Improving America’s Hospitals

The Joint Commission’s Annual Report on Quality and Safety 2008

The Joint Commission’s mission is to continuously improve the safety and quality of care provided to the public through the provision of health care accreditation and related services that support performance improvement in health care organizations.

Nearly 90 percent of the hospitals in the United States comply with The Joint Commission’s standards and other accreditation requirements to achieve the delivery of safe, high quality care. Joint Commission-accredited organizations earn The Joint Commission’s Gold Seal of Approval™ which reflects the organization’s commitment to providing excellent patient care.

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INTRODUCTION FROM THE JOINT COMMISSION PRESIDENT

Over the past six years, Joint Commission-accredited hospitals have made quality and safety a priority—and the numbers prove it! This report presents scientific evidence of improvement and how it relates to common medical conditions and procedures.

*Improving America's Hospitals: The Joint Commission's Report on Quality and Safety 2008* provides the broadest picture of quality and safety performance ever presented by The Joint Commission. This report documents how well hospitals have performed in treating heart attack, heart failure and pneumonia and in providing surgical care; 25 individual measures are tracked from one to six years. In addition, hospital performance against 2007 National Patient Safety Goals (NPSGs) is reviewed, as well as NPSG performance trends back to 2003. Joint Commission hospitals showed improvement on all measures tracked from 2006 to 2007, as well as steady, cumulative quality improvement from 2002 to 2007.

While Joint Commission-accredited hospitals deserve congratulations for improving the quality of care, there is more work to be done. Improvement is a continuous process and for health care especially, it's one where the target is constantly moving. While national performance on some measures nears 100 percent, performance of other measures is in the 50 to 70 percent range. And so the work to improve care continues.

By taking the lead on quality and safety improvement, Joint Commission-accredited hospitals are saving lives and improving the health and quality of life for thousands of patients. By documenting the results of hospital improvement efforts, The Joint Commission measures progress and continually raises the bar toward even better results.

The Joint Commission’s commitment to quality and safety extends beyond the work described in this report. Best known as a hospital accreditation organization, The Joint Commission also provides related services that support performance improvement and actively collaborates with organizations sharing its commitment to quality and safety. Collaborative efforts with the Centers for Medicare & Medicaid Services (CMS), the National Quality Forum (NQF), and the Hospital Quality Alliance (HQA) and others help assure efficiency, consistency and scientific credibility in data collection. This type of collaboration should lead to industry-wide agreement on current and new priorities and on new and improved methods for optimizing health care quality and patient safety.

In everything they do, Joint Commission-accredited hospitals work on behalf of patients, doing all they can to assure the delivery of safe, quality care. This report provides a sense of the commitment these hospitals share and how the Joint Commission helps them to save and improve lives.

Sincerely,

Mark R. Chassin, M.D., M.P.P., M.P.H.
President
The Joint Commission
EXECUTIVE SUMMARY

Joint Commission-accredited hospitals have steadily improved quality over a six-year period, saving lives and improving the health of thousands of patients. Improving America’s Hospitals: The Joint Commission’s Annual Report on Quality and Safety 2008 provides scientific evidence of this improvement and also reviews hospital performance regarding National Patient Safety Goals (NPSGs).

Key Findings

Joint Commission-accredited hospitals have significantly improved the quality of care provided to heart attack, heart failure, pneumonia and surgical patients.

Hospitals are more consistently providing evidence-based treatments—treatments shown by scientific evidence to lead to the best outcomes for patients, according to performance measurement results compiled over the past six years:

- The heart attack care result improved to 96 percent in 2007 from 86.9 percent in 2002 and from 94.4 percent in 2006. A 96 percent score means that hospitals provided an evidence-based treatment 96 times for every 100 opportunities to do so.
- The heart failure care result improved to 88 percent in 2007 from 59.7 percent in 2002 and from 84.1 percent in 2006.
- The pneumonia care result improved to 89 percent in 2007 from 72.3 percent in 2002 and from 87.3 percent in 2006.
On three evidence-based measures of surgical care quality measured from 2005 to 2007, Joint Commission-accredited hospitals also showed continual progress, with improvement on the three measures ranging from 3.6 to 12.1 percentage points.

For more performance results, go to the Key Performance Results and Performance Detail sections.

The performance results reflect The Joint Commission’s tracking of hospital performance on 25 individual quality measures reflecting the best “evidence-based” treatments. There are eight measures of care relating to heart attack, four to heart failure, eight to pneumonia, and five to surgical care. More than 3,000 hospitals contributed data. To learn more, go to Understanding the Quality of Care Measures.

**What’s New This Year**

Results on three new performance measures, bringing the total number of individual measures to 25.

- Providing influenza screening and vaccination to pneumonia patients
- Ordering venous thromboembolism (VTE) medicine/treatment for surgical care patients
- Providing VTE medicine/treatment to surgical care patients

**By requiring hospitals to report and improve quality performance, The Joint Commission has contributed significantly to quality improvement.**

Quality improvements have corresponded to performance reporting requirements, supporting the continued use of performance measurement to encourage improvement in hospitals. For more on the value of performance measurement, go to the Joint Commission Accreditation: How Performance Measurement Supports Quality Improvement and Patient Safety section.
Where a patient receives care makes a difference.

Not all hospitals deliver the same level of quality; some hospitals perform better than others in treating particular conditions. This variability has been known within the hospital industry for a long time. Results for specific hospitals can be found at www.qualitycheck.org.

The quality performance of hospitals varies from state to state, as well. For example, the performance of hospitals on the quality measure of providing discharge instructions to heart failure patients ranged from a high of 92.1 percent in the highest-performing state to a low of 56.5 percent in the lowest-performing state. The performance difference among states is greater than 10 percentage points on 12 of the 24 quality measures tracked in 2007.

There are exceptions to this variability. For example, state performance ranges from 99.1 percent to 100 percent on measuring oxygen in the bloodstream of patients with pneumonia.

For more statewide quality results, go to the Key Performance Results and Performance Detail sections.

**Improvement on most quality measures is still needed.**

Even with the improvements of the past six years, more improvement is still needed. For example, treatments were still not being performed consistently in 2007 on some measures introduced in 2002:

- Discharge instructions for heart failure patients—only 27.5 percent of hospitals achieved 90 percent compliance
- Pneumococcal screening for pneumonia patients—only 38.6 percent of hospitals achieved 90 percent compliance
- ACE inhibitor or ARB (angiotensin receptor blocker) prescribed at discharge for heart failure patients—only 57.7 percent of hospitals achieved 90 percent compliance
- ACE inhibitor or ARB prescribed at discharge for heart attack patients—only 68.8 percent of hospitals achieved 90 percent compliance

For more on where improvement is still needed, go to the Key Performance Results section.

**Joint Commission-accredited hospitals are making excellent strides on National Patient Safety Goal compliance.**

As part of The Joint Commission’s accreditation process, most hospitals achieved compliance with the 18 requirements of the nine 2007 National Patient Safety Goals (NPSGs), 100 percent compliance was achieved on one of the requirements and 99 percent on three others. On 11 of the requirements, 90 percent or more of the 1,466 hospitals surveyed demonstrated compliance.

