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# **Emergency Department Overload: A Growing Crisis**

*The Results of the AHA Survey of  
Emergency Department (ED) and Hospital Capacity*

**April 2002**

# ED Overload: Key Findings

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- ◆ **A majority of hospital EDs perceive they are “at” or “over” operating capacity**
  - **62% of all hospitals surveyed**
  - **More than 3 out of 4 urban hospitals**
  - **90% of Level I Trauma Centers and hospitals over 300 beds**
- ◆ **One third of all hospitals experienced “ED diversion” — i.e., times when their EDs could no longer accept all or specific types of patients by ambulance**
  - **More than half of urban hospitals reported ED diversions**
  - **1 in 8 urban hospitals reported time on diversion at 20 percent or more**

# ED Overload: Key Findings

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- ◆ **Lack of available staffed critical care beds was the # 1 reason cited for ED diversion**
- ◆ **Hospitals reporting time on diversion at 20% or more had an average RN vacancy rate of 16%**
- ◆ **ED volume continues to rise**
  - **ED visit volume grew by 5 percent from 2000 to 2001 at surveyed hospitals**

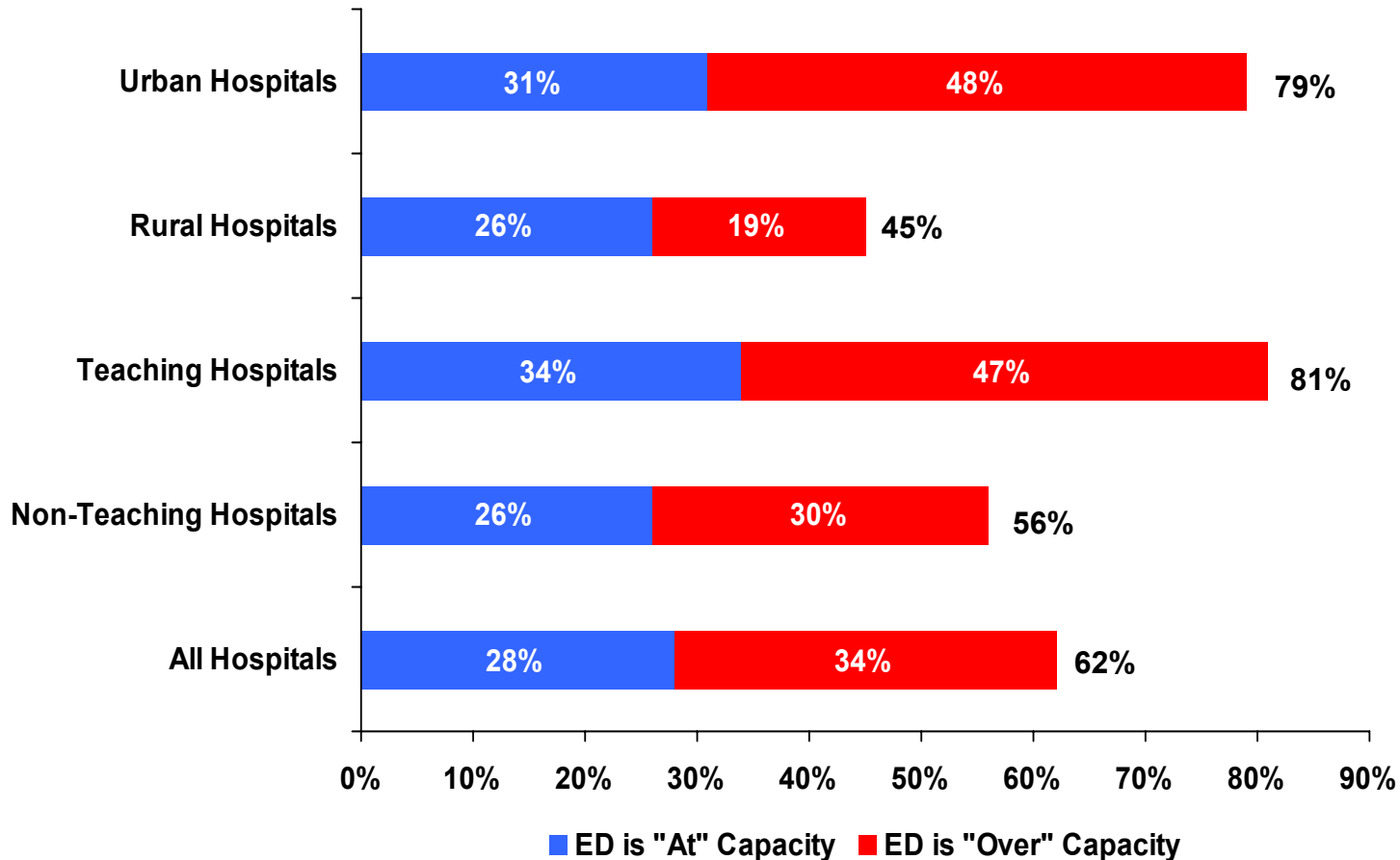
# Study Objectives and Methodology

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- ◆ **Survey commissioned by AHA to gather nationally representative data on key issues:**
  - Perceptions of volume vs. capacity
  - Diversion rates
  - Reasons for diversion
  - Impact on service levels
  - Volume trends
  - Volume of uninsured
- ◆ **1501 hospitals with ED services responded -- representing 36% of all hospitals with EDs**
- ◆ **Respondents asked to provide data for November 2001**
- ◆ **Distribution of respondents closely matches the universe of hospitals on key dimensions**
  - Urban/rural, bed size, teaching status, regional distribution

