

# Medicaid/State Children's Health Insurance Program Patients and Infectious Diseases Treated in Emergency Departments — NHAMCS, 2003

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# Overview of Presentation

- Introduction
- Study Objectives
- Methods
- Results
- Discussion
- Limitations
- Conclusions



# Introduction

- **Emergency Departments (EDs) are a major source of care in the United States**
- **During 1996–2002, the number of visits to EDs increased 22%, from 90.3 million visits to 110.2 million visits**
- **During 2003, there were 114 million ED visits**
- **Infectious disease is a leading illness-related diagnosis at these visits**



- **Certain population groups, including blacks and Hispanics, were more likely than whites to identify EDs as their regular source of care**
- **Among persons with a regular source of care, 24%–36% of all their recent physician visits still occurred at an ED**



# Why Study Infectious Diseases Visits to Emergency Departments Among Medicaid/SCHIP?

- At the national level, no ED studies have focused solely on developing infectious diseases profile among Medicaid/SCHIP population



- **One reason why ED datasets have not been widely incorporated is because of lack of statewide ED data in certain states**
- **Annually, > 20 million visits to EDs relate to infectious diseases**



# Medicaid Program (latest development)

- Medicaid is an entitlement program where federal government pays its share of expenditures for covered services provided to eligible individuals under each state's federally approved Medicaid plan



# Medicaid Program Qualification

- Under federal Medicaid law, individuals must fall within certain eligibility categories (e.g., children, pregnant women, adults in families with dependent children, and those who are aged or disabled)
- Meet financial eligibility criteria





# Medicaid Program Qualification

- **Since 1986, federal law required, as a condition of Medicaid eligibility, individuals declare under penalty of perjury that they are citizens or nationals of the US or in satisfactory immigration status (i.e., aliens who are lawful residents, refugees, and other aliens under special circumstances)**



# Medicaid Program Qualification

- **Federal Medicaid regulation requires states to re-determine eligibility of a Medicaid beneficiary at least once every 12 months or if states receive information that may affect eligibility of beneficiary**



# Medicaid Program Qualification

- **The Deficit Reduction Act of 2005, enacted Feb 8, 2006, required states to obtain satisfactory documentary evidence of US citizenship or nationality for nearly 40 million nonexempt Medicaid beneficiaries within 1 year of the provision's July 1, 2006 effective date**



# Objectives

**To characterize infectious disease-related visits to EDs in 2003**

**To estimate the number of Medicaid enrollees visits to EDs for infectious diseases**

**To calculate visit rates with a Medicaid source of payment**



# Methodology

- **Data source: NHAMCS**
- **Year of Study: 2003**



# Description of NHAMCS

- **NHAMCS is a national probability sample survey of visits to hospital EDs (non-Federal hospitals)**
- **475 hospitals provided data for this survey (93.5% participation rate)**
- **Data are weighted to generate national estimates**



# Data Source for Patient Visit Information

**Source: Textual description of reason for ED visit (i.e., chief complaints) entered at each sampled hospital**

**In 2003, a total of 40,253 forms were completed**



# Diagnosis Codes and Case Ascertainment

- Data are then coded according to ICD-9-CM
- Cases selected from diagnostic codes representing infectious diseases, compiled by previous authors\*

\*Armstrong GL, Pinner RW. Outpatient visits for infectious diseases in the United States, 1980 through 1996. Arch Intern Med 1999;159:2531-6





# Selected Diagnostic Codes

- Upper respiratory tract infections
- Lower respiratory tract infections
- Skin infections
- Urinary tract infections
- Other viral infections
- Eye and eyelid infections
- Vaginitis and cervicitis
- Sexually transmitted diseases
- Enteric infections



# Denominator

- **Derived from the U.S. resident estimates (U.S. Bureau of Census)**
- **Medicaid population estimates obtained from NCHS. These are individuals covered by Medicaid/SCHIP**



# Results — Total Visits for Infectious Diseases

- **Estimated annual visits: 21.6 million**
- **Figure represents 19% of all visits to EDs**
- **Estimated rate: 76 visits/1,000 persons**

