



# Michigan Physician Workforce Requirements Assessment Project and Methodology Review

Meeting of the Steering Committee for the Blue Ribbon  
Group on Physician Supply for the State of Michigan

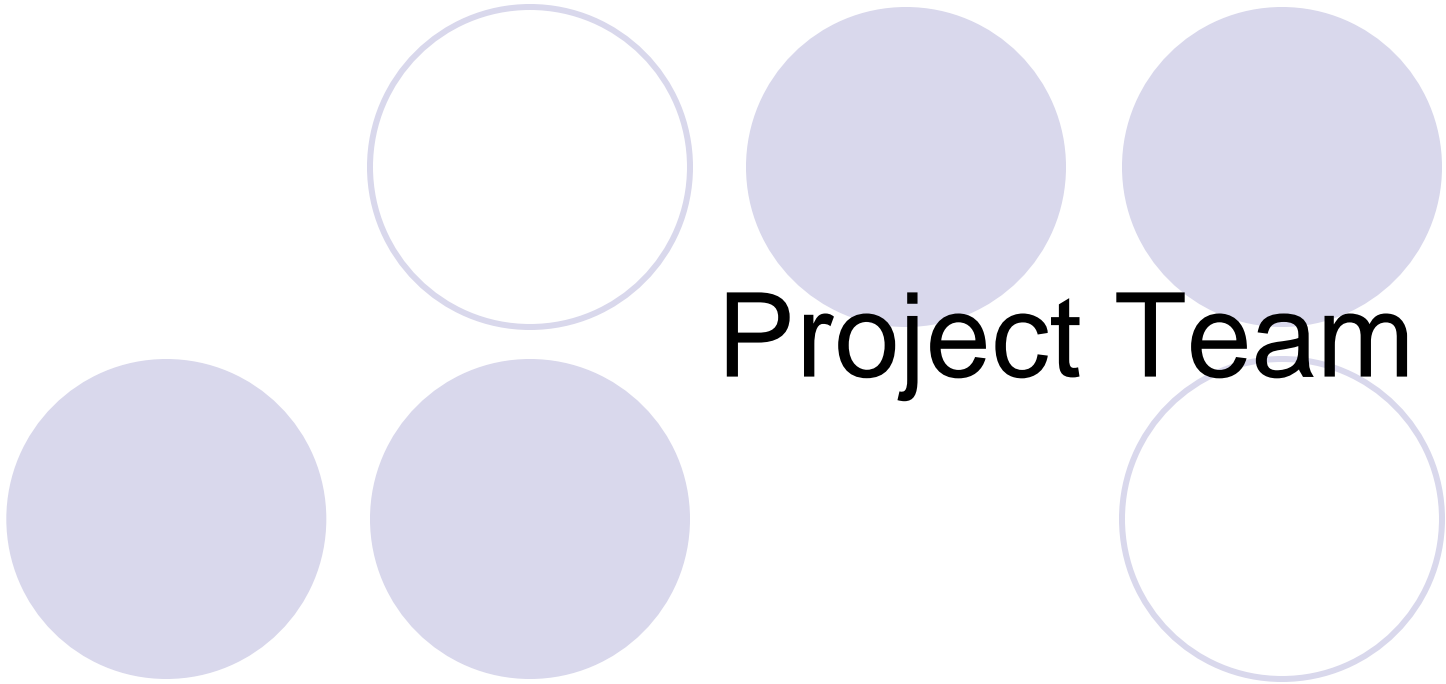
December 1, 2004

Gaetano J. Forte  
Center for Health Workforce Studies



# Presentation Overview

- Project Team
- Project Overview
- Project Components
  - Current Physician Supply in Michigan
  - Medical Education and Graduate Medical Training in Michigan
  - Population and Demographic Trends in Michigan
  - Future Physician Supply and Demand in Michigan
- Project Products