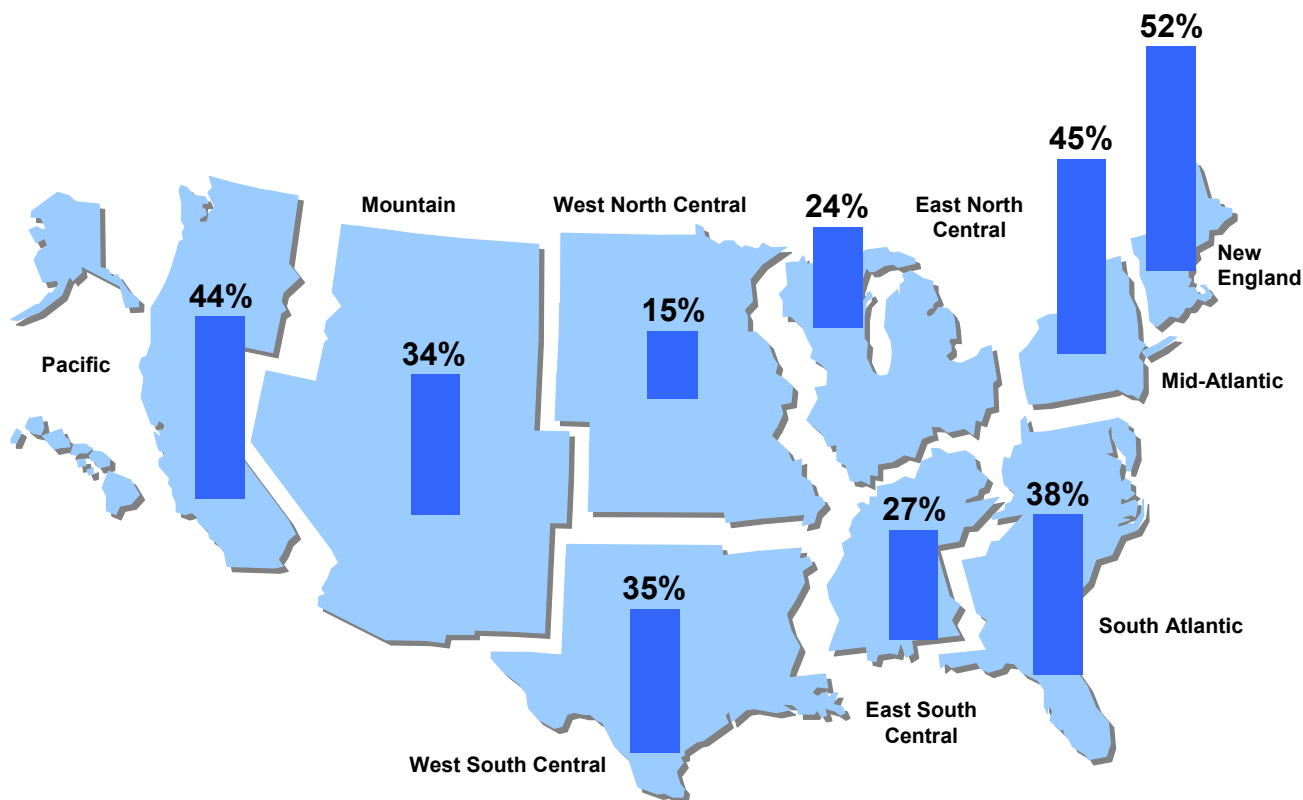
# Most EDs are “at” or “over” capacity

Percent of Hospitals Reporting ED Capacity Issues by Type of Hospital



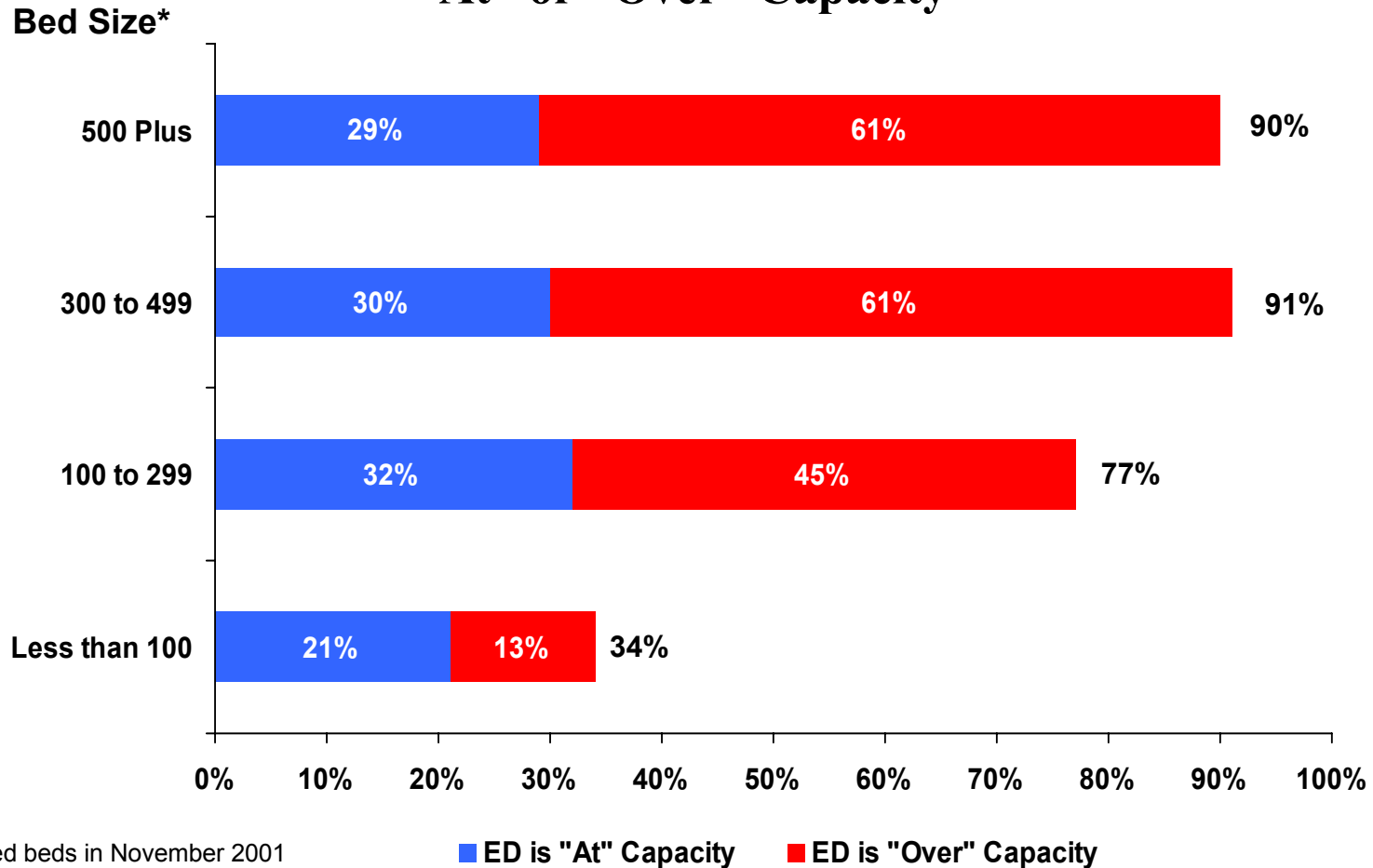
# ED capacity is a problem across the country - but most acute for Northeast and West Coast

## Percent of Hospitals Reporting that Their ED is Operating “Over” Capacity: By Region



# More than 90 percent of large hospitals (300 plus beds) report EDs “at” or “over” capacity

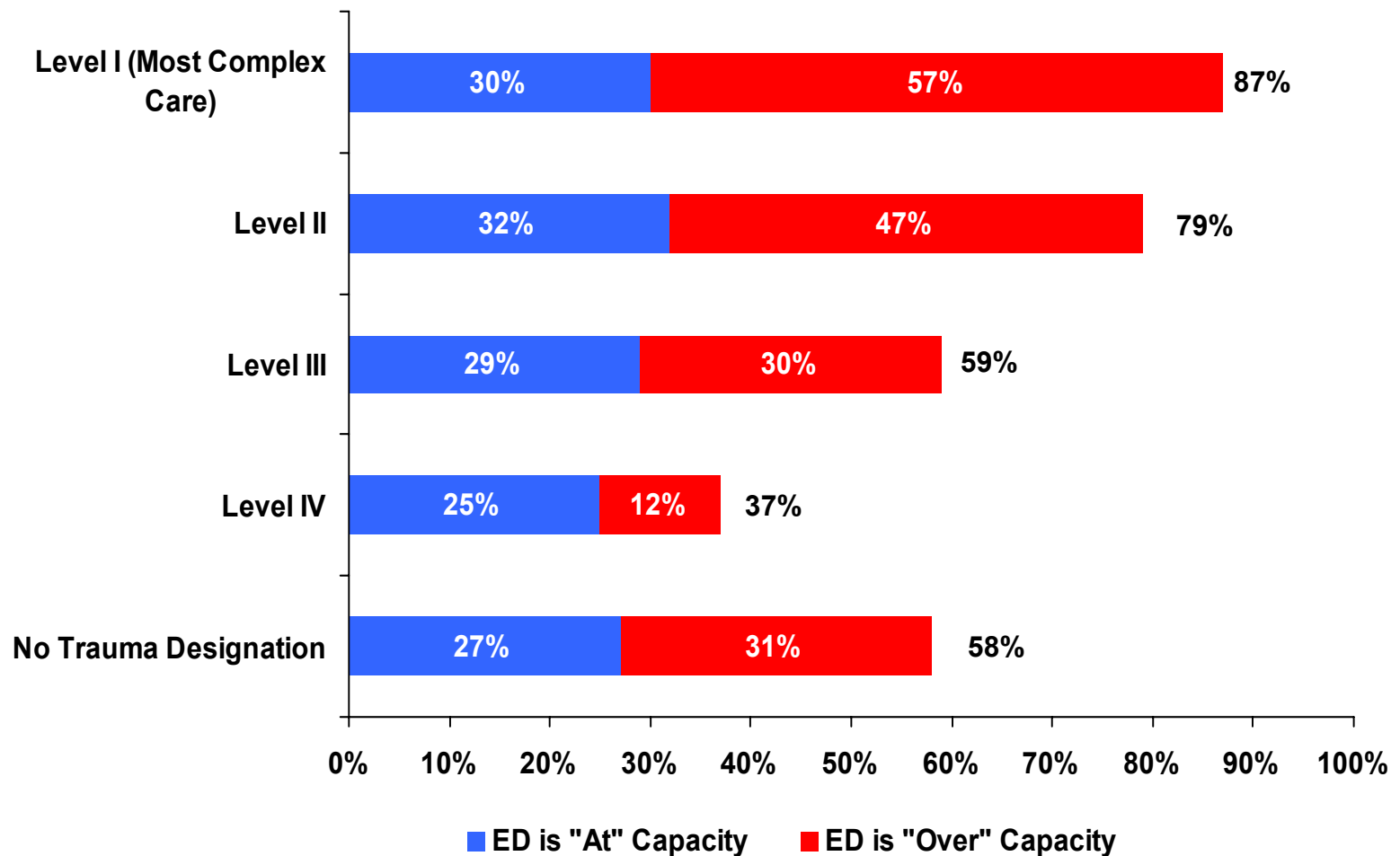
## Percent of Hospitals Reporting that Their ED is Operating “At” or “Over” Capacity



\*Staffed beds in November 2001

# Among Level I Trauma Centers, nearly 90 percent are “at” or “over” capacity

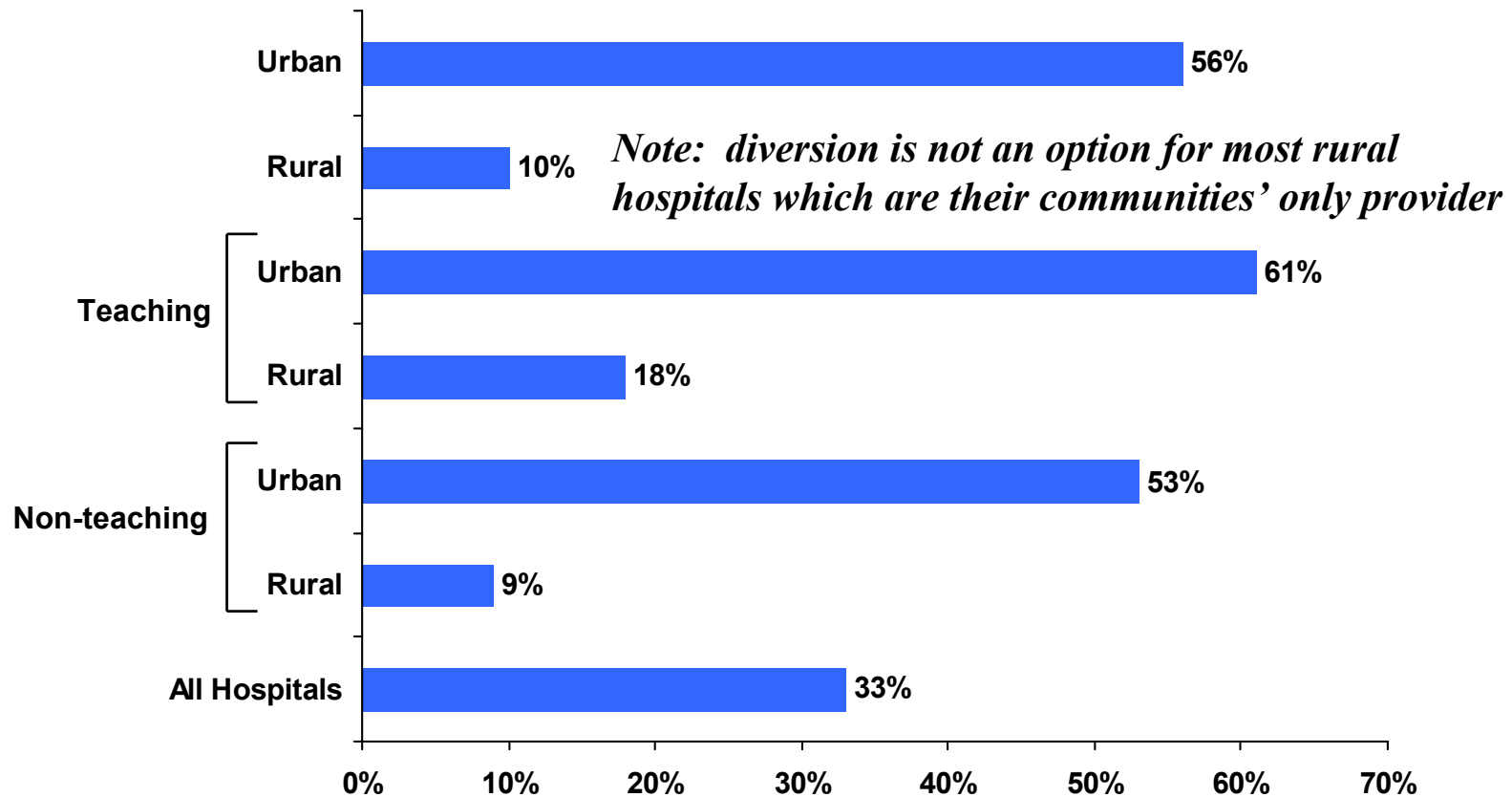
## Percent of Hospitals Reporting ED Capacity Issues by Trauma Level