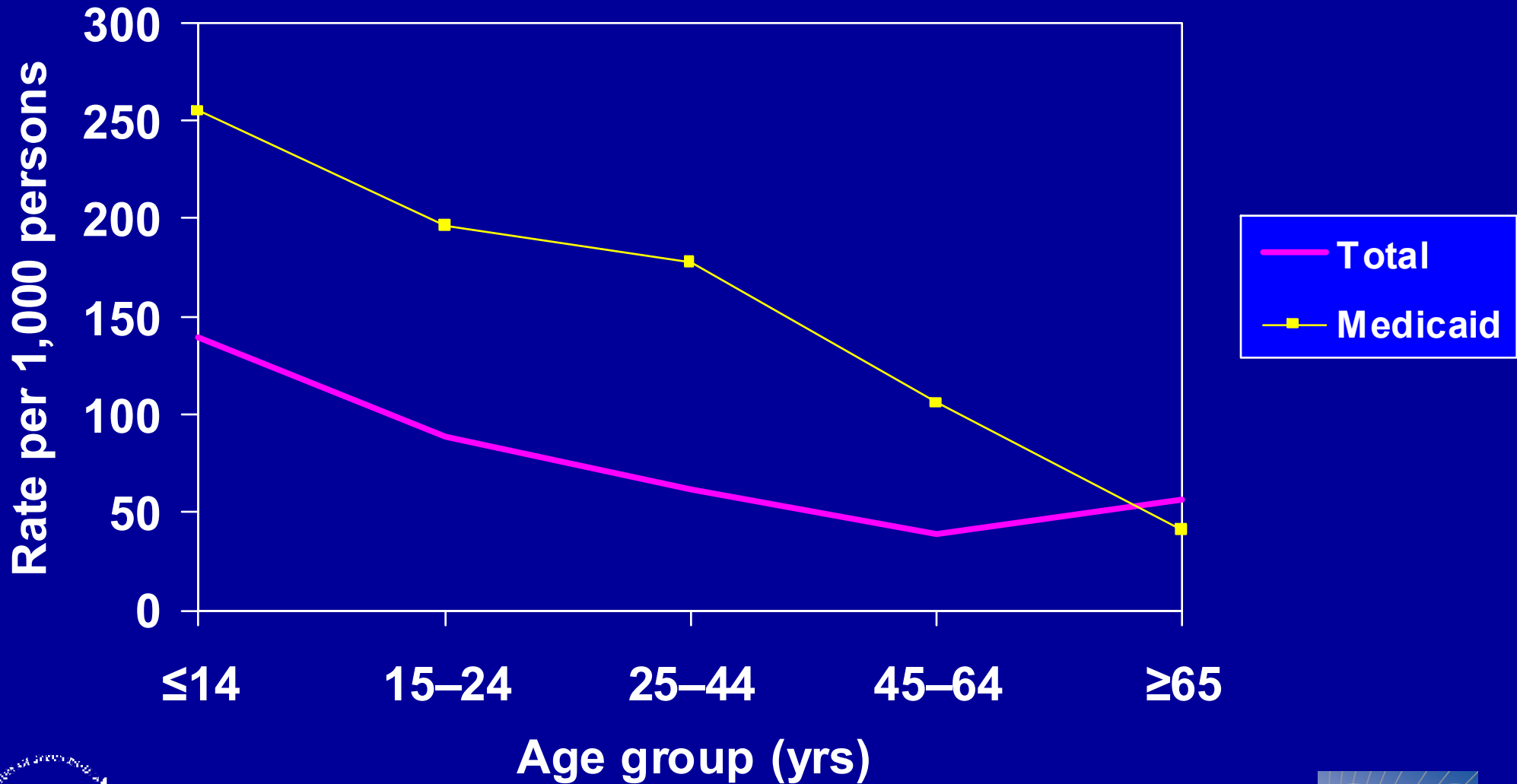


# Medicaid Visits for Infectious Diseases

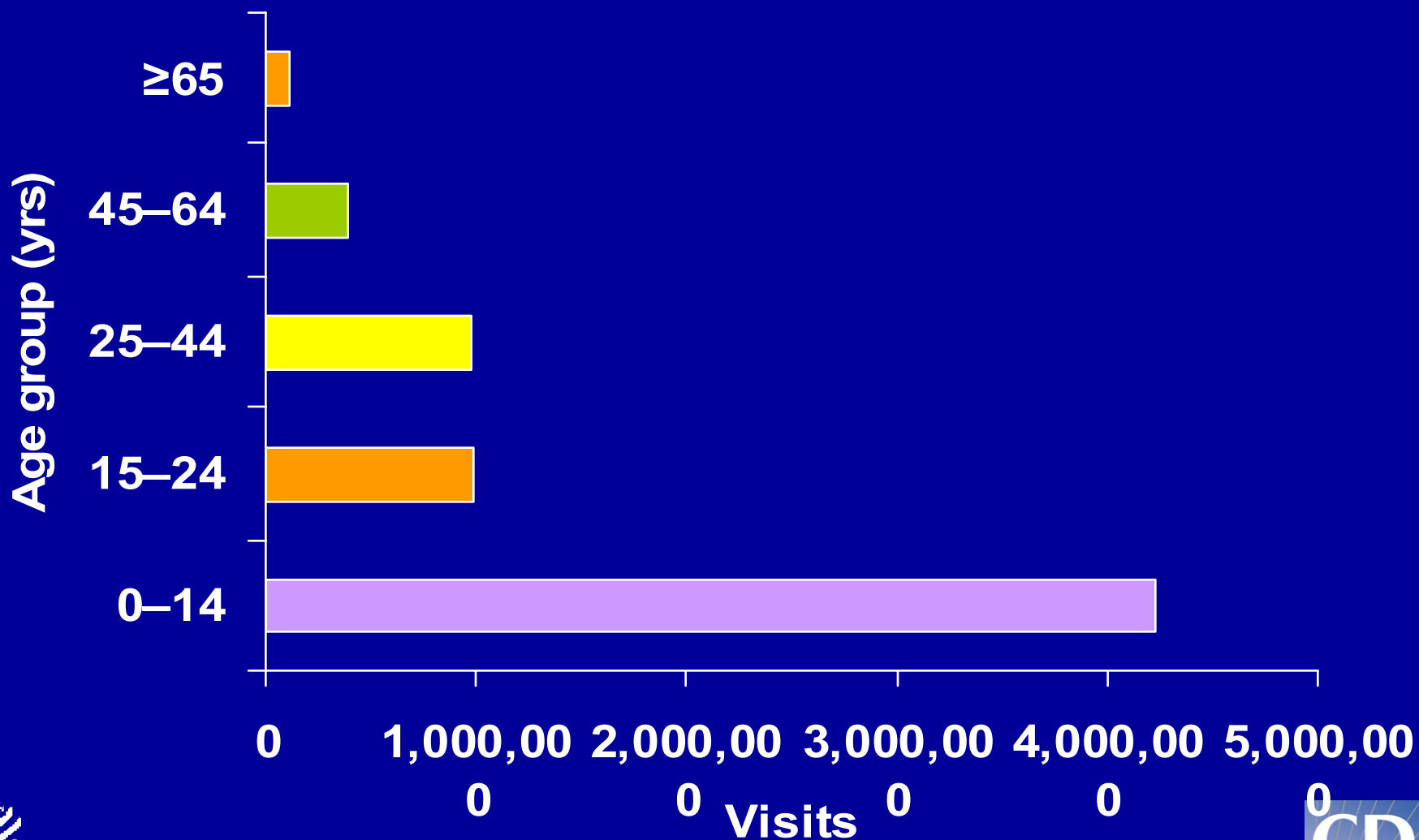
- **Estimated visits in 2003 = 6.7 million**
- **Figure represents 31% of infectious diseases treated at EDs**
- **Estimated rate: 200 visits/1,000 persons**



