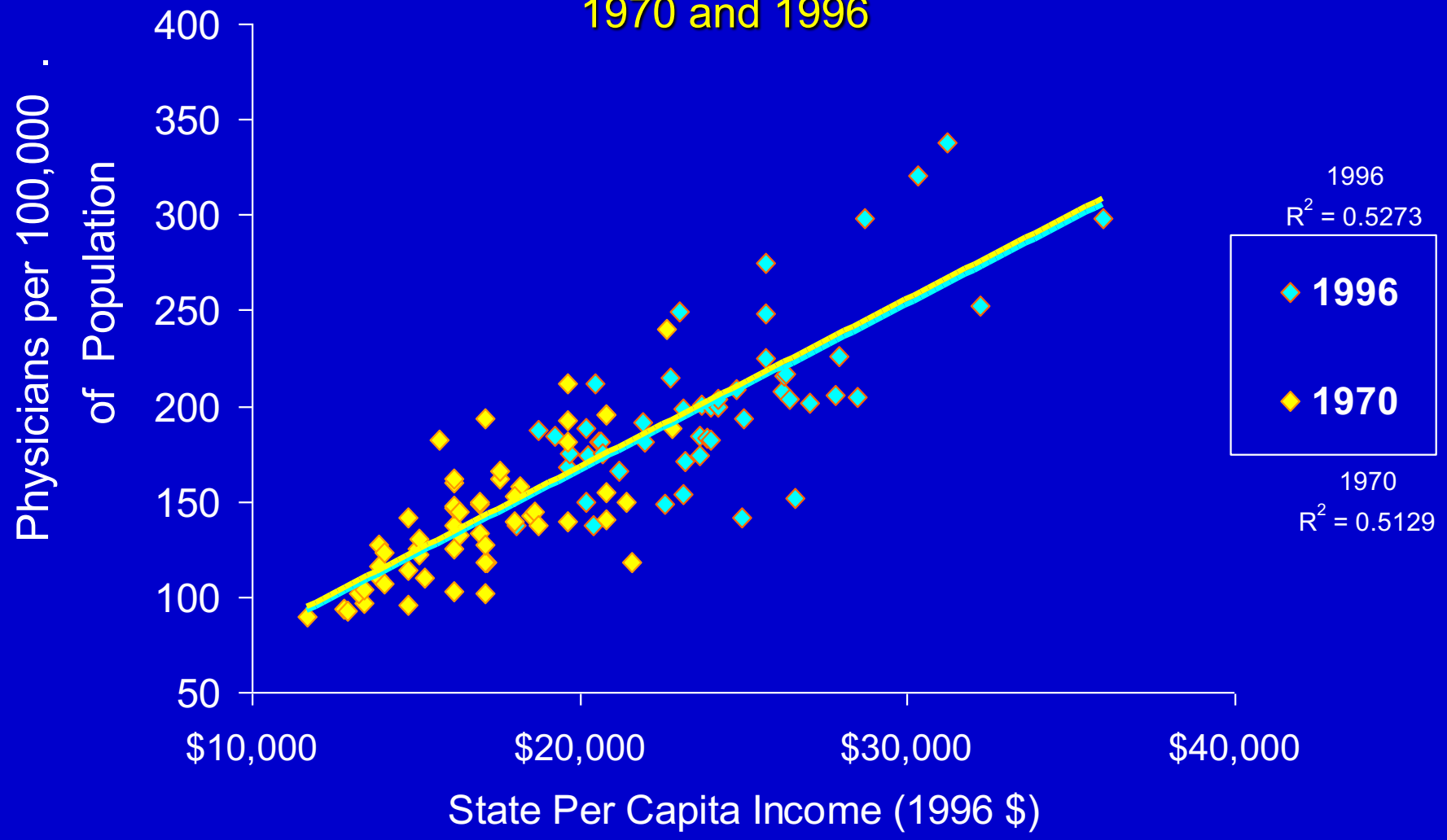
RELATIONSHIP BETWEEN PHYSICIAN SUPPLY and GROSS DOMESTIC PRODUCT 1929-2000



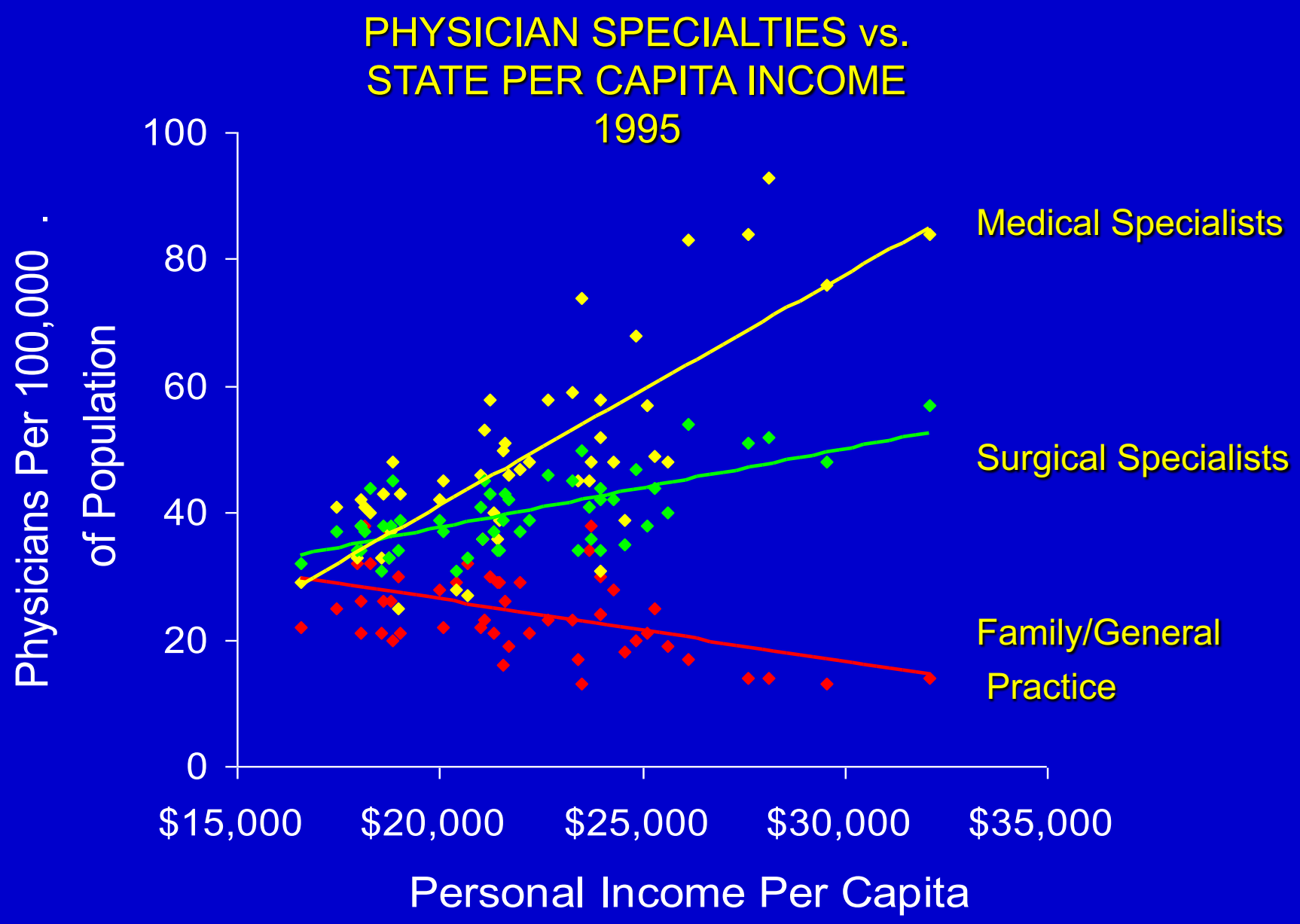
STATE PER CAPITA INCOME vs. STATE PHYSICIAN SUPPLY 1996