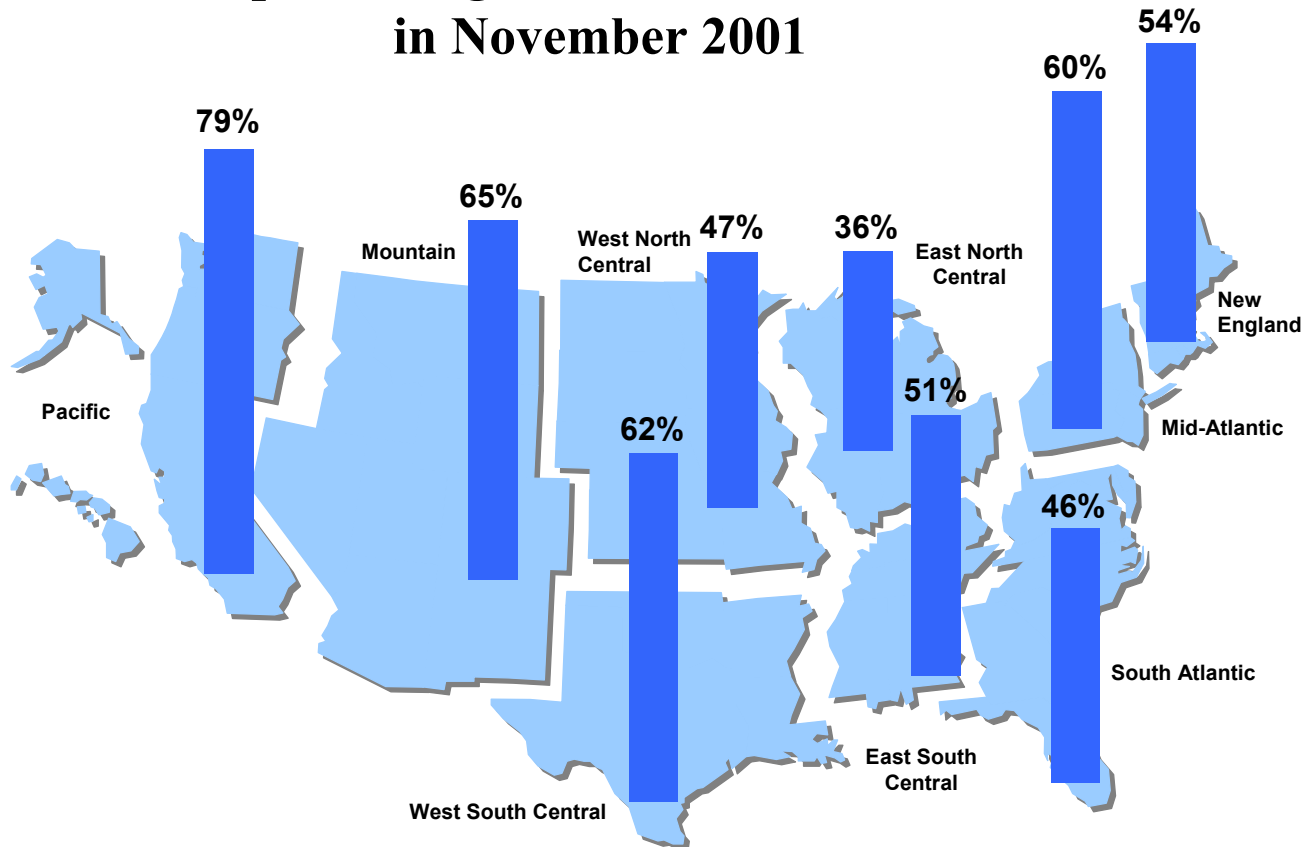
# A majority of urban and teaching hospitals experienced some time on ED diversion

Percent of Hospitals Reporting Time on Diversion  
in November 2001



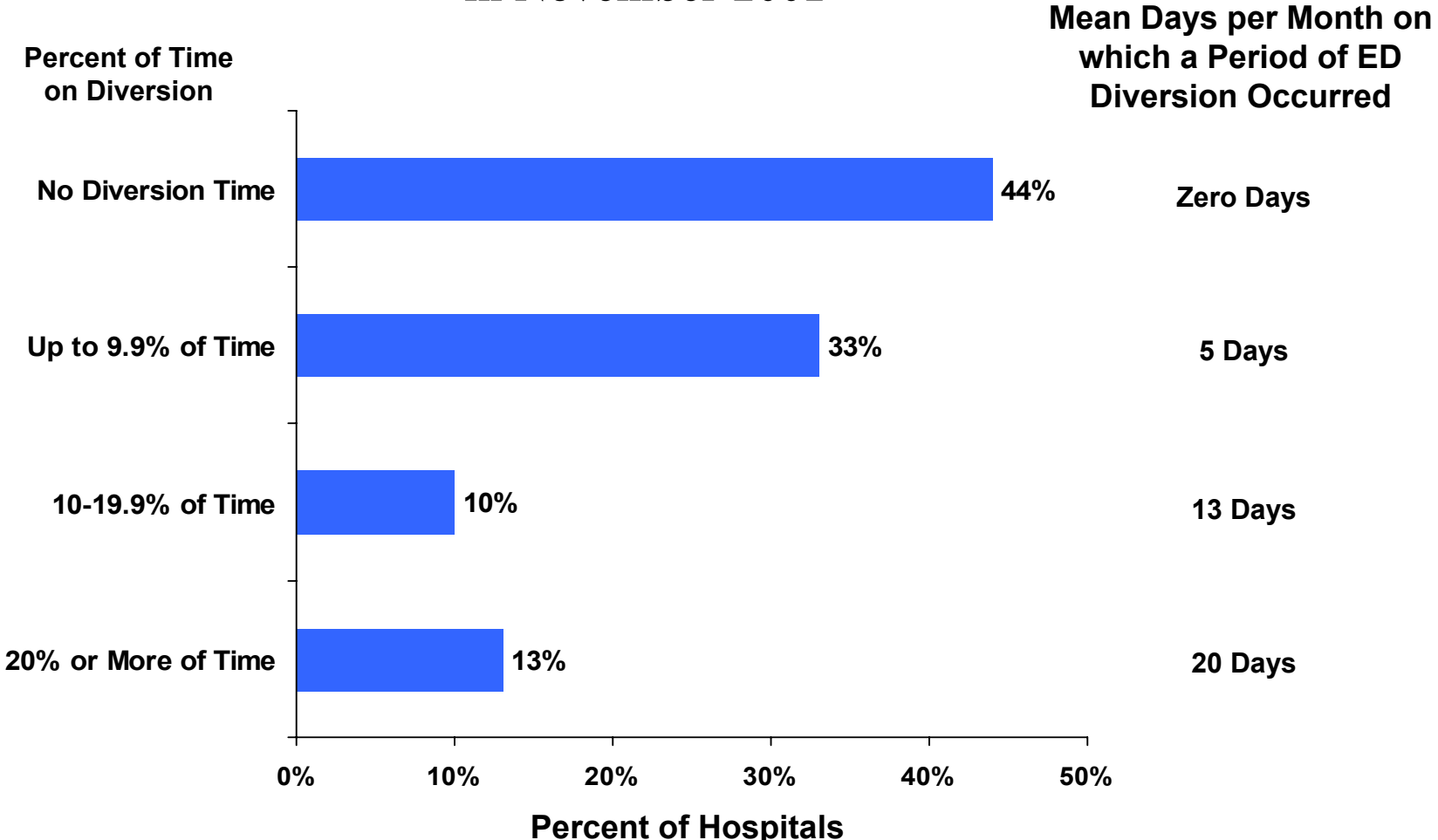
# In many regions, two-thirds or more of urban hospitals experienced time on diversion