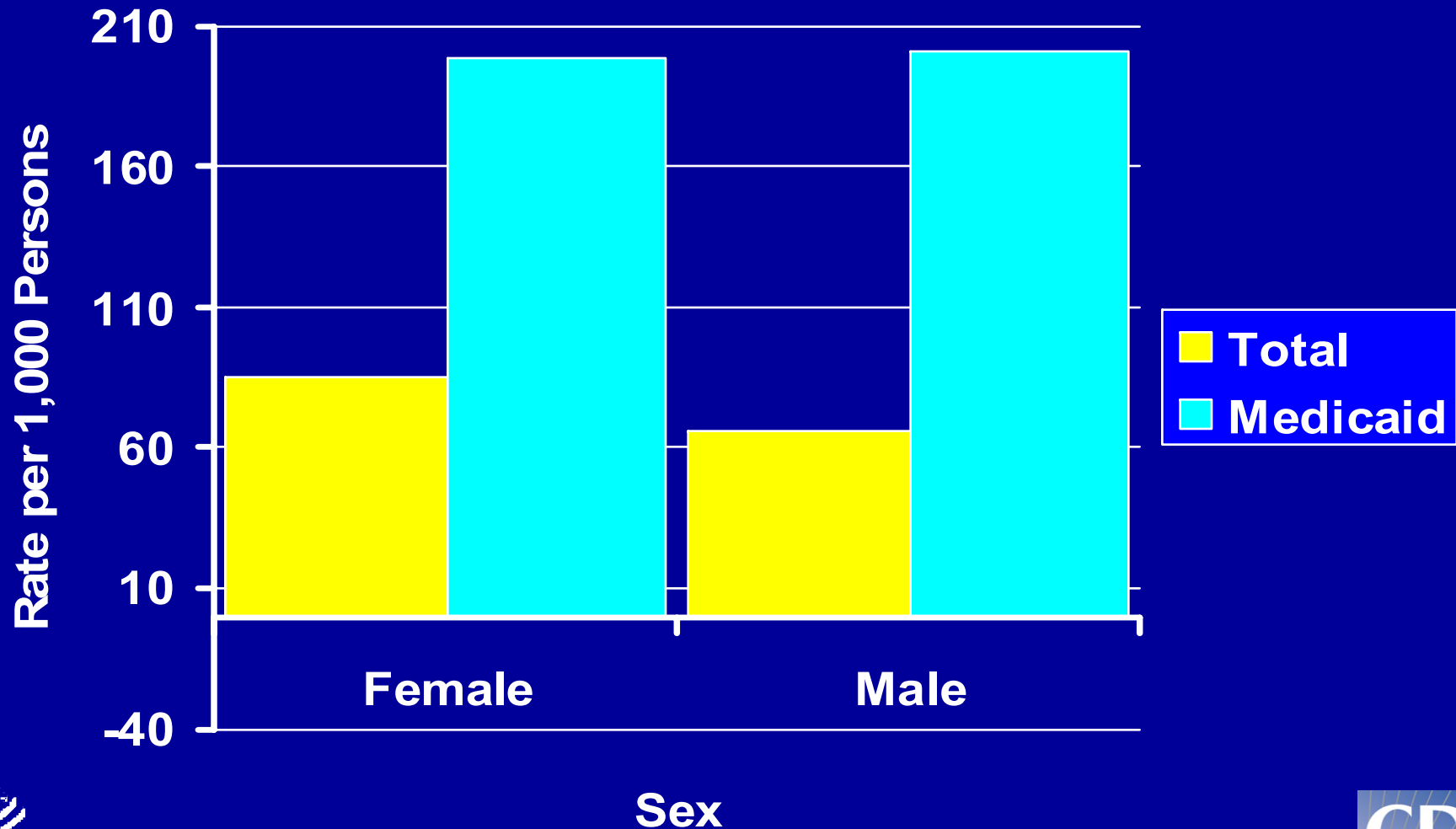
# Rates of Infectious Disease-Related ED Visits, by Age Group — NHAMCS, 2003