“Compliance” means consistent performance of the requirement. When an organization is found to be “non-compliant,” it does not mean that the organization is failing to do what is required; it means that the organization is not doing it consistently.

For more on NPSG compliance and 2003-2007 compliance trends, go to the Key Performance Results and Performance Detail sections.
Improving America’s Hospitals

The Joint Commission’s Annual Report on Quality and Safety 2008

Key Performance Results
QUALITY AND SAFETY KEY PERFORMANCE RESULTS

Hospital Quality Performance

Joint Commission-accredited hospitals have significantly improved the quality of care over a six-year period, saving lives and improving the health of thousands of patients. The Joint Commission has contributed significantly to this quality improvement by requiring hospitals to report quality performance.

Despite the quality gains made over the past several years, improvement on most quality measures is still needed. In addition, not all hospitals deliver the same level of quality; some hospitals perform better than others in treating particular conditions. The quality performance of hospitals varies from state to state, as well.

Key Findings

1. Joint Commission-accredited hospitals have significantly improved the quality of care provided to heart attack, heart failure, pneumonia and surgical patients. This improvement has saved lives and improved the health of thousands of patients.

U.S. Hospitals Improve Performance in Heart Attack, Heart Failure and Pneumonia Care

*Hospitals are more consistently providing evidence-based treatments* – treatments shown by scientific evidence to lead to the best outcomes for patients, according to performance measurement results compiled over the past six years:

* The heart attack care result improved to 96 percent in 2007 from 86.9 percent in 2002 and from 94.4 percent in 2006. A 96 percent score means that hospitals provided an evidence-based treatment 96 times for every 100 opportunities to do so.
* The heart failure care result improved to 88 percent in 2007 from 59.7 percent in 2002 and from 84.1 percent in 2006.
* The pneumonia care result improved to 89 percent in 2007 from 72.3 percent in 2002 and from 87.3 percent in 2006.
On three evidence-based measures of surgical care quality measured from 2005 to 2007, Joint Commission-accredited hospitals also showed continual improvement, with progress on the three measures ranging from 3.6 to 12.1 percentage points.

For more performance results, go to the Performance Detail section.

The performance results reflect The Joint Commission’s tracking of 25 individual quality measures reflecting the best “evidence-based” treatments. There are eight measures of care relating to heart attack, four to heart failure, eight to pneumonia, and five to surgical care patients. More than 3,000 hospitals contributed data. To learn more, go to the Understanding the Quality of Care Measures section.

In 2007, results improved on all 25 quality performance measures of heart attack, heart failure, pneumonia and surgical care. Of the 25, 13 were analyzed from 2002 through 2007, seven from 2005 through 2007, and two from 2006 to 2007. In addition, 2007 data on three new measures are included in this report. These results provide an increasingly in-depth picture of hospital quality improvement.

The magnitude of national improvement on individual evidence-based measures tracked from 2002-2007 ranged from 4.4 percent to 56.5 percent, and improvement has increased steadily since 2002. The performance of hospitals improved the fastest on measures where performance was lower at the beginning of the tracking period. On measures tracked for the first time in 2005 or 2006, performance is generally lower and there is more variability than on the performance measures tracked since 2002, showing a correlation between performance measurement and quality.

There were some dramatic improvements over the six-year period of data collection, especially in providing smoking cessation advice. For example, hospitals provided this advice to 98.2 percent of heart attack patients in 2007 compared with 66.6 percent in 2002. Hospitals greatly improved in their results from 2002 to 2007 in providing this advice to heart failure patients.
patients (to 95.7 percent from 42.2 percent) and pneumonia patients (to 93.7 percent from 37.2 percent). Other strong improvements included providing discharge instructions to heart failure patients (to 77.5 percent from 30.9 percent) and providing pneumococcal screening and vaccination to pneumonia patients (to 83.9 percent from 30.2 percent).

NATIONAL PERFORMANCE IMPROVEMENT BY INDIVIDUAL MEASURES

These graphics portray the results for 20 measures tracked at least two years.
Heart Failure Care: National Rates by Year

Key to abbreviations: ACEI: Angiotensin converting enzyme inhibitor, ARB: angiotensin receptor blocker, LVS: Left ventricular systolic. See Glossary for definitions.
Pneumonia Care: National Rates by Year

- **Antibiotic Selection - ICU**
- **Antibiotic Selection - Non ICU**
- **Blood Cultures in the ED**
- **Blood Cultures in the ICU**
- **Oxygenation Assessment**
- **Pneumococcal Vaccination**
- **Smoking Cessation Advice**
NATIONAL PERFORMANCE IMPROVEMENT BY INDIVIDUAL MEASURES (continued)

Surgical Care: National Rates by Year
Antibiotic Received Within One Hour Prior to Surgical Incision

- CABG
- Cardiac
- Colon
- Hip
- Hysterectomy
- Knee
- Vascular
- Overall
NATIONAL PERFORMANCE IMPROVEMENT BY INDIVIDUAL MEASURES (continued)

Surgical Care: National Rates by Year
Antibiotic Discontinued Within 24 Hours After Surgery
KEY PERFORMANCE RESULTS

NATIONAL PERFORMANCE IMPROVEMENT BY INDIVIDUAL MEASURES (continued)

Surgical Care: National Rates by Year
Prophylactic Antibiotic Selection for Surgical Patients

See Glossary for definitions.
All improvements in performance are statistically significant. Many of the smaller percentage improvements occurred within large patient populations, meaning that significantly more patients received a treatment. In some cases, performance was already quite high and there was less room for improvement. Note: The last column is reported as percentage points. This is the difference on a percentage scale between two rates, in this case 2002 performance versus 2007 performance.