Percent of Urban Hospitals  
Experiencing Time on ED Diversion  
in November 2001



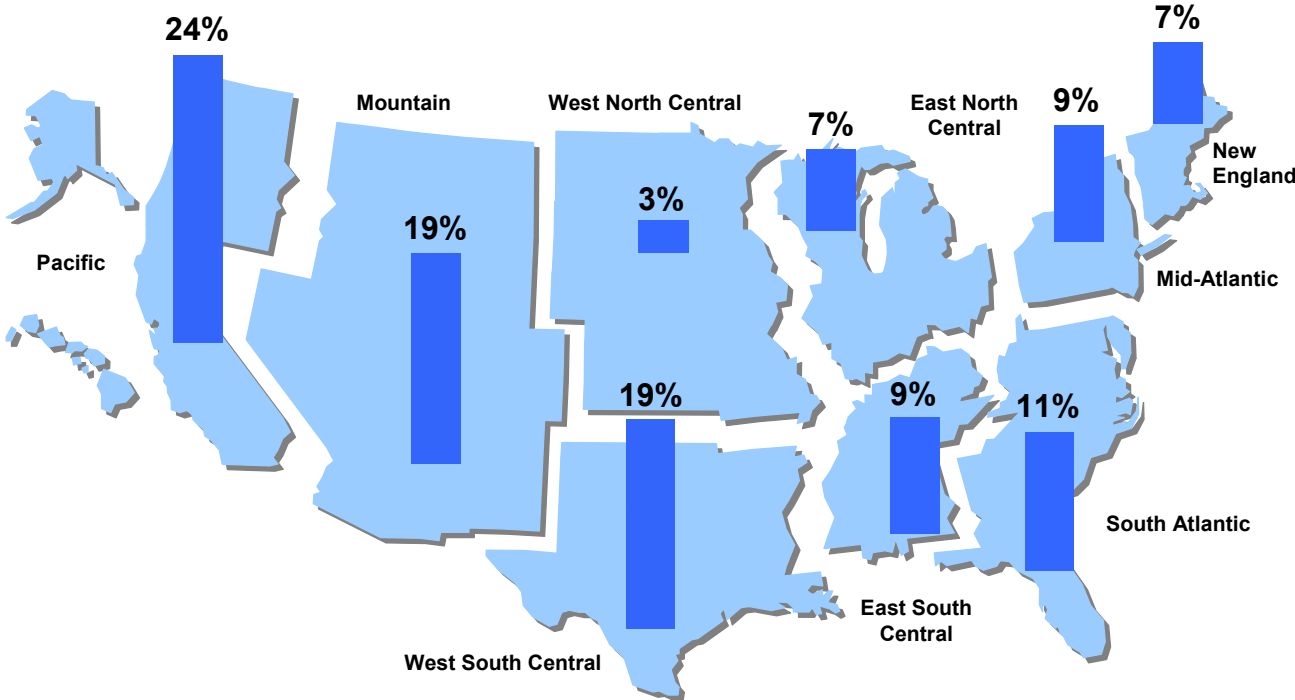
# One in eight urban hospitals experienced diversion more than 20 percent of the time

**Percent of Time on Diversion - Urban Hospitals  
in November 2001**



# ED diversion time exceeding 20 percent is most common in the West

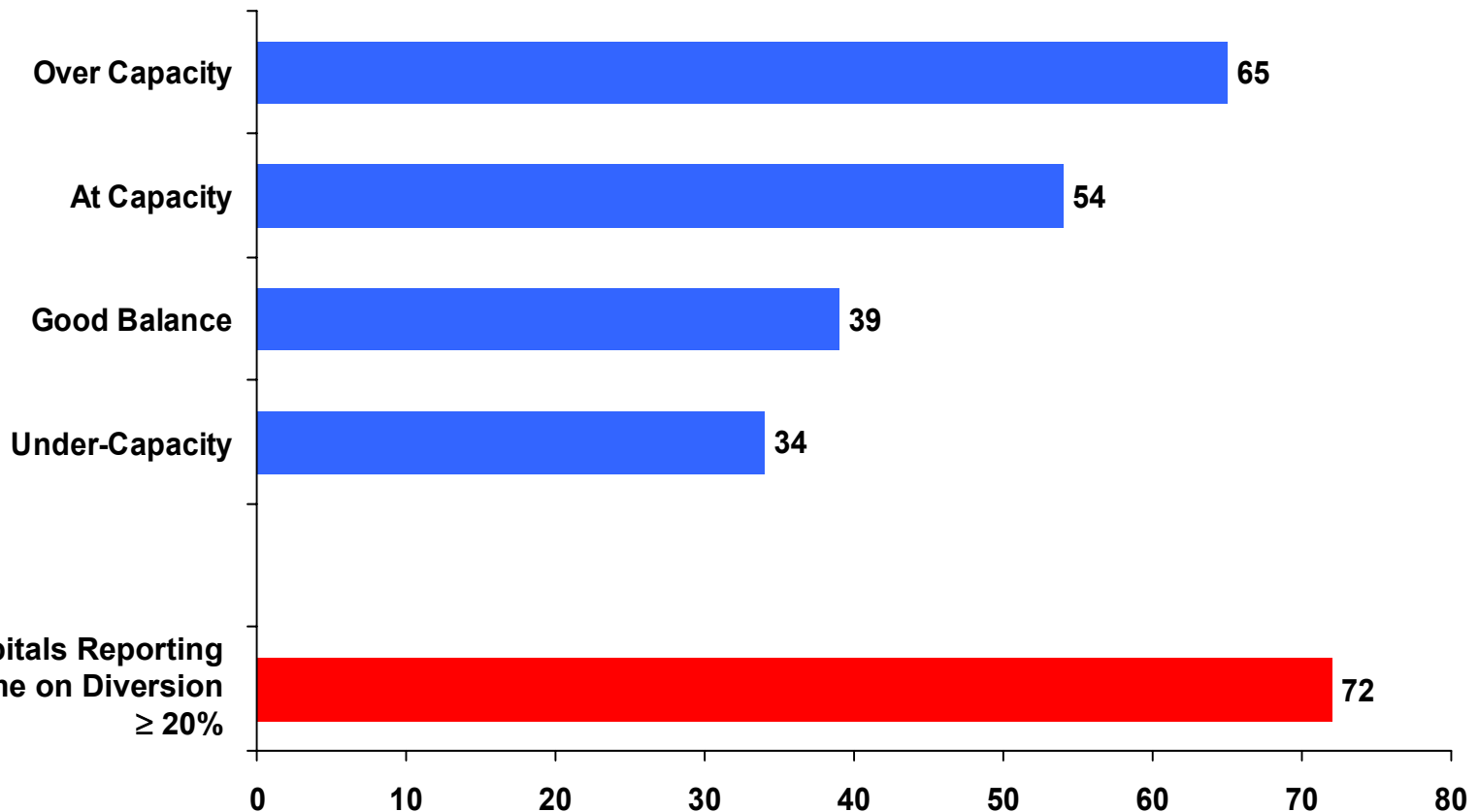
Hospitals Reporting Time on Diversion at 20% or More  
As a Percent of Total Urban Hospitals  
in November 2001



# Capacity constraints translate into longer waiting times for treatment...

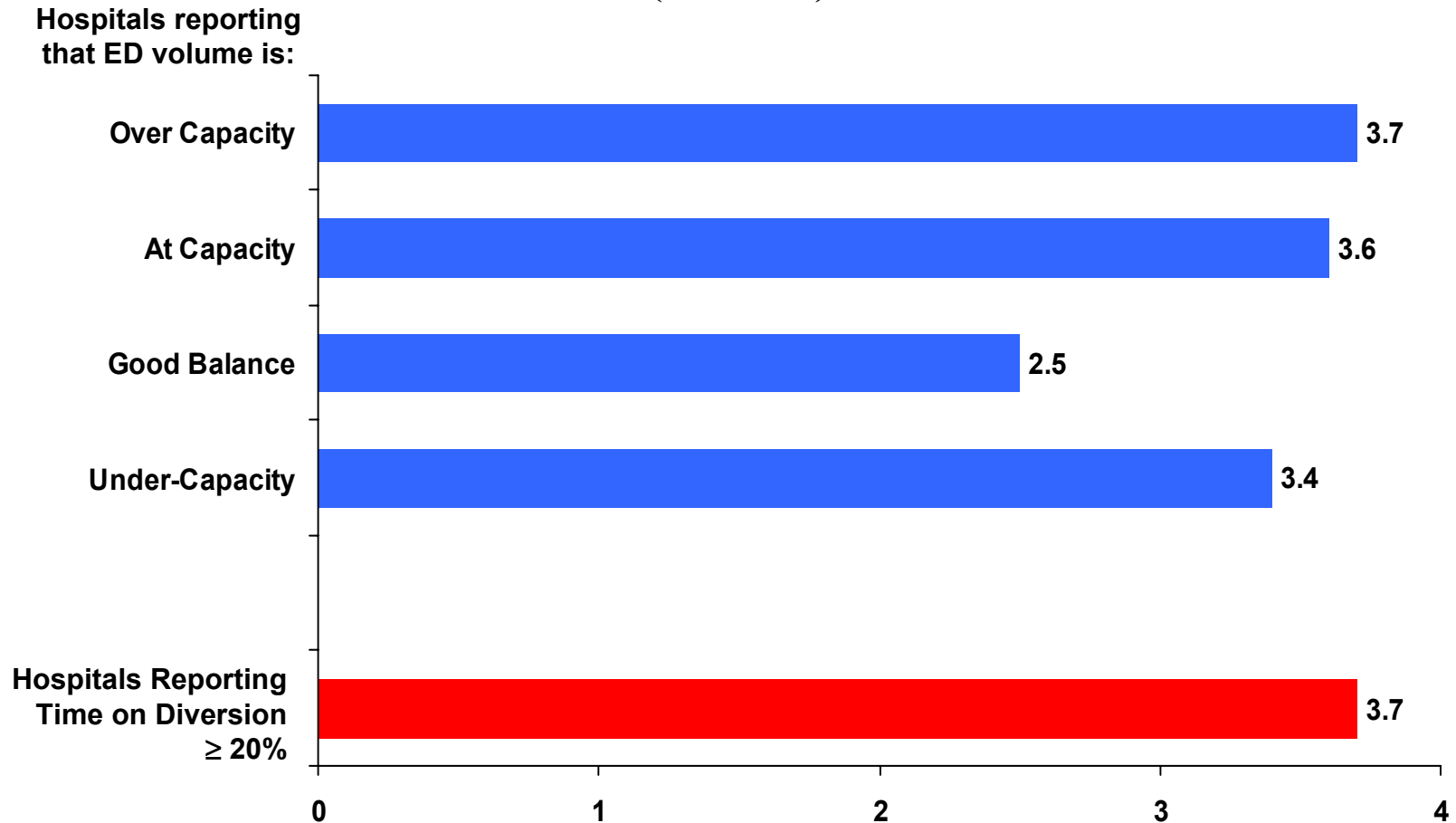
**Average Waiting Time for Treatment  
by a Physician or Other Provider in November  
(in minutes)**