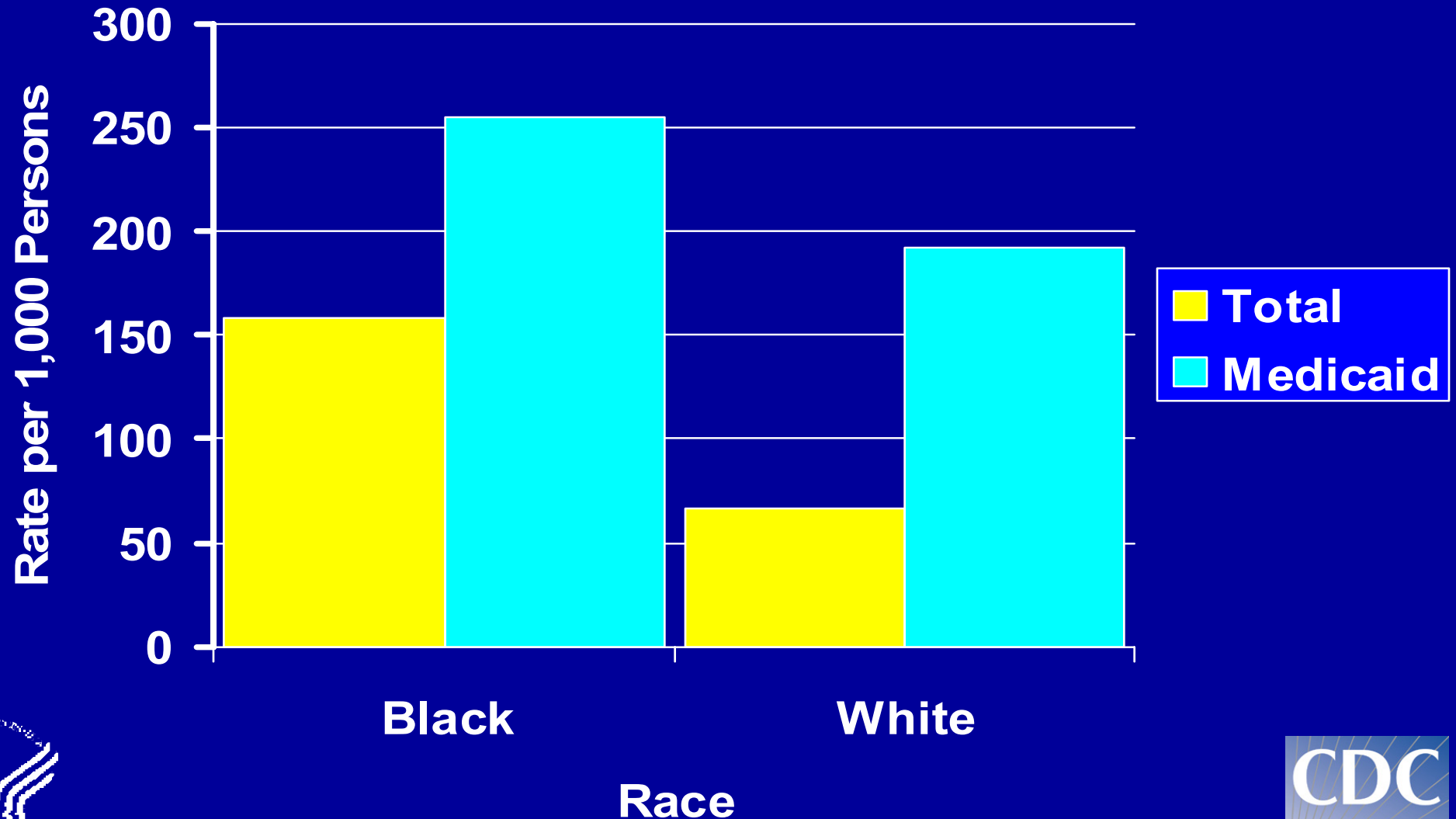
# Medicaid Visits for Infectious Diseases, by Age Group — NHAMCS, 2003