<table>
<thead>
<tr>
<th>Performance measure</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2002-2007 improvement (percentage points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart attack care composite*</td>
<td>86.9%</td>
<td>89.8%</td>
<td>91.5%</td>
<td>90.0%</td>
<td>94.4%</td>
<td>96.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Aspirin at arrival</td>
<td>93.0%</td>
<td>94.3%</td>
<td>94.7%*</td>
<td>95.5%*</td>
<td>96.6%</td>
<td>97.4%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Aspirin at discharge</td>
<td>92.0%</td>
<td>93.7%</td>
<td>94.5%</td>
<td>95.6%</td>
<td>96.6%</td>
<td>97.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>ACEI or ARB at discharge</td>
<td>75.8%</td>
<td>78.3%</td>
<td>79.9%</td>
<td>83.6%</td>
<td>86.7%</td>
<td>91.5%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>66.6%</td>
<td>76.2%</td>
<td>84.3%*</td>
<td>92.1%</td>
<td>96.6%</td>
<td>98.2%</td>
<td>31.6%</td>
</tr>
<tr>
<td>Beta blocker at discharge</td>
<td>87.3%</td>
<td>90.3%</td>
<td>92.5%</td>
<td>94.8%</td>
<td>96.2%</td>
<td>97.2%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Beta blocker at arrival</td>
<td>85.0%</td>
<td>88.2%</td>
<td>90.0%</td>
<td>92.2%</td>
<td>93.6%</td>
<td>94.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Heart failure care composite*</td>
<td>59.7%</td>
<td>66.3%</td>
<td>71.2%</td>
<td>76.0%</td>
<td>84.1%</td>
<td>88.0%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Discharge instructions</td>
<td>30.9%</td>
<td>42.4%</td>
<td>49.6%</td>
<td>59.2%</td>
<td>70.3%</td>
<td>77.5%</td>
<td>46.6%</td>
</tr>
<tr>
<td>LVS assessment</td>
<td>81.5%</td>
<td>84.5%</td>
<td>87.5%</td>
<td>90.9%*</td>
<td>93.4%</td>
<td>95.4%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>42.2%</td>
<td>56.8%</td>
<td>69.6%*</td>
<td>83.9%*</td>
<td>92.1%</td>
<td>95.7%</td>
<td>53.5%</td>
</tr>
<tr>
<td>ACEI or ARB at discharge</td>
<td>74.2%</td>
<td>75.8%</td>
<td>76.3%</td>
<td>83.0%</td>
<td>85.6%</td>
<td>90.1%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Pneumonia care composite*</td>
<td>72.3%</td>
<td>76.1%</td>
<td>79.9%</td>
<td>81.0%</td>
<td>87.3%</td>
<td>91.0%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Measuring oxygen in blood</td>
<td>95.0%</td>
<td>97.2%</td>
<td>98.6%</td>
<td>99.3%</td>
<td>99.6%</td>
<td>99.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Pneumococcal vaccination</td>
<td>30.2%</td>
<td>37.6%</td>
<td>48.8%</td>
<td>62.9%*</td>
<td>75.8%</td>
<td>83.9%</td>
<td>53.7%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>37.2%</td>
<td>50.2%</td>
<td>65.5%</td>
<td>80.1%*</td>
<td>89.4%</td>
<td>93.7%</td>
<td>56.5%</td>
</tr>
<tr>
<td>Blood culture in ICU*</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>90.4%</td>
<td>92.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Blood culture in ED**</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>90.1%</td>
</tr>
</tbody>
</table>

* Composite measures combine the results of all individual measures on a similar medical condition into a single percentage rating calculated by adding up the number of times recommended evidence-based care was provided to patients and dividing this sum by the total number of opportunities to provide this care.

** Before 2006, blood culture in the ICU and blood culture in the ED were one measure: taking a blood culture before giving antibiotics.
### Key Performance Results

#### Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety

**The following performance measures were introduced for the first time in 2004; 2005 was the first full year of reported data.***

<table>
<thead>
<tr>
<th>Measure</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>Improvement (percentage points)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart attack care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fibrinolytic therapy within 30 minutes*</td>
<td>38.6%</td>
<td>42.5%</td>
<td>51.0%</td>
<td>12.4%</td>
</tr>
<tr>
<td>PCI balloon therapy within 90 minutes**</td>
<td>68.3%</td>
<td>N/A</td>
<td>72.3%</td>
<td>4.0%</td>
</tr>
<tr>
<td><strong>Pneumonia care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotics within four hours of arrival†</td>
<td>74.5%</td>
<td>79.0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Antibiotics to ICU patients within 24 hours</td>
<td>50.2%</td>
<td>59.8%</td>
<td>63.9%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Antibiotics to non-ICU patients within 24 hours</td>
<td>84.0%</td>
<td>88.8%</td>
<td>91.9%</td>
<td>7.9%</td>
</tr>
<tr>
<td><strong>Surgical care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotics within one hour before the first surgical cut††</td>
<td>81.8%</td>
<td>86.7%</td>
<td>89.5%</td>
<td>7.7%</td>
</tr>
<tr>
<td>For CABG surgery</td>
<td>85.2%</td>
<td>87.6%</td>
<td>89.3%</td>
<td>4.1%</td>
</tr>
<tr>
<td>For cardiac surgery (other than CABG)</td>
<td>83.8%</td>
<td>87.1%</td>
<td>88.9%</td>
<td>5.1%</td>
</tr>
<tr>
<td>For colon surgery</td>
<td>72.2%</td>
<td>78.0%</td>
<td>82.4%</td>
<td>10.2%</td>
</tr>
<tr>
<td>For hip joint replacement surgery</td>
<td>81.3%</td>
<td>86.8%</td>
<td>89.2%</td>
<td>7.9%</td>
</tr>
<tr>
<td>For hysterectomy surgery</td>
<td>82.3%</td>
<td>87.0%</td>
<td>89.9%</td>
<td>7.6%</td>
</tr>
<tr>
<td>For knee joint replacement surgery</td>
<td>85.1%</td>
<td>90.4%</td>
<td>92.2%</td>
<td>7.1%</td>
</tr>
<tr>
<td>For vascular surgery</td>
<td>75.2%</td>
<td>81.1%</td>
<td>85.1%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Stopping antibiotics within 24 hours after surgery††</td>
<td>73.5%</td>
<td>78.9%</td>
<td>85.6%</td>
<td>12.1%</td>
</tr>
<tr>
<td>For CABG surgery</td>
<td>70.0%</td>
<td>86.8%</td>
<td>89.5%</td>
<td>19.5%</td>
</tr>
<tr>
<td>For cardiac surgery (other than CABG)</td>
<td>63.0%</td>
<td>85.7%</td>
<td>89.5%</td>
<td>26.5%</td>
</tr>
<tr>
<td>For colon surgery</td>
<td>61.5%</td>
<td>65.2%</td>
<td>74.7%</td>
<td>13.2%</td>
</tr>
<tr>
<td>For hip joint replacement surgery</td>
<td>69.0%</td>
<td>74.7%</td>
<td>84.0%</td>
<td>15.0%</td>
</tr>
<tr>
<td>For hysterectomy surgery</td>
<td>88.0%</td>
<td>89.1%</td>
<td>90.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>For knee joint replacement surgery</td>
<td>69.3%</td>
<td>76.0%</td>
<td>85.5%</td>
<td>16.2%</td>
</tr>
<tr>
<td>For vascular surgery</td>
<td>65.4%</td>
<td>67.2%</td>
<td>76.9%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

* This measure is not reported at the state level; there were insufficient numbers to report (less than 30 cases).

** Since 2005, the timeframe for implementing PCI therapy decreased to 90 minutes from 120 minutes. Only 10 hospitals were able to meet the public reporting requirement of 30 patients on this measure.

† This measure has been changed to “providing antibiotics within six hours of arrival,” according to practice standards. However, 2007 data had insufficient volume for reporting purposes.

†† This surgical care measure reports rates on seven specific surgical procedures, as well as the overall measure rate.

See Glossary for definitions.
2. By requiring hospitals to report quality performance, The Joint Commission has contributed significantly to quality improvement.

Quality improvements have corresponded to performance reporting requirements, supporting the continued use of performance measurement to encourage improvement in hospitals. An industry leader in performance measurement, The Joint Commission supervises a network of 51 measurement systems that is the source of all quality-related data on The Joint Commission’s Quality Check Web site (www.qualitycheck.com) and provides 93 percent of the data displayed on the Centers for Medicare and Medicaid Services’ (CMS) Hospital Compare Web site.