Hospitals reporting  
that ED volume is:



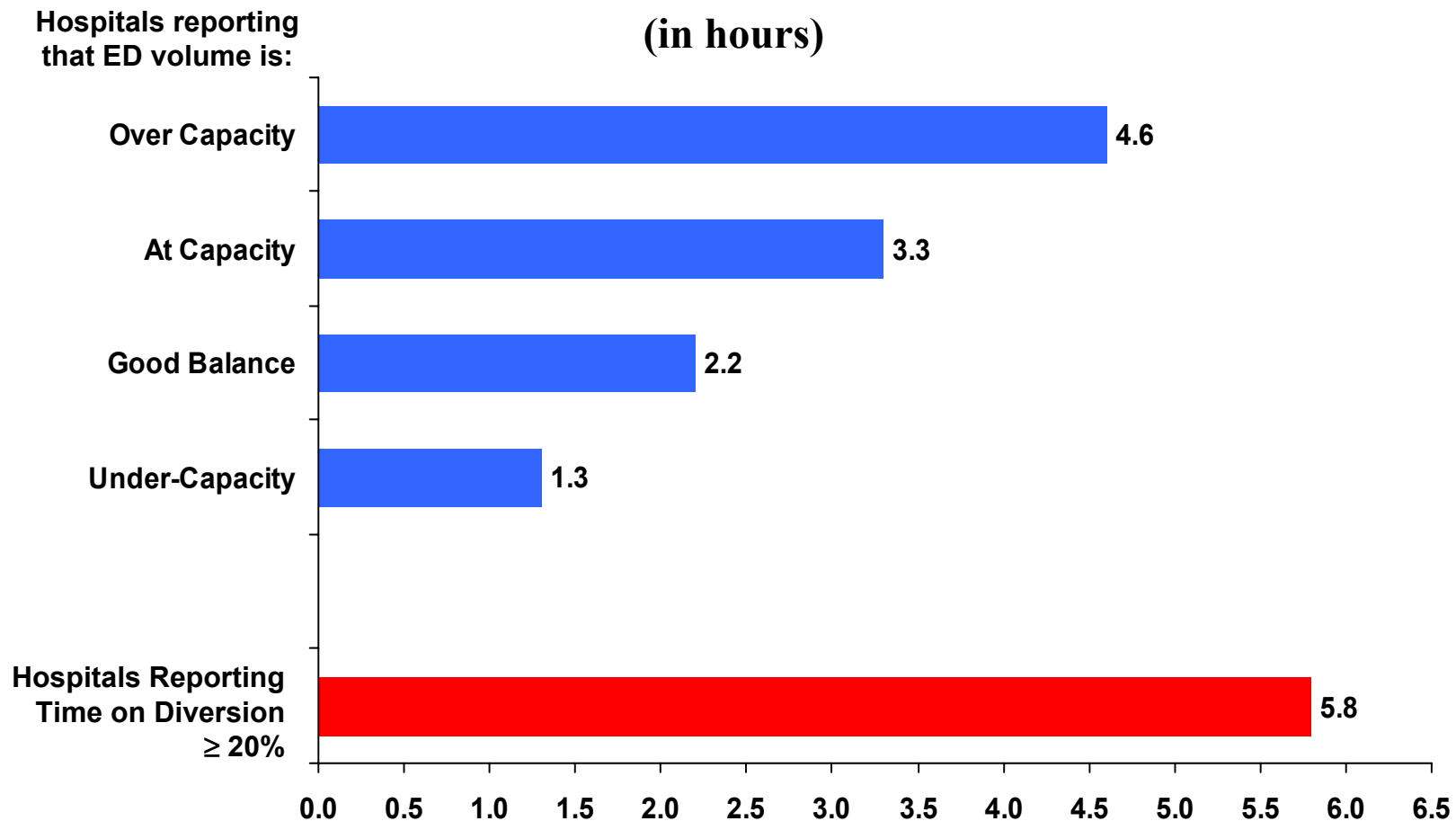
# ...longer stays in the ED...

**Average Length of Stay in ED Treatment Area in November  
(in hours)**



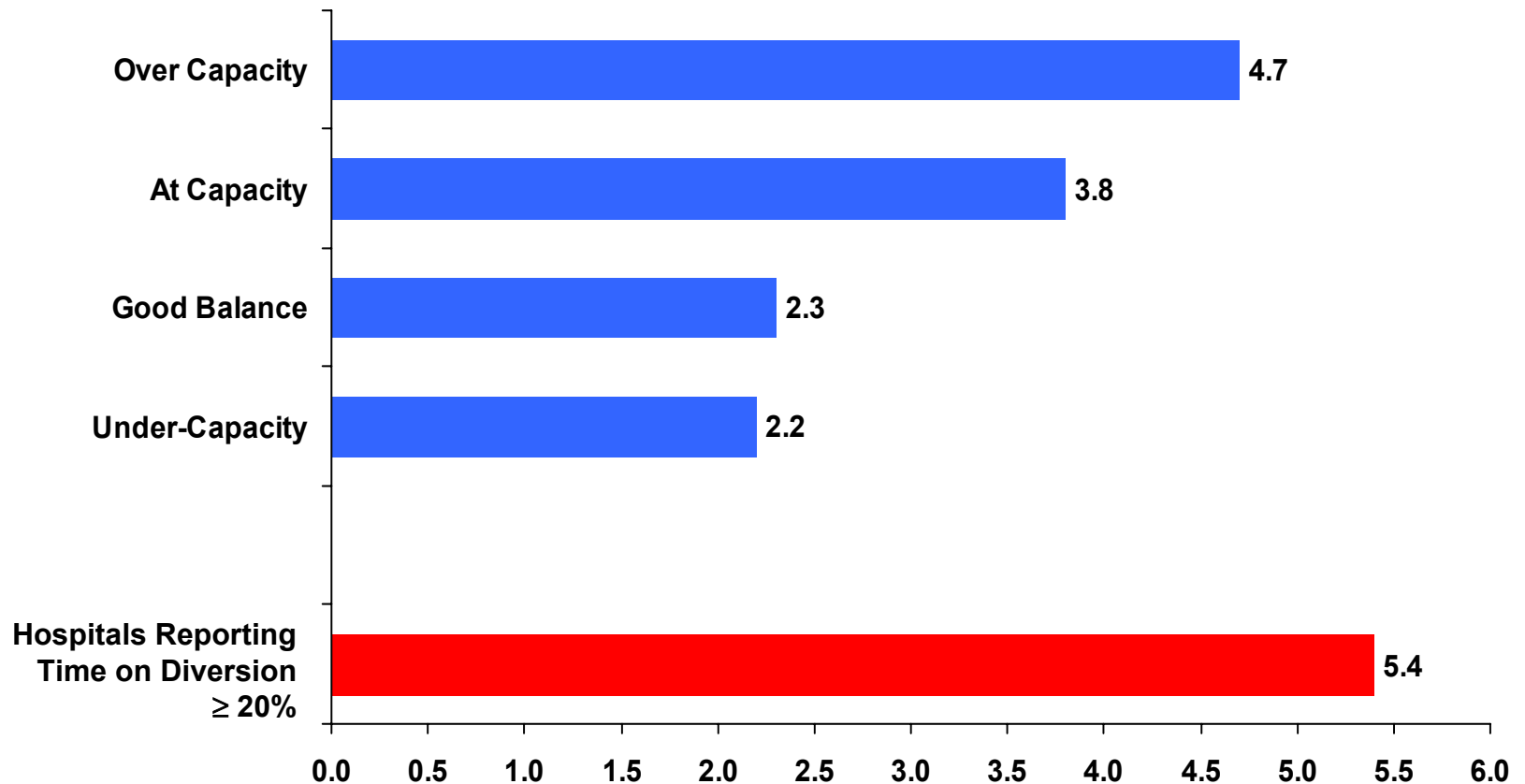
# ...and longer waiting times to get admitted to a general acute or critical care bed...