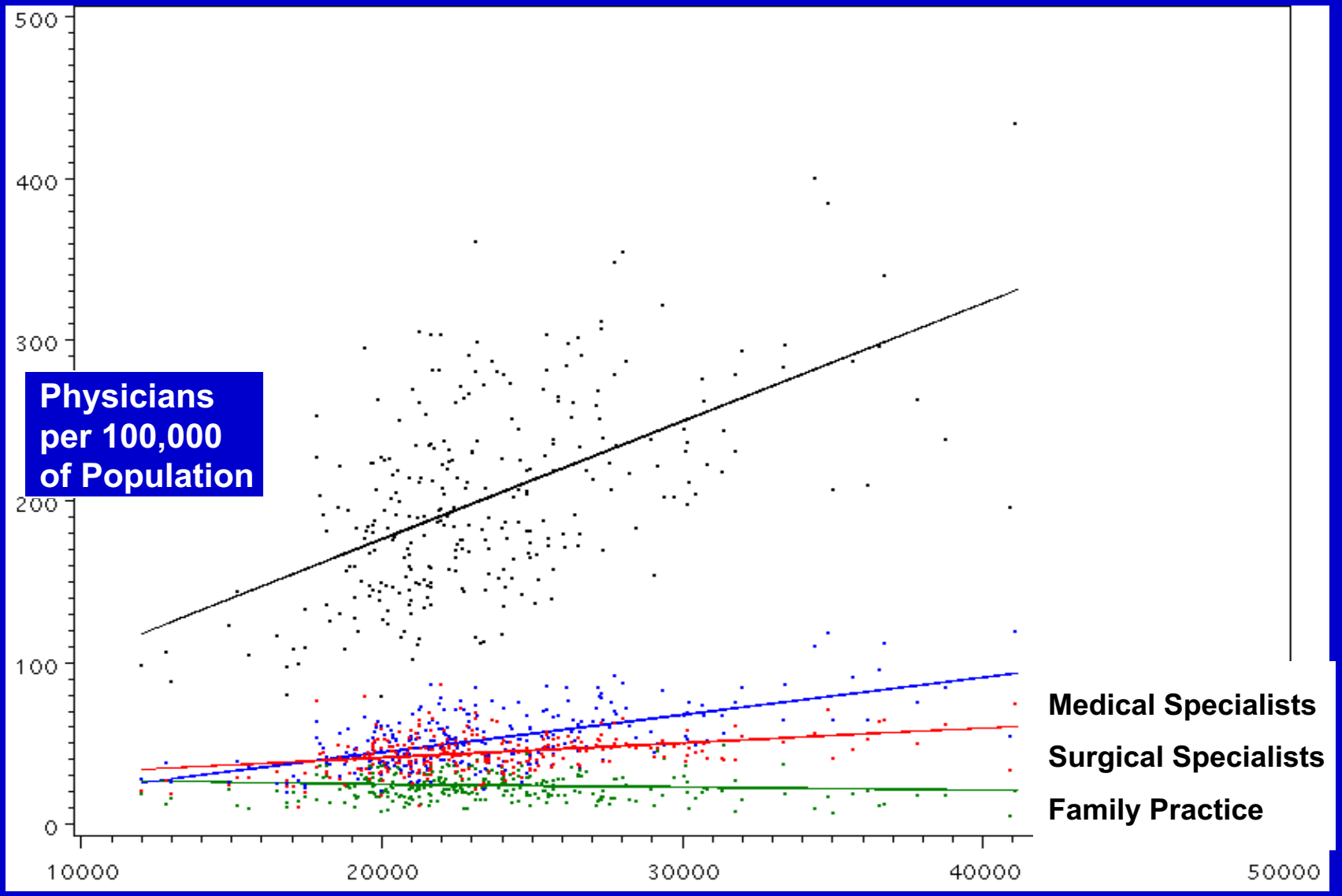
STATE PER CAPITA INCOME vs. STATE PHYSICIAN SUPPLY 1970 and 1996



1970 data from Reinhardt, 1975


PHYSICIAN SPECIALTIES vs.
STATE PER CAPITA INCOME
1995
Physicians Per 100,000 .
of Population
100
80
60
40
20
0
$15,000
$20,000
$25,000
$30,000
$35,000
Personal Income Per Capita
Medical Specialists
Surgical Specialists
Family/General
Practice

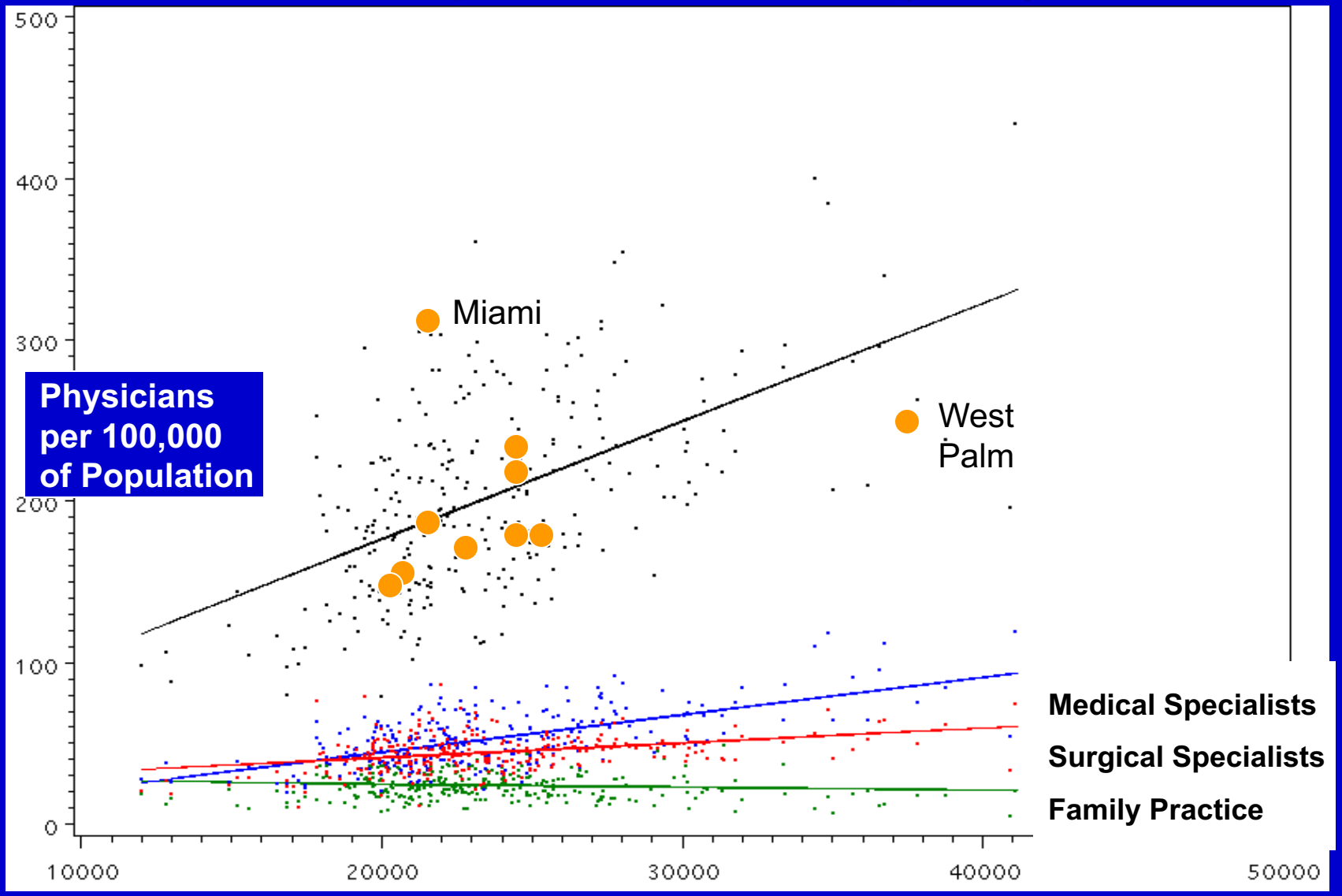
PER CAPITA INCOME vs PHYSICIAN SUPPLY in Metropolitan Statistical Areas (MSAs)



Per Capita Income

Residents included

PER CAPITA INCOME vs PHYSICIAN SUPPLY in Metropolitan Statistical Areas (MSAs)