# Rates of Infectious Diseases Treated at EDs, by Sex — NHAMCS, 2003



# Rates of Infectious Diseases Treated at EDs, total by Race — NHAMCS, 2003



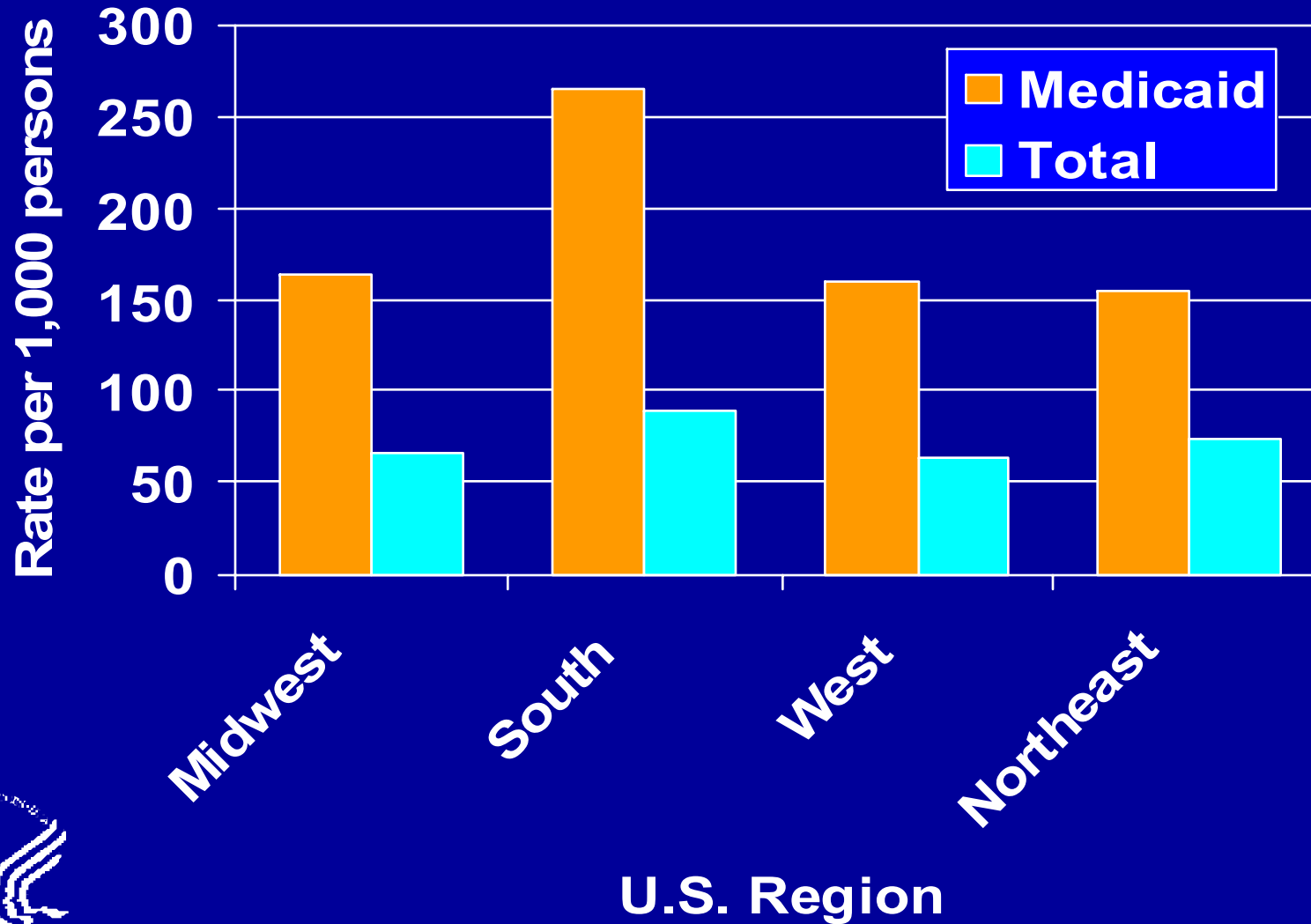


## Leading Infectious Diseases Resulting in Visits to EDs — NHAMCS, 2003

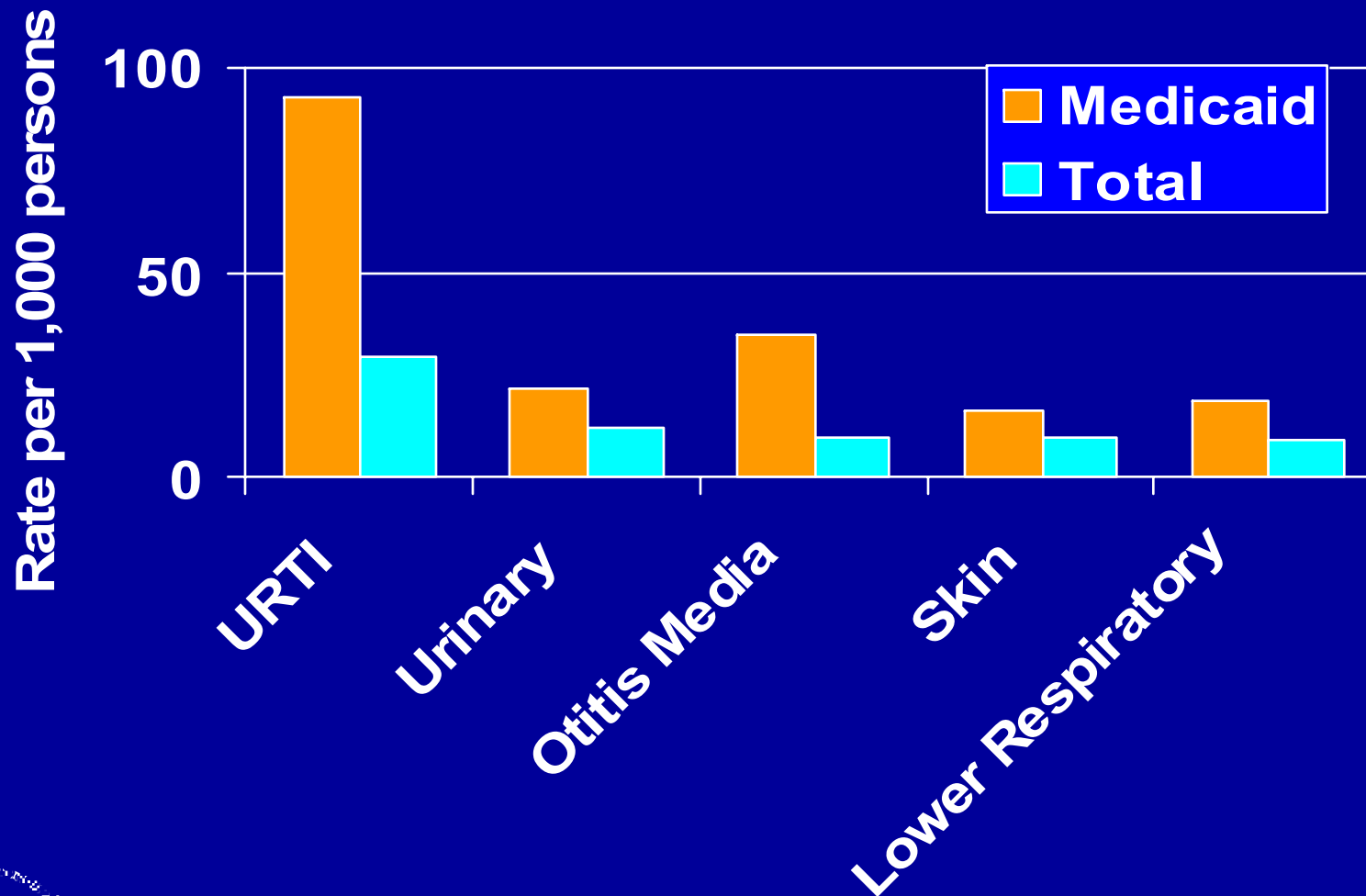
Infectious disease	Percentage (US)	Percentage (Medicaid)
<b>Upper respiratory tract infection</b>	<b>38</b>	<b>47</b>
<b>Urinary tract infection</b>	<b>16</b>	<b>11</b>
<b>Otitis media</b>	<b>13</b>	<b>18</b>
<b>Skin infection</b>	<b>13</b>	<b>8</b>
<b>Lower respiratory tract infection</b>	<b>11</b>	<b>9</b>



