

2010 National Conference on Health Statistics

Exploring NHIS Data by Census Division

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Research Data Center

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The previous presentations have covered some of the formal aspects of the NCHS RDC.

This presentation is more exploratory, to help you think about what **YOU** can do with restricted data at the RDC.

Restricted Data at the NCHS/RDC

Frequently requested types of data include:

- Small geographic areas
- Sensitive information
- Mortality and linked mortality files
- Exact dates
- Small race/ethnicity groups
- Genetic data

Restricted Geographic Data

Frequently used geographic areas include:

- State
- County
- Census tract

Geographic Data in the National Health Interview Survey (NHIS)

The sampling frame for the NHIS allows public use estimates to be made for:

- The whole United States
- The four Census Regions

State is a restricted variable, and:

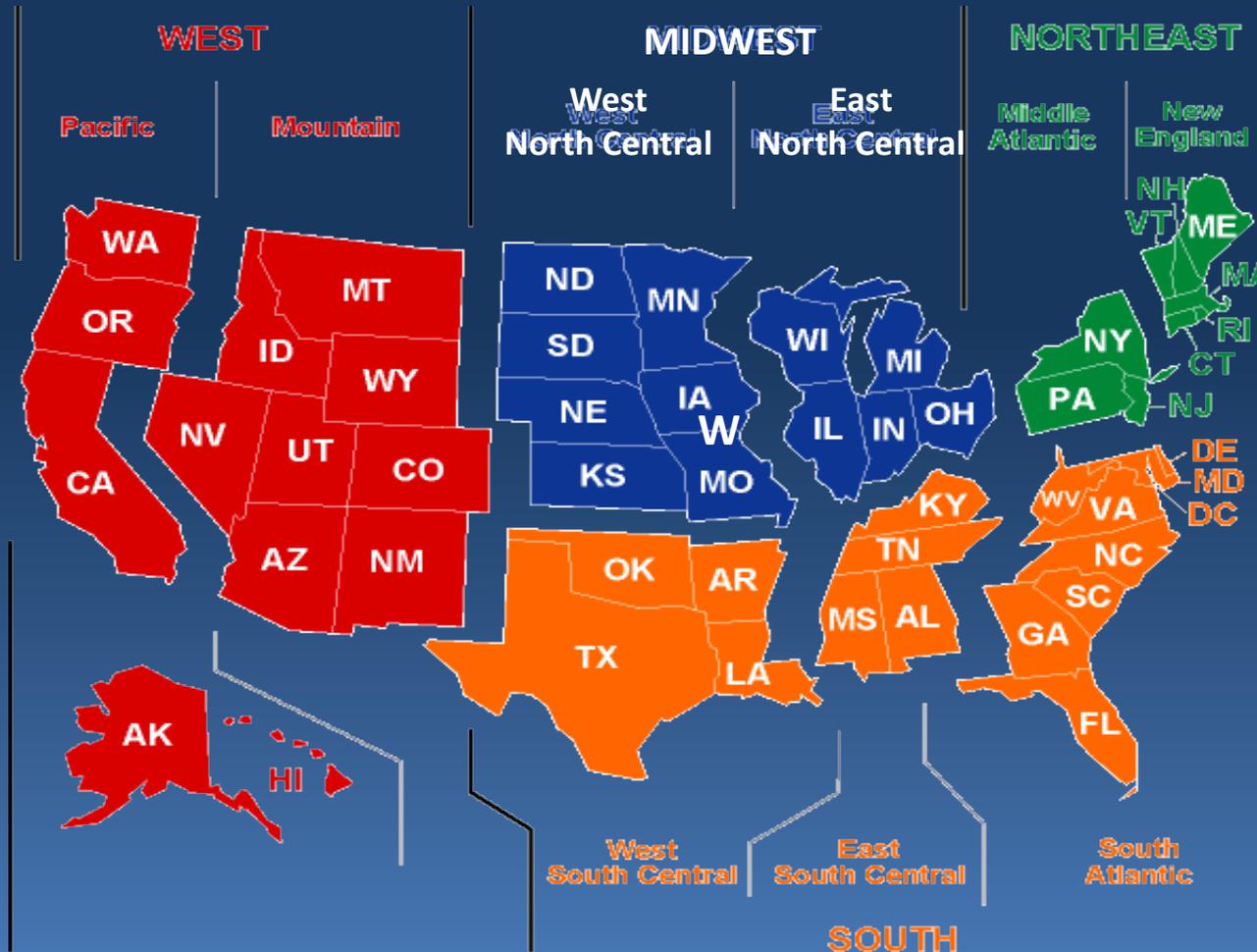
- State is not a level in the NHIS sample frame
- Some states are not included in the sample
- Some states are too small for stable estimates
- Using state in analysis may violate confidentiality

A Methodological Research Question

What can we use when Region is too large,
and State is too small?

Division may allow for finer detail than
Region, without violating confidentiality.

Map of US Census Regions and Divisions



Source: Dept. of Energy, Regional Energy Profiles.

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Census Divisions

US Census Region	US Census Division	States
Region 1: Northeast	1. New England	CT, ME, MA, NH, RI, VT
	2. Middle Atlantic	NY, NJ, PA
Region 2: Midwest	3. East North Central	IN, IL, MI, OH, WI
	4. West North Central	IA, KS, MN, MO, NE, ND, SD
Region 3: South	5. South Atlantic	DE, MD, WV, DC, VA, NC, SC, GA, FL
	6. East South Central	MS, AL, TN, KY
	7. West South Central	TX, OK, AR, LA
Region 4: West	8. Mountain	MT, ID, WY, NV, UT, CO, AZ, NM
	9. Pacific	CA, OR, WA, AK, HI

Source: US Census Bureau

Goal

To compare the use of Region with Division to review the prevalence of selected covariates and five chronic disease conditions.

Overview of the National Health Interview Survey

National Health Interview Survey (NHIS)

- Fielded each year
- Personal interview, in the home
- 30-40,000 households
- 75-100,000 people
- A multi-stage random sample
- Represents the civilian, non-institutionalized US population
- Region is the smallest public use geographic unit

Source: NHIS website

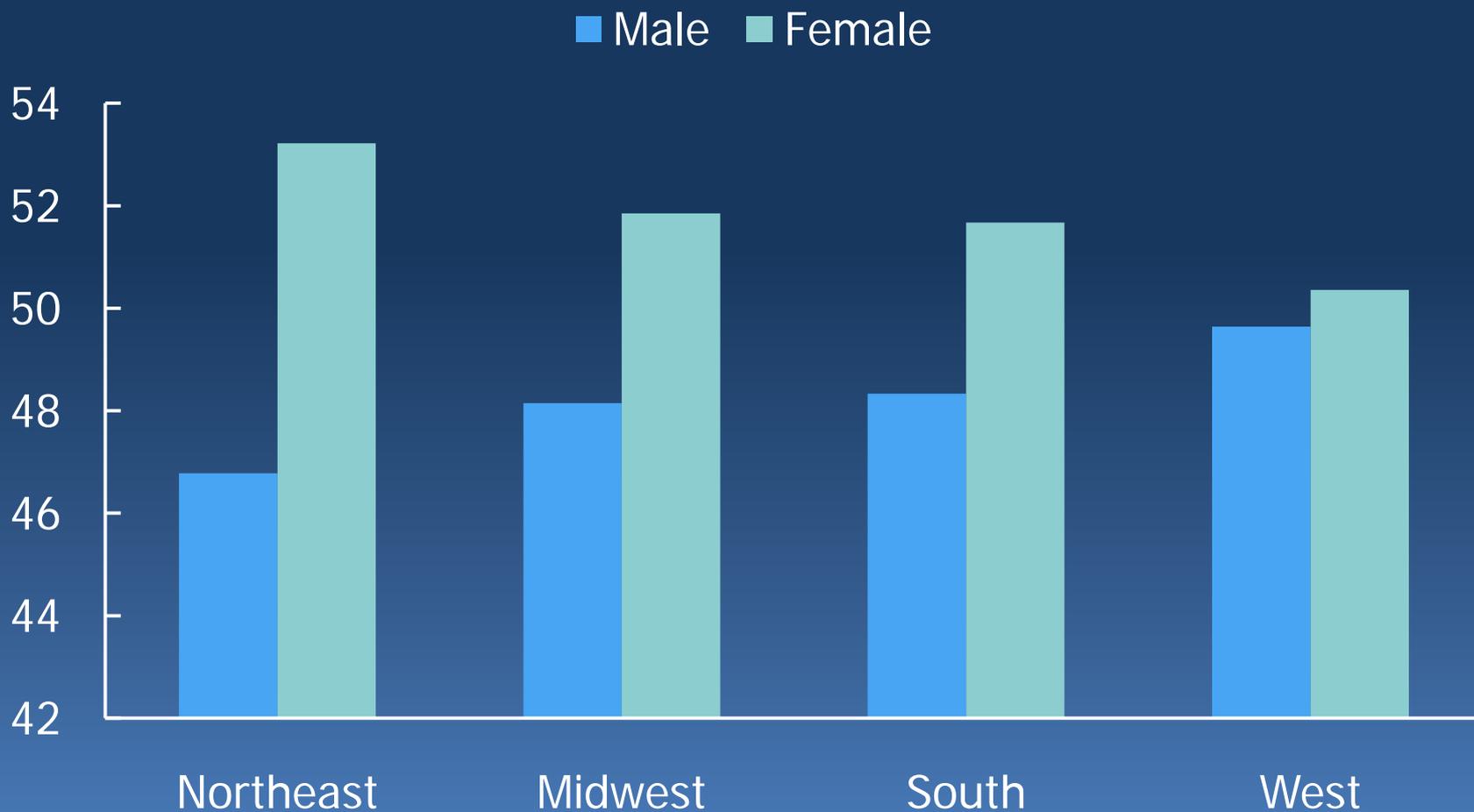
Notes

- Estimates were calculated from the 2009 NHIS Sample Adult file, using the Sample Adult weight.
- Estimates by Division are not representative of the US population because Division is not part of the NHIS sampling frame.
- This work is exploratory. Relationships have not been tested for statistical significance.

Demographic and smoking variables

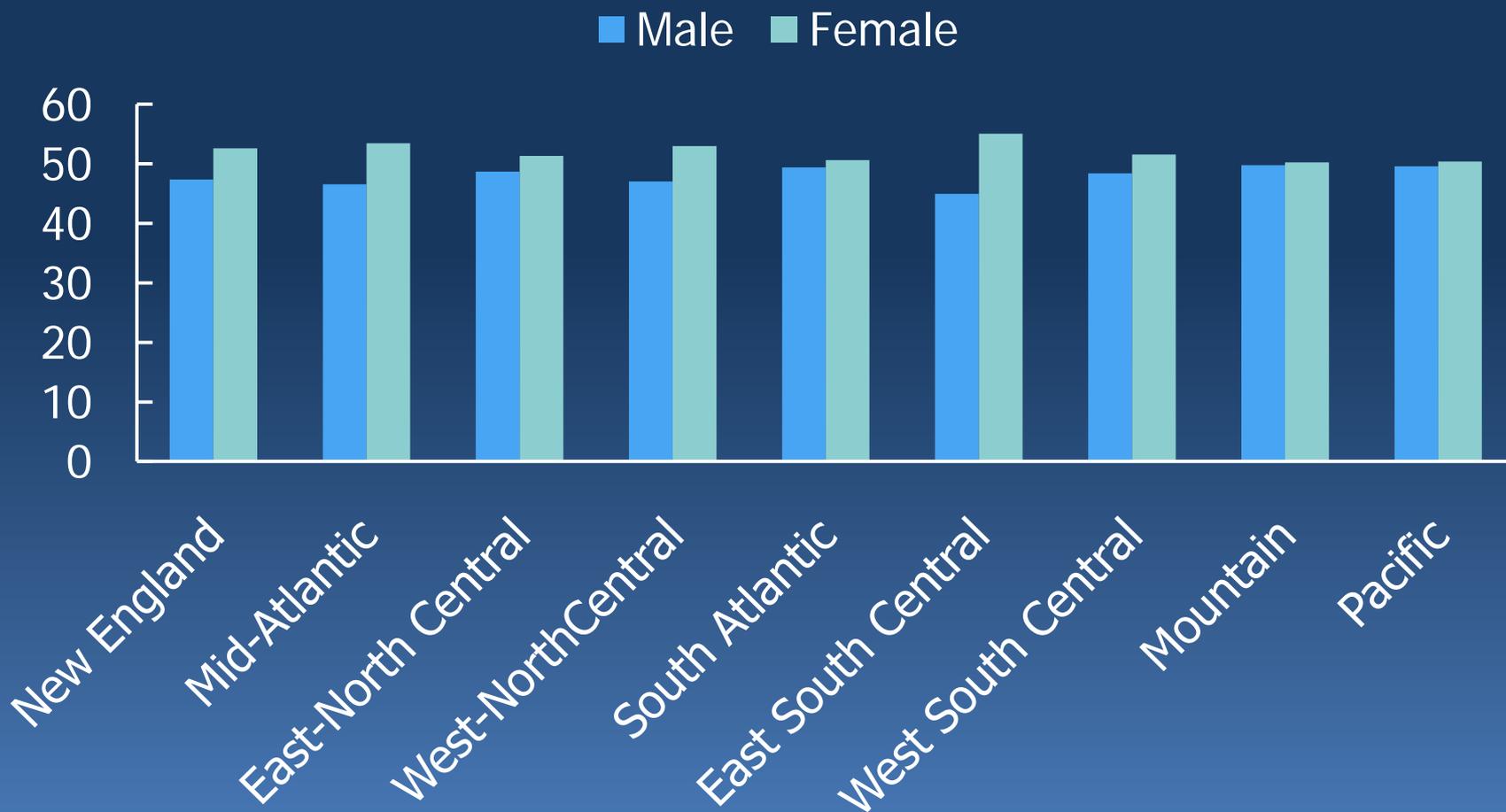
- Sex
- Race/ethnicity
- Cigarette smoking status
- Current smoking