**Project Team**



# Project Team

- Center for Health Workforce Studies
  - Conducts studies of the supply, demand, use and education of the health workforce
  - Committed to collecting and analyzing data to understand workforce dynamics and trends
  - Goal to inform public policies, the health and education sectors and the public
  - One of six regional centers with a cooperative agreement with HRSA/Bureau of Health Professions



# Project Team

- Center for Health Workforce Studies
  - Project Director: Gaetano Forte
  - Lead Researcher: Sandra McGinnis
  - Data Analyst: David Armstrong



# Project Team

- AAMC Center for Workforce Studies
  - Lead Consultant: Edward Salsberg
  - To encourage a supply of physicians by specialty and region consistent with demand and need
  - To promote a more effective marketplace for physician workforce
  - To support more informed decisions by the medical education community and by policy makers
  - To promote more systematic physician workforce data collection and analysis and dissemination of findings



# Project Team

- Altarum Health Solutions Division
  - Lead Consultant: Charles Roehrig
  - 30+ year history in health workforce modeling for the federal government
  - Developed supply and requirements models for physicians, nurses, and other health professionals
  - Consulted with CHWS on the most recent national COGME physician workforce policy assessment and the recently completed assessment of the California physician workforce



# Project Overview





# Project Background and Context

- National Physician Workforce Assessment
- California Physician Workforce Assessment
- Demographic Trends
- Physician Utilization Trends

# National Physician Workforce Assessment



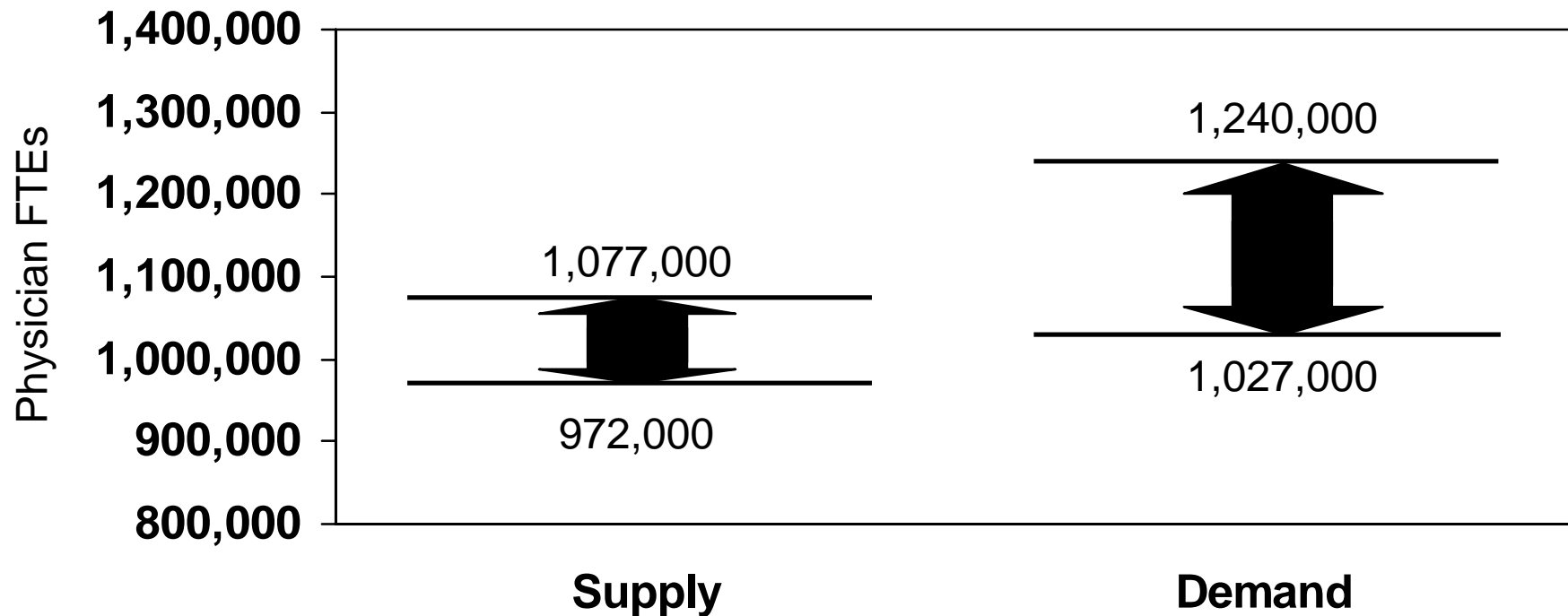
Accounting for likely future trends affecting the physician supply and demand in the U.S.:

- Supply in 2020: 972,000 – 1,077,000 FTEs
- Demand in 2020: 1,027,000 – 1,240,000 FTEs
- Likely difference between supply and demand in 2020: 85,000 – 96,000 FTEs

*Source: COGME, forthcoming*


# National Physician Workforce Assessment

## Physician Supply and Demand in 2020 (in FTEs)



Source: COGME, forthcoming

# California Physician Workforce Assessment



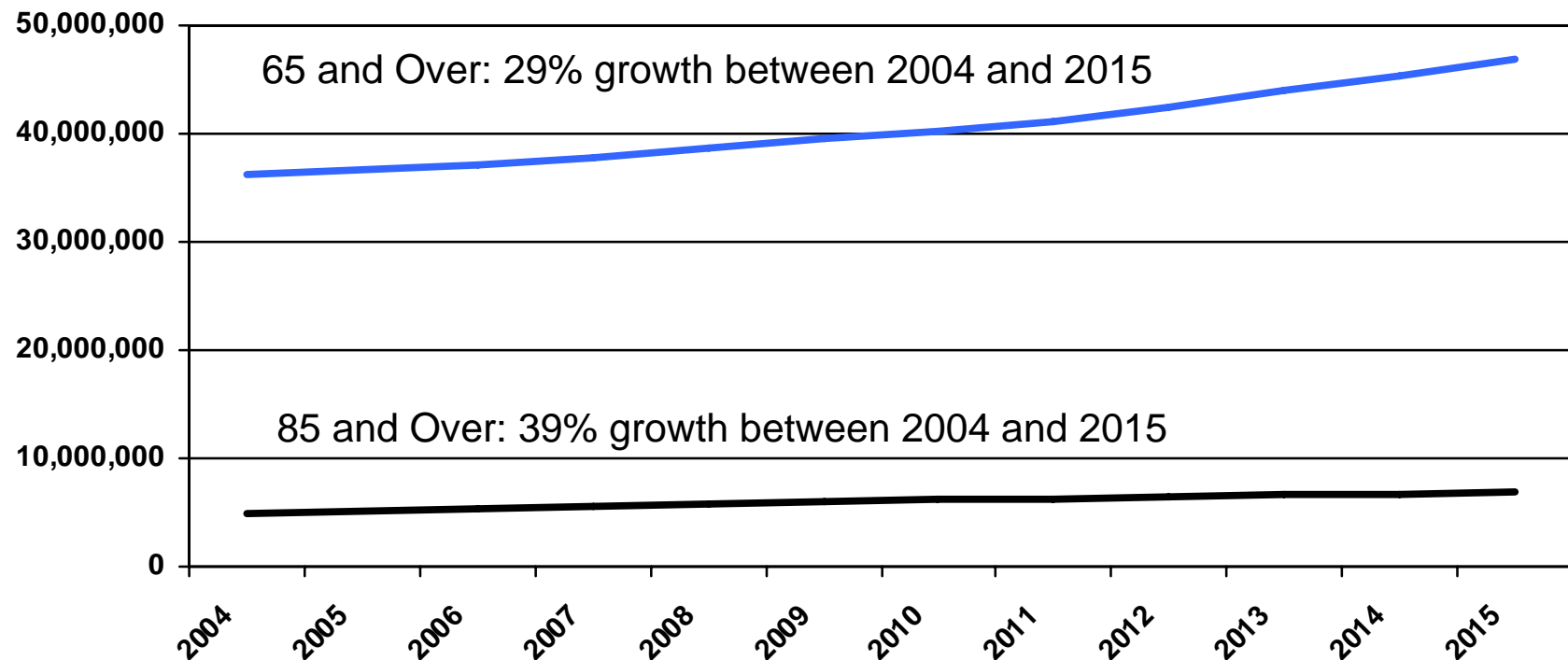
Accounting for likely future trends affecting the physician supply and demand in the California:

- Supply in 2015: 101,000 – 113,000 physicians
- Demand in 2015: 104,000 – 131,000 physicians
- Likely difference between supply and demand in 2015: 5,000 – 17,000 physicians

*Source: CHWS, forthcoming*

# Demographic Trends

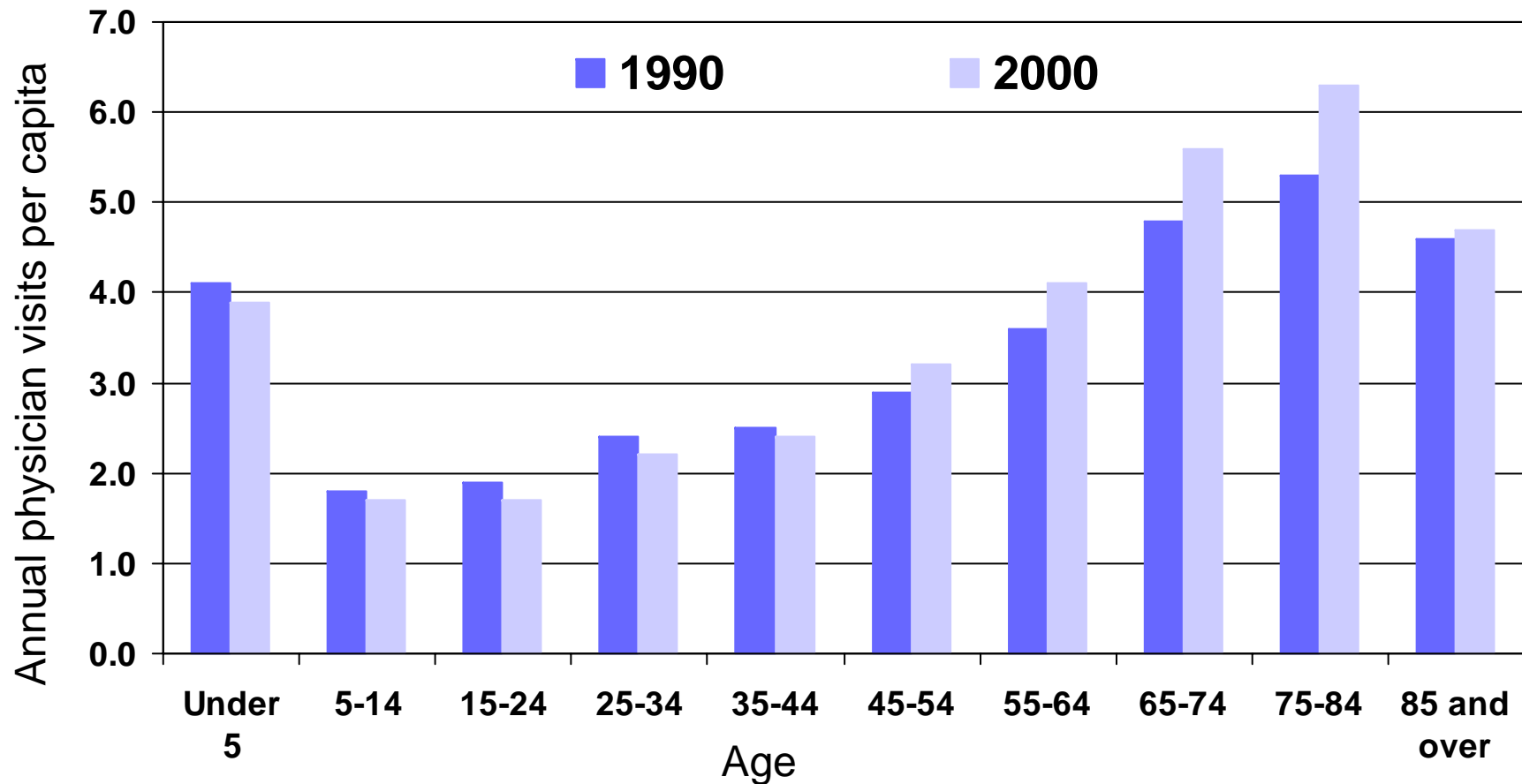
## Projected US Resident Population Over 65 and Over 85 Years of Age, 2004 – 2015