For more on the value of performance measurement, go to the Joint Commission Accreditation: How Performance Measurement Supports Quality Improvement and Patient Safety section.

3. Where a patient receives care makes a difference.

Not all hospitals deliver the same level of quality; some hospitals perform better than others in treating particular conditions. This variability has been known within the hospital industry for a long time. Results for specific hospitals can be found at www.qualitycheck.org. Health care consumers can assure the best care for themselves and their families by comparing hospital quality and safety, asking their doctors questions, considering options, and making informed decisions.

The quality performance of hospitals varies from state to state, as well. For example, the performance of hospitals on the quality measure of providing discharge instructions to heart failure patients ranged from a high of 92.1 percent in the highest-performing state to a low of 56.5 percent in the lowest-performing state. The performance difference among states is greater than 10 percentage points on 12 of the 25 quality measures tracked in 2007.

There are exceptions to this variability. For example, state performance ranges from 99.1 percent to 100 percent on measuring oxygen in the bloodstream of patients with pneumonia.
STATE PERFORMANCE VARIABILITY COMPARED TO NATIONAL AVERAGES

The following table compares the low and high ranges of state performance to national averages. Each individual measure within each set shows the difference between the highest-performing and lowest-performing states. More illustrations of hospital performance by state can be found in the Performance Detail section. Note: The last column is reported as percentage points. This is the difference on a percentage scale between two rates, in this case 2002 performance versus 2007 performance.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart attack care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspirin at arrival</td>
<td>97.4%</td>
<td>96.4%</td>
<td>99.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Aspirin at discharge</td>
<td>97.2%</td>
<td>94.7%</td>
<td>99.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>ACEI or ARB at discharge</td>
<td>91.5%</td>
<td>86.4%</td>
<td>97.5%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>98.2%</td>
<td>94.9%</td>
<td>99.8%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Beta blocker at discharge</td>
<td>97.2%</td>
<td>95.2%</td>
<td>99.1%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Beta blocker at arrival</td>
<td>94.7%</td>
<td>91.0%</td>
<td>99.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>PCI within 90 minutes**</td>
<td>72.3%</td>
<td>46.8%</td>
<td>90.7%</td>
<td>43.9%</td>
</tr>
<tr>
<td><strong>Heart failure care</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Discharge instructions</td>
<td>77.5%</td>
<td>56.5%</td>
<td>92.1%</td>
<td>35.6%</td>
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<td>11.1%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>95.7%</td>
<td>85.6%</td>
<td>98.4%</td>
<td>12.8%</td>
</tr>
<tr>
<td>ACEI or ARB at discharge</td>
<td>90.1%</td>
<td>85.5%</td>
<td>96.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td><strong>Pneumonia care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring oxygen in blood</td>
<td>99.7%</td>
<td>99.1%</td>
<td>100.0%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Pneumococcal vaccination</td>
<td>83.9%</td>
<td>64.8%</td>
<td>95.3%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Blood culture in the ICU †</td>
<td>92.7%</td>
<td>87.4%</td>
<td>96.1%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Blood culture in the ED †</td>
<td>91.0%</td>
<td>85.8%</td>
<td>94.8%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Smoking cessation advice</td>
<td>93.7%</td>
<td>84.7%</td>
<td>97.8%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Antibiotics for ICU patients within 24 hours</td>
<td>63.9%</td>
<td>48.9%</td>
<td>82.8%</td>
<td>33.9%</td>
</tr>
<tr>
<td>Antibiotics for non-ICU patients within 24 hours</td>
<td>91.9%</td>
<td>86.9%</td>
<td>95.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Influenza vaccination*</td>
<td>79.5%</td>
<td>64.5%</td>
<td>91.6%</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

* New measure in 2007

** Since 2005, the timeframe for implementing PCI therapy decreased to 90 minutes from 120 minutes. Only 10 hospitals were able to meet the public reporting requirement of 30 patients on this measure.

† Before 2006, blood culture in the ICU and blood culture in the ED were one measure: taking a blood culture before giving antibiotics.

See Glossary for definitions.
### Key Performance Results

#### State Performance Variability Compared to National Averages (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surgical care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotics within one hour before the first surgical cut</td>
<td>89.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For CABG surgery</td>
<td>89.3%</td>
<td>67.8%</td>
<td>100.0%</td>
<td>32.2%</td>
</tr>
<tr>
<td>For cardiac surgery (other than CABG)</td>
<td>88.9%</td>
<td>63.1%</td>
<td>100.0%</td>
<td>36.9%</td>
</tr>
<tr>
<td>For colon surgery</td>
<td>82.4%</td>
<td>64.2%</td>
<td>95.7%</td>
<td>31.6%</td>
</tr>
<tr>
<td>For hip joint replacement surgery</td>
<td>89.2%</td>
<td>66.7%</td>
<td>96.4%</td>
<td>29.7%</td>
</tr>
<tr>
<td>For hysterectomy surgery</td>
<td>89.9%</td>
<td>77.0%</td>
<td>96.7%</td>
<td>19.7%</td>
</tr>
<tr>
<td>For knee joint replacement surgery</td>
<td>92.2%</td>
<td>80.8%</td>
<td>96.6%</td>
<td>15.8%</td>
</tr>
<tr>
<td>For vascular surgery</td>
<td>85.1%</td>
<td>53.3%</td>
<td>97.6%</td>
<td>44.2%</td>
</tr>
<tr>
<td><strong>Appropriate prophylactic antibiotics</strong></td>
<td>94.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For coronary artery bypass graft (CABG) surgery</td>
<td>97.9%</td>
<td>55.2%</td>
<td>100.0%</td>
<td>44.8%</td>
</tr>
<tr>
<td>For cardiac surgery (other than CABG)</td>
<td>96.2%</td>
<td>30.8%</td>
<td>100.0%</td>
<td>69.2%</td>
</tr>
<tr>
<td>For colon surgery*</td>
<td>75.7%</td>
<td>41.0%</td>
<td>89.6%</td>
<td>48.6%</td>
</tr>
<tr>
<td>For hip joint replacement surgery*</td>
<td>98.0%</td>
<td>87.6%</td>
<td>100.0%</td>
<td>12.4%</td>
</tr>
<tr>
<td>For hysterectomy surgery*</td>
<td>93.7%</td>
<td>82.9%</td>
<td>97.8%</td>
<td>14.9%</td>
</tr>
<tr>
<td>For knee joint replacement surgery*</td>
<td>98.2%</td>
<td>92.7%</td>
<td>100.0%</td>
<td>7.3%</td>
</tr>
<tr>
<td>For vascular surgery*</td>
<td>95.1%</td>
<td>65.7%</td>
<td>100.0%</td>
<td>34.3%</td>
</tr>
<tr>
<td><strong>Stopping antibiotics within 24 hours</strong></td>
<td>85.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For CABG surgery</td>
<td>89.5%</td>
<td>76.2%</td>
<td>100%</td>
<td>23.8%</td>
</tr>
<tr>
<td>For cardiac surgery (other than CABG)</td>
<td>89.5%</td>
<td>67.4%</td>
<td>100%</td>
<td>32.6%</td>
</tr>
<tr>
<td>For colon surgery</td>
<td>74.7%</td>
<td>54.2%</td>
<td>94.1%</td>
<td>39.9%</td>
</tr>
<tr>
<td>For hip joint replacement surgery</td>
<td>84.0%</td>
<td>46.2%</td>
<td>92.8%</td>
<td>46.6%</td>
</tr>
<tr>
<td>For hysterectomy surgery</td>
<td>90.2%</td>
<td>76.1%</td>
<td>97.5%</td>
<td>21.4%</td>
</tr>
<tr>
<td>For knee joint replacement surgery</td>
<td>85.5%</td>
<td>59.6%</td>
<td>96.5%</td>
<td>36.9%</td>
</tr>
<tr>
<td>For vascular surgery</td>
<td>76.9%</td>
<td>40.0%</td>
<td>95.3%</td>
<td>55.3%</td>
</tr>
<tr>
<td><strong>Ordering VTE medicine/treatment</strong></td>
<td>87.1%</td>
<td>71.8%</td>
<td>97.4%</td>
<td>25.6%</td>
</tr>
<tr>
<td><strong>Providing VTE medicine/treatment</strong></td>
<td>83.1%</td>
<td>70.3%</td>
<td>96.1%</td>
<td>25.8%</td>
</tr>
</tbody>
</table>

