

Chapter 4. Timeliness

Timeliness is the health care system's capacity to provide care quickly after a need is recognized. It is one of the six dimensions of quality the Institute of Medicine established as a priority for improvement in the health care system.¹ Measures of timeliness include time spent waiting in doctors' offices and emergency departments (EDs) and the interval between identifying a need for specific tests and treatments and actually receiving services.

Importance

Morbidity and Mortality

- Lack of timeliness can result in emotional distress, physical harm, and higher treatment costs for patients.^{2,3}
- Stroke patients' mortality and long-term disability are largely influenced by the timeliness of therapy.^{4,5}
- Timely delivery of appropriate care can help reduce mortality and morbidity for chronic conditions, such as kidney disease.⁶
- Timeliness in childhood immunizations helps maximize protection from vaccine-preventable diseases while minimizing risks to the child and reducing the chance of disease outbreaks.⁷
- Timely antibiotic treatments are associated with improved clinical outcomes.⁸

Cost

- Early care for comorbid conditions has been shown to reduce hospitalization rates and costs for Medicare beneficiaries.⁹
- Some research suggests that, over the course of 30 years, the costs of treating diabetic complications can approach \$50,000 per patient.¹⁰ Early care for complications in patients with diabetes can reduce overall costs of the disease.¹¹
- Timely outpatient care can reduce admissions for pediatric asthma, which account for more than \$1.25 billion in total hospitalization charges annually.¹²

Measures

This report focuses on one core report measure related to timeliness of primary, emergency, and hospital care: getting care for illness or injury as soon as wanted. In addition, two supporting measures are presented: ED waiting times, and timeliness of cardiac reperfusion for heart attack patients.

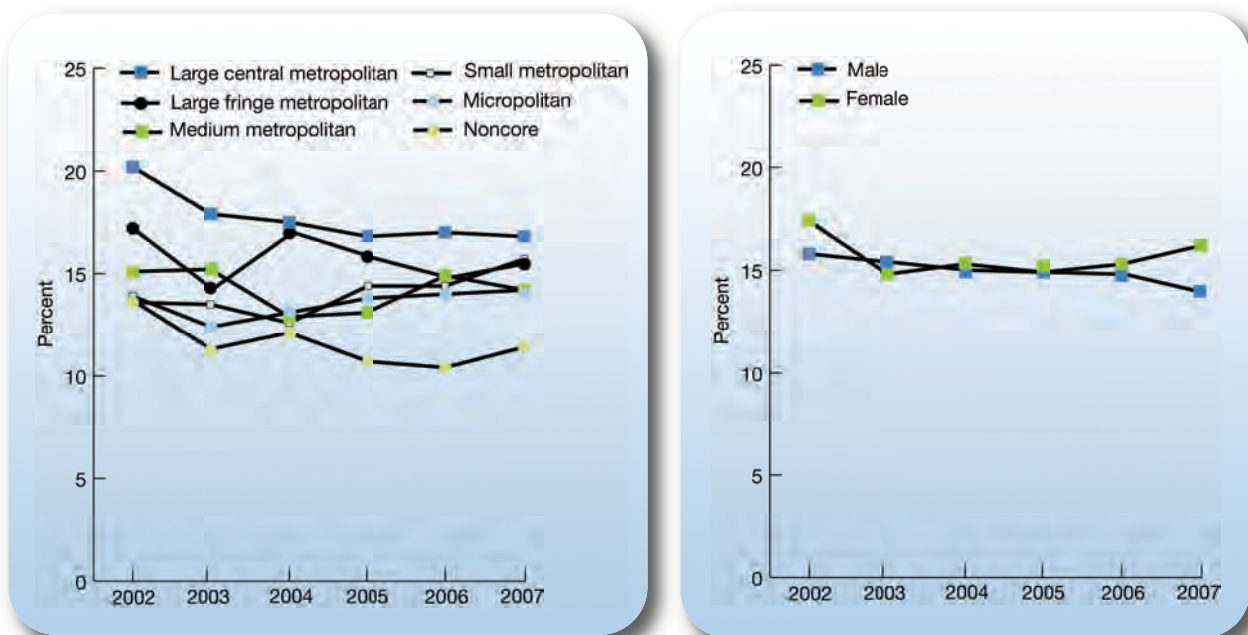
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Findings

Getting Care for Illness or Injury As Soon As Wanted

A patient's primary care provider should be the first point of contact for most illnesses and injuries. A patient's ability to receive timely treatment for illness and injury is a key element in a patient-centered health care system.