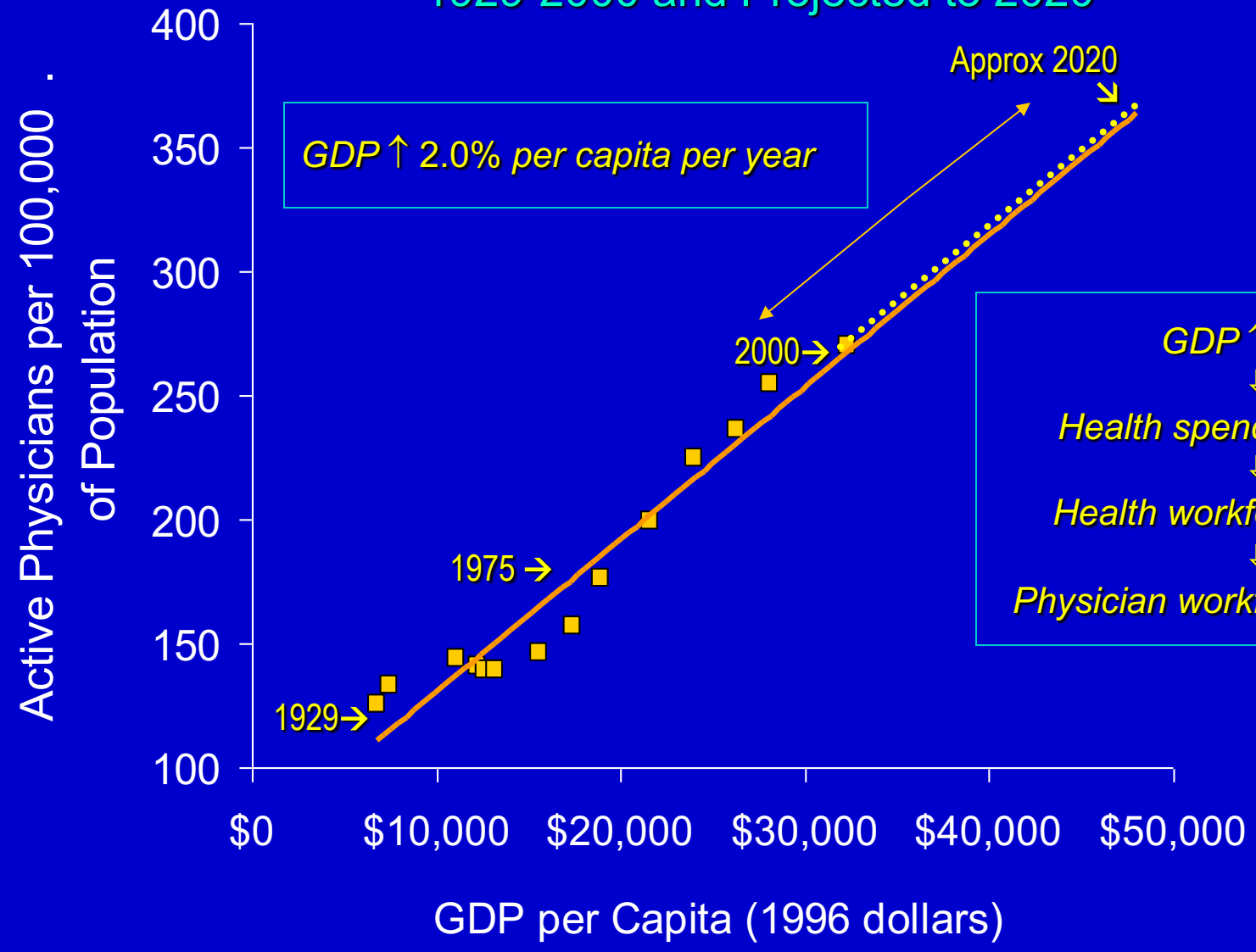
Per Capita Income

Residents included

TREND MODEL PROJECTIONS

PHYSICIAN DEMAND TREND vs. GROSS DOMESTIC PRODUCT

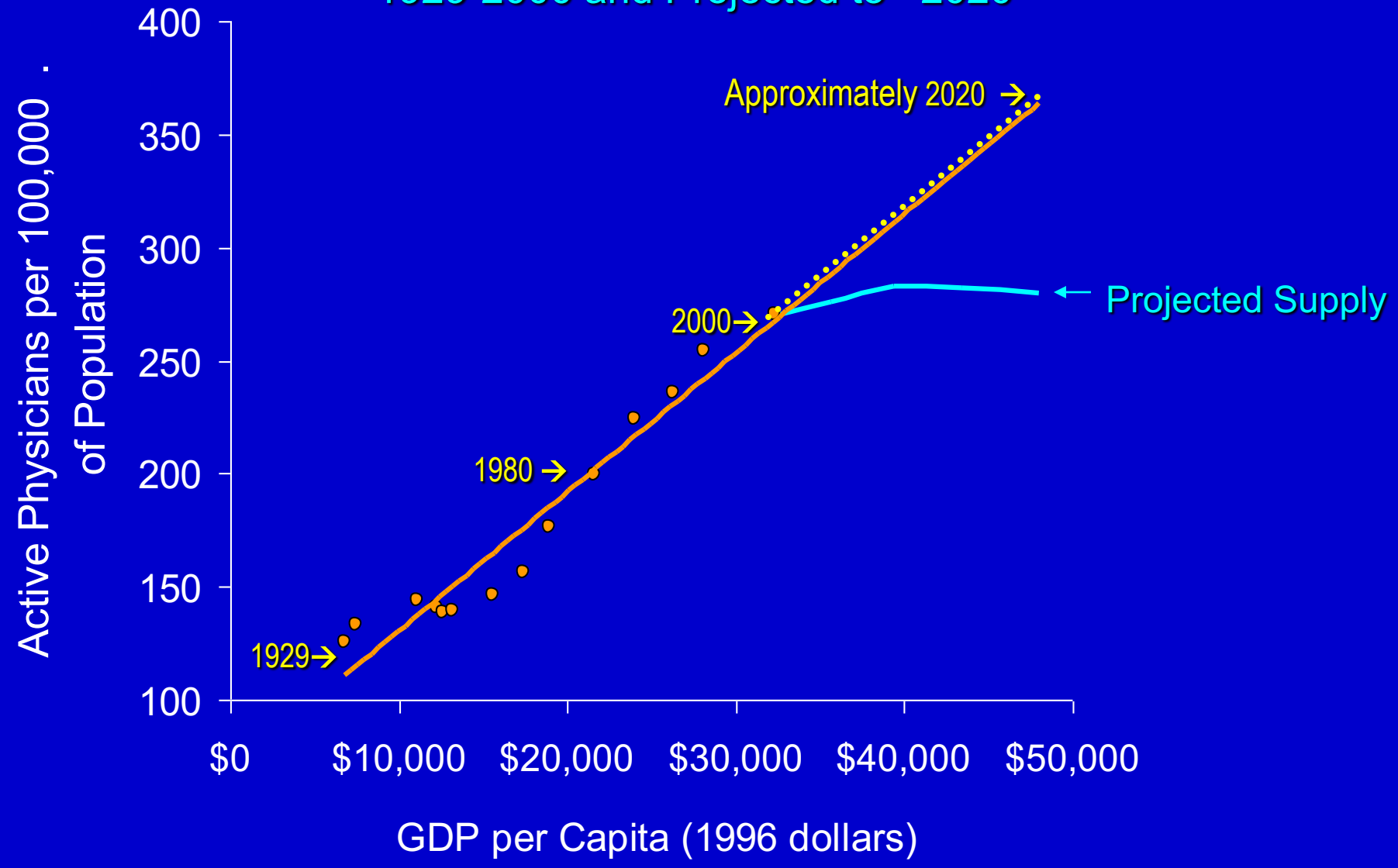
1929-2000 and Projected to 2020



GDP ↑ 1.0%
⇩
Health spending ↑ ~1.5%
⇩
Health workforce ↑ ~1.2%
⇩
Physician workforce ↑ ~ 0.75%