Percent Male and Female by Region



Source: 2009 NHIS

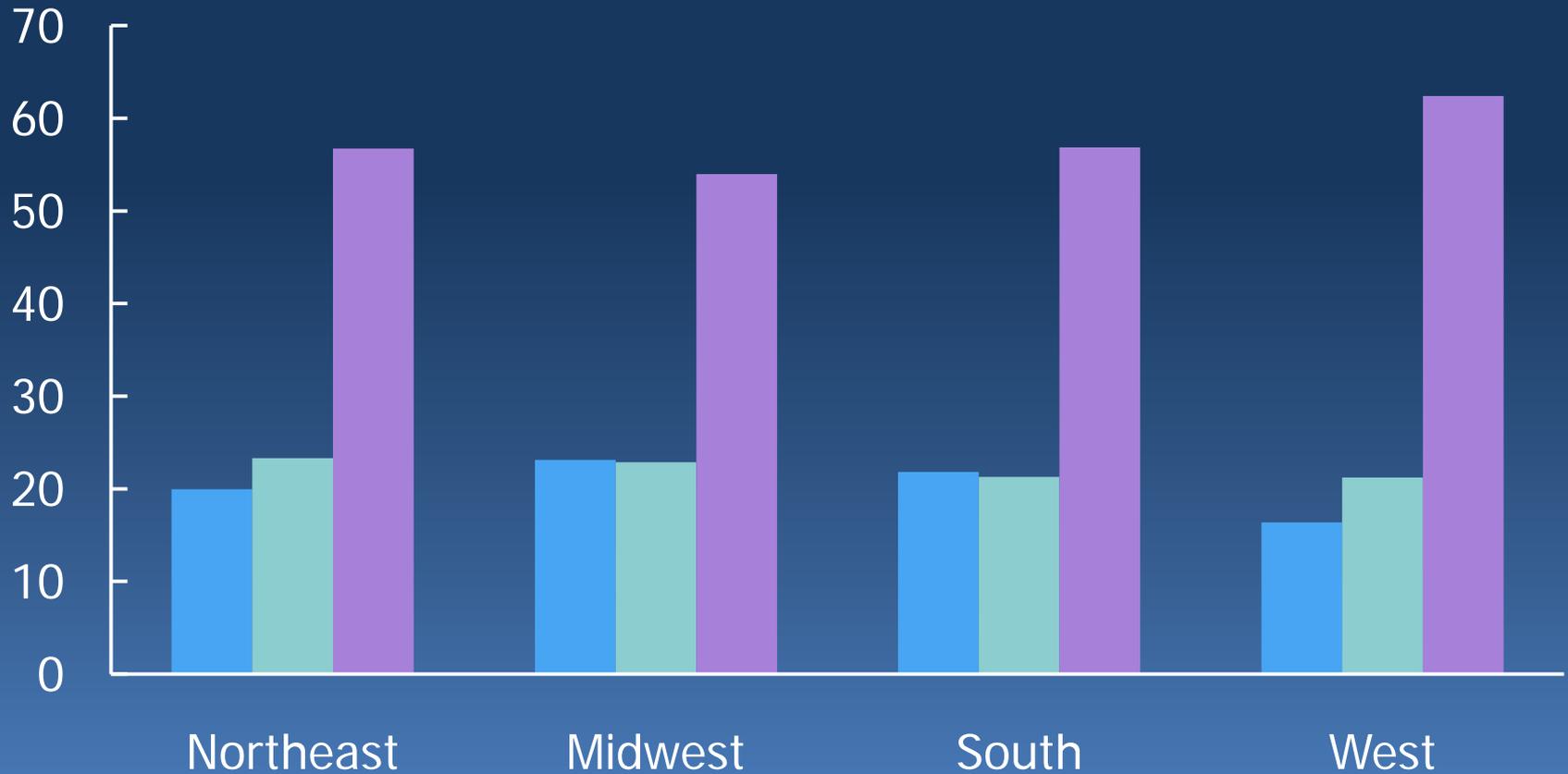
Percent Male and Female by Division



Source: 2009 NHIS

Smoking Status by Region

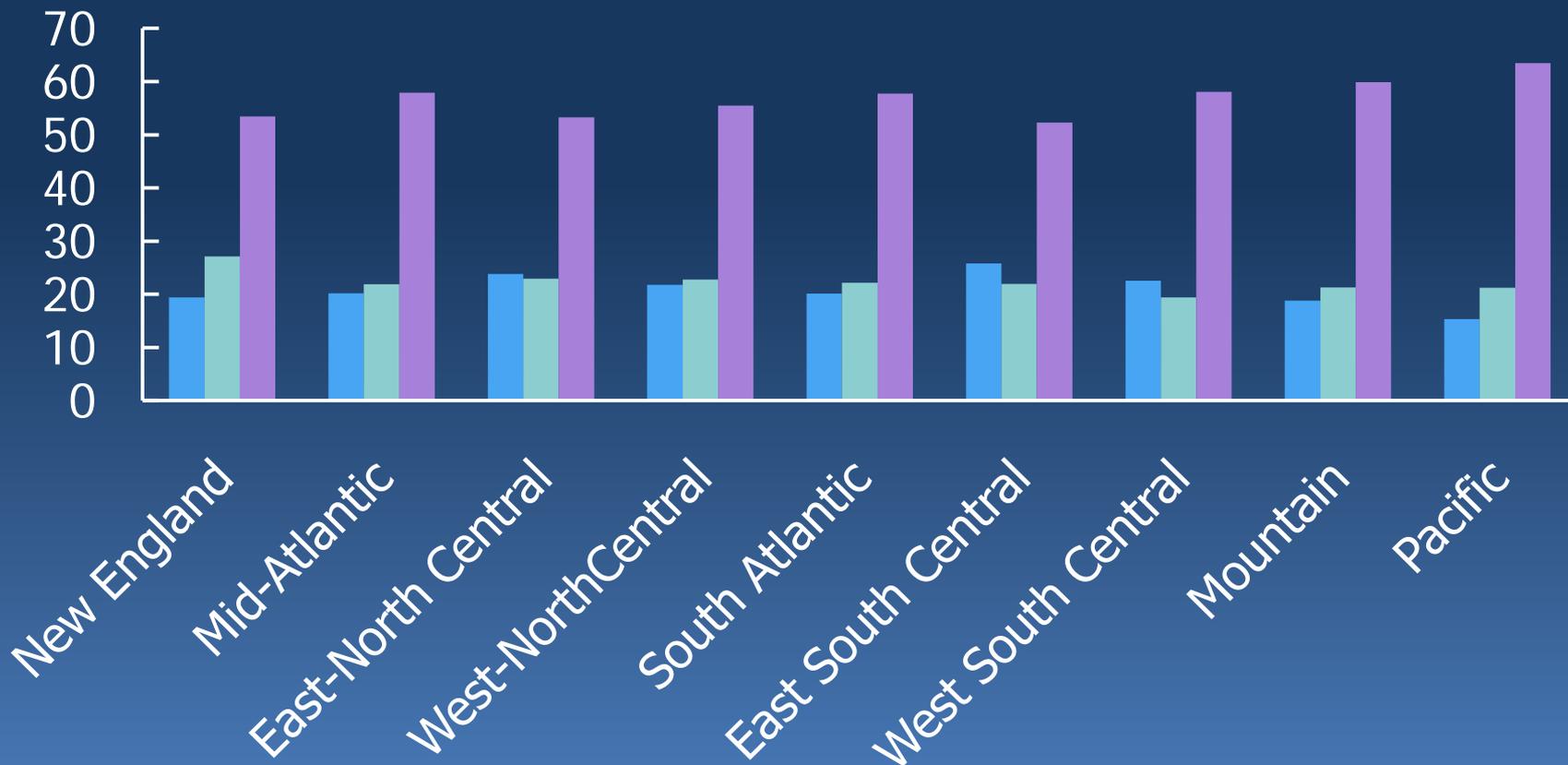
■ Current ■ Former ■ Never



Source: 2009 NHIS