**Average Time Waiting for Transfer from ED to an Acute or Critical Care Bed in November  
(in hours)**



# ... or a psychiatric bed

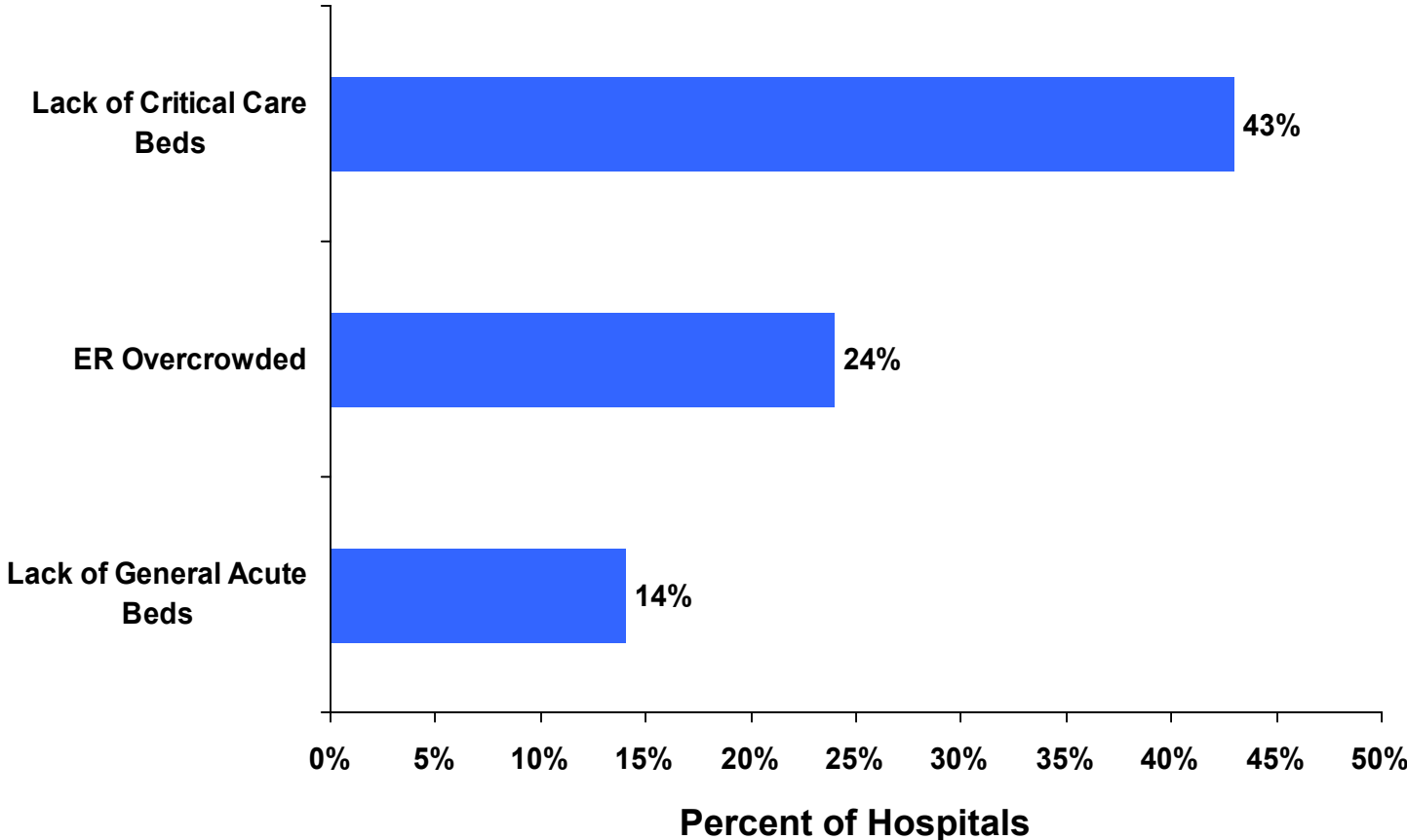
**Average Time Waiting for Transfer from ED to Psychiatric Bed  
(in hours)**





# “Lack of critical care beds” most often ranked as the #1 reason for diversion

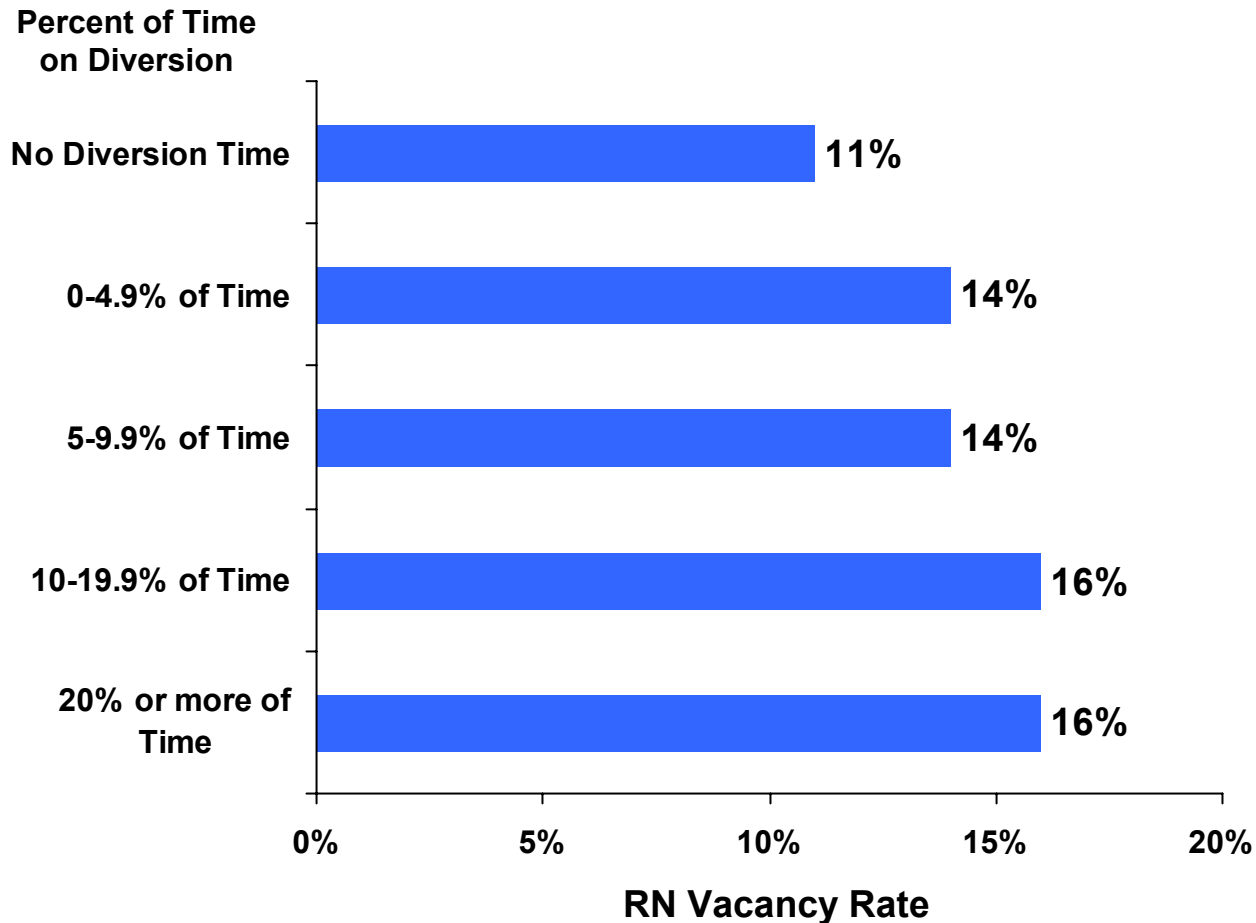
**Number One Reason for Ambulance Diversion:  
Percent of Hospitals Experiencing Diversions by Reason**