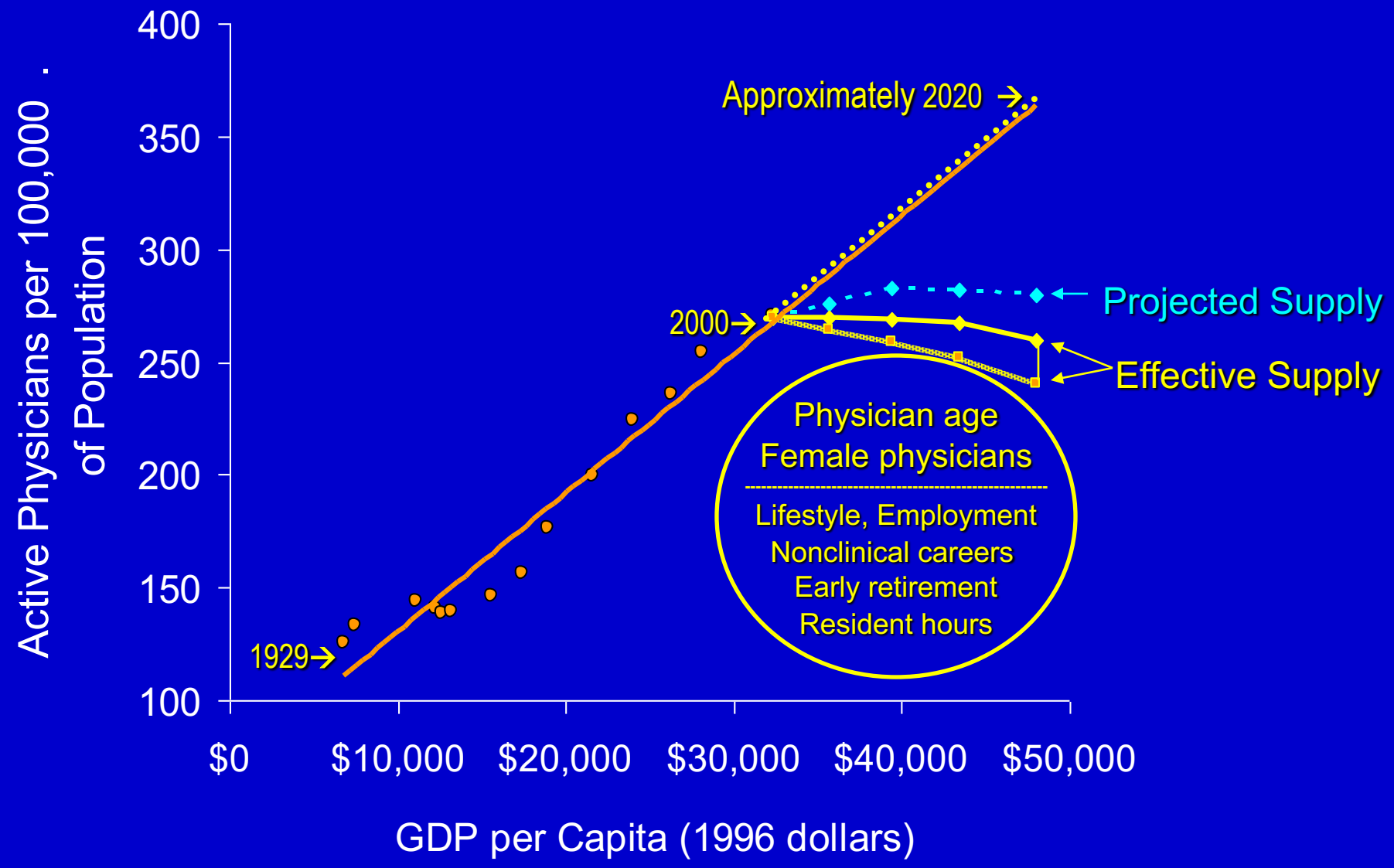
PHYSICIAN DEMAND and SUPPLY vs. GROSS DOMESTIC PRODUCT