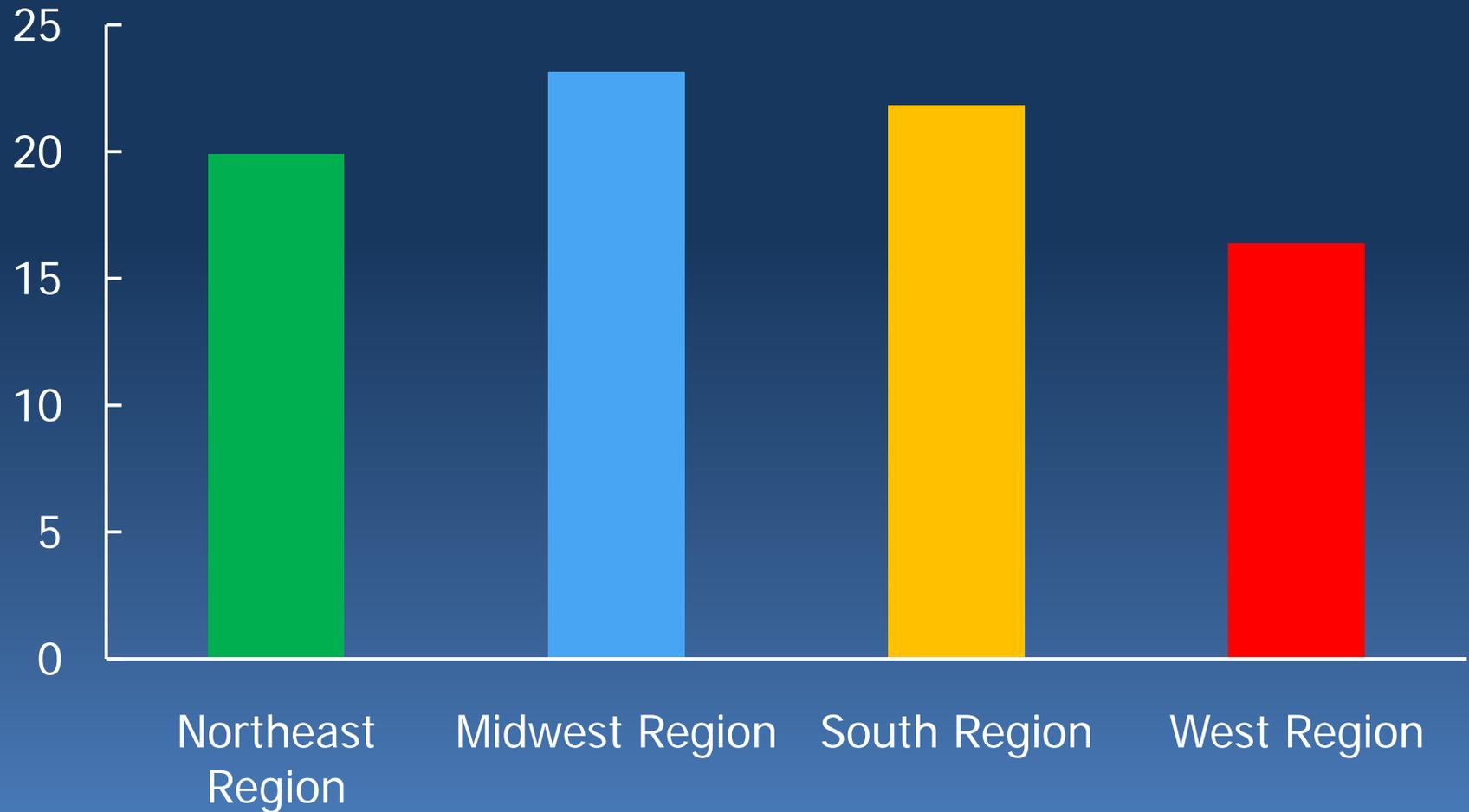
Smoking Status by Division

Current Former Never



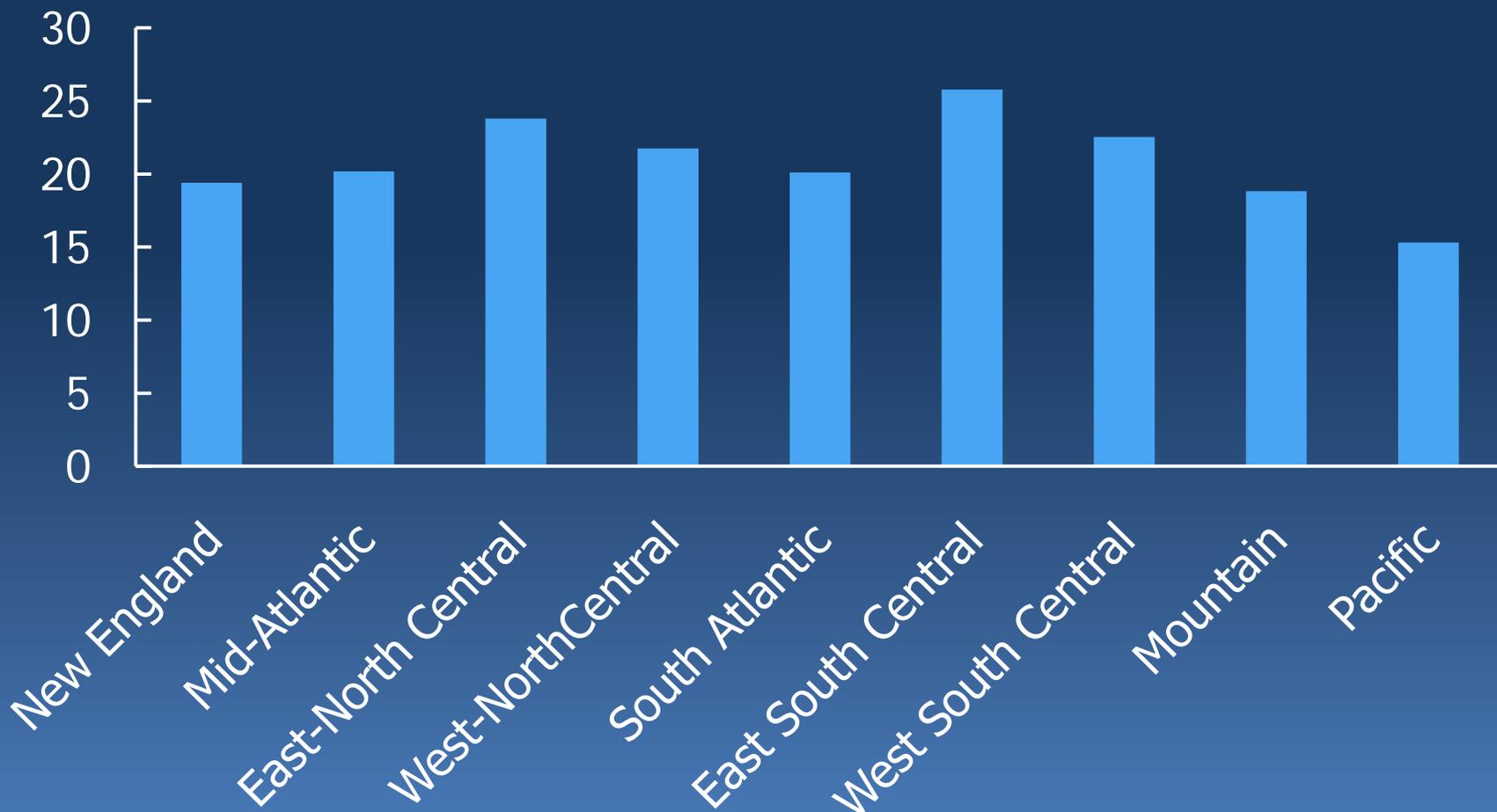
Source: 2009 NHIS

Prevalence of Current Smoking by Region



Source: 2009 NHIS

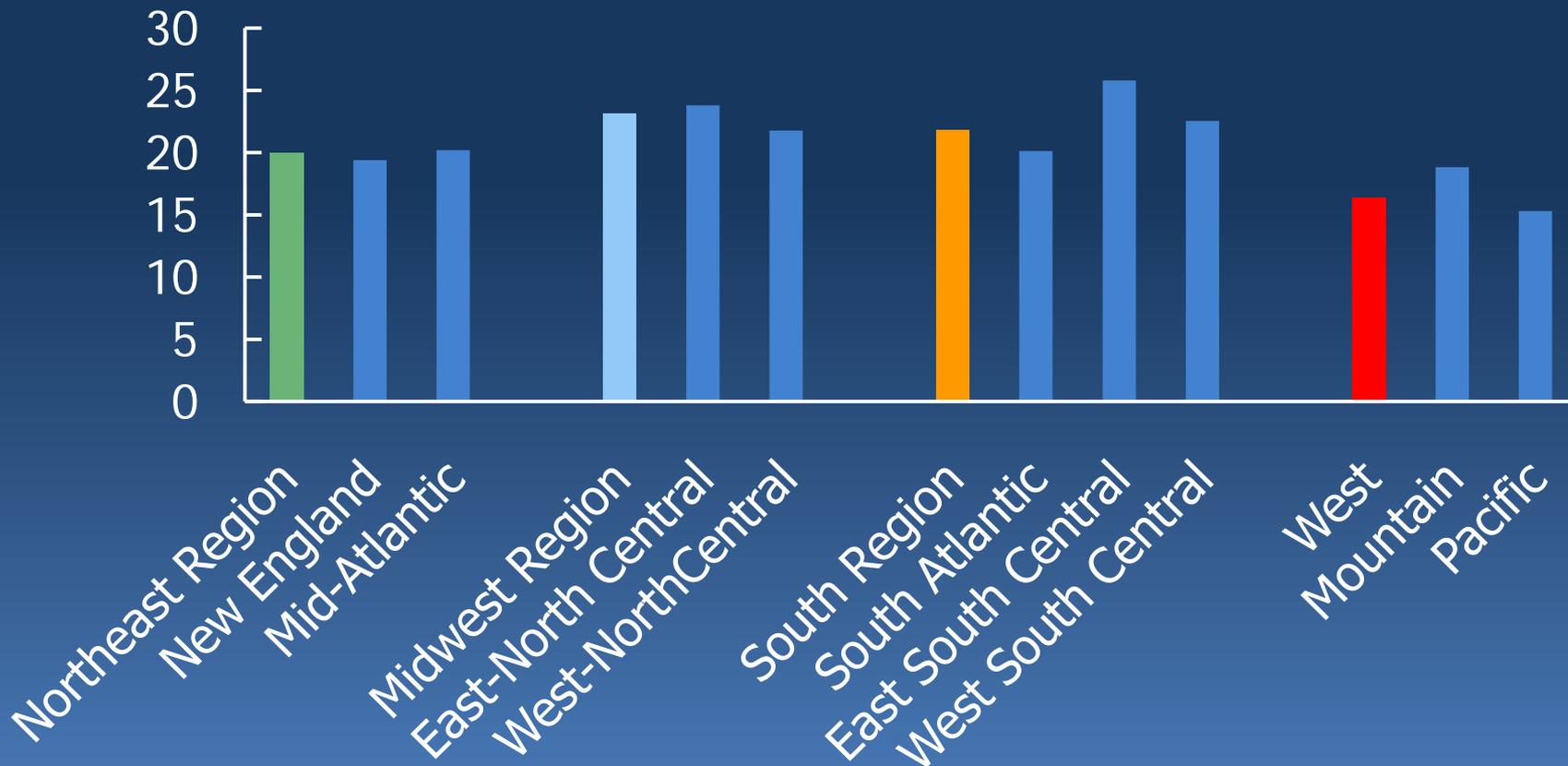
Prevalence of Current Smoking by Division