* New measure in 2007

** Since 2005, the timeframe for implementing PCI therapy decreased to 90 minutes from 120 minutes. Only 10 hospitals were able to meet the public reporting requirement of 30 patients on this measure.

† Before 2006, blood culture in the ICU and blood culture in the ED were one measure: taking a blood culture before giving antibiotics.

See Glossary for definitions.
4. Improvement on most quality and safety measures is still needed.

Even with the improvements of the past six years, more improvement is still needed. For example, on some measures introduced in 2002, treatments were still not being performed consistently in 2007:

- Discharge instructions for heart failure patients – only 27.5 percent of hospitals achieved 90 percent compliance
- Pneumococcal screening for pneumonia patients – only 38.6 percent of hospitals achieved 90 percent compliance
- ACE inhibitor or ARB (angiotensin receptor blocker) prescribed at discharge for heart failure patients – only 57.7 percent of hospitals achieved 90 percent compliance
- ACE inhibitor or ARB prescribed at discharge for heart attack patients – only 68.8 percent of hospitals achieved 90 percent compliance

**90 percent of American hospitals achieved 90 percent compliance on only five of 24 measures tracked during 2007.**

The percentage of hospitals performing over 90 percent ranges from 99.8 percent to 7.2 percent on 23 measures of heart attack, heart failure, pneumonia and surgical care. The best performance was in providing an oxygenation assessment for patients with pneumonia, with 99.8 percentage of hospitals achieving annual overall performance over 90 percent. The other four measures that showed achievement by hospitals of more than 90 percent related to heart attack care. Performance on the other 19 measures ranged from 89.7 percent to 7.2 percent. Most of the performance levels on the lower end of the scale involved measures first reported in 2005, 2006 or 2007.

The Joint Commission is working to address these and other issues in a number of ways, including through standards, National Patient Safety Goals, and coalitions with other organizations also interested in furthering patient safety.
PERCENTAGE OF HOSPITALS ACHIEVING ANNUAL COMPLIANCE OF 90 PERCENT

The following table shows percentage of hospitals achieving the annual targeted performance of 90 percent or more compliance on a measure. Note: The last column is reported as percentage points. This is the difference on a percentage scale between two rates, in this case 2002 performance versus 2007 performance.

<table>
<thead>
<tr>
<th>Performance measure</th>
<th>2006 High (percentage &gt;90)</th>
<th>2007 High (percentage &gt;90)</th>
<th>2006-2007 difference (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring oxygen in blood (Pneumonia)</td>
<td>99.6</td>
<td>99.8</td>
<td>0.2</td>
</tr>
<tr>
<td>Smoking cessation advice (Heart Attack)</td>
<td>91.5</td>
<td>96.7</td>
<td>5.2</td>
</tr>
<tr>
<td>Aspirin at arrival (Heart Attack)</td>
<td>93.0</td>
<td>96.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Beta blocker at discharge (Heart Attack)</td>
<td>88.7</td>
<td>93.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Aspirin at discharge (Heart Attack)</td>
<td>90.0</td>
<td>91.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Smoking cessation advice (Heart Failure)</td>
<td>75.2</td>
<td>89.7</td>
<td>14.5</td>
</tr>
<tr>
<td>Beta blocker at arrival (Heart Attack)</td>
<td>79.0</td>
<td>86.0</td>
<td>7.1</td>
</tr>
<tr>
<td>Appropriate prophylactic antibiotics (Surgical Care)</td>
<td>N/A</td>
<td>83.2</td>
<td>N/A</td>
</tr>
<tr>
<td>LVS assessment (Heart Failure)</td>
<td>69.5</td>
<td>81.1</td>
<td>11.5</td>
</tr>
<tr>
<td>Smoking cessation advice (Pneumonia)</td>
<td>62.8</td>
<td>78.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Blood culture in the ICU (Pneumonia)*</td>
<td>66.8</td>
<td>75.4</td>
<td>8.7</td>
</tr>
<tr>
<td>Antibiotics for non-ICU (Pneumonia)</td>
<td>49.3</td>
<td>69.4</td>
<td>20.1</td>
</tr>
<tr>
<td>ACEI or ARB at discharge (Heart Attack)</td>
<td>43.6</td>
<td>68.8</td>
<td>25.2</td>
</tr>
<tr>
<td>Blood culture in the ED (Pneumonia)*</td>
<td>58.3</td>
<td>64.2</td>
<td>5.9</td>
</tr>
<tr>
<td>ACEI or ARB at discharge (Heart Failure)</td>
<td>36.1</td>
<td>57.7</td>
<td>21.5</td>
</tr>
<tr>
<td>Antibiotic within one hour (Surgical Care)</td>
<td>39.9</td>
<td>53.7</td>
<td>13.8</td>
</tr>
<tr>
<td>Ordering VTE medicine/treatment (Surgical Care)</td>
<td>NA</td>
<td>43.6</td>
<td>N/A</td>
</tr>
<tr>
<td>Pneumococcal vaccination (Pneumonia)</td>
<td>22.7</td>
<td>38.6</td>
<td>15.9</td>
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<tr>
<td>Antibiotic discontinued within 24 hours (Surgical Care)</td>
<td>20.1</td>
<td>37.6</td>
<td>17.5</td>
</tr>
<tr>
<td>Providing VTE medicine/treatment (Surgical Care)</td>
<td>N/A</td>
<td>29.3</td>
<td>N/A</td>
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<td>Discharge instructions (Heart Failure)</td>
<td>17.7</td>
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<td>9.8</td>
</tr>
<tr>
<td>Influenza vaccination (Pneumonia)</td>
<td>N/A</td>
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<td>N/A</td>
</tr>
<tr>
<td>Antibiotics for ICU (Pneumonia)</td>
<td>0.7</td>
<td>7.2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

*Before 2006, blood culture in the ICU and blood culture in the ED were one measure: taking a blood culture before giving antibiotics.