1929-2000 and Projected to ~2020

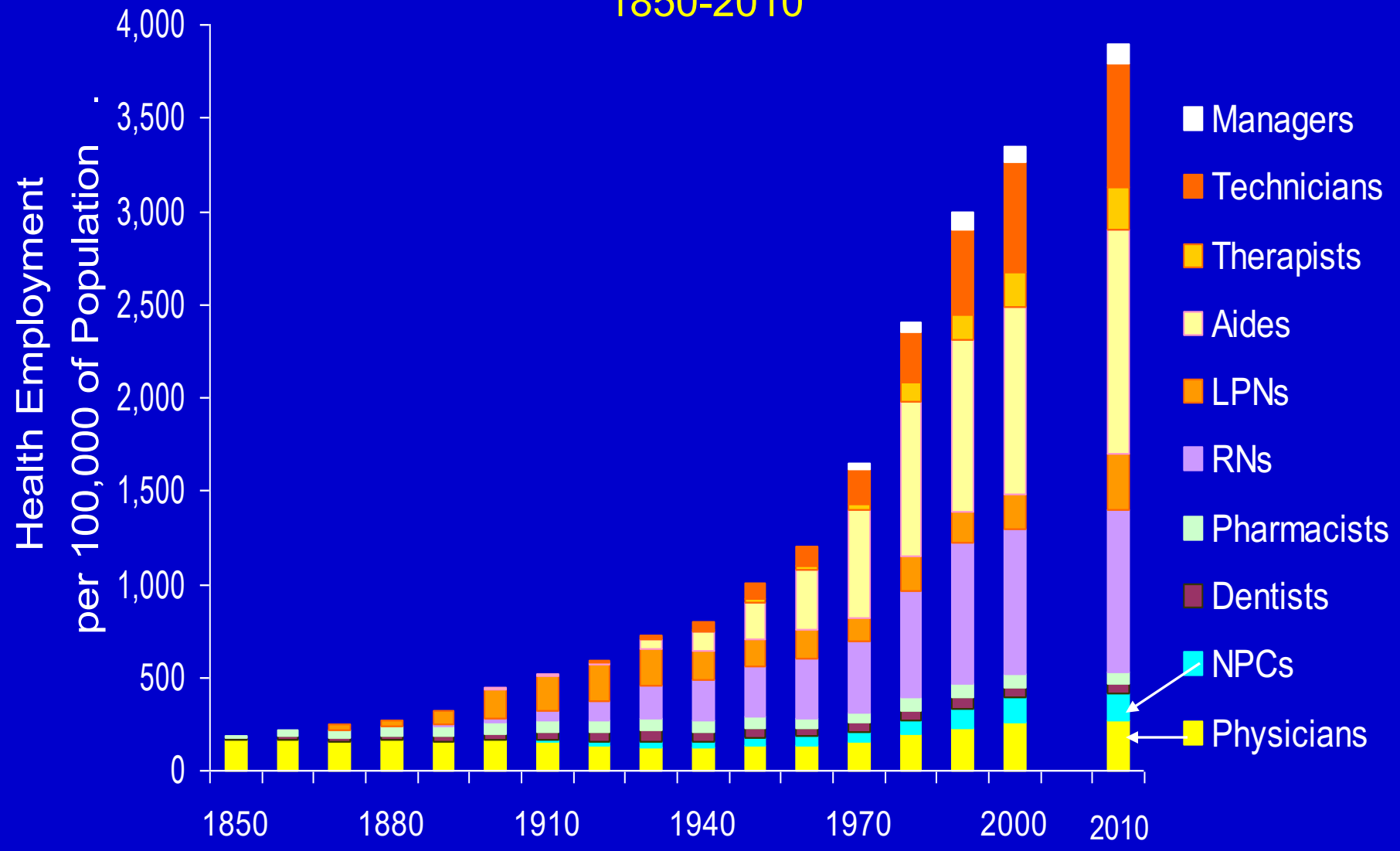


PHYSICIAN DEMAND and EFFECTIVE SUPPLY

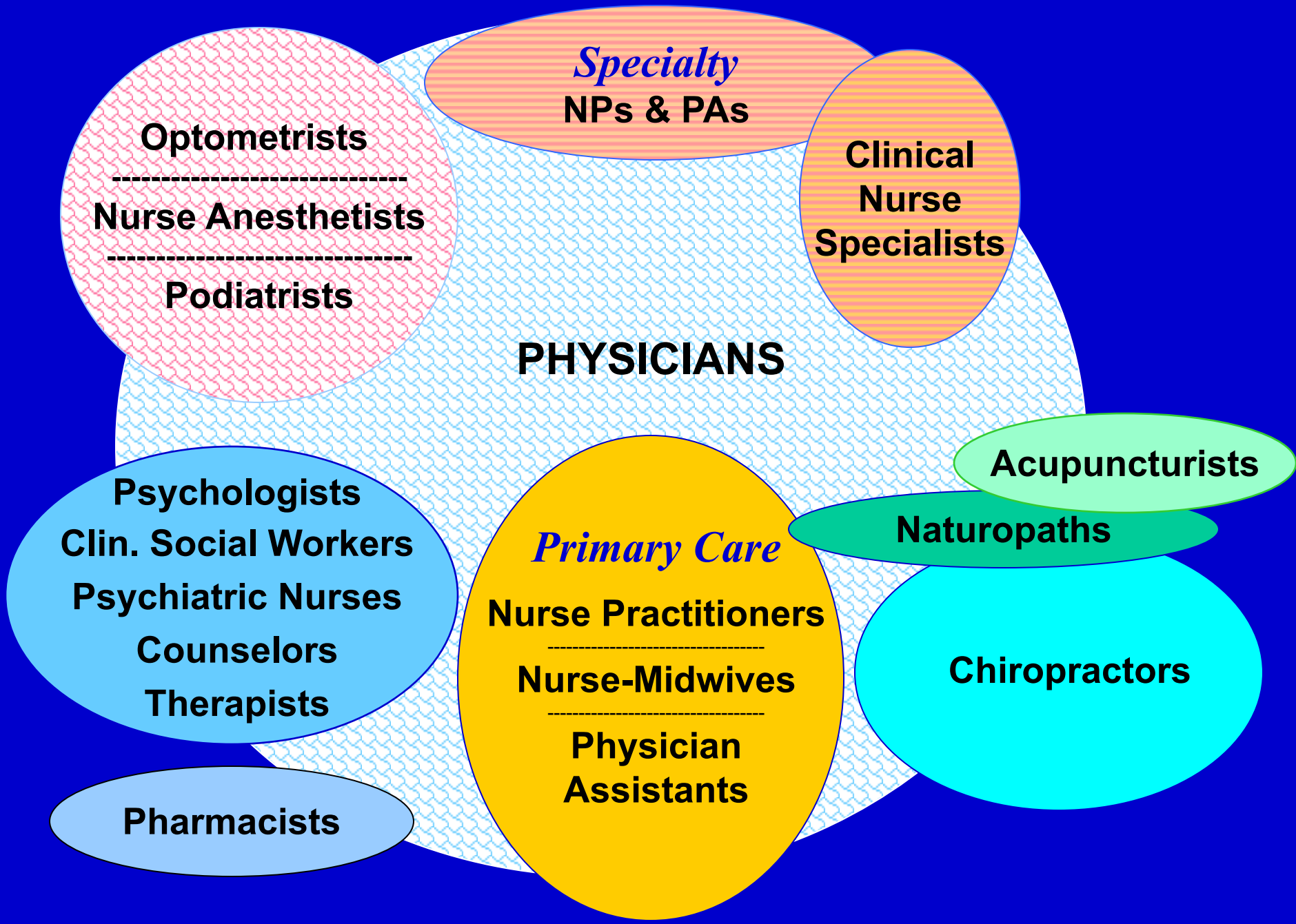
1929-2000 and Projected to ~2020



PHYSICIANS, NONPHYSICIAN CLINICIANS and OTHER HEALTH WORKERS 1850-2010



Adapted from Kendix and Getzen and the Bureau of Labor Statistics


Specialty
NPs & PAs
Optometrists
Nurse Anesthetists
Podiatrists
Clinical Nurse Specialists
PHYSICIANS
Acupuncturists
Naturopaths
Psychologists
Clin. Social Workers
Psychiatric Nurses
Counselors
Therapists
Primary Care
Nurse Practitioners
Nurse-Midwives
Physician Assistants
Chiropractors
Pharmacists