# Hospitals experiencing ED diversions have higher RN vacancy rates

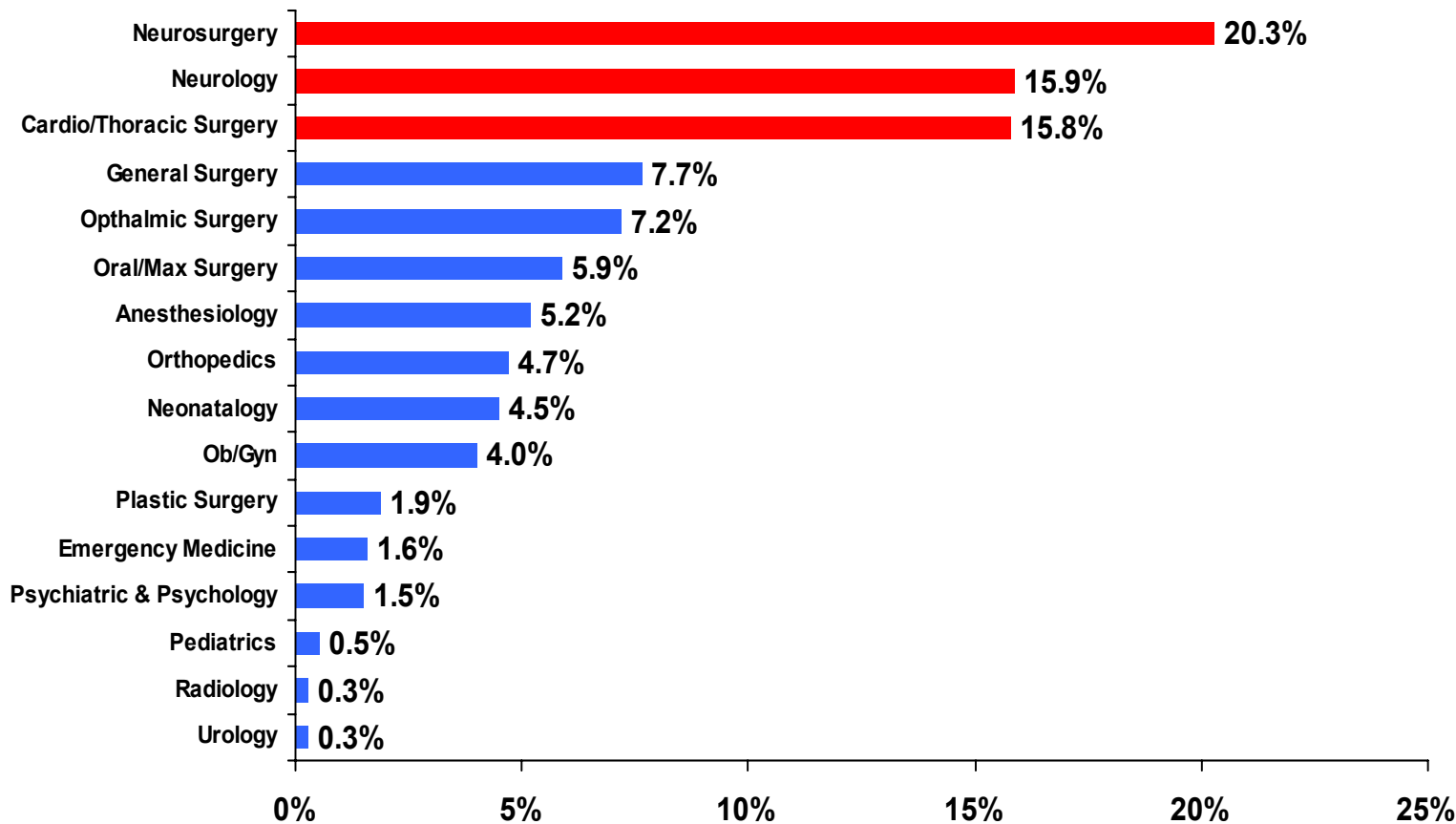
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**RN Vacancy Rate vs. Percent of Time on Diversion**



# Neurosurgery, neurology, and cardio/thoracic surgery were the hardest physician coverage slots to fill

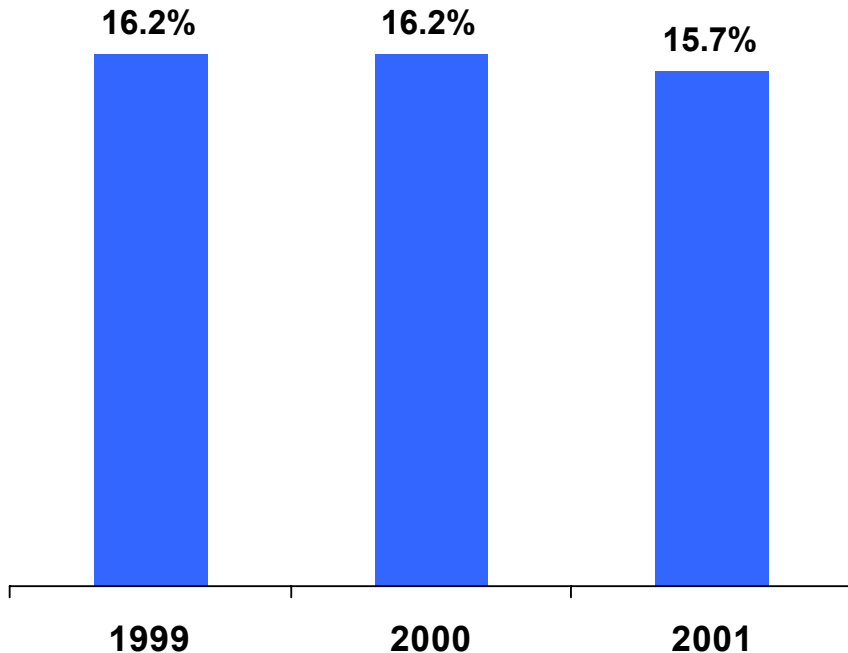
Percent of Hospitals Naming Specialty Among Top Three Hardest to Fill for ED Coverage



# Nationally the self-pay *portion* of ED volume has been fairly constant since 1999...

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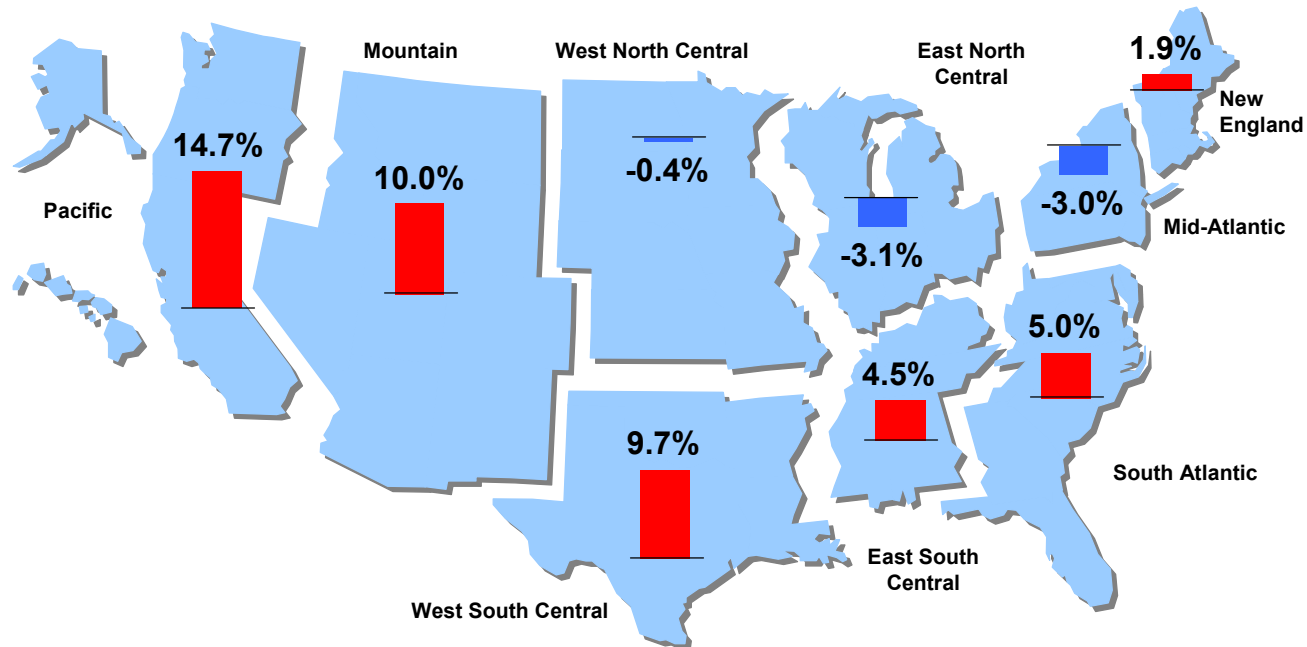
Self-Pay ED visits as a Percent of Total  
1999-2001



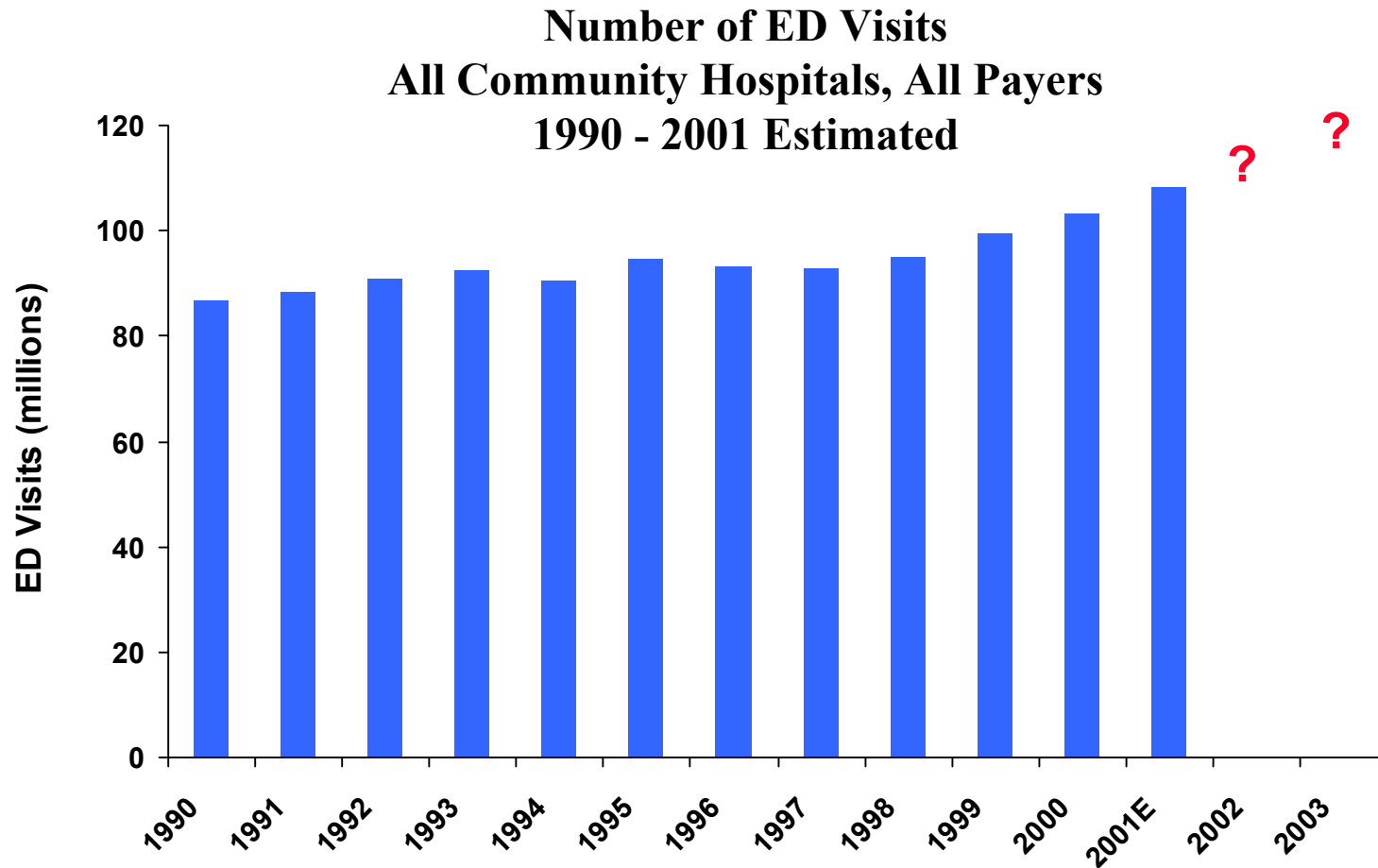
- ◆ Data on self-pay patients used as a proxy for “uninsured”
- ◆ Category includes all patients who have no third party source of payment
- ◆ Includes charity care patients