Figure 4.1. Adults who needed care right away for an illness, injury, or condition in the last 12 months who sometimes or never got care as soon as wanted, by geographic location and gender, 2002-2007



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2002-2007.

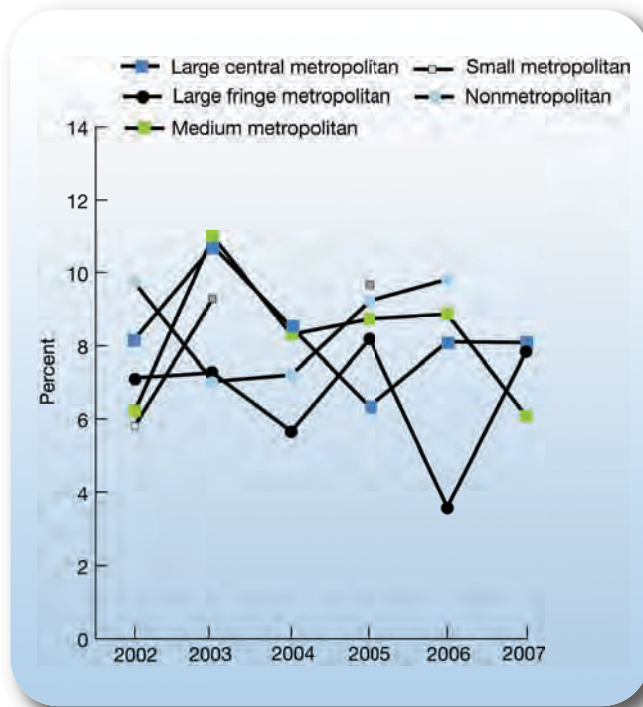
Denominator: Civilian noninstitutionalized population age 18 and over.

- From 2002 to 2007, the overall percentage of adults who needed care right away for an illness, injury, or condition in the last 12 months who sometimes or never got care as soon as wanted decreased (from 16.8% to 15.3%; data not shown).
- During this period, the percentage of adults in large central metropolitan areas who needed care right away for an illness, injury, or condition in the last 12 months who sometimes or never got care as soon as wanted decreased (from 20.2% to 16.8%; Figure 4.1). Also, the percentage for males during the same period decreased (from 15.8% to 13.9%).

Also, in the NHDR:

- From 2002 to 2007, the overall percentage decreased for both middle-income adults and White adults (from 16.9% to 14.8%, and from 15.8% to 14.3%, respectively).

Figure 4.2. Children who needed care right away for an illness, injury, or condition in the last 12 months who sometimes or never got care as soon as wanted, by geographic location, 2002-2007



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2002-2007.

Denominator: Civilian noninstitutionalized population under age 18.

Note: Data did not meet criteria for statistical reliability, data quality, or confidentiality for all geographic locations in all years.