OVERLAPPING RESPONSIBILITIES OF PHYSICIANS AND NONPHYSICIAN CLINICIANS

PHYSICIANS

COMPLEX CARE

MULTISYSTEM DISEASE CARE

CHRONIC DISEASE MANAGEMENT

MINOR and SELF-LIMITED DISORDERS

SYMPTOM CONTROL

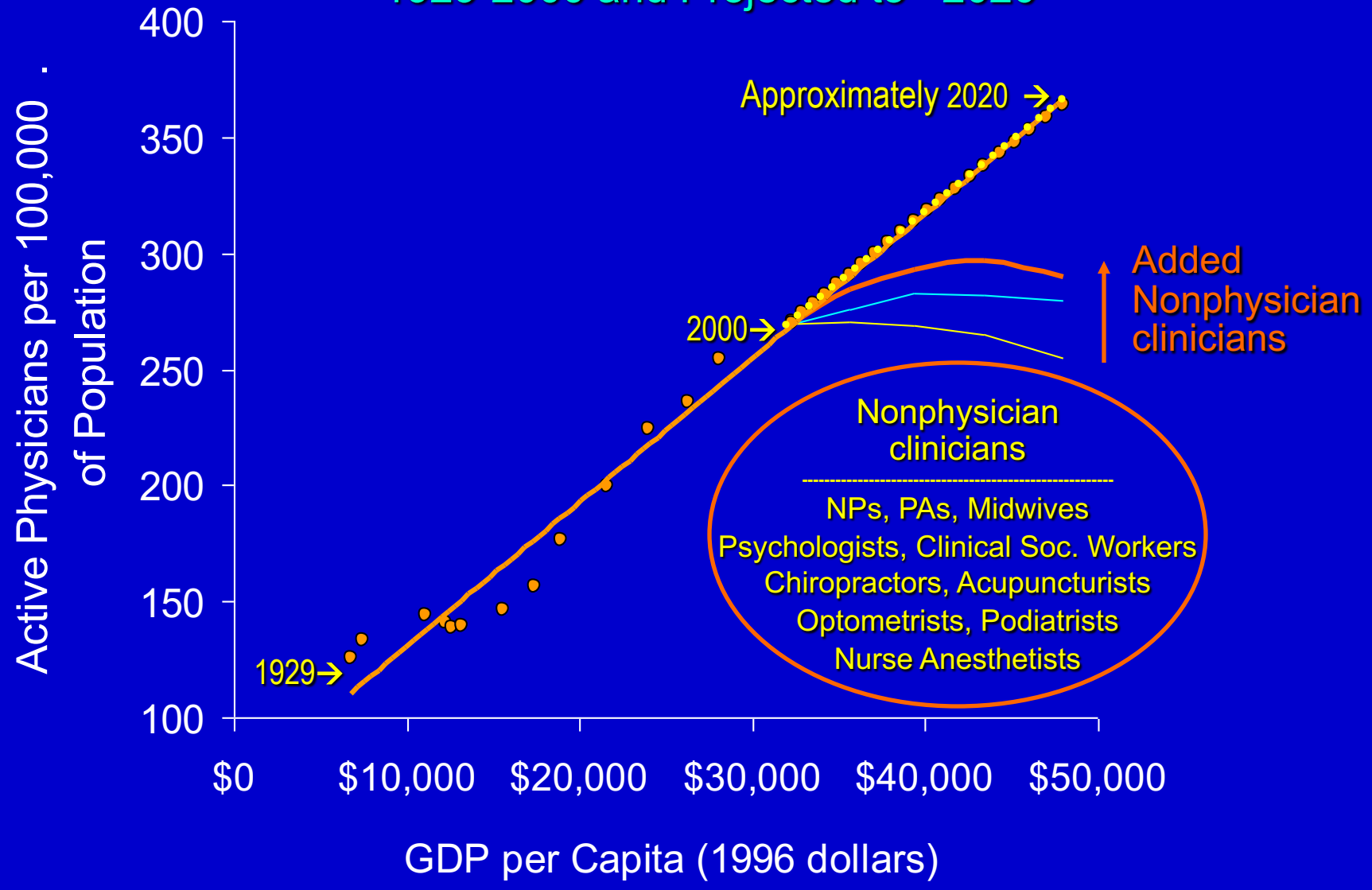
WELLNESS CARE and PREVENTION

COUNSELING and EDUCATION

NONPHYSICIAN CLINICIANS

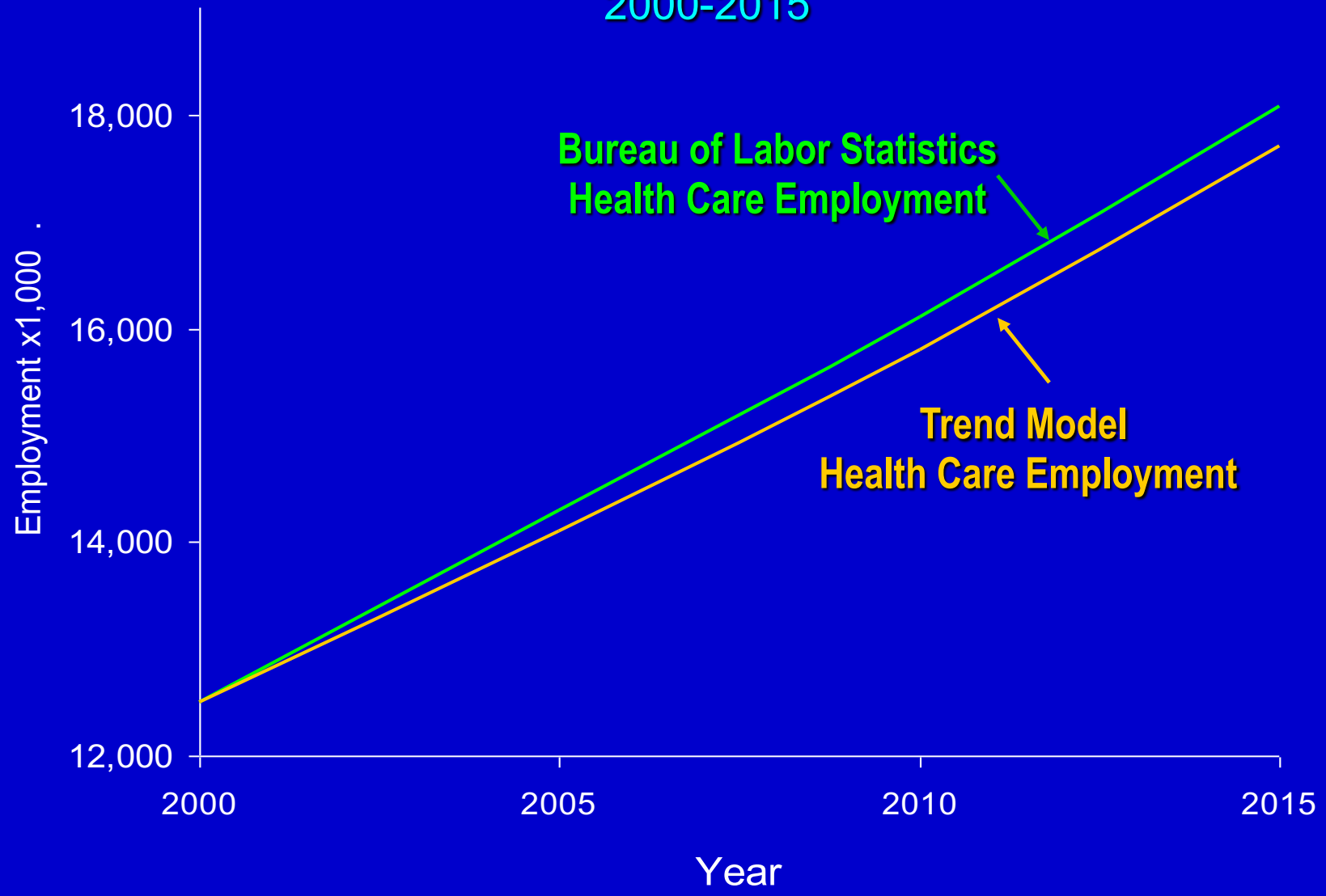
PHYSICIAN DEMAND and SUPPLY of PHYSICIANS and NPCs