Source: 2009 NHIS

Prevalence of Current Smoking by Region and Division

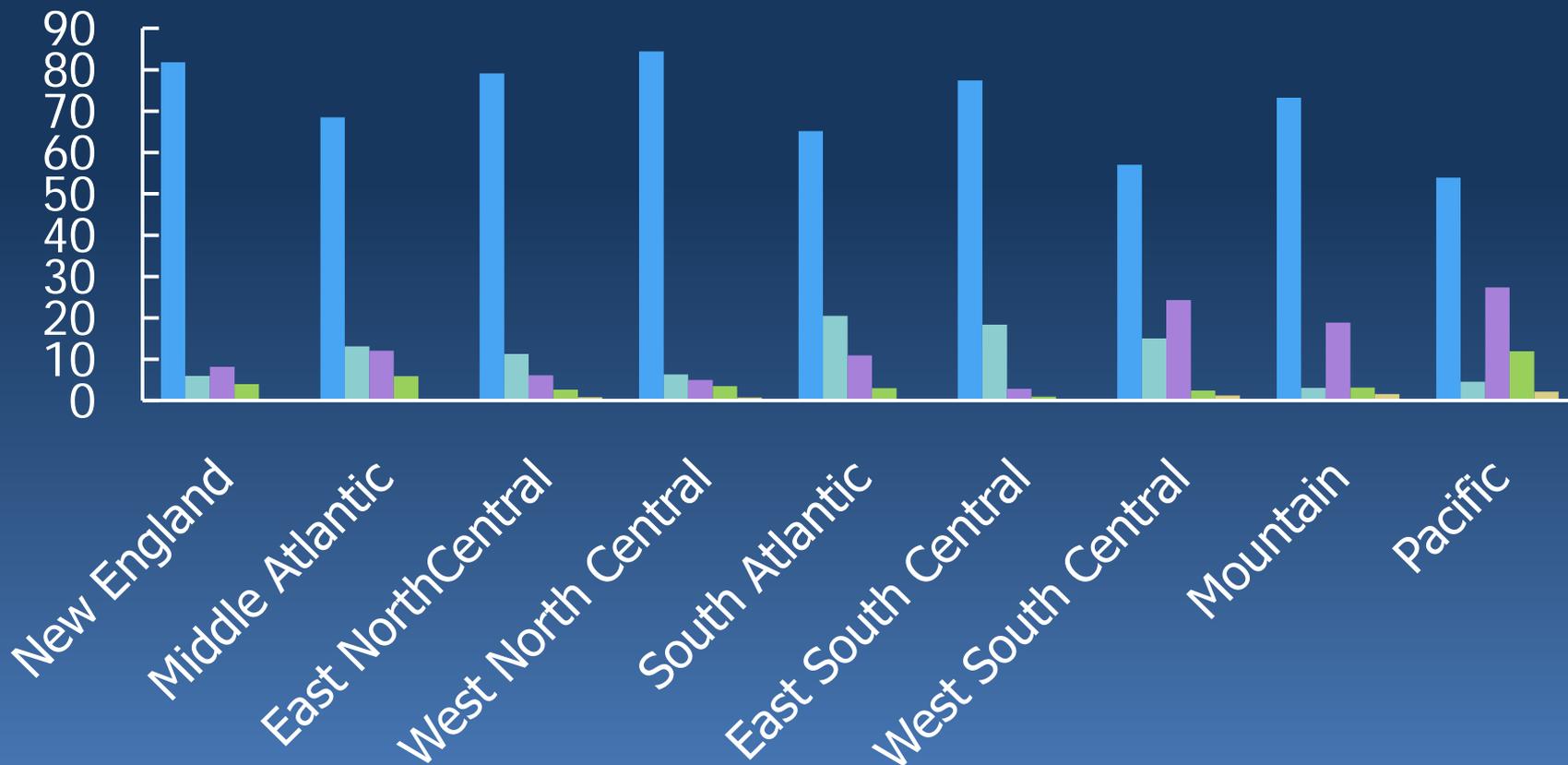
Current Smoking



Source: 2009 NHIS

Percentage of the Division Population by Race/Ethnicity Group

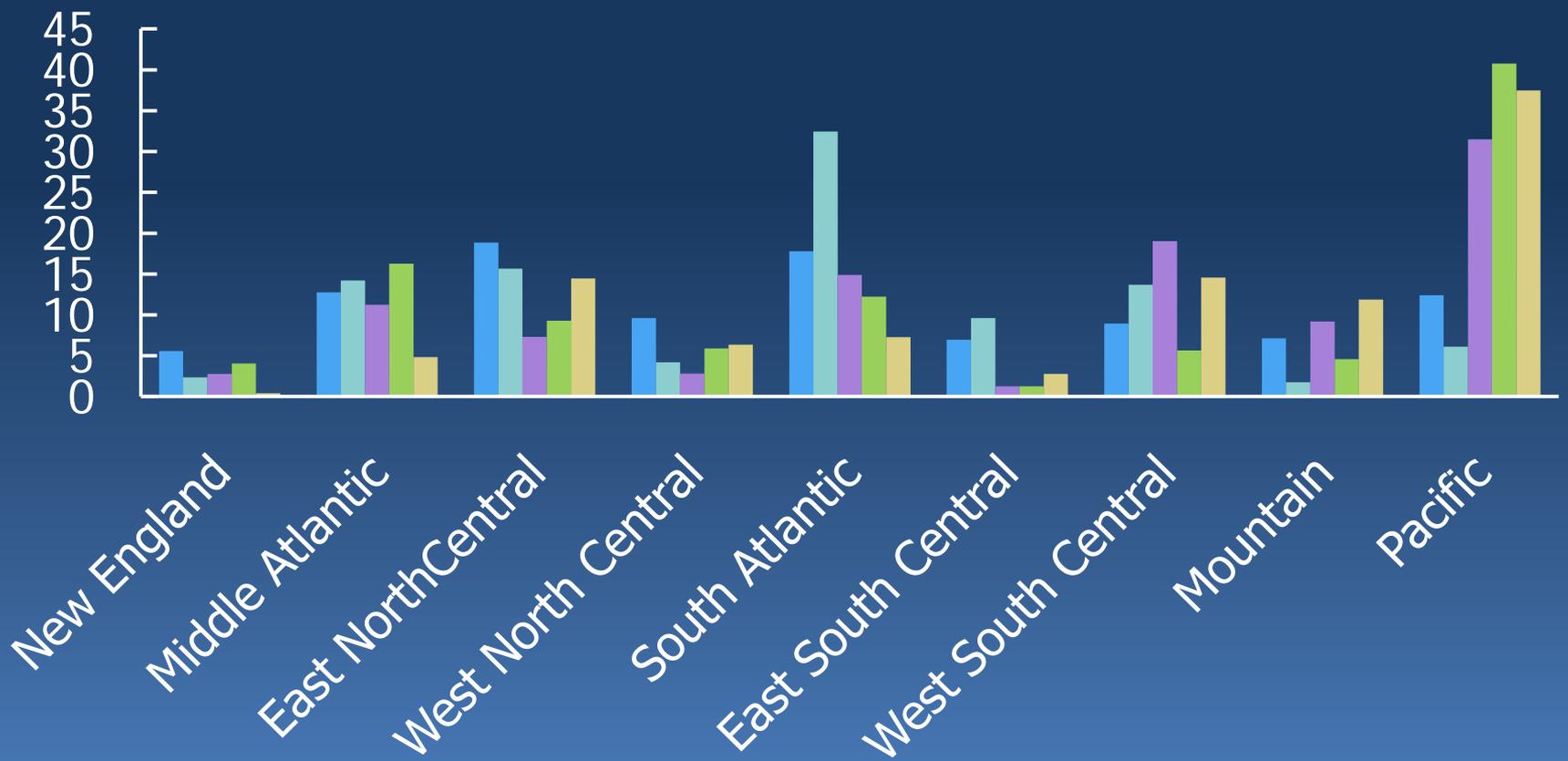
White Black Hispanic Asian Other



Source: 2009 NHIS

The Percentage of a Race/Ethnicity Group in Each Division

White Black Hispanic Asian Other



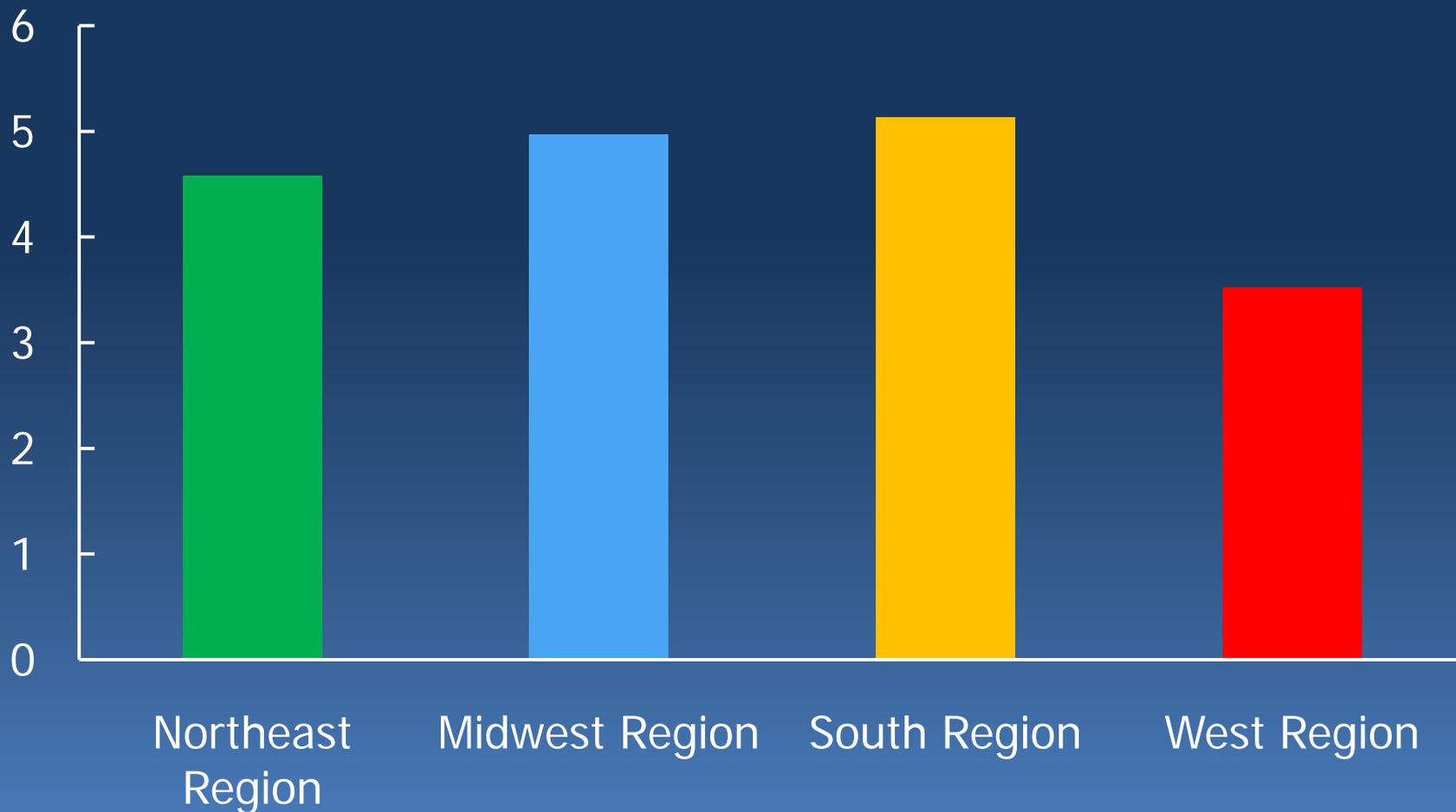
Source: 2009 NHIS

Selected conditions from the 2009 NHIS Core Questionnaire

Have you EVER been told by a doctor or
other health professional that you had:

- . . . Coronary heart disease
- . . . Hypertension
- . . . A stroke
- . . . Diabetes
- . . . Asthma

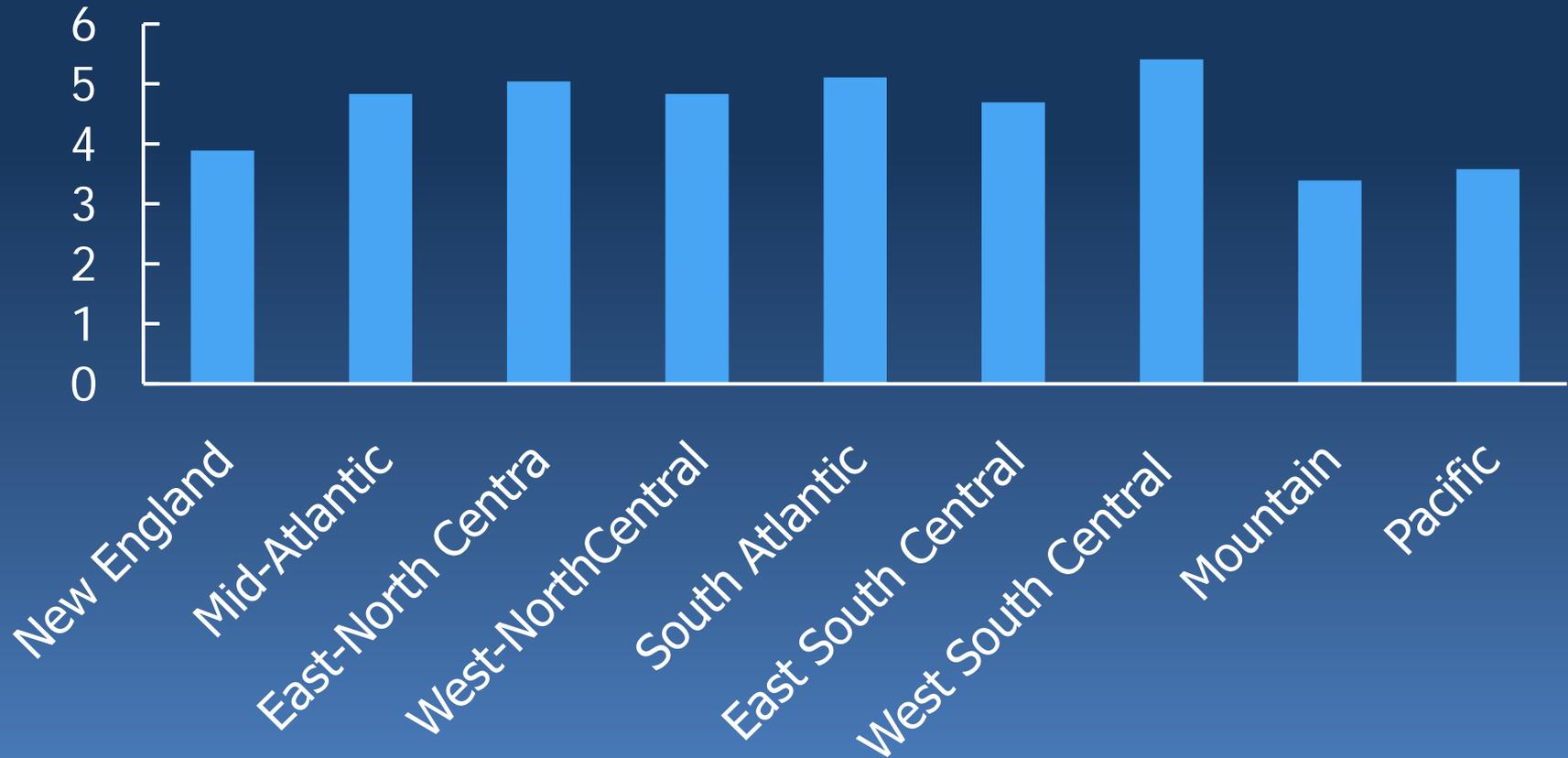
Prevalence of Coronary Heart Disease (CHD) by Region