Sources: US Census Bureau 2004, CHWS

# Physician Utilization Trends

## Per Capita Physician Visits by Age Group, 1990 and 2000



Sources: NAMCS 1990 and 2000, CHWS

# Project Purpose



- To develop an up-to-date systematic assessment of the physician workforce in Michigan
- To assess the medical education and training efforts in the Michigan and understand their contributions to the supply of physicians in the state
- To assess the likely demographic changes in Michigan over the next 10 years
- To forecast the supply of and demand for physicians in Michigan over the next 10 years under a variety of likely scenarios



# Project Components



# Project Components



- Current Physician Supply in Michigan
- Medical Education and Graduate Medical Training in Michigan
- Population and Demographic Trends in Michigan
- Future Physician Supply and Demand in Michigan

# Current Physician Supply in Michigan

This component will include:

- Basic physician counts and ratios per population
- Specialty distributions
- Demographic profile of physicians practicing in the state
- Current practice patterns
- Details on the education and training of physicians practicing in the state

# Current Physician Supply in Michigan

- Data Sources:

- American Medical Association's Physician Masterfile
- American Osteopathic Association's Physician Database

# Medical Education and Training in Michigan

This component will include:

- Profile of medical education in the state
- Historical outcomes of medical education in the state
- Profile of graduate medical training in the state
- Historical outcomes of graduate medical training in the state
- Assessment of medical school capacity

# Medical Education and Training in Michigan

- Data Sources:

- AMA's Physician Masterfile
- AMA's Graduate Medical Education Database
- American Association of Colleges of Osteopathic Medicine data on Osteopathic education in the state
- Association of American Medical Colleges

# Population and Demographic Trends in Michigan

- Profile of current Michigan population by:
  - Age
  - Gender
  - Race/ethnicity
  - Health status
  - Insurance status
- Population projections

# Population and Demographic Trends in Michigan

- Data sources:
  - US Census Bureau
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - Other sources

# Future Physician Supply and Demand in Michigan



- Modification of existing forecasting models
- Multiple scenarios
- Forecasts through 2015





# Physician Supply Forecasting

- Model Dimensions

- National projections through 2020
- For 36 medical specialties
- Activity Distribution (e.g., patient care, administrative, research, teaching, other)
- Physician age and gender
- IMGs, USMGs, CMGs
- MDs and DOs