See Glossary for definitions.

For more on where improvement is still needed, go to Performance Detail section.
NATIONAL PATIENT SAFETY GOAL COMPLIANCE

Key Finding

Joint Commission-accredited Hospitals are Making Excellent Strides on National Patient Safety Goal Compliance.

As part of The Joint Commission’s accreditation process, most hospitals achieved compliance with the 18 requirements of the nine 2007 National Patient Safety Goals (NPSGs), 100 percent compliance was achieved on one of the requirements and 99 percent on three others. On 11 of the requirements, 90 percent or more of the 1,466 hospitals surveyed demonstrated compliance.

“Compliance” means consistent performance of the requirement. When an organization is found to be “non-compliant,” it does not mean that the organization is failing to do what is required; it means that the organization is not doing it consistently.

Included as part of NPSG compliance is organization compliance with The Joint Commission’s Universal Protocol. This protocol was established in 2003 to address the continuing occurrence of wrong site, wrong procedure, and wrong person surgery in Joint Commission-accredited organizations.

Hospitals must do more than simply perform specified tasks to achieve compliance with Joint Commission NPSGs. To assure safe health care environments, hospitals must continually analyze fundamental workflow systems and redesign those systems as needed. Hospitals must go beyond the tasks of removing a dangerous medication from a patient care unit or requiring a specific safety feature on a medical device. They must achieve goals such as “improve the accuracy of patient identification” by changing how individuals caring for patients do their jobs. Achieving this kind of behavioral change among providers takes time, motivation, reinforcement, reward, patience, and support.
NATIONAL PATIENT SAFETY GOAL COMPLIANCE TRENDS

The following chart illustrates trends in National Patient Safety Goal compliance from 2003-2007 derived from onsite surveys at Joint Commission-accredited hospitals. The numbers represent percentage points, except the second row, which represents the number of surveys conducted.

Hospitals improved or equaled compliance from 2006 to 2007 on all requirements common to both years.

<table>
<thead>
<tr>
<th>Goal Description</th>
<th>Number of surveys &gt;</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A Two patient identifiers</td>
<td>1,249</td>
<td>96.2</td>
<td>95.9</td>
<td>95.3</td>
<td>91.9</td>
<td>97.2</td>
</tr>
<tr>
<td>2A Read back verbal orders</td>
<td>92.6</td>
<td>91.8</td>
<td>82.7</td>
<td>84.3</td>
<td>96.3</td>
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</tr>
<tr>
<td>2B &quot;Do not use&quot; abbreviations</td>
<td>76.5</td>
<td>75.2</td>
<td>61.4</td>
<td>63.1</td>
<td>76.4</td>
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</tr>
<tr>
<td>2C Reporting critical test results</td>
<td>n/a</td>
<td>n/a</td>
<td>90.5</td>
<td>73.1</td>
<td>64.9</td>
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<tr>
<td>2E Hand-off communications</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>93.9</td>
<td>98.2</td>
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</tr>
<tr>
<td>3B Standardize drug concentrations</td>
<td>99.4</td>
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<td>98.5</td>
<td>98.3</td>
<td>99.3</td>
<td></td>
</tr>
<tr>
<td>3C Look-alike, sound-alike drugs</td>
<td>n/a</td>
<td>n/a</td>
<td>97.6</td>
<td>92.6</td>
<td>94.6</td>
<td></td>
</tr>
<tr>
<td>3D Labeling medications and solutions</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>91.1</td>
<td>82.0</td>
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</tr>
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<td>7A CDC hand hygiene guidelines</td>
<td>n/a</td>
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<td>96.4</td>
<td>91.2</td>
<td>91.2</td>
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<tr>
<td>7B Health-care associated infection</td>
<td>n/a</td>
<td>99.9</td>
<td>100</td>
<td>99.9</td>
<td>100</td>
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</tr>
<tr>
<td>8A Medication reconciliation</td>
<td>n/a</td>
<td>n/a</td>
<td>99.9</td>
<td>66.1</td>
<td>82.1</td>
<td></td>
</tr>
<tr>
<td>8B Transfer/discharge reconciliation</td>
<td>n/a</td>
<td>n/a</td>
<td>99.7</td>
<td>72.5</td>
<td>88.1</td>
<td></td>
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<tr>
<td>9B Fall reduction program</td>
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<td>n/a</td>
<td>n/a</td>
<td>93.5</td>
<td>94.9</td>
<td></td>
</tr>
<tr>
<td>13A Patient safety reports</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>99.5</td>
<td></td>
</tr>
<tr>
<td>15A Suicide risk</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>97.8</td>
<td></td>
</tr>
<tr>
<td>UP* 1A Pre-operative verification process</td>
<td>98.5</td>
<td>94.6</td>
<td>95.5</td>
<td>97.1</td>
<td>99.0</td>
<td></td>
</tr>
<tr>
<td>UP* 1B Operative site marking</td>
<td>93.8</td>
<td>95.4</td>
<td>96.7</td>
<td>93.4</td>
<td>93.5</td>
<td></td>
</tr>
<tr>
<td>UP* 1C &quot;Time out&quot; before procedure</td>
<td>91.1</td>
<td>92.0</td>
<td>82.7</td>
<td>74.2</td>
<td>78.8</td>
<td></td>
</tr>
</tbody>
</table>

*Universal Protocol

Interpreting NPSG trends

Trends in the NPSG compliance data should be interpreted with caution. At first glance, it looks like performance may be deteriorating. The more likely explanation is that Joint Commission surveyors are becoming more sophisticated in assessing and identifying non-compliance. For example, the 2004 hospital compliance rate for conducting a "time out" before a procedure was 92.0 percent, compared to 78.8 percent in 2007. When the "time out" requirement was first implemented, it was surveyed primarily in operating rooms where performance is generally consistent. But "time out" is not just an OR requirement; it applies wherever invasive procedures are done. More recently, surveyors are finding non-compliance with the "time out" requirement in endoscopy suites, catheterization labs, and even at bedside procedures.

The requirements for “time outs” and reporting critical test results are the most challenging for organizations to meet, while performance improved significantly for “do not use” abbreviations, for medication reconciliation, and for transfer/discharge reconciliation.

For more on NPSG compliance, go to the Performance Detail section.
QUALITY AND SAFETY PERFORMANCE DETAIL

This section of the report includes background information, important facts and statistics, and results for each performance measure in four sets (heart attack care, heart failure care, pneumonia care and surgical care).

A “What one should know about the data” section for each measure includes information about the kinds of patients whose results are excluded from this report’s data. It’s important to understand that not every patient gets—or should get—a treatment. Often, patients have health care conditions or factors that influence the effectiveness of treatments, or whether or not a provider orders a particular treatment. Also, a patient may choose to refuse treatment or not follow the instructions of his or her care plan.