Source: 2009 NHIS

Prevalence of CHD by Division

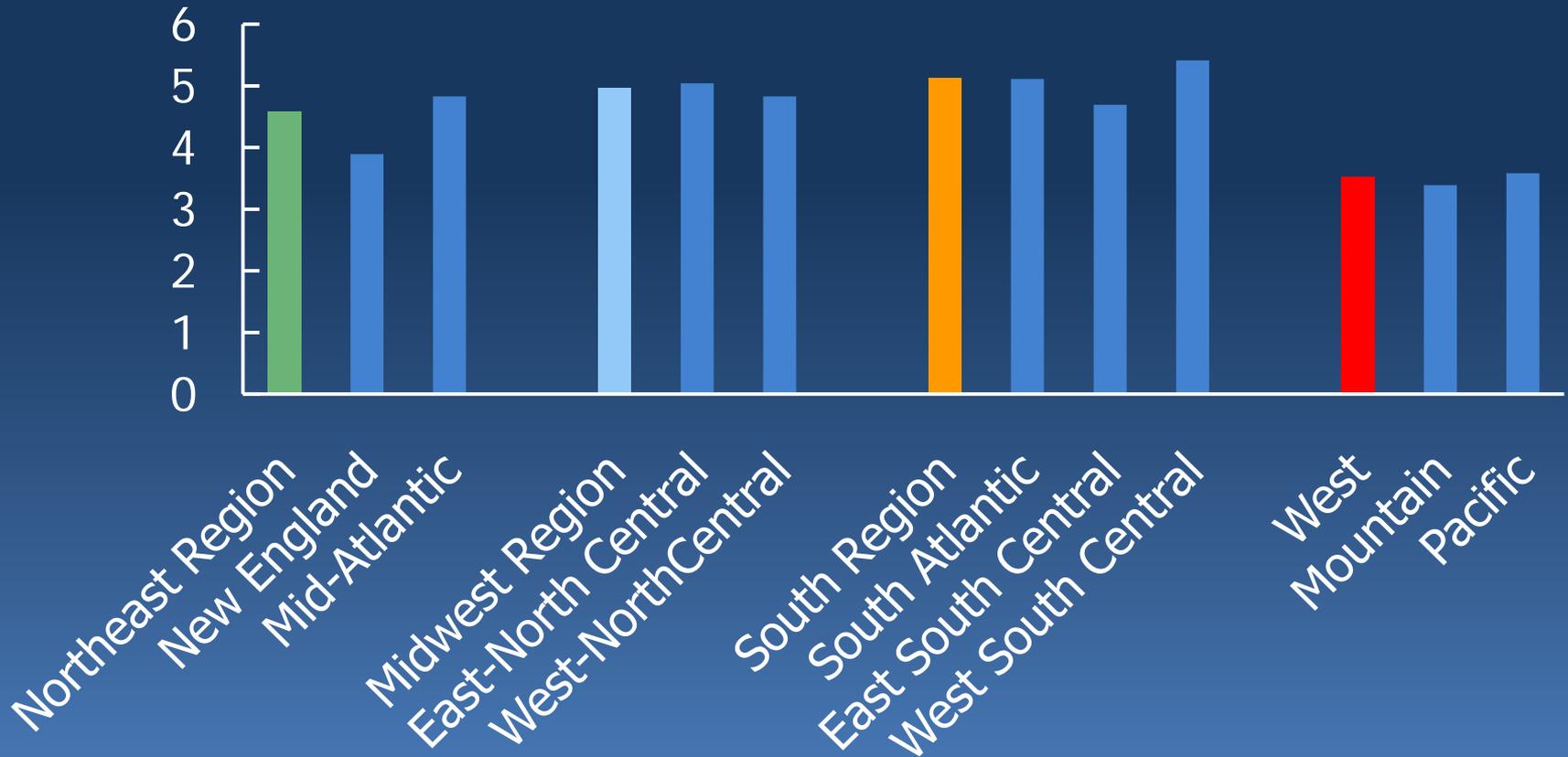
Coronary Heart Disease



Source: 2009 NHIS

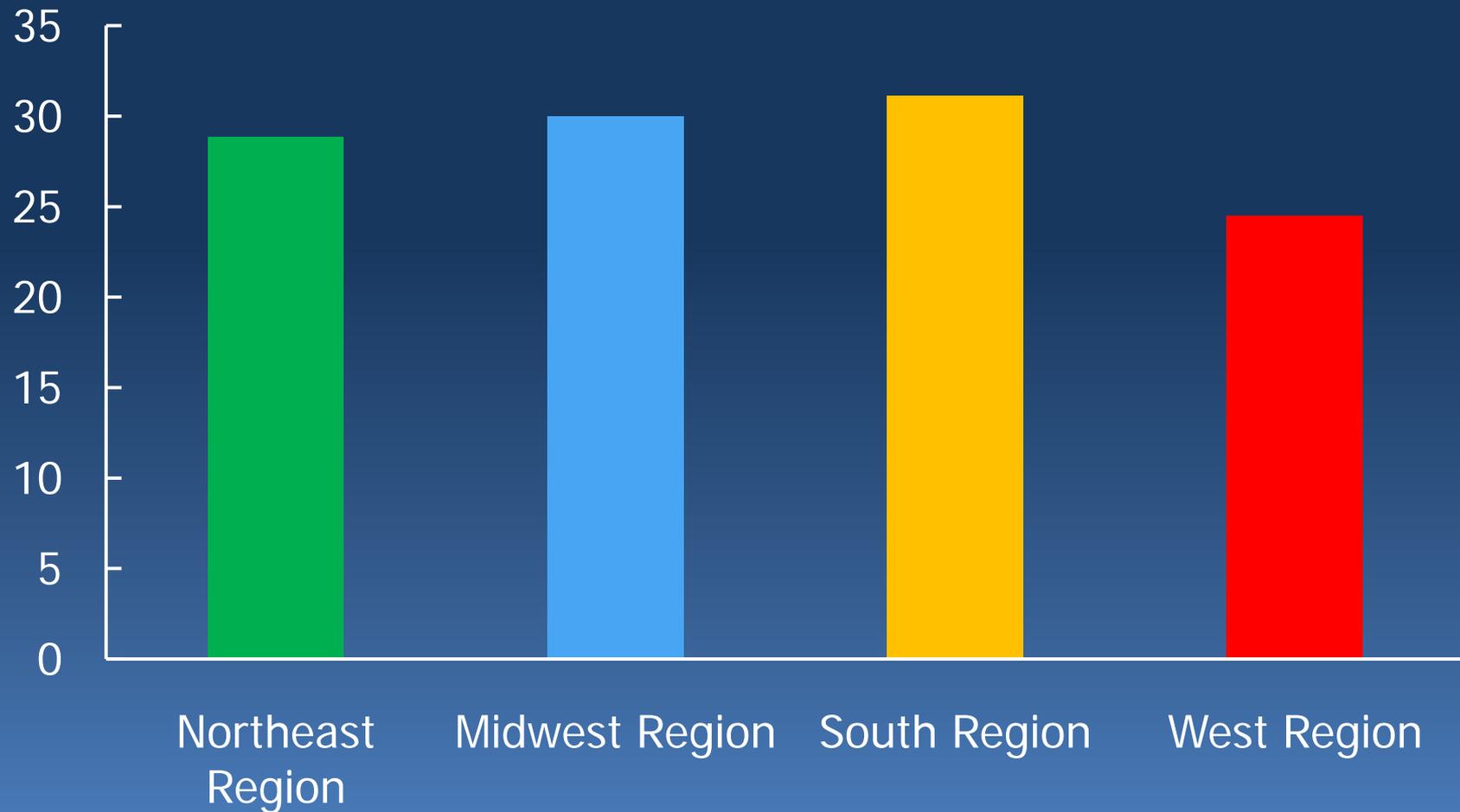
Prevalence of CHD by Region and Division

Coronary Heart Disease



Source: 2009 NHIS

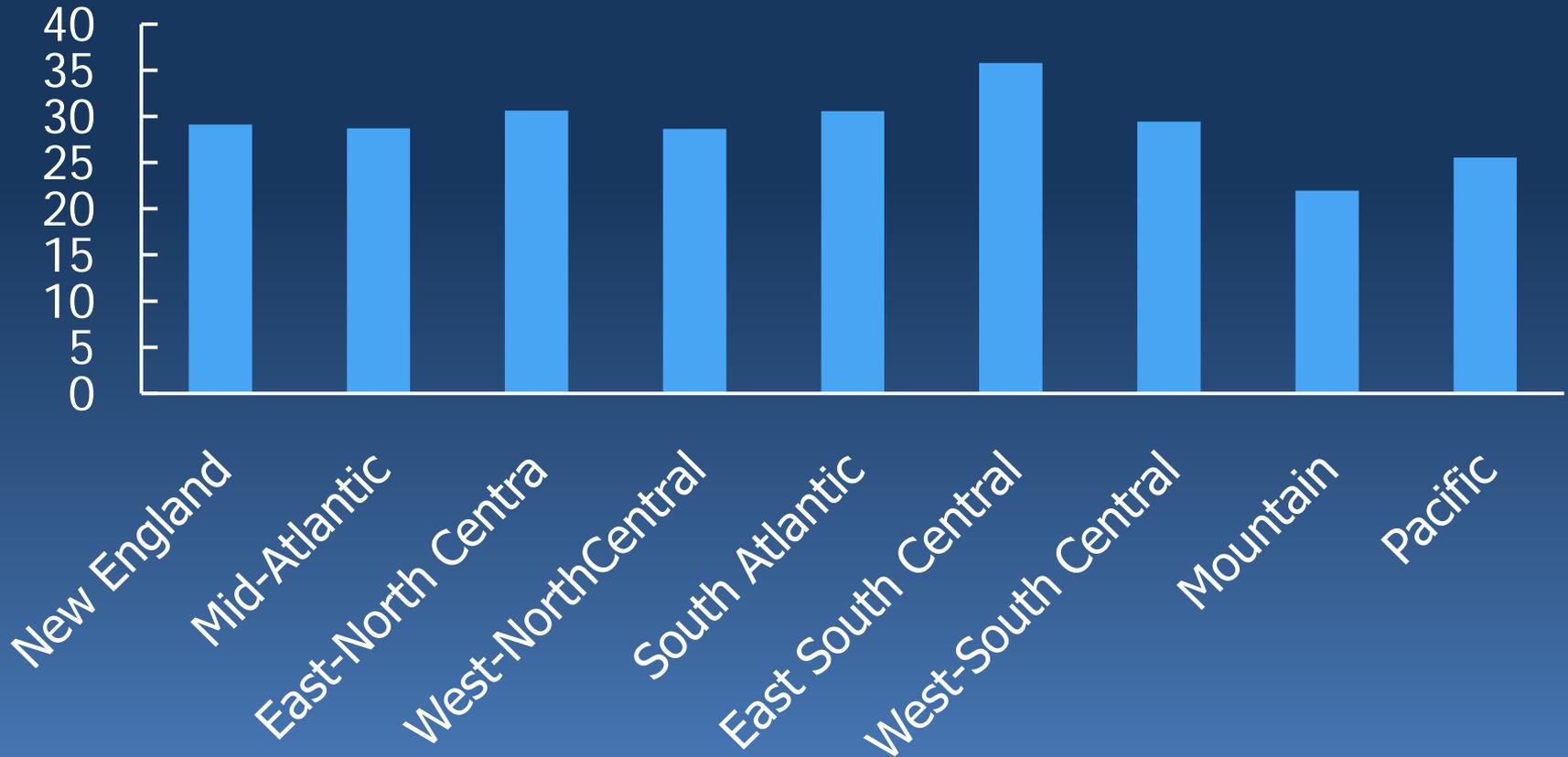
Prevalence of Hypertension by Region



Source: 2009 NHIS

Prevalence of Hypertension by Division

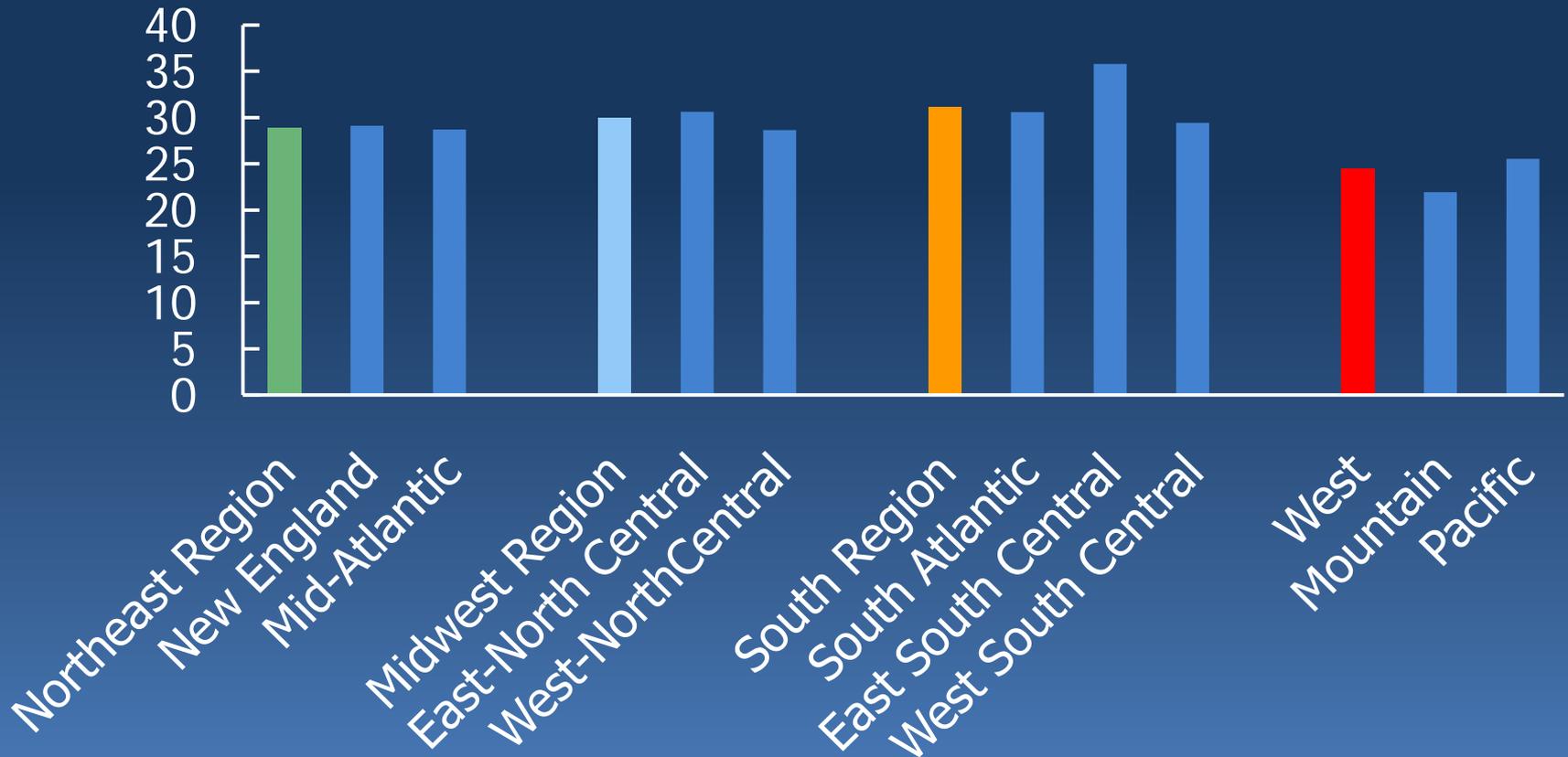
Hypertension



Source: 2009 NHIS

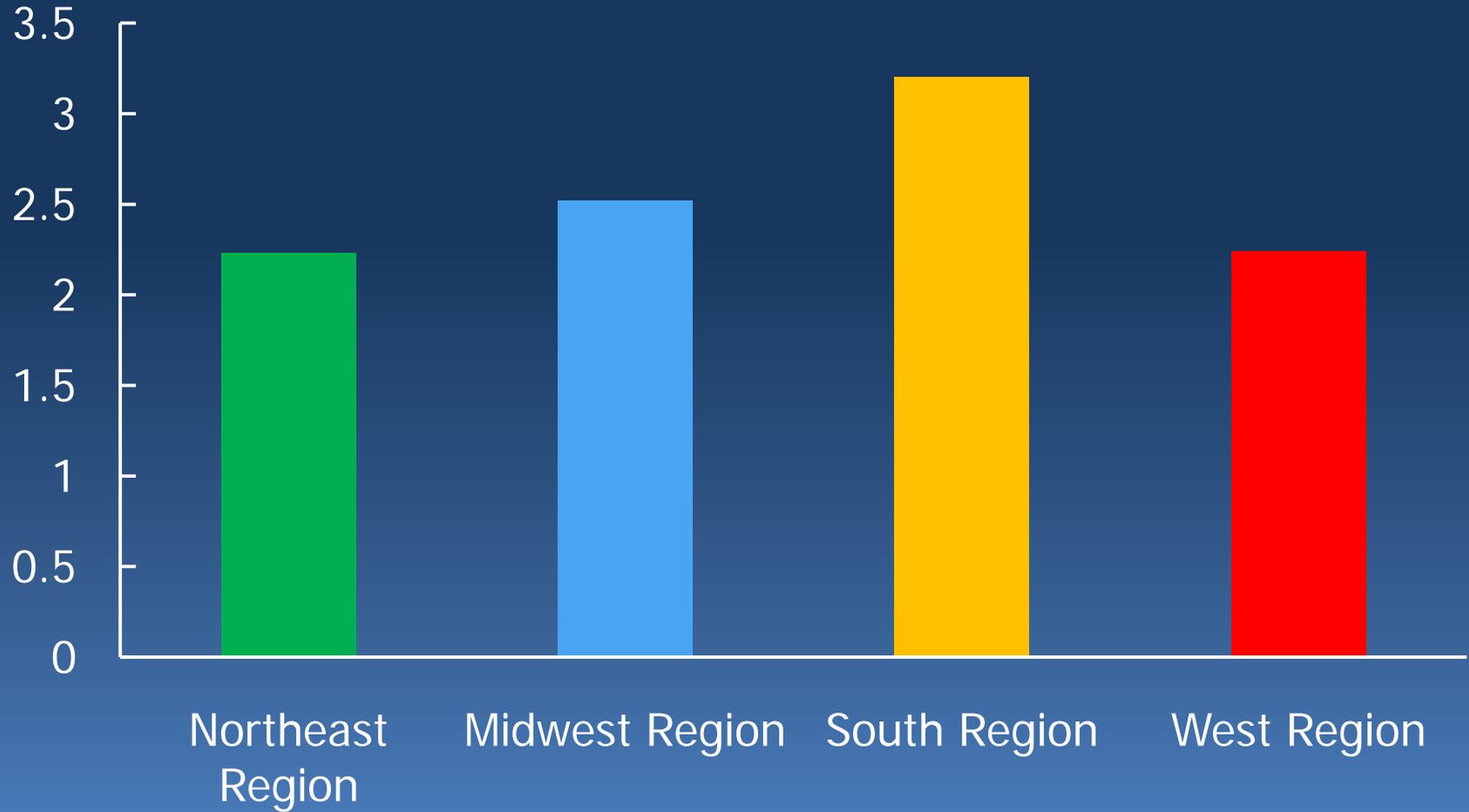
Prevalence of Hypertension by Region and Division