# ...but the *number* of self-pay ED visits is growing rapidly in some regions

Percent Increase/(Decrease) in Self-Pay ED Visits  
By Region  
1999-2001

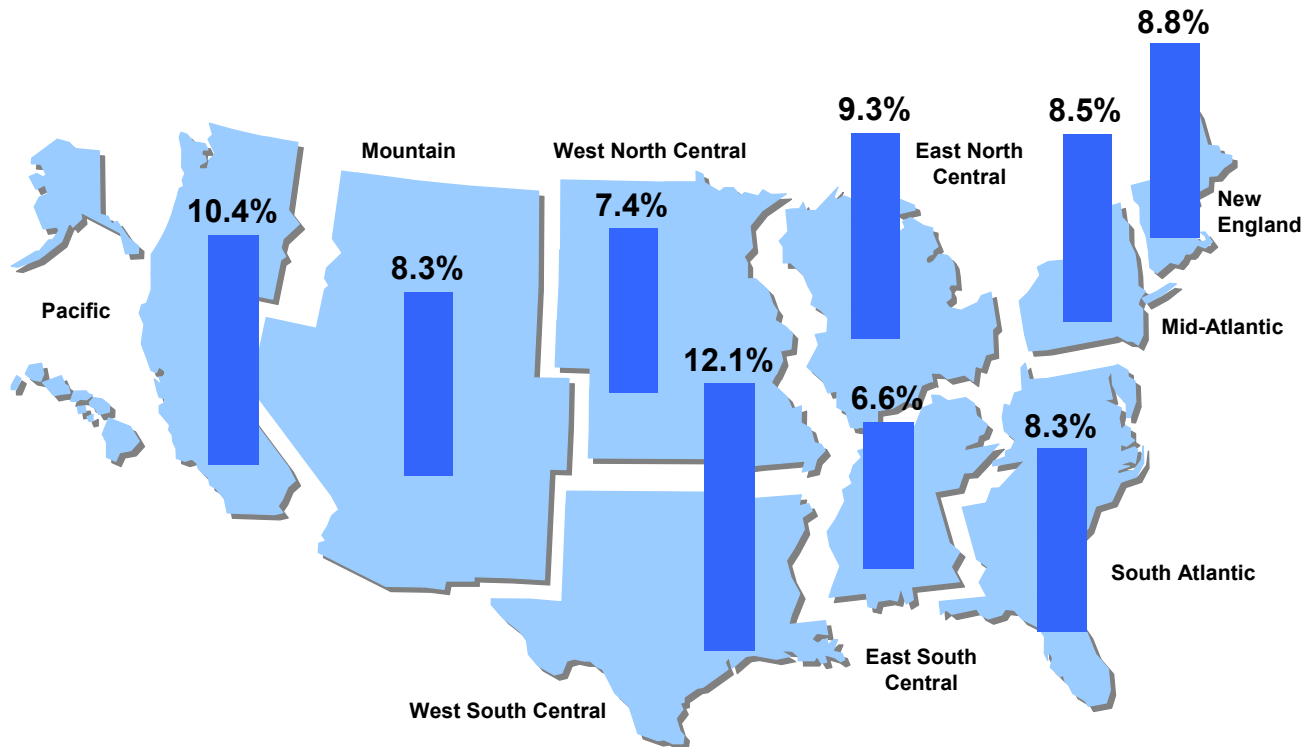


# Overall ED volume is growing: pressures on hospital EDs will likely mount in future years...



# ...especially in regions experiencing the highest levels of ED visit growth

Percent Increase/(Decrease) ED Visits  
By Region  
1999-2001



# ED Overload: A Growing Crisis

## Summary

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- ◆ **EDs represent the most critical access point to our nation's health delivery system**
  - Available 24/7, 365 days a year
  - Guaranteed access point for all who need care regardless of ability to pay
  - First response to epidemics and disasters
- ◆ **Today 62% of all hospital EDs and 3 out of 4 urban EDs perceive they are "at" or "over" capacity**
  - A majority of urban hospitals experienced ED diversion--some more than 20 percent of the time
- ◆ **ED overload is symptomatic of other capacity issues--lack of critical care beds and staff shortages**
- ◆ **ED volume is rising -- capacity problems likely to worsen**



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# Appendix

# Number of Respondents vs. Universe of Hospitals

## Urban/Rural Numbers

| Location | Number in Category     |               | Percent Responding |
|----------|------------------------|---------------|--------------------|
|          | 2000 AHA Annual Survey | AHA ED Survey |                    |
| Urban    | 2740                   | 713           | 26.0%              |
| Rural    | 2175                   | 719           | 33.1%              |

## Bed Size Distribution

| Bed Size           | Number in Category     |               | Percent Responding |
|--------------------|------------------------|---------------|--------------------|
|                    | 2000 AHA Annual Survey | AHA ED Survey |                    |
| Less than 100 Beds | 2253                   | 518           | 23.0%              |
| 100-299 Beds       | 1892                   | 533           | 28.2%              |
| 300-499 Beds       | 523                    | 176           | 33.7%              |
| 500 Beds and More  | 247                    | 70            | 28.3%              |

## Teaching Status

|              | Number in Category     |               | Percent Responding |
|--------------|------------------------|---------------|--------------------|
|              | 2000 AHA Annual Survey | AHA ED Survey |                    |
| Teaching     | 1175                   | 347           | 29.5%              |
| Non-Teaching | 3740                   | 1108          | 29.6%              |

## Regional Distribution

| Location           | Number in Category     |               | Percent Responding |
|--------------------|------------------------|---------------|--------------------|
|                    | 2000 AHA Annual Survey | AHA ED Survey |                    |
| New England        | 205                    | 64            | 31.2%              |
| Mid Atlantic       | 502                    | 177           | 35.3%              |
| South Atlantic     | 739                    | 254           | 34.4%              |
| East North Central | 732                    | 263           | 35.9%              |
| East South Central | 429                    | 96            | 22.4%              |
| West North Central | 673                    | 151           | 22.4%              |
| West South Central | 717                    | 200           | 27.9%              |
| Mountain           | 347                    | 100           | 28.8%              |
| Pacific            | 571                    | 189           | 33.1%              |

# Distribution of Respondents vs. Universe of Hospitals

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## Urban/Rural Distribution

|       | 2000 AHA Annual Survey | AHA ED Survey |
|-------|------------------------|---------------|
| Urban | 55.7%                  | 49.8%         |
| Rural | 44.3%                  | 50.2%         |

## Bed Size Distribution

| Bed Size           | 2000 AHA Annual Survey | AHA ED Survey |
|--------------------|------------------------|---------------|
| Less than 100 Beds | 45.8%                  | 39.9%         |
| 100-299 Beds       | 38.5%                  | 41.1%         |
| 300-499 Beds       | 10.6%                  | 13.6%         |
| 500 Beds and More  | 5.0%                   | 5.4%          |

## Teaching Status

|              | 2000 AHA Annual Survey | AHA ED Survey |
|--------------|------------------------|---------------|
| Teaching     | 23.9%                  | 23.8%         |
| Non-Teaching | 76.1%                  | 76.2%         |

## Regional Distribution

| Location           | 2000 AHA Annual Survey | AHA ED Survey |
|--------------------|------------------------|---------------|
| New England        | 4.2%                   | 4.3%          |
| Mid Atlantic       | 10.2%                  | 11.8%         |
| South Atlantic     | 15.0%                  | 16.9%         |
| East North Central | 14.9%                  | 17.5%         |
| East South Central | 8.7%                   | 6.4%          |
| West North Central | 13.7%                  | 10.1%         |
| West South Central | 14.6%                  | 13.3%         |
| Mountain           | 7.1%                   | 6.7%          |
| Pacific            | 11.6%                  | 12.6%         |

# ED Diversion Defined

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- ◆ **Hospitals divert when their Emergency Departments can no longer accept all or specific types of patients by ambulance.**
- ◆ **ED diversion is a short-term, temporary approach used to assure that patients get the right care at the right time.**
- ◆ **If one ED is overcrowded and another is available, diversion assures a patient is treated in a timely manner.**
- ◆ **ED diversion is a warning sign of capacity constraints under normal conditions.**