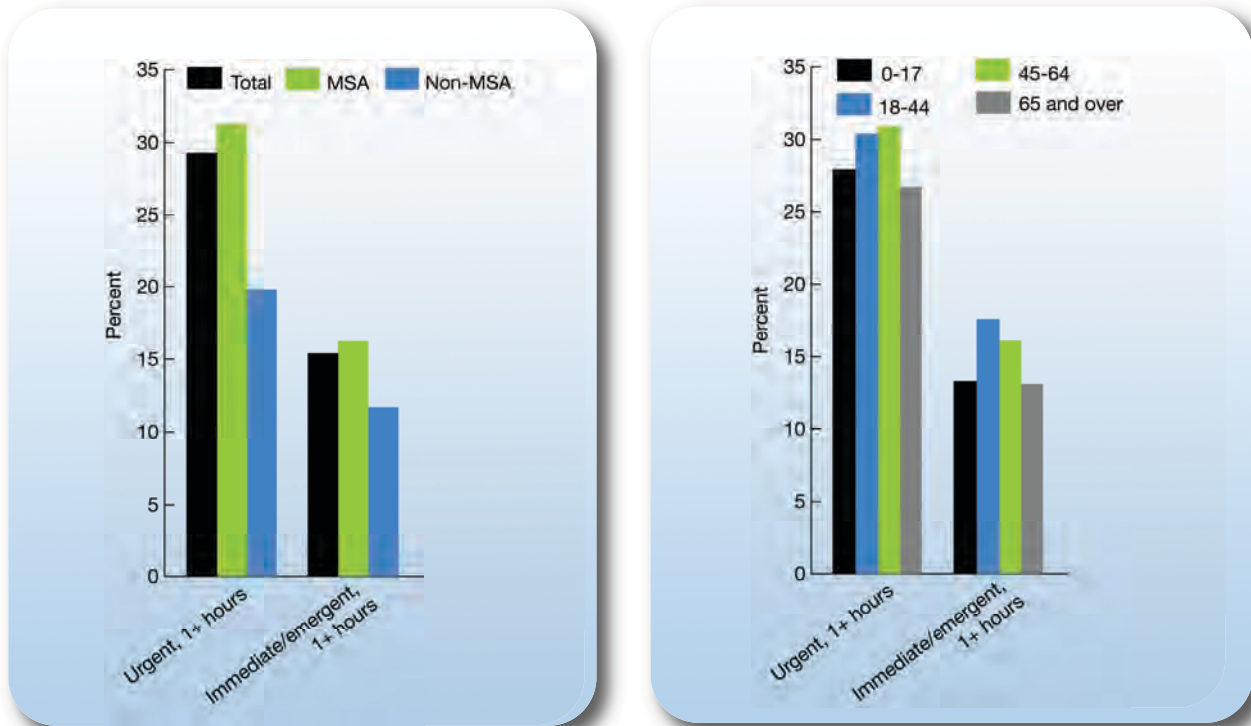
- In 2007, there were no statistically significant differences by location among children who needed care right away for an illness, injury, or condition in the last 12 months (Figure 4.2). In addition, from 2002 to 2007, none of the residential groups changed significantly.

Emergency Department Visit Waiting Times

In 2007, an estimated 116.8 million visits were made to hospital EDs compared with 110.2 million visits in 2004.^{13, 14} The median waiting time for patients to be seen by a physician during an ED visit in the United States was 33 minutes.¹³ Not all patients seeking care in an ED need urgent care, and use of EDs for nonurgent care could lead to longer waiting times. The National Hospital Ambulatory Medical Care Survey defines five levels of urgency of ED visits: Immediate, requiring immediate care; Emergent, requiring care in less than 15 minutes; Urgent, requiring care within 1 hour; Semiurgent, requiring care within 2 hours; and Nonurgent, not requiring care within 2 hours.

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Figure 4.3. Emergency department visits in which patient had to wait an hour or more by urgency, geographic location, and age, 2007-2008



Key: MSA = metropolitan statistical area.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey (NHAMCS), 2007-2008.

Denominator (Immediate or Emergent): Visits to U.S. emergency department with triage assessment of immediate or emergent, 2007-2008.

Denominator (Urgent): Visits to U.S. emergency department with triage assessment of urgent, 2007-2008.

- In 2007-2008, among ED visits for immediate/emergent conditions, there was no significant difference in the percentage that had to wait an hour or more between patients living in metropolitan and nonmetropolitan areas (Figure 4.3). Among visits for urgent conditions, the percentage that had to wait an hour or more was lower among nonmetropolitan patients compared with metropolitan patients (19.8% compared with 31.3%).
- Differences related to age were not significant.