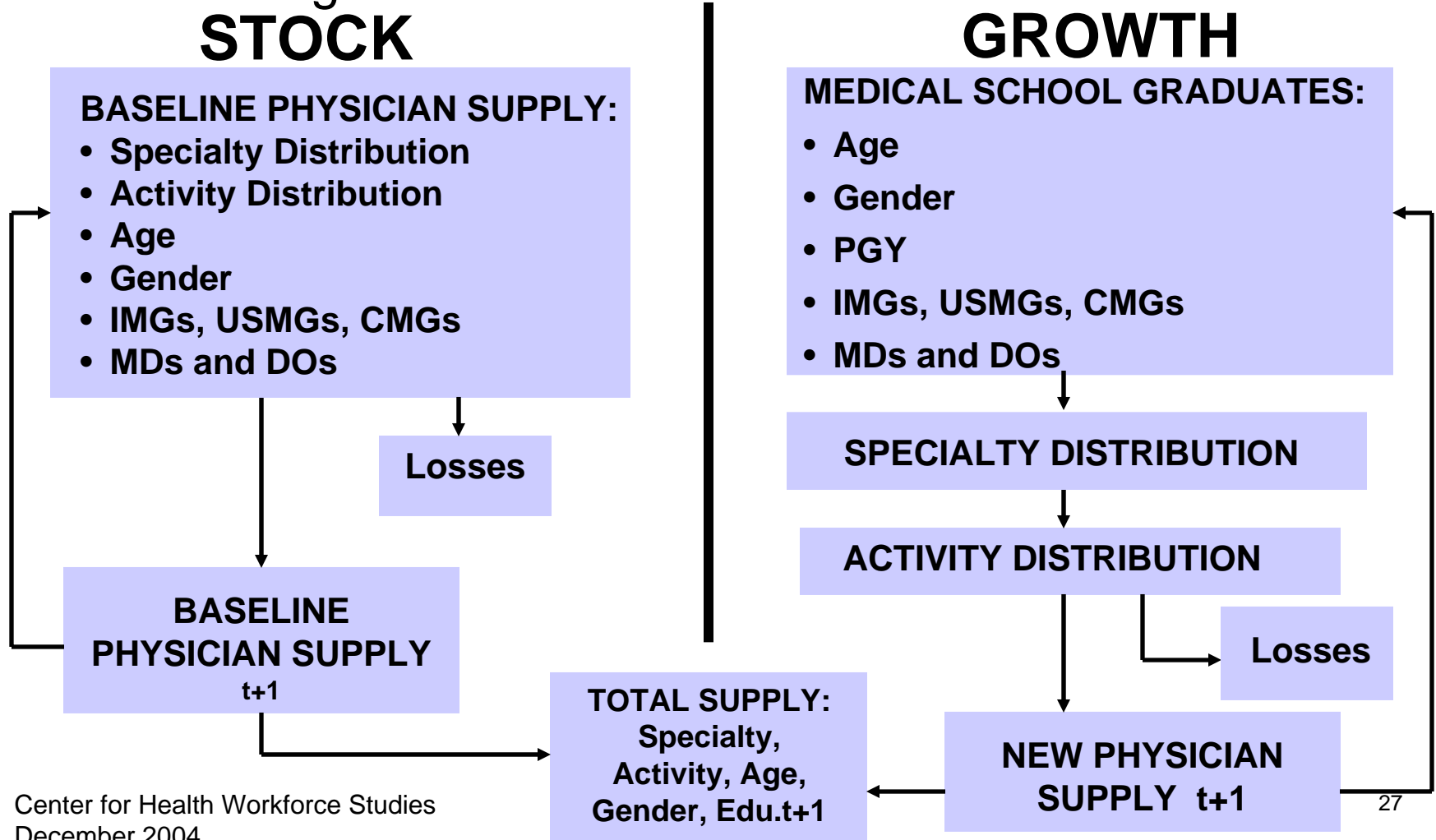
# Physician Supply Forecasting

- Model Determinants

- Current age, gender, USMG/IMG/CMG, and specialty distribution of physician workforce
- Annual number of US and international medical graduates
- Recent patterns of specialty choice and activity distribution
- Physician retirement patterns
- Physician productivity (especially average hours worked)
- Physician migration into and out of the state

# Physician Supply Forecasting

- Model Diagram





# Physician Supply Forecasting

- Forecast Scenarios

1. Baseline scenario based on trends in historical determinants
2. 5% reduction in work hours among physicians phased in over 10 years
3. 10% increase in productivity phased in over 10 years
4. Combine scenarios 2 and 3