Hypertension



Source: 2009 NHIS

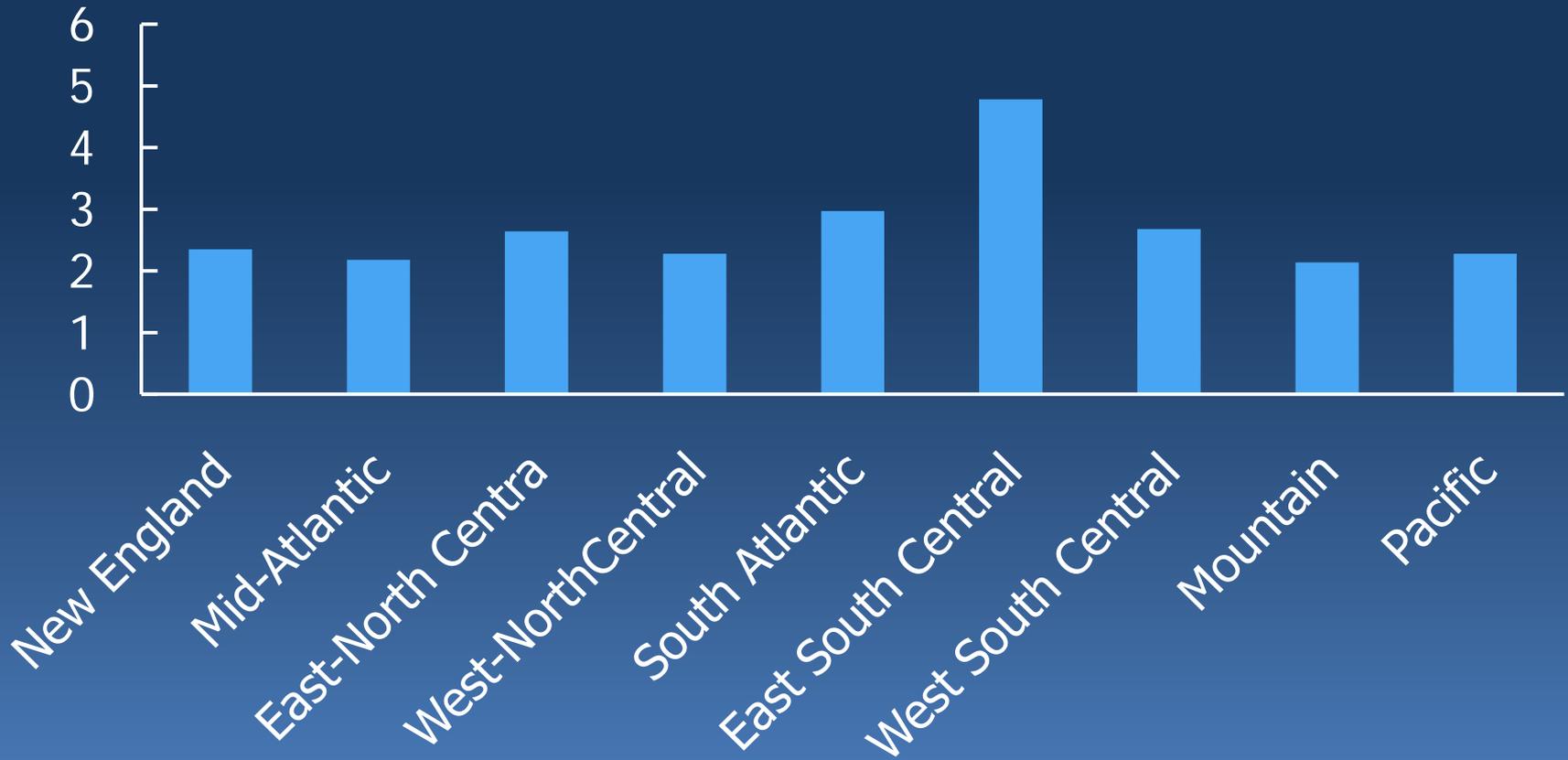
Prevalence of Stroke by Region



Source: 2009 NHIS

Prevalence of Stroke by Division

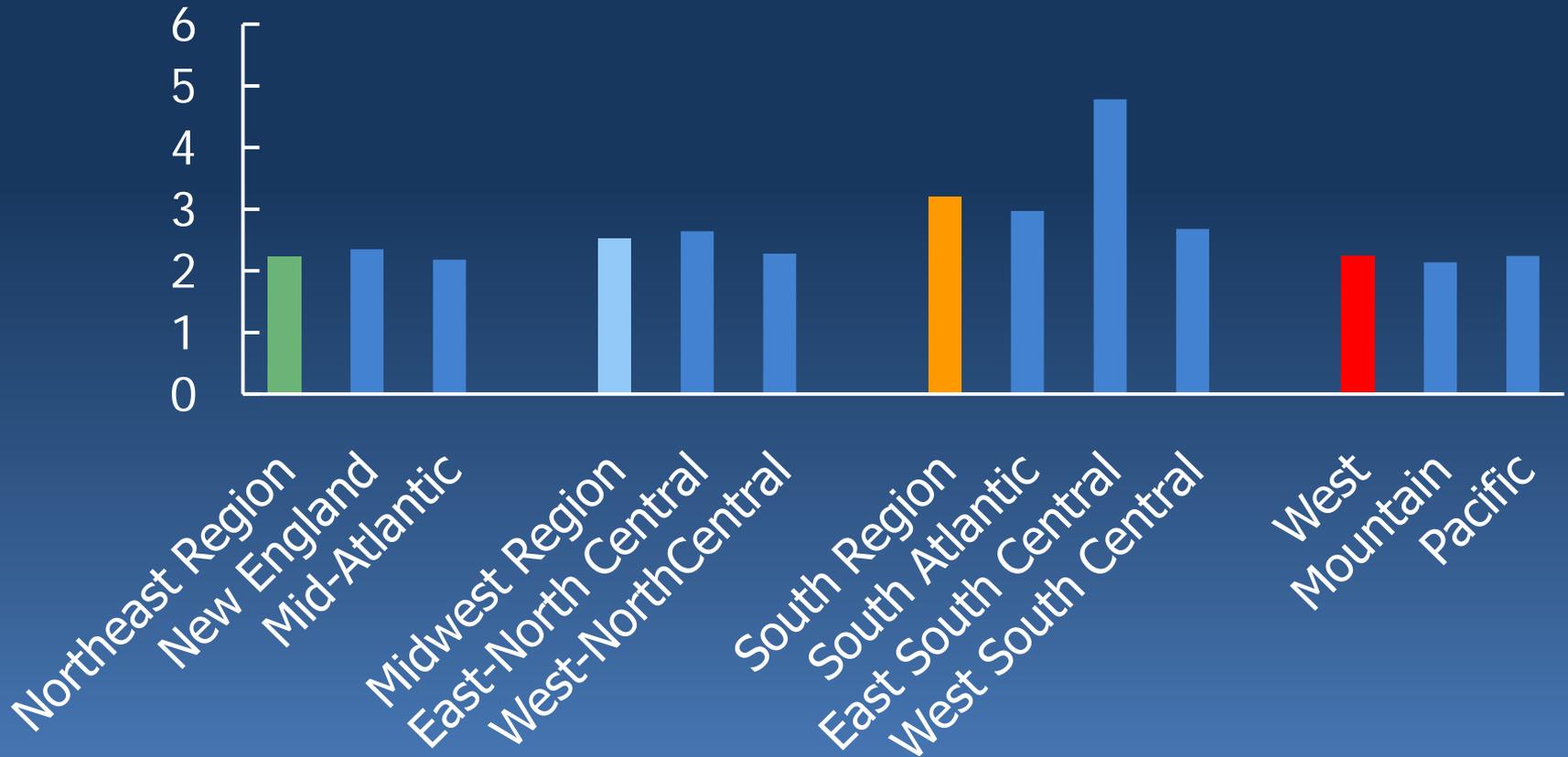
Stroke



Source: 2009 NHIS

Prevalence of Stroke by Region and Division

Stroke



Source: 2009 NHIS

Stroke Belt

An area in the southeast part of the United States with a high prevalence of stroke.

The East South Central Division is in the stroke belt.

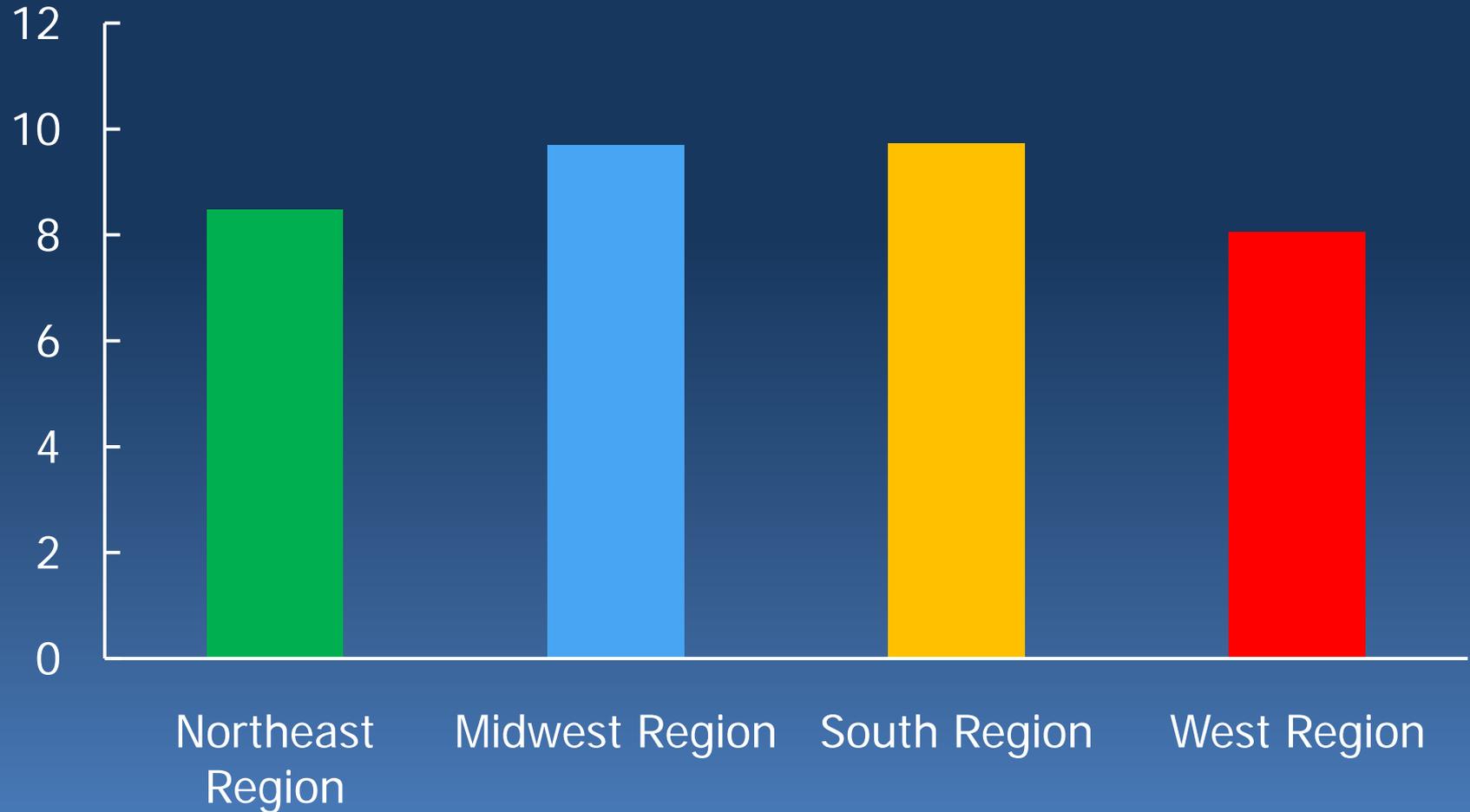
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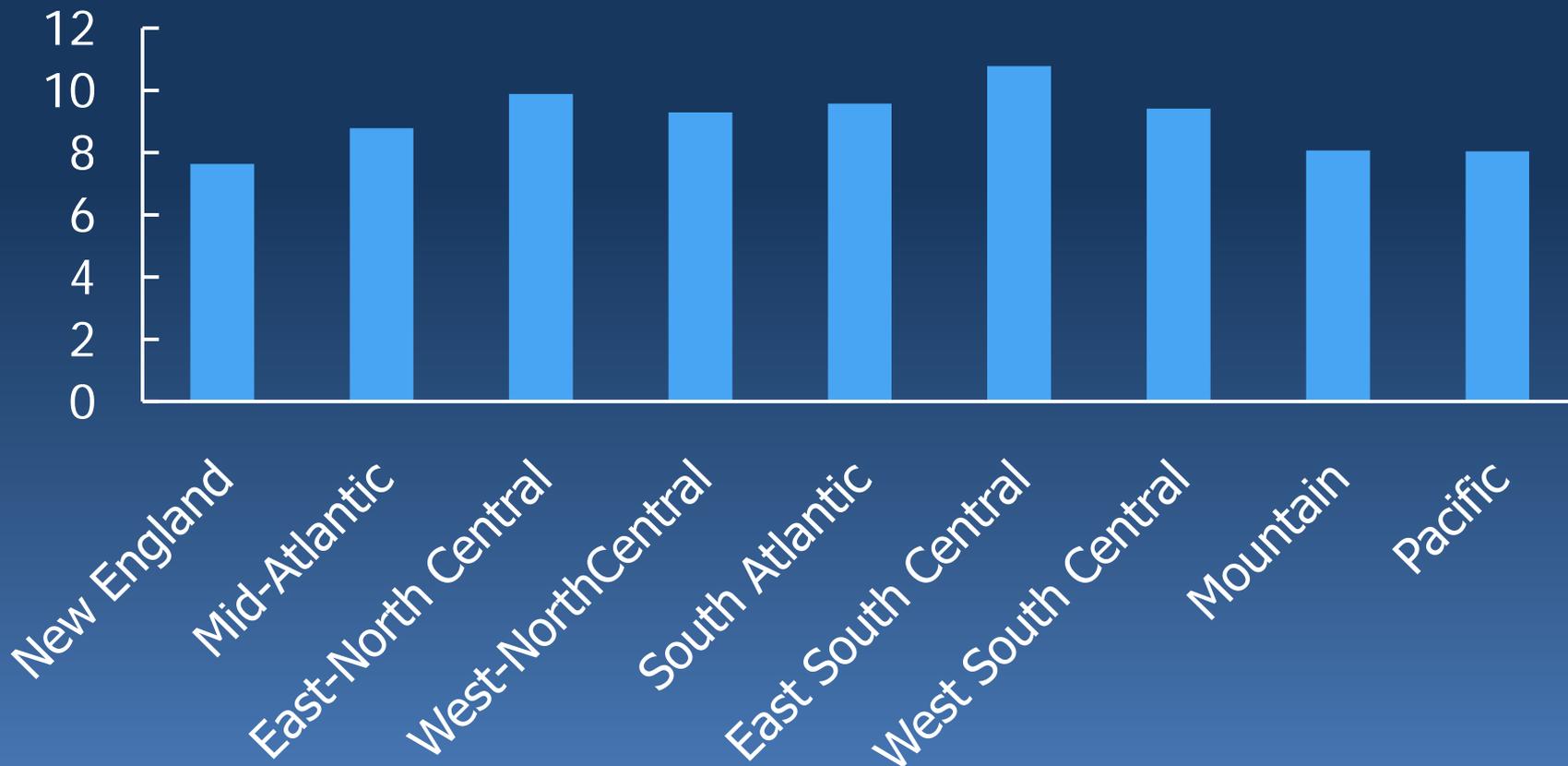
Prevalence of Diabetes by Region