Also, in the NHDR:

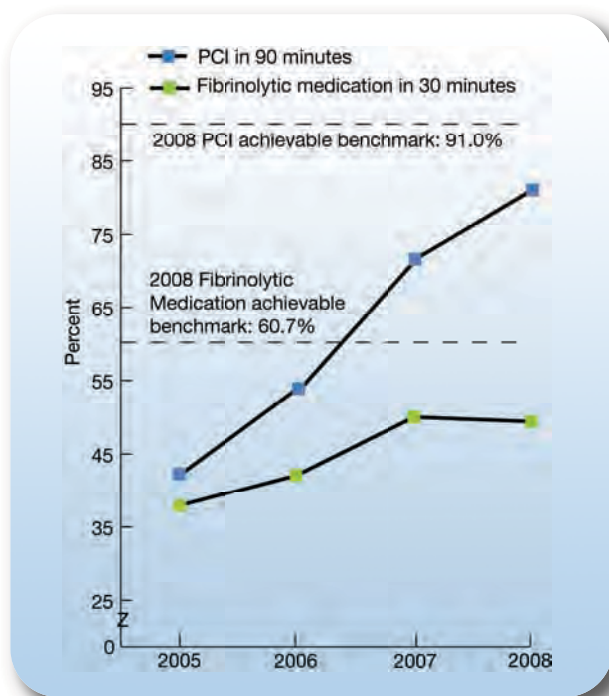
- In 2007-2008, among ED visits for immediate/emergent conditions, the percentage that had to wait an hour or more was higher among Blacks compared with Whites.
- Among visits for urgent conditions, the percentage of patients who had to wait an hour or more was higher for Blacks compared with Whites and for uninsured patients under age 65 compared with privately insured patients under age 65.

Timeliness of Cardiac Reperfusion for Heart Attack Patients

The capacity to treat hospital patients in a timely manner is especially important for emergency situations, such as heart attacks. Some heart attacks are caused by blood clots. Early actions, such as percutaneous coronary intervention (PCI) or fibrinolytic medication, may open blockages caused by blood clots, reduce heart muscle damage, and save lives.¹⁵ To be effective, these actions need to be performed quickly after the start of a heart attack. In this report, we present two measures of timeliness of cardiac reperfusion:

- PCI within 90 minutes among appropriate patients.
- Fibrinolytic medication within 30 minutes among appropriate patients.

Figure 4.4. Hospital patients with heart attack who received percutaneous coronary intervention within 90 minutes or fibrinolytic medication within 30 minutes, 2005-2008



Key: PCI = percutaneous coronary intervention.

Source: Centers for Medicare & Medicaid Services, Medicare Quality Improvement Organization Program, 2005-2008.

Denominator: Patients hospitalized with a principal diagnosis of acute myocardial infarction who were appropriate candidates for PCI or fibrinolytic medication.

- From 2005 to 2008, among heart attack patients, the percentage of patients receiving PCI within 90 minutes improved from 42.1% to 81.3% (Figure 4.4).
- During the same period, the percentage of heart attack patients receiving fibrinolytic medication within 30 minutes improved from 37.9% to 49.4%.

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- In 2008, the top 5 State PCI achievable benchmark was 91.0%.ⁱ At the current rate of improvement, the achievable benchmark could be attained in less than 1 year.
- In 2008, the top 5 State fibrinolytic medication achievable benchmark was 60.7%.ⁱⁱ At the current rate of improvement, the achievable benchmark could be attained in about 2.5 years.
- Males should reach the achievable benchmark in a little over 2 years, but females would not reach the benchmark for more than 4 years.

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ⁱ The top 5 States that contributed to the achievable benchmark are Massachusetts, Minnesota, North Carolina, Rhode Island, and South Carolina.

ⁱⁱ The top 5 States that contributed to the achievable benchmark are Arkansas, California, Georgia, Kentucky, and Tennessee.