1929-2000 and Projected to ~2020

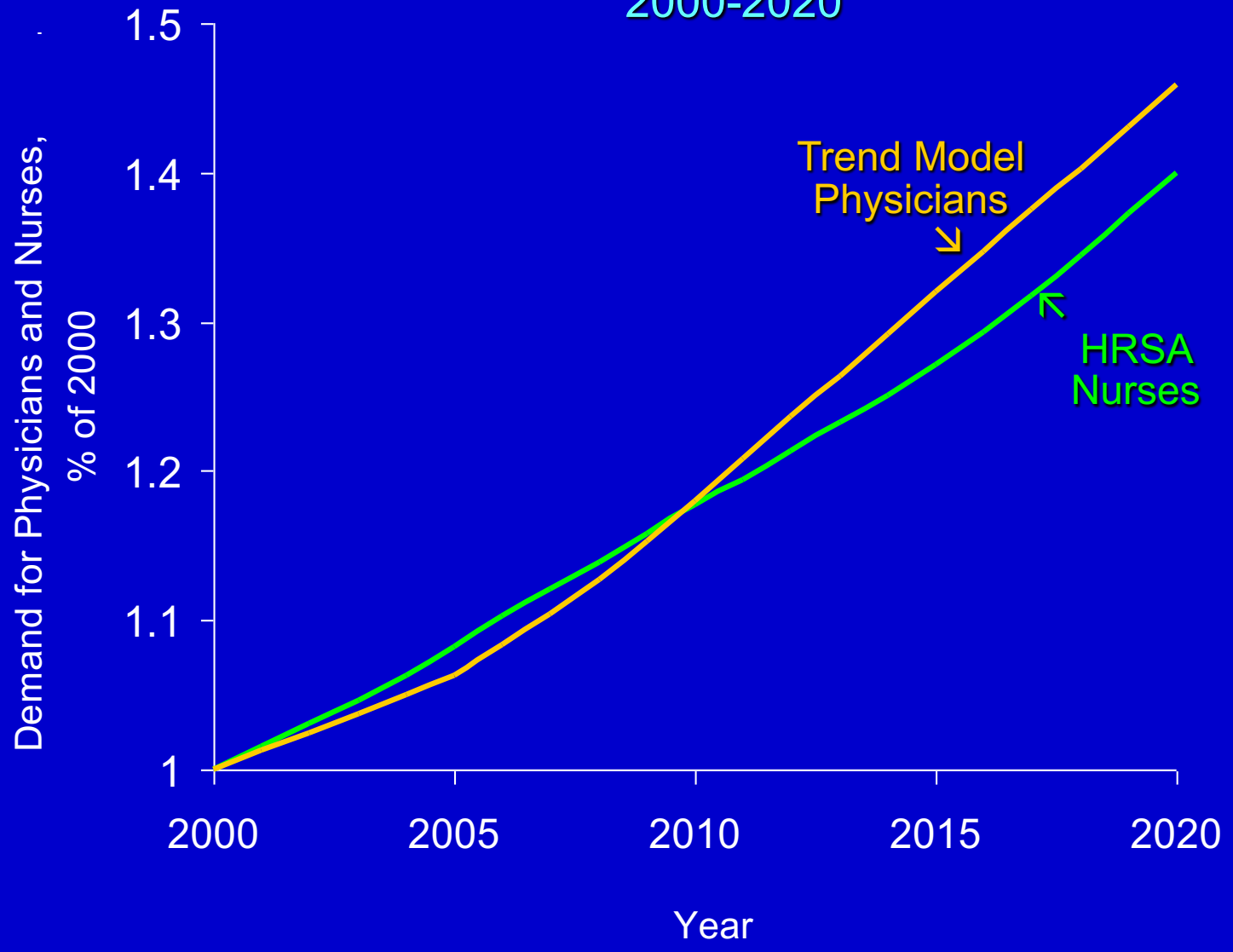


TREND PROJECTIONS
OF THE DEMAND FOR PHYSICIANS

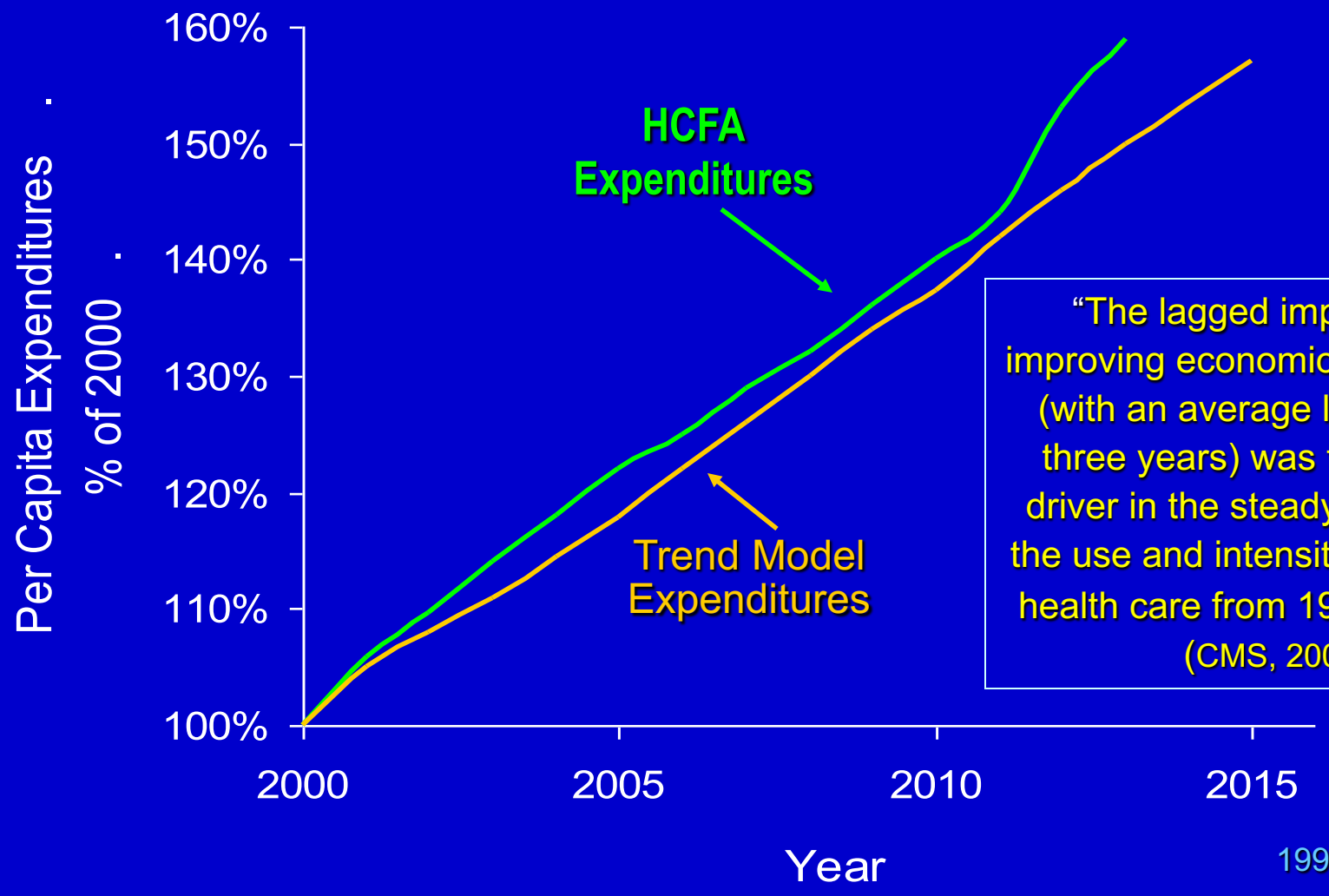
BUREAU OF LABOR STATISTICS
HEALTH SERVICES EMPLOYMENT
2000-2015



HEALTH RESOURCES AND SERVICES ADMINISTRATION
DEMAND FOR NURSES
2000-2020



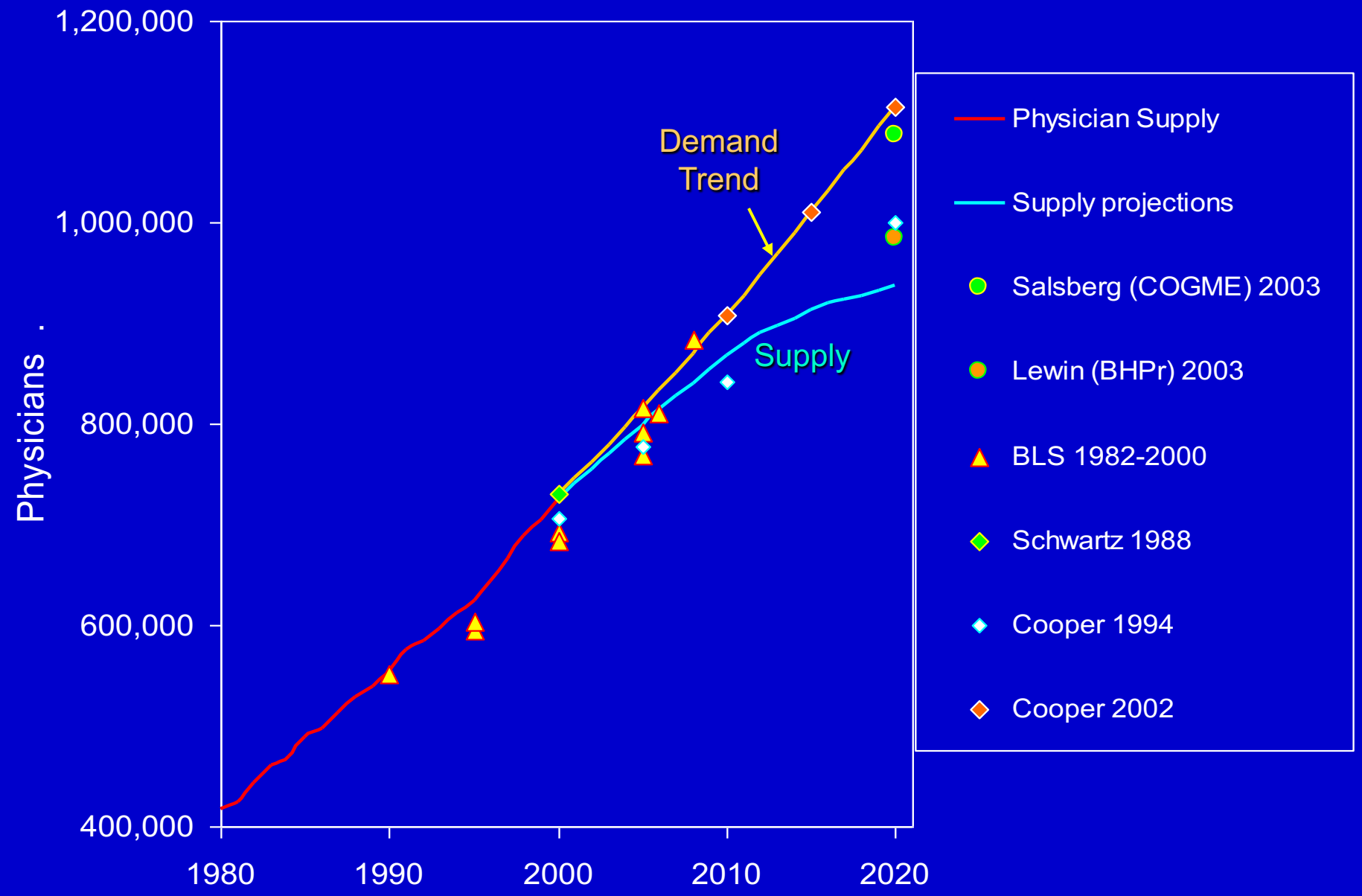
HEALTH CARE FINANCING ADMINISTRATION
HEALTH CARE EXPENDITURES PER CAPITA
2000-2013



"The lagged impact of an improving economic environment (with an average lag of about three years) was the primary driver in the steady increase in the use and intensity of personal health care from 1999 to 2002." (CMS, 2004)

1996 $, percent of 2000

VARIOUS PHYSICIAN TREND PROJECTIONS



PLANNING PARAGIGMS

TASK AND TIME MODELS

Appropriate Tasks → Visits x $\frac{\text{Time per Visit}}{\text{Time per Doc}}$ = FTEs Needed

Adjusted needs model (GMENAC)