Source: 2009 NHIS

Prevalence of Diabetes by Division

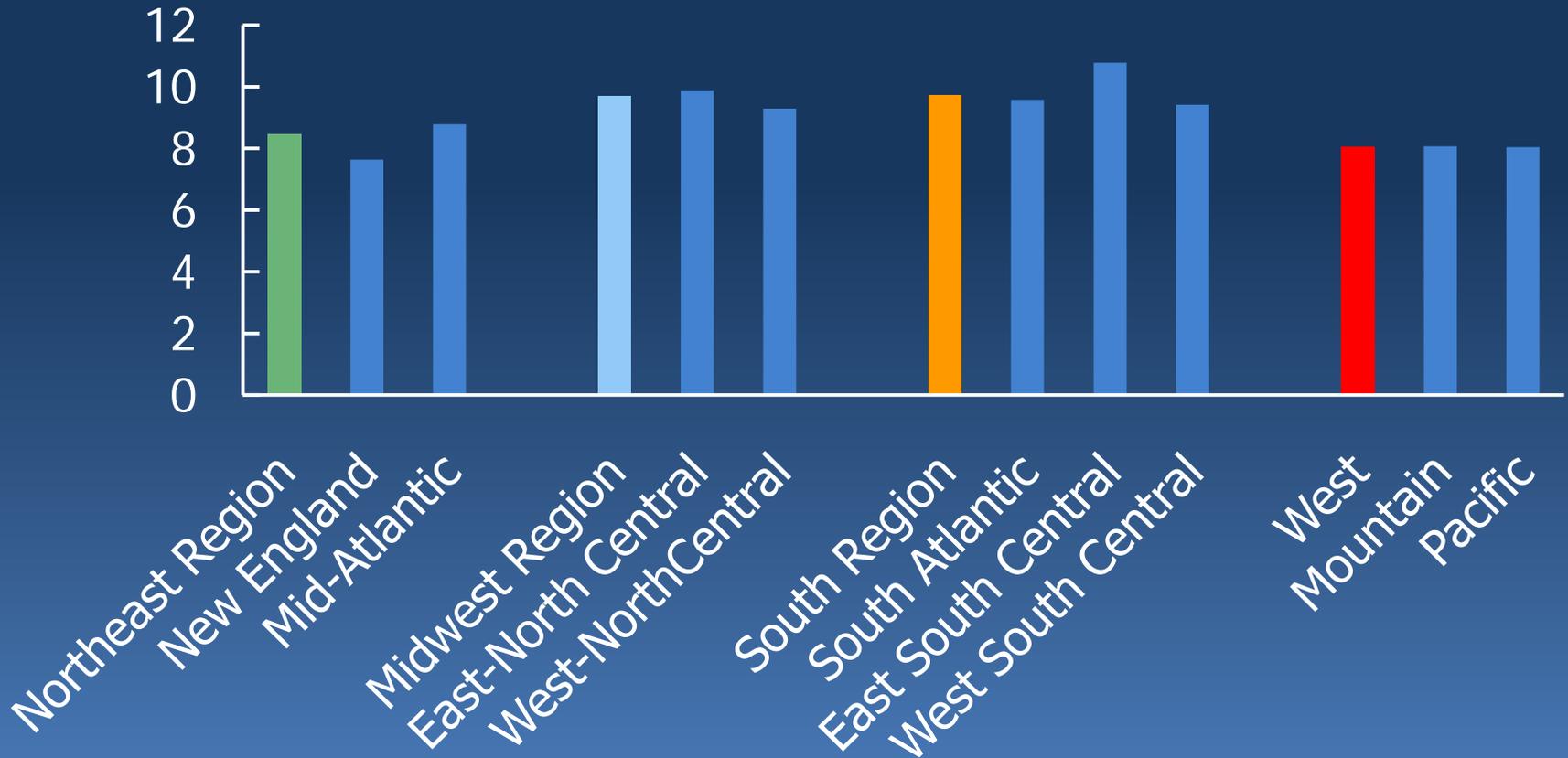
Diabetes



Source: 2009 NHIS

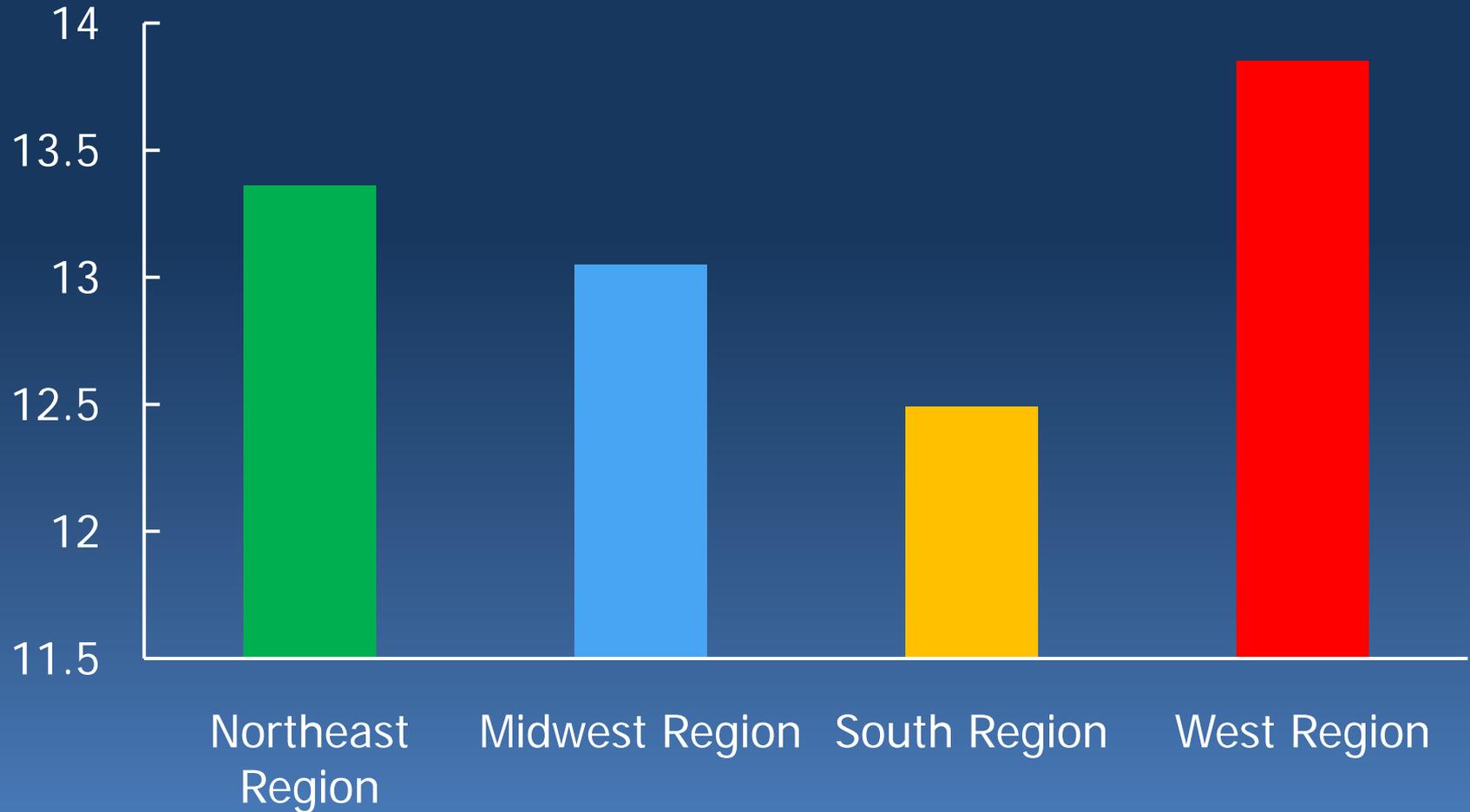
Prevalence of Diabetes by Region and Division