# Rates of Infectious Diseases visits, by Geographic Region — NHAMCS, 2003



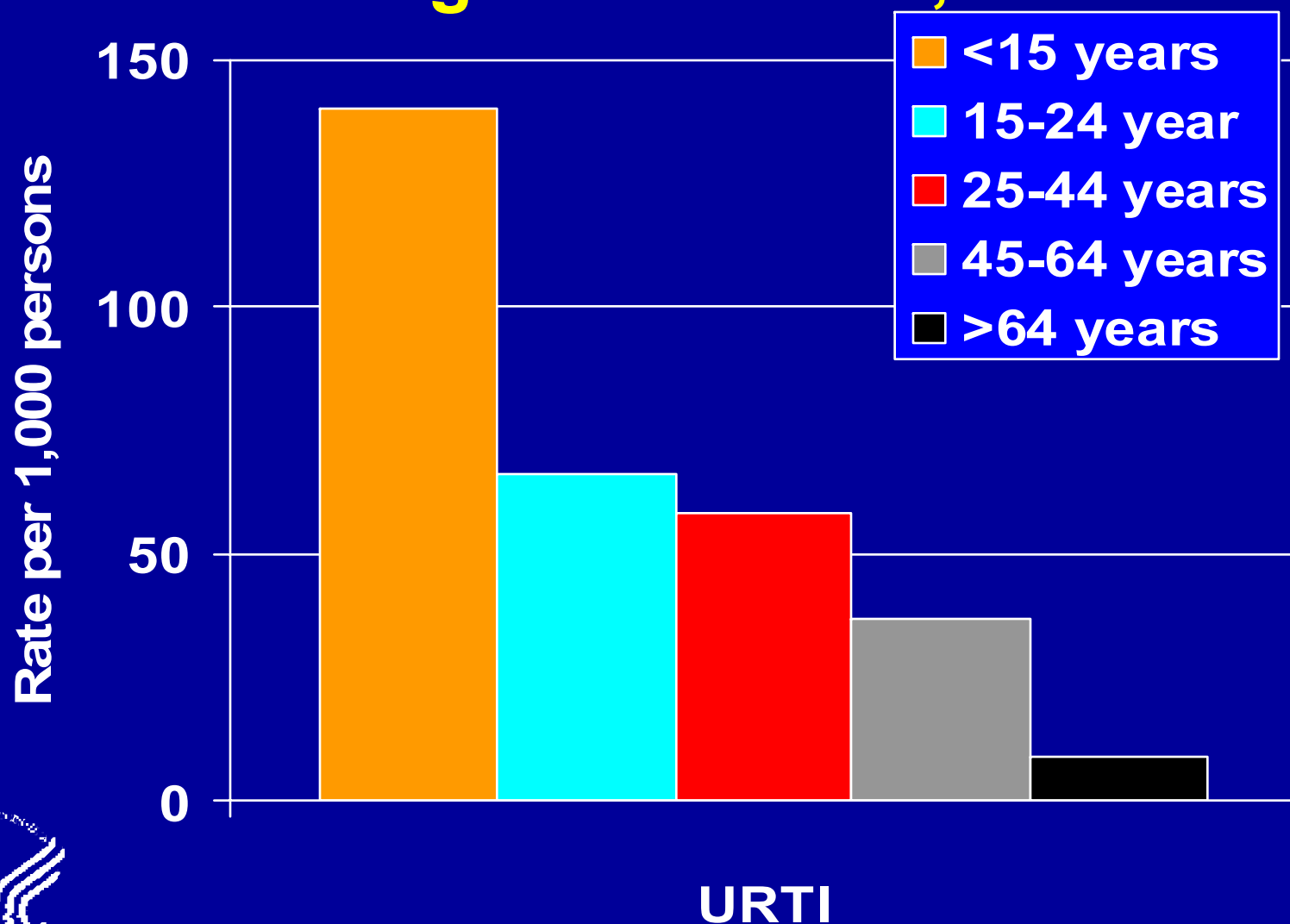
# Rates of ED visits for Specific Infectious Diseases — NHAMCS, 2003