This report only includes data about patients considered “eligible” for one of the evidence-based treatments or measures.
HEART ATTACK CARE PERFORMANCE DETAIL

Heart Attack

What is a heart attack?

- A heart attack occurs when the supply of blood and oxygen to an area of heart muscle is blocked. This blockage can lead to an irregular heartbeat that causes a severe decrease in the heart’s pumping function and may bring about sudden death. If the blockage is not treated within a few hours, the affected heart muscle will die and be replaced by scar tissue. 1, 35, 36

- The signs and symptoms of a heart attack include chest and/or upper body discomfort, shortness of breath, cold sweat, nausea or vomiting, and light-headedness or dizziness. Chest discomfort can last for more than a few minutes, or it may go away and come back, and can feel like pressure, squeezing, fullness, or pain. Discomfort in other areas of the upper body can include pain or numbness in one or both arms or in the back, neck, jaw or stomach. 1, 35, 36

- Some people may have no symptoms with their heart attack; this is called a “silent” heart attack. 1, 35, 36

What’s important to know about heart attack

- Every year, more than 1 million Americans have heart attacks. About half die from the heart attack and about half of those who die do so within one hour of the start of symptoms and before reaching the hospital. 1, 35, 36

- Most people do not seek medical care for two hours or more after symptoms begin. Many people wait 12 hours or longer to seek treatment. Prompt treatment of a heart attack can help prevent or limit lasting damage to the heart and can prevent sudden death. 1, 35, 36

For more information about heart attack

- American Heart Association:  www.americanheart.org

- American College of Cardiology:  www.acc.org

- National Heart, Lung, and Blood Institute:  www.nhlbi.nih.gov
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart attack patients who both needed and received aspirin within 24 hours before or after arriving at the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 97.4 percent in providing heart attack patients with aspirin within 24 hours of arriving at the hospital—an improvement of 0.8 percentage points from 2006.

• Performance rates among states ranged from 96.4 to 99.3 percent.

WHAT’S IMPORTANT TO KNOW ABOUT ASPIRIN AND HEART ATTACK TREATMENT

• The American Heart Association recommends aspirin use for patients who have had a heart attack (unless the patient has other conditions that prevent him or her from safely taking aspirin.) 2, 35, 36

• For certain types of heart attack, aspirin is beneficial because it reduces the tendency of blood to clot in blood vessels of the heart and improves the chance a patient will survive. 2, 35, 36

• National guidelines strongly recommend the early administration of aspirin for some heart attack patients. Some patients are allergic to aspirin, or are taking medicines that cannot be taken with aspirin, among other reasons. 2, 3, 35,36

• Do not start aspirin therapy without first consulting your doctor; the risks and benefits vary for each person. 1, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

• Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:

  – The patient did not receive aspirin due to an allergy to aspirin or other medical reasons.
  – The patient was younger than 18 years of age.
  – The patient was transferred to another acute care or federal hospital on the day of or day after arrival.
  – The patient was transferred from another acute care hospital, including another emergency department.
  – The patient was discharged on the same day of arrival at the hospital.
  – The patient left against medical advice on the day of or day after arrival.
  – The patient received comfort care only.
  – The patient died on the day of or day after arrival at the hospital.
WHAT THIS INFORMATION TELLS US

These data report how often aspirin was prescribed to some heart attack patients when they left the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 97.2 percent in prescribing aspirin to heart attack patients at hospital discharge—an improvement of 0.6 percentage point from 2006.

• Performance rates among states ranged from 94.7 to 99.1 percent.

WHAT’S IMPORTANT TO KNOW ABOUT TAKING ASPIRIN AFTER HAVING A HEART ATTACK

• The American Heart Association recommends aspirin use for patients who have had a heart attack (unless the patient has other conditions that prevent him or her from safely taking aspirin.) 2, 35, 36

• For certain types of heart attack, aspirin is beneficial because it reduces the tendency of blood to clot in blood vessels of the heart and improves the chance a patient will survive. 2, 35, 36

• National guidelines strongly recommend that some heart attack patients continue to take aspirin to prevent another heart attack. Some patients are allergic to aspirin, or are taking medicines that cannot be taken with aspirin, among other reasons. 2, 3, 35, 36

• Do not start aspirin therapy without first consulting your doctor; the risks and benefits vary for each person. 1, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

• Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:
  – The patient did not receive aspirin due to an allergy to aspirin or other medical reasons.
  – The patient was younger than 18 years of age.
  – The patient was transferred to another acute care or federal hospital.
  – The patient was discharged to hospice.
  – The patient left against medical advice.
  – The patient received comfort care only.
  – The patient died.
WHAT THIS INFORMATION TELLS US
These data report the percentage of heart attack patients (those with problems in a certain part of the heart’s left ventricle) who received a prescription for a medicine called an ACE inhibitor or an ARB when they were discharged from the hospital. ACE stands for angiotensin converting enzyme. ARB stands for angiotensin receptor blocker. ACE inhibitors, also called ACEIs, and ARBs are medicines taken by mouth that reduce blood pressure and strengthen the heart beat.

RESULTS
• In 2007, Joint Commission-accredited hospitals achieved national average performance of 91.5 percent in prescribing an ACE inhibitor or ARB medication to heart attack patients discharged from the hospital—an improvement of 4.8 percentage points from 2006.
• Performance rates among states ranged from 86.4 to 97.5 percent.

WHAT'S IMPORTANT TO KNOW ABOUT ACE INHIBITORS, ARBS AND HEART ATTACK
• Studies show that heart attack patients who are treated with an ACE inhibitor and ARB medicine live longer than patients who do not take these medications. 4, 35, 36
• National guidelines strongly recommend ACE inhibitor or ARB medicines for heart attack patients. 5, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive an ACE inhibitor or ARB medication due to an allergy to these medications or other medical reasons.

• The patient was younger than 18 years of age.

• The patient was transferred to another acute care or federal hospital.

• The patient was discharged to hospice.

• The patient left against medical advice.

• The patient received comfort care only.

• The patient died.
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart attack patients who were given advice or counseling about quitting smoking.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 98.2 percent in advising heart attack patients to quit smoking—an improvement of 1.7 percentage points from 2006.

• Performance rates among states ranged from 94.9 to 99.8 percent.

WHAT’S IMPORTANT TO KNOW ABOUT SMOKING AND HEART ATTACK

• More than 25 percent of adult American men and 20 percent of adult American women are smokers. 6, 35, 36

• Studies show that smokers are more likely to quit smoking if a doctor advises them to do so. 7, 35, 36

• One year after quitting smoking, a person’s risk of heart disease decreases by 50 percent. 6, 35, 36

• National guidelines strongly recommend smoking cessation counseling for heart attack patients who smoke. 8, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart attack patients received smoking cessation advice but were excluded from these data for one or more of the following reasons:

• The patient was younger than 18 years of age.
• The patient was transferred to another acute care or federal hospital.
• The patient was discharged to hospice.
• The patient left against medical advice.
• The patient received comfort care only.
• The patient died.
WHAT THIS INFORMATION TELLS US

These data report the percentage of some heart attack patients who received a prescription for a medicine called a beta blocker when they were discharged from the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 97.2 percent in prescribing beta blocker medication to heart attack patients at hospital discharge—an improvement of 1.0 percentage point from 2006.