= >750 diseases

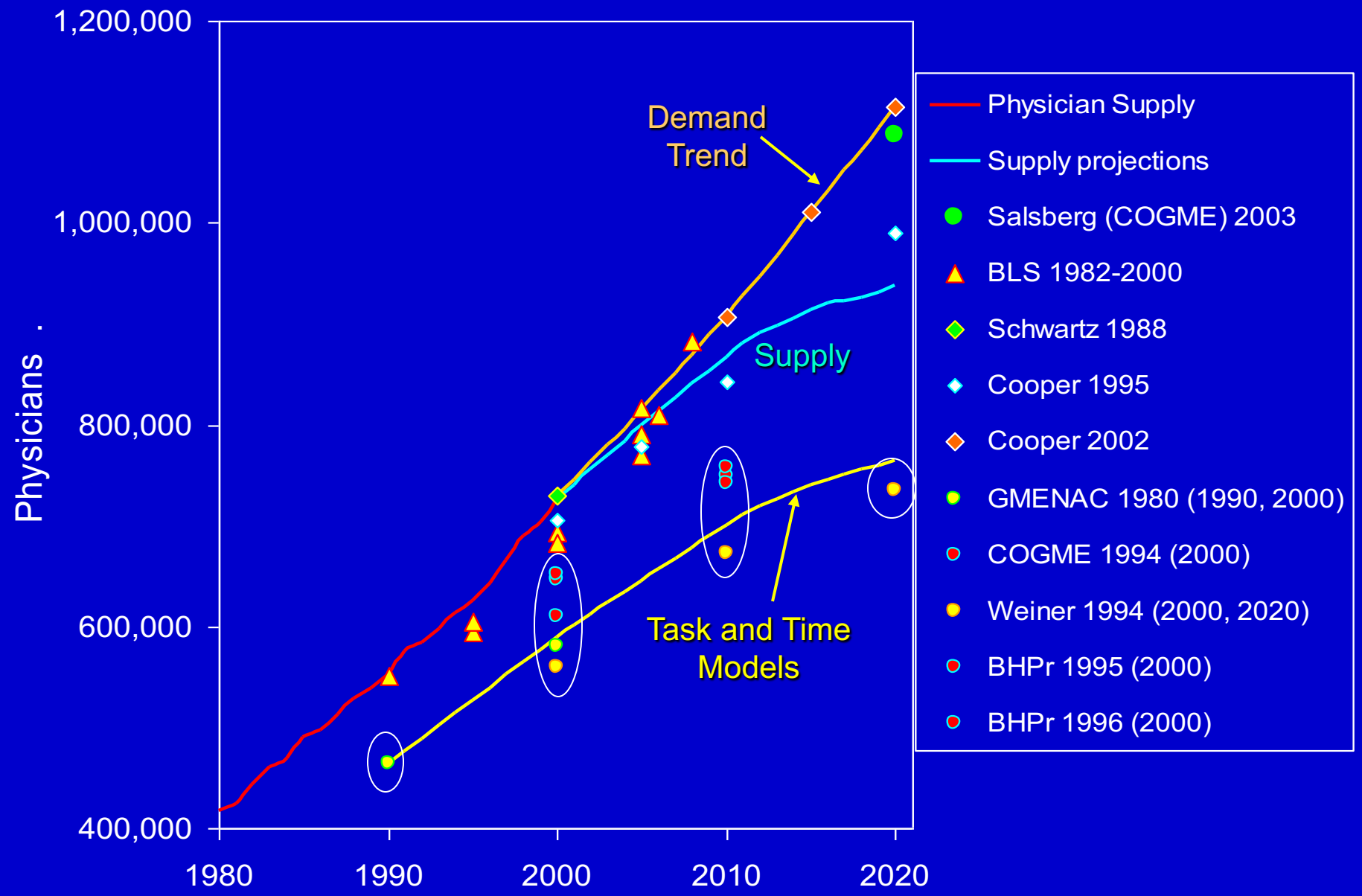
Demand-utilization model (BHPr)

Demographic (age/race/gender = 36) x Insurance (3) x Specialties (18) x NCHS Datasets (5)
=9,720 cells

Managed care model (Weiner)

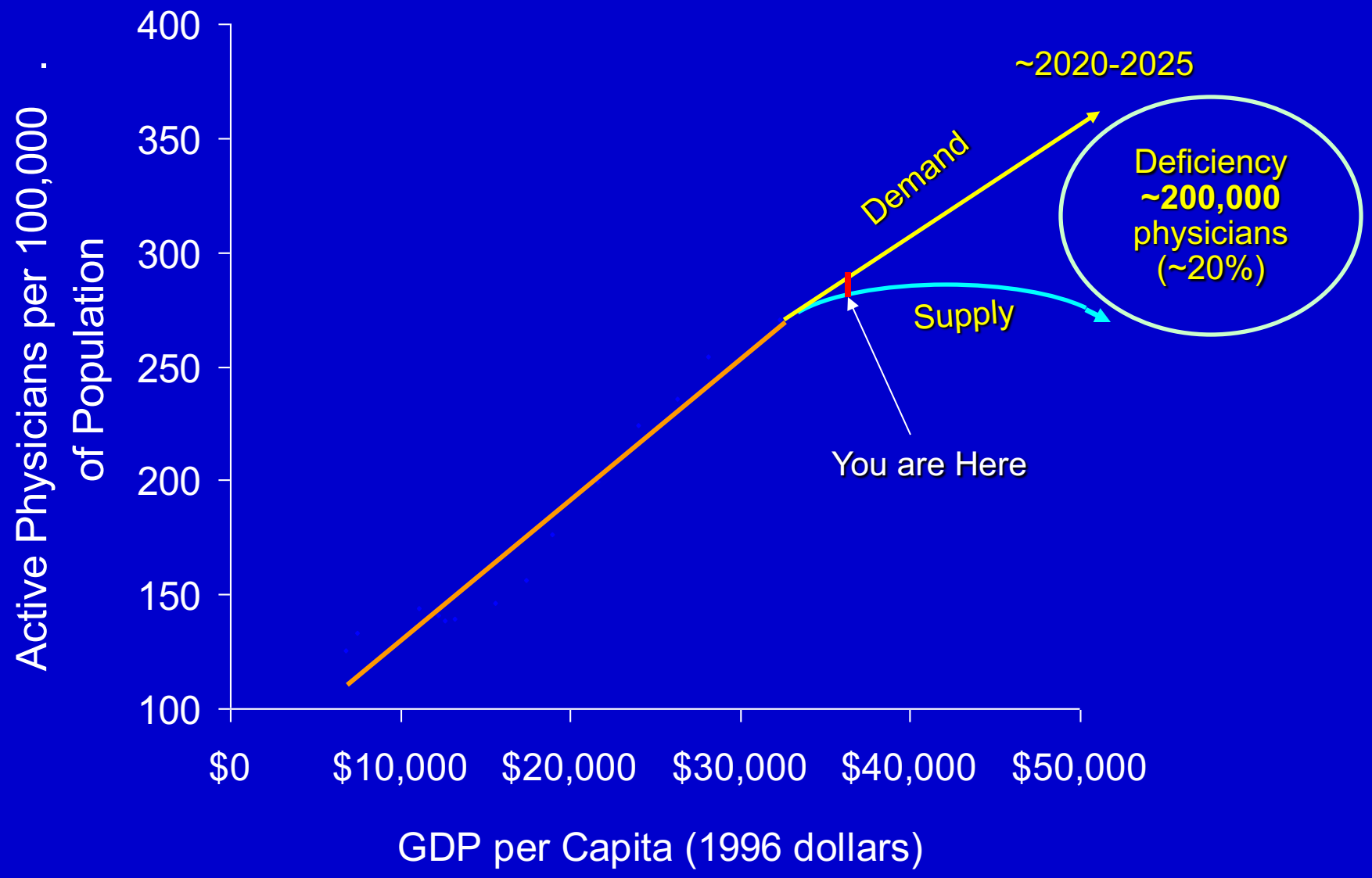
Count all the HMO docs
? Missed docs, different patient characteristics ?
40 hour doc =1.0 FTEs.

PHYSICIAN SUPPLY and DEMAND



THE SHAPE OF PHYSICIAN SUPPLY NOW AND INTO THE FUTURE

DEFICIT WITH NO ADDITIONAL USMGs or IMGs



INDICATIONS OF CURRENT AND IMPENDING PHYSICIAN SHORTAGES

- Waiting times for patients
- Salaries, bonuses for new physicians
- Refusal by physicians to accept Medicare patients
- Boutique (VIP) practices
- Recruiters and surveys
- Resident exit surveys
- Federal forecasters
  - Bureau of Labor Statistics
  - Health Care Financing Adm. (CMS)
- State medical associations
  - California, Massachusetts, Arizona, New Mexico, Oregon, Texas
- Medical school deans

GREATEST CURRENT PHYSICIAN SHORTAGES

Anesthesiology
Radiology
Cardiology
Gastroenterology
Orthopedics
Dermatology
Oncology
Urology
Pulmonary/Critical Care

} 20% of physicians

Emergency medicine
General surgery
Neurosurgery
Neurology
Ob/Gyn
Pediatric sub-specialties
Psychiatry

…and early signs of shortages in primary care

THE IMPERATIVE

The conditions that have led to the current physician shortages have been evolving for more than a decade.

To continue to do nothing invites public discontent and forces the profession of medicine to redefine itself in ever more narrow scientific and technological spheres.

Yet, the solutions are neither simple nor immediate.

These circumstances demand consensus building and thoughtful planning.

Thank you.