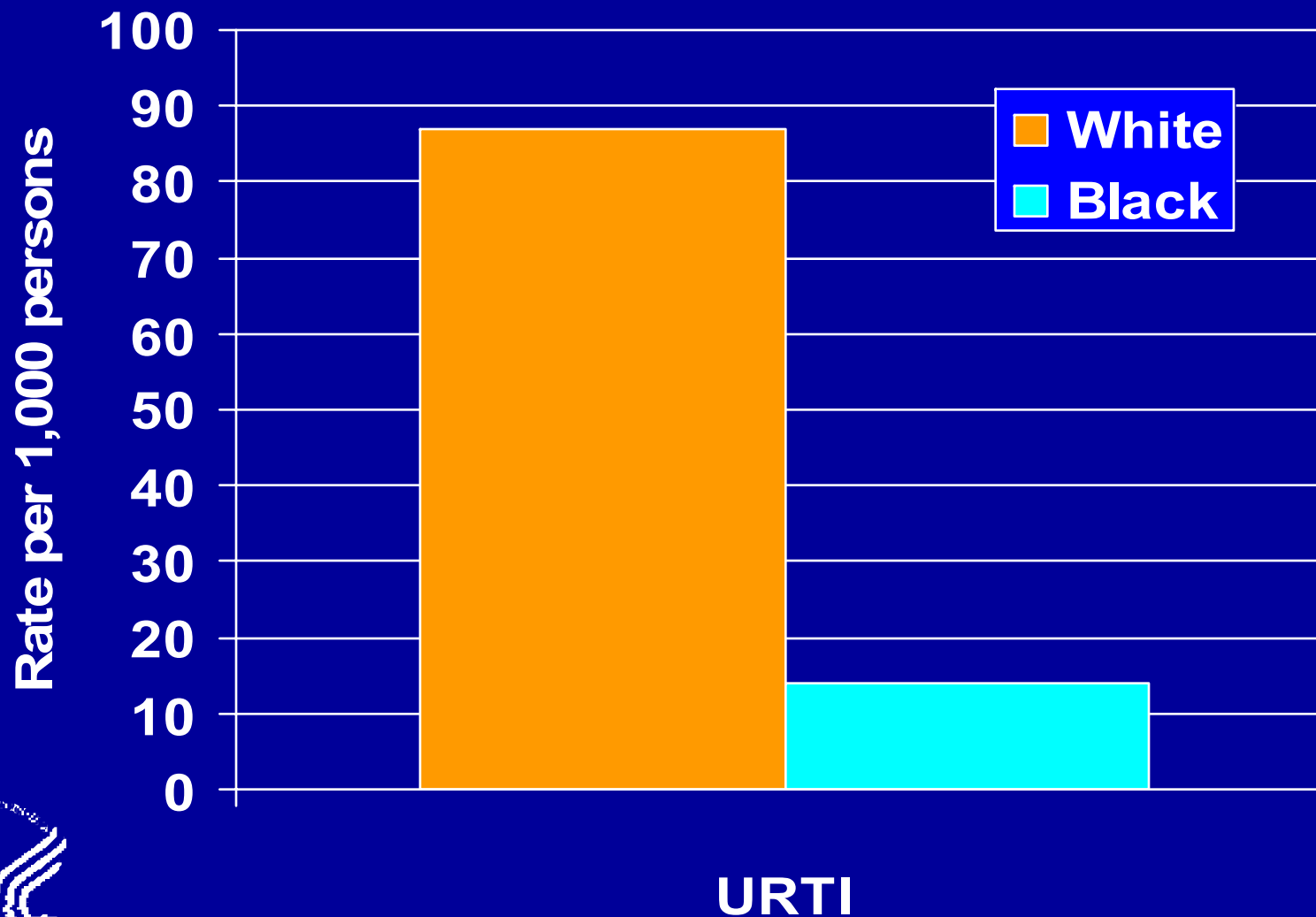
Specific Infections



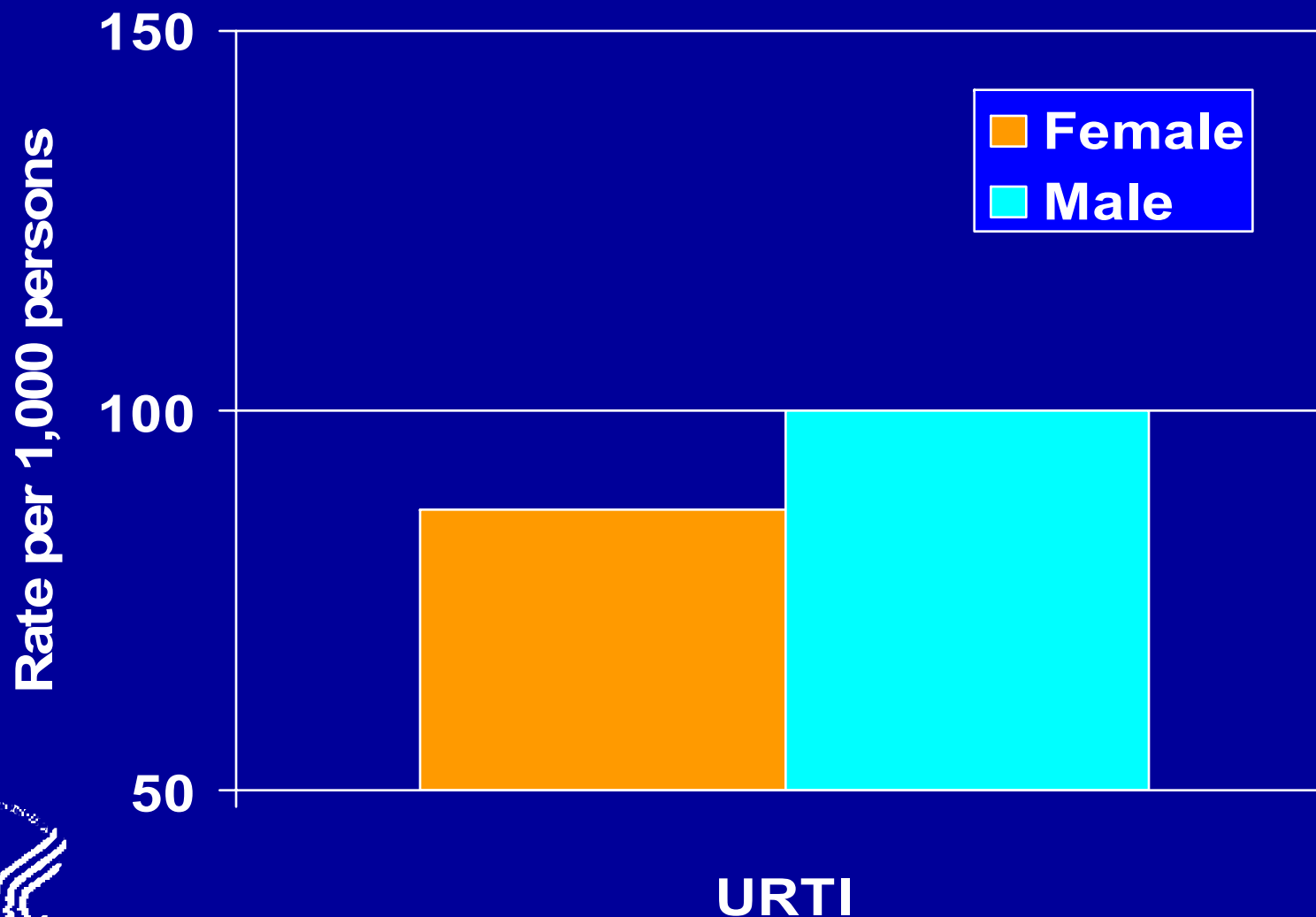
# Rates of ED visits for Upper Respiratory Tract Infections among Medicaid Enrollees by Age— NHAMCS, 2003