# Physician Demand Forecasting

- Model Dimensions

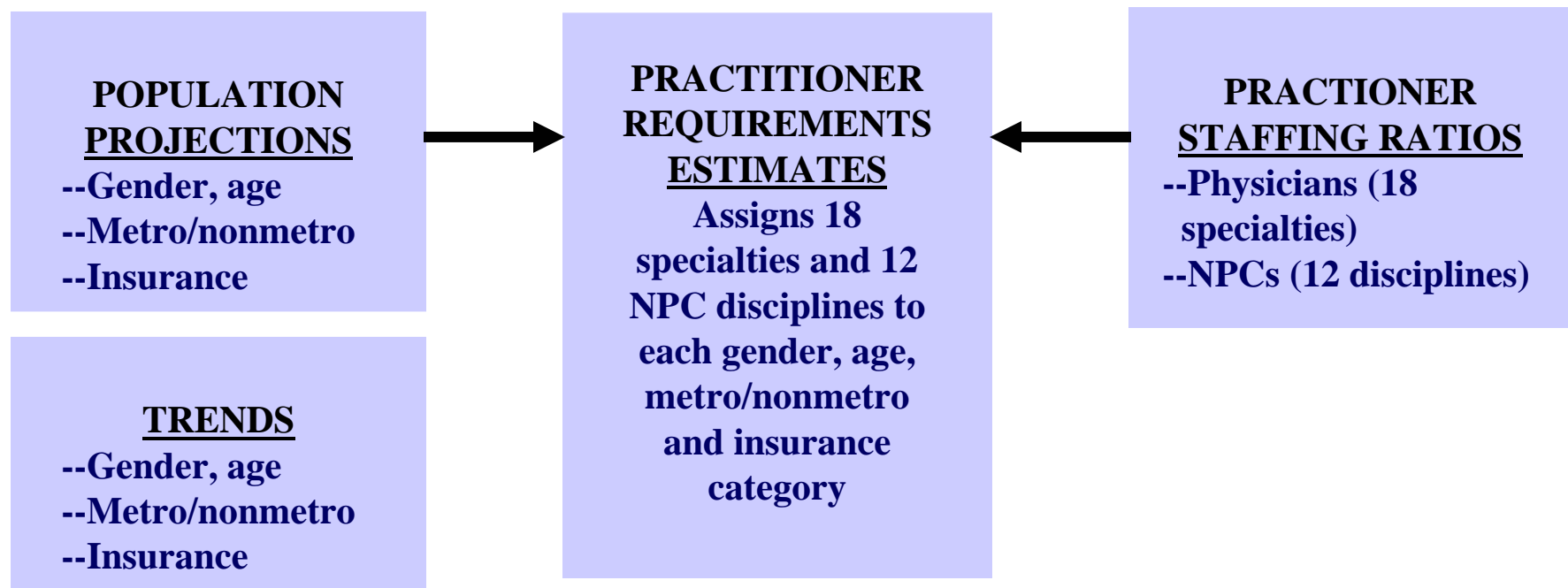
- Projections through 2020
- For 18 medical specialties
- For specific population groups defined by age, gender, metropolitan/non-metro location

# Physician Demand Forecasting

- Model Determinants
  - Population projections by age, gender, metro/non-metro location
  - Projected insurance distribution
  - Detailed physician-to-population ratios
  - Adjustments to demand projections made outside the model
    - Economic growth
    - Changes in patterns of care

# Physician Demand Forecasting

## ● Model Diagram



Source: Dall, 2004



# Physician Demand Forecasting

- Forecast Environments
  1. Current health care delivery system remains constant
  2. Expanded access, expanded insurance, other efforts to improve the health status of Michigan's population



# Physician Demand Forecasting

- Forecast Scenarios

1. Baseline scenario based on current levels of determinants
2. Annual increase in per capita gross state product factored into model
3. Changing age-specific physician utilization rates
4. Reduction of the estimated unnecessary/marginally beneficial services provided by physicians
5. Combine scenarios 2 and 4
6. Combine scenarios 3 and 4



# Project Products

# Project Products



- Physician Profile
- Summary Report



Thank You

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