Diabetes



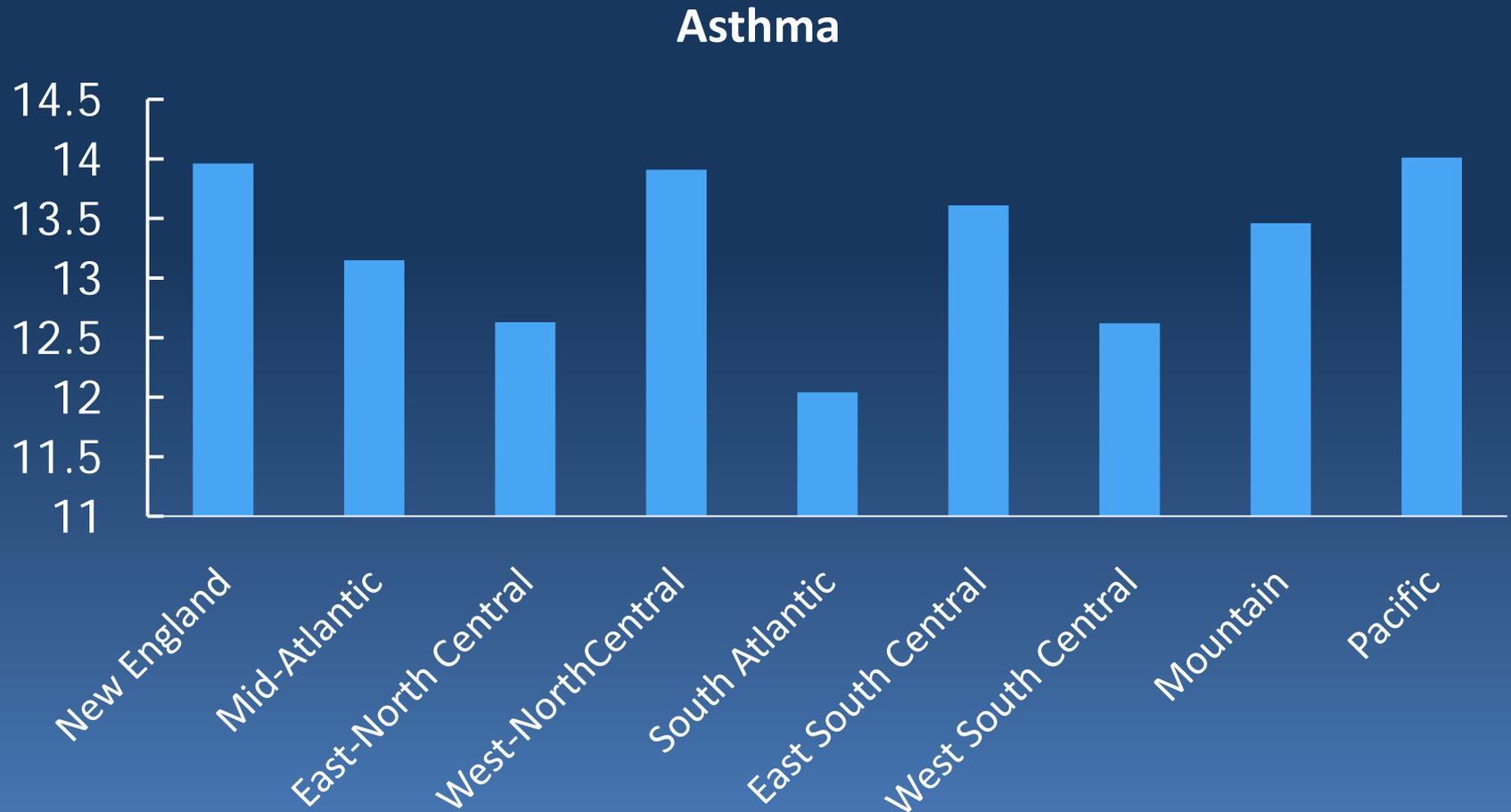
Source: 2009 NHIS

Prevalence of Asthma by Region



Source: 2009 NHIS

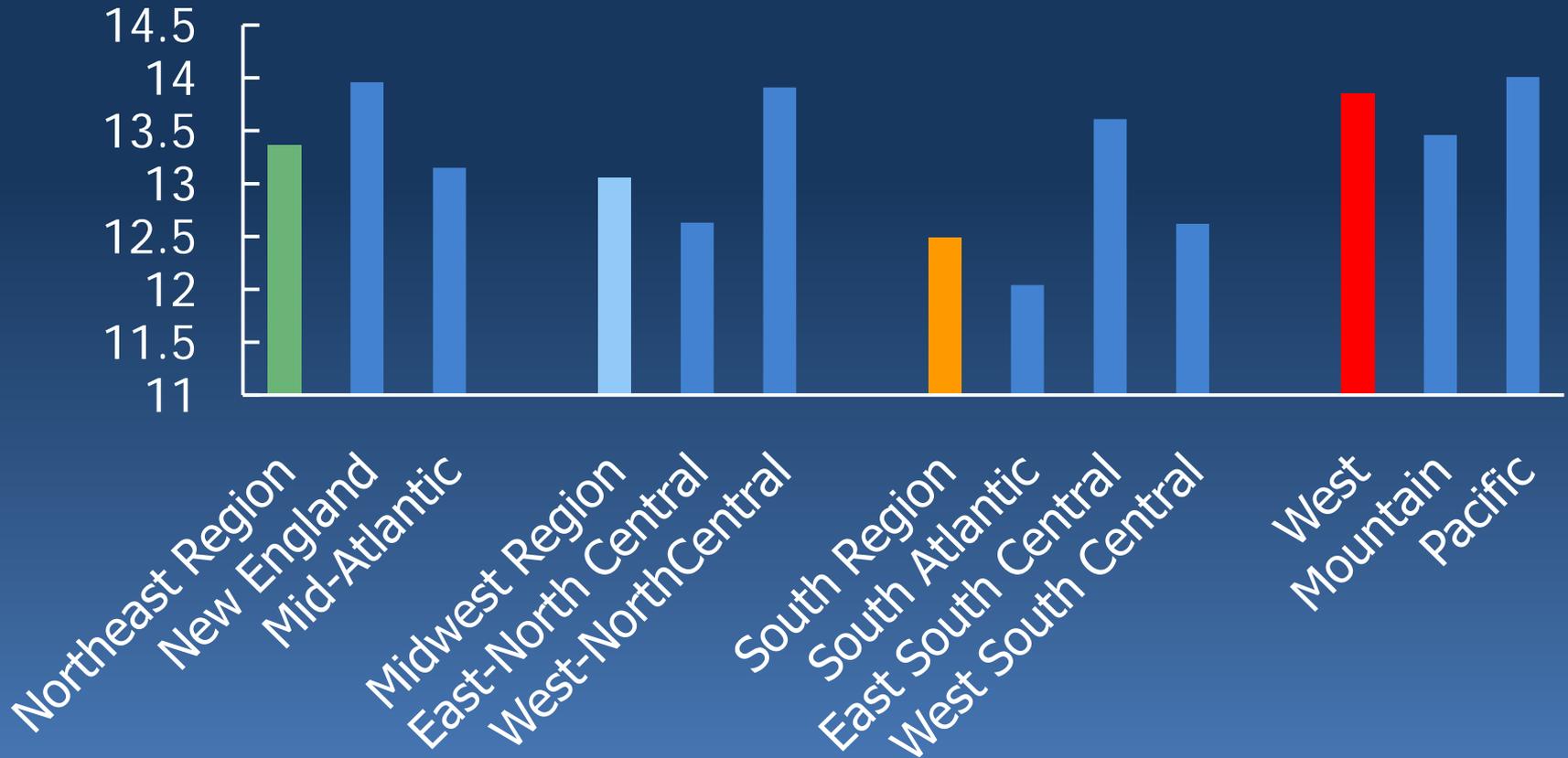
Prevalence of Asthma by Division



Source: 2009 NHIS

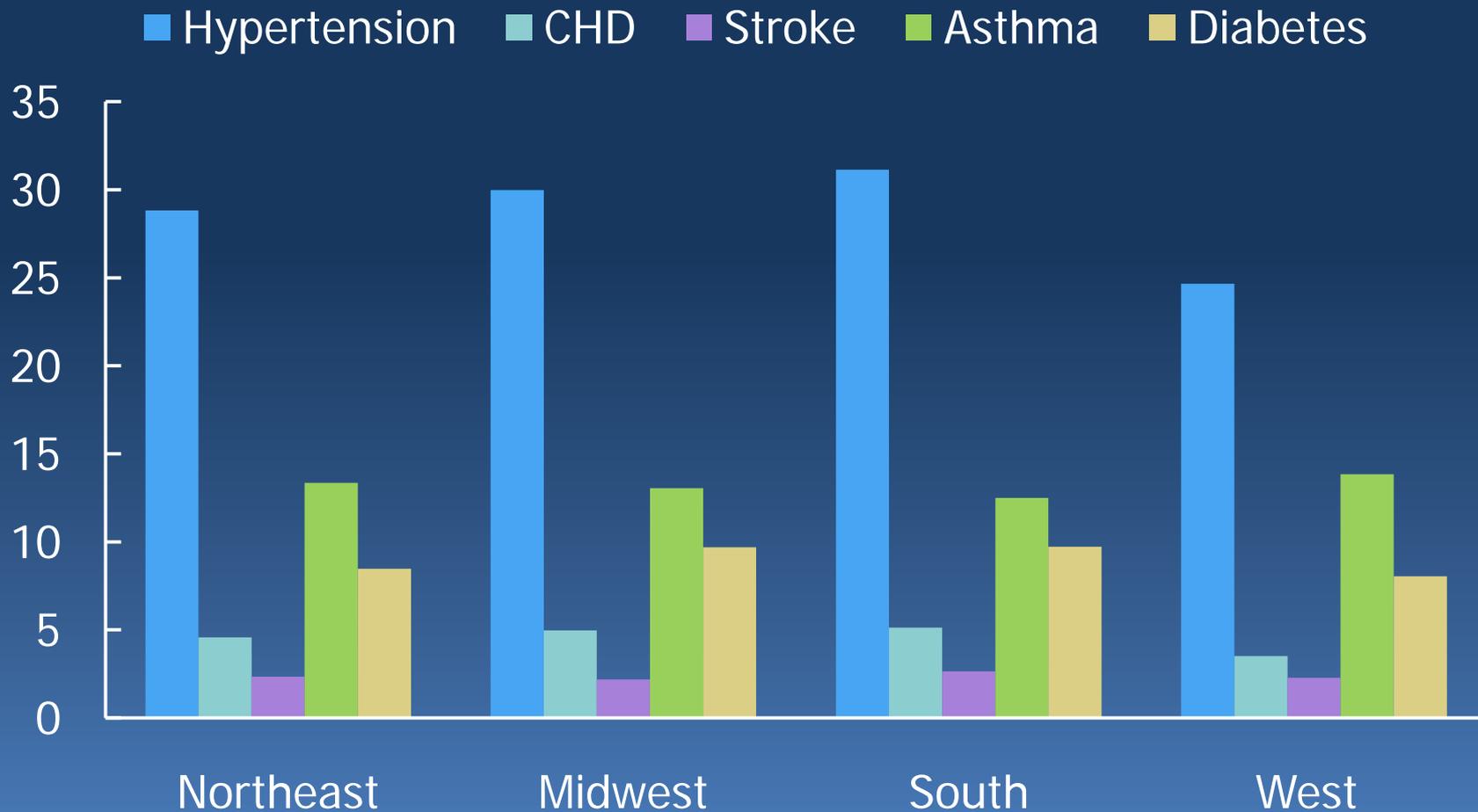
Prevalence of Asthma by Region and Division

Asthma



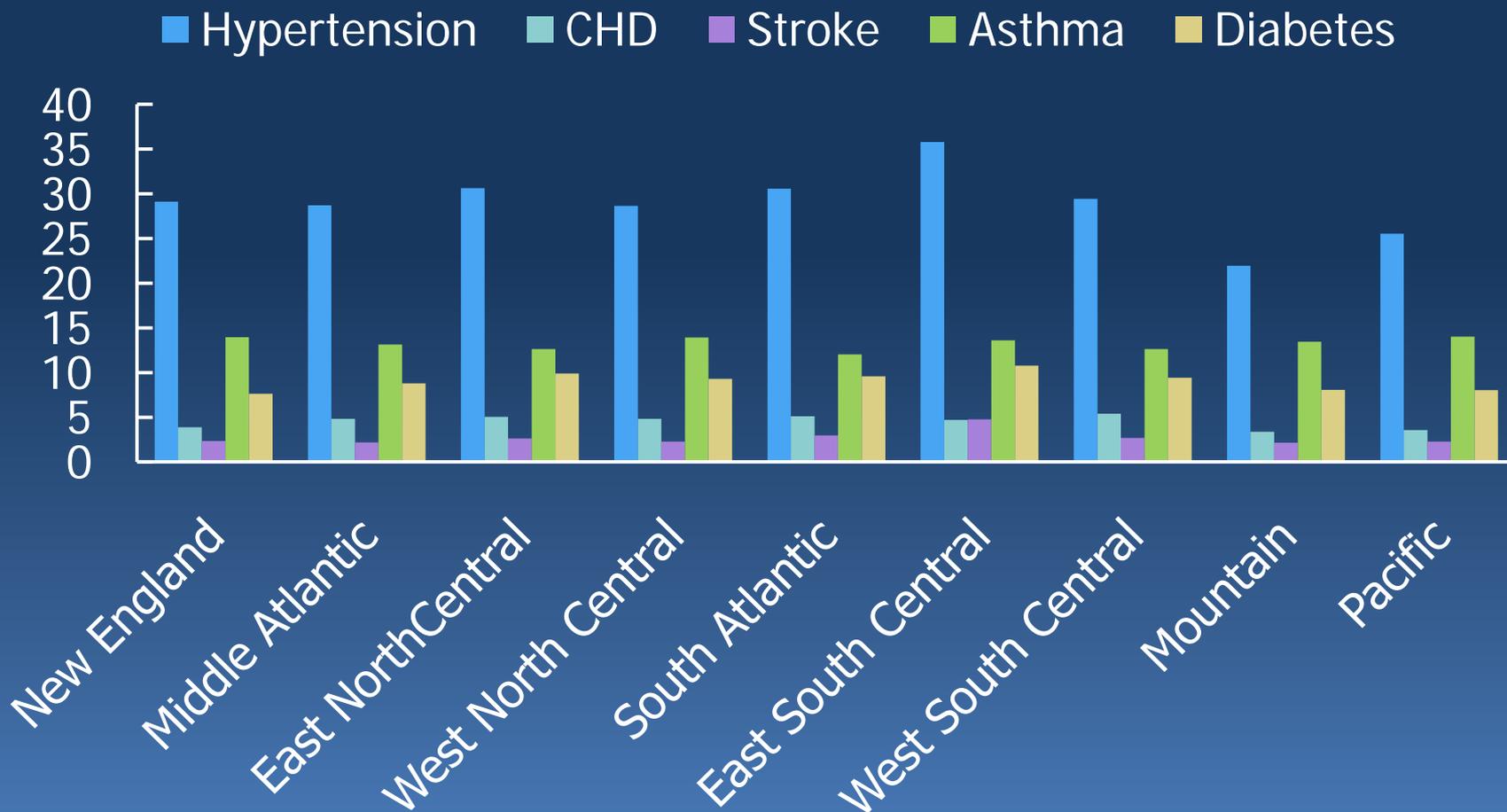
Source: 2009 NHIS

Five Conditions by Region



Source: 2009 NHIS

Five Conditions by Division



Source: 2009 NHIS

Summary and Conclusions

Displaying chronic conditions and covariates by Division can reveal more detail than showing them by Region.

Reaching the RDC from the NCHS Homepage

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CDC Centers for Disease Control and Prevention
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- Lifestyle**

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- Health Data Interactive
- Healthy People 2010/2020
- Injury Data and Resources
- ICD and ICF Classifications and Coding
- National Death Index
- NCHS Survey Measures Catalog
- NHANES Tutorial
- Q-Bank Question Evaluation Reports
- Responses to Recent Health Policy Requests
- VitalStats

What's New!

America's Children In Brief: Key National Indicators of Well-Being, 2010 [PDF](#)
Annual inter-agency report features data on health, other measures

Births, Marriages, Divorces, and Deaths: Provisional Data for October 2009

Cohort Fertility Tables for All, White, and Black Women: United States, 1960-2005

United States Life Tables, 2006
[PDF](#) [PDF - 967 KB]

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NCHS Research Data Center (RDC)

The National Center for Health Statistics (NCHS) developed the Research Data Centers (RDC) to allow researchers access to restricted data.

The RDC is responsible for protecting the confidentiality of survey respondents, study subjects, or institutions from which data were collected. In order to do this, we request all researchers submit a research proposal outlining the need for this more sensitive data. The proposal provides a framework for us to identify potential disclosure risk. Once approved, we work with you to create a data file specific to your research question. We cannot send you the dataset, but we offer several modes of access.

People interested in using the RDC are typically, university trained researchers who are comfortable using SAS or a similar statistical package to analyze standard datasets. Past researchers have been epidemiologists, economists, demographers and health scientists.

If this is your first time using the RDC we have provided step-by-step instructions to guide you along the process.

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Access Modes

STEP 3
The Proposal Process

STEP 4
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STEP 5
**Approved Projects:
Next Steps**

STEP 6
**Publication and
Beyond**

To learn more about the geocode data available at the NCHS / RDC:

- Click on “Step 1: Types of Data”
- On the next page, pick “Restricted Data”
- Click on “Geocodes by NCHS Survey”

We look forward to seeing you soon!