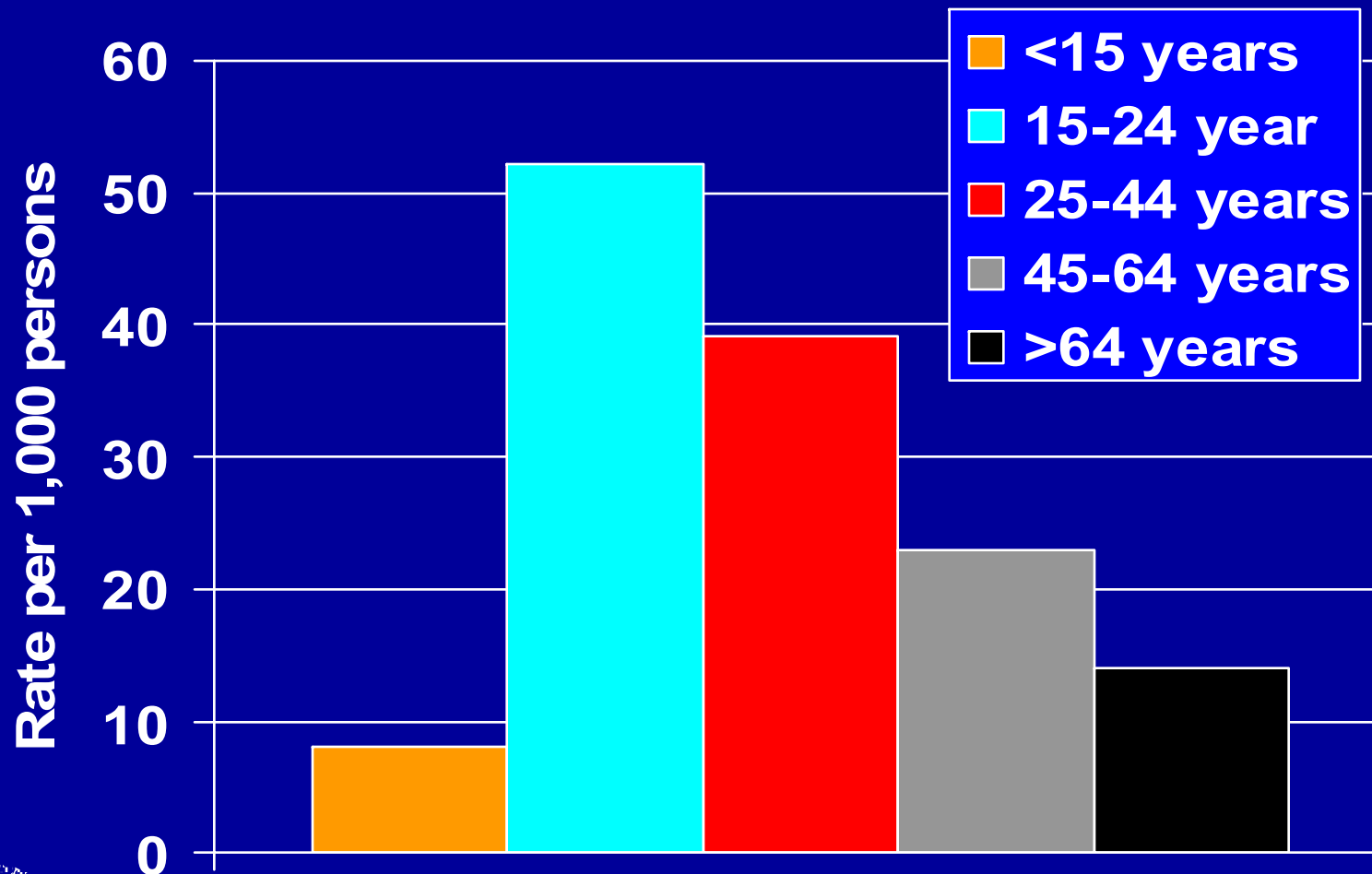
# Rates of ED visits for Upper Respiratory Tract Infections among Medicaid Enrollees by Race— NHAMCS, 2003



# Rates of ED visits for Upper Respiratory Tract Infections among Medicaid Enrollees by Gender— NHAMCS, 2003



# Rates of ED visits for Urinary Tract Infections among Medicaid Enrollees—NHAMCS, 2003



Urinary Tract Infections



# Discussion

- **Multiple factors influence the rate of visits to EDs for treatment of infectious diseases, including**
  - **Age**
  - **Access to care**
  - **Access to over-the-counter medications**
  - **Correct diagnosis (methodology)**





# 21.6 Million Visits for Infectious Disease-Related Complaints Is a Conservative Estimate

The estimate provided in this research is conservative because it excludes military hospitals, prison clinics, and programs serving STD clients



# **Study Implications — Lack of Access to Primary-Care Provider**

- **Research supports previous studies that described probable lack of access to a primary-care provider**
- **Published data demonstrate approximately one in four persons aged 25–44 years lacked a regular place to go for medical care**



- **Skin infections, upper respiratory tract infections, otitis media, and lower-respiratory tract infections are the leading infectious disease causes of visits to EDs**
- **Primary-care practitioners could treat these conditions during regular office visits as opposed to ED visits**



# Race as an Implication

- The rate of visits for blacks was higher than the rate for whites
- Reason for the higher rate of visits for blacks is unknown
- Certain reports have indicated blacks receive less primary and preventive care than whites



# Age as an Implication — < 15 years old

- Our research indicates that infectious diseases is a major cause of ED use for both the general population (19% of ID visits) and Medicaid enrollees (63% of visits among pop)
- Visit rate was much higher among this group in comparison to other age groups



# URTI as an Implication — *HP 2010*

- With >8 million visits relating to URTIs, surprisingly *HP 2010* lacked appropriate objective for this indicator
- Previous research showed approximately 70% of visits to health service centers relate to URTIs



# Limitations

- **NHAMCS does not allow state-level breakdown**
- **Unable to fully control for racial differences in communities surveyed by NHAMCS hospitals**

**For example, in the inner city where a majority of blacks reside, patients frequently use EDs**



# Conclusions

- **Rate of ED visits for any particular condition is a function of both incidence of disease and health-care–usage pattern**
- **The data confirm previous studies documenting lack of access to primary-care providers and racial inequalities**





- **Medicaid enrollee-specific ED visit rates for ID were higher by age group, gender, race and region, compared with national rates**
- **Because approximately half of visits relate to URTIs for a Medicaid payment group, URTIs should form the basis for development of appropriate control strategies**



# Disclaimer

- **The findings and conclusions in this report are those of the author and do not necessarily represent the views of the CDC.**