• Performance rates among states ranged from 95.2 to 99.1 percent.

WHAT'S IMPORTANT TO KNOW ABOUT BETA BLOCKERS AFTER HEART ATTACK

• Beta blocker medicine has been shown to reduce further heart damage. 9, 35, 36

• Beta blocker medicine protects the heart by slowing the heart and helping the heart use less energy to pump blood. 1, 35, 36

• National guidelines strongly recommend that heart attack patients continue taking beta blocker medicine to prevent another heart attack. 5, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive a beta blocker medicine due to an allergy to the medication or other medical reasons.
• The patient was younger than 18 years of age.
• The patient was transferred to another acute care or federal hospital.
• The patient was discharged to hospice.
• The patient left against medical advice.
• The patient received comfort care only.
• The patient died.
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart attack patients who received a medicine called a beta blocker within 24 hours after arriving at the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 94.7 percent in providing patients with beta blocker medication within 24 hours after arriving at the hospital—an improvement of 1.1 percentage points from 2006.

• Performance rates among states ranged from 91.0 to 99.3 percent.

WHAT'S IMPORTANT TO KNOW ABOUT BETA BLOCKERS AND HEART ATTACK

• Beta blocker medicine has been shown to reduce further heart damage. 9, 35, 36

• National guidelines strongly recommend that heart attack patients receive beta blocker medicine soon after having a heart attack. 5, 35, 36
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive a beta blocker medicine due to an allergy to the medication or other medical reasons.

• The patient was younger than 18 years of age.

• The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.

• The patient was transferred from another acute care hospital, including another emergency department.

• The patient was discharged on the same day of arrival at the hospital.

• The patient left against medical advice on the day of or day after arrival.

• The patient received comfort care only.

• The patient died on the day of or day after arrival at the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart attack patients with a clogged heart artery who received PCI (percutaneous coronary intervention) balloon therapy within 90 minutes of arriving at the hospital. National guidelines establish a 90-minute optimum timeframe for getting this treatment after having a heart attack.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved a national average performance of 72.3 percent in providing PCI balloon therapy within 90 minutes of the patient’s arrival at the hospital—an improvement of 4.6 percentage points from 2005, the last year this measure was reported. Since that time, the timeframe for implementing PCI therapy decreased to 90 minutes from 120 minutes. Before 2005, hospitals measured “time to PCI balloon therapy.”

• Performance rates among states ranged from 46.8 to 90.7 percent.

WHAT’S IMPORTANT TO KNOW ABOUT PCI BALLOON THERAPY AND HEART ATTACK

• PCI balloon therapy involves threading a small balloon into a blood vessel in the heart to open up a clogged artery that keeps the blood from flowing to the heart muscle.

• PCI can open a clogged artery, thereby increasing blood flow to the heart and reducing heart damage. A lack of blood supply to the heart muscle can cause lasting heart damage.

• It is important that this therapy be given quickly after a heart attack is diagnosed.
• PCI balloon therapy is used in certain types of heart attacks. 5

• National guidelines recommend that PCI balloon therapy be given within 90 minutes of arrival at the hospital to patients who are having the type of heart attack that PCI balloon therapy helps. 5

WHAT ONE SHOULD KNOW ABOUT THE DATA

• PCI balloon therapy is only done at certain hospitals since it is a specialized service requiring trained personnel and equipment.

• Some heart attack patients received this treatment but were excluded from these data for one or more of the following reasons:

  – The patient was younger than 18 years of age.
  
  – The patient was transferred from another acute care hospital, including another emergency department.
  
  – The patient was given thrombolytic therapy (a medication that breaks up blood clots, which increases blood flow to the heart).
Heart Attack Care: National Rates by Year

WHAT THIS INFORMATION TELLS US

These graphs show the national performance rates of Joint Commission-accredited hospitals over the course of five consecutive years (2002-2007) for six of the seven heart attack measures evaluated in this report.

RESULTS

• Joint Commission-accredited hospitals reported steady improvement over the course of the study in six of the seven heart attack measures.
The most significant improvement was in providing smoking cessation advice to heart attack patients. In 2002, only 66.6 percent of heart attack patients received smoking cessation advice. In 2007, there was significant improvement, with 98.2 percent of heart attack patients receiving smoking cessation advice.

The best rates of performance were for:

- Providing aspirin at arrival improved from 93.0 percent in 2002 to 97.4 percent in 2007.
- Providing aspirin at discharge improved from 92.0 percent in 2002 to 97.2 percent in 2007.
- Providing beta blocker at discharge improved from 87.3 percent in 2002 to 97.2 percent in 2007.

The greatest need for improvement is for providing fibrinolytic therapy within 30 minutes of the patient’s arrival at the hospital. With 51.0 percent national performance, this measure had the lowest national performance of all the measures in this report. While this measure had the poorest performance nationwide, only five individual hospitals were able to publicly report data on this measure because a minimum of 30 patients was required to report data.

**WHAT’S IMPORTANT TO KNOW ABOUT HEART ATTACK**

- Every year, more than 1 million Americans have heart attacks. About half die from the heart attack and about half of those who die do so within one hour of the start of symptoms and before reaching the hospital. 1, 35, 36
- Most people do not seek medical care for two hours or more after symptoms begin. Many people wait 12 hours or longer to seek treatment. Prompt treatment of a heart attack can help prevent or limit lasting damage to the heart and can prevent sudden death. 1, 35, 36

**WHAT ONE SHOULD KNOW ABOUT THE DATA**

- These data measure specific “processes” of care for heart attack. In this instance, the study counts the number patients receiving the recommended care for heart attack.
- While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in this graph.
Heart Failure

What is heart failure?

• Heart failure occurs when the heart loses its ability to pump enough blood through the body. Usually, the loss in pumping action is a symptom of an underlying heart problem, such as coronary artery disease. 12, 37

• Heart failure usually develops slowly, often over years, as the heart gradually loses its pumping ability and works less efficiently. 12, 37

• There are two types of heart failure – systolic and diastolic:
  – Systolic heart failure happens when the heart cannot pump with enough force to push blood into circulation. Blood coming into the heart from the lungs may back up and cause fluid to leak into the lungs, a condition known as pulmonary congestion.
  – Diastolic heart failure happens when the heart cannot properly fill with blood because the muscle has become stiff, losing its ability to relax. This may lead to fluid accumulation, especially in the feet, ankles and legs. Some patients may have lung congestion. 12, 37

• Symptoms of heart failure include shortness of breath; fatigue or easy tiring; fluid accumulation in the feet, ankles, legs and, occasionally, the abdomen; and persistent coughing. 12, 37

What’s important to know about heart failure

• About one in every 100 people over the age of 65 has chronic heart failure. 11, 37

• Heart failure affects 2 to 3 million Americans, and 400,000 new cases are diagnosed each year. 12, 37

• Heart failure causes 39,000 deaths each year and is a contributing factor in another 225,000 deaths. 12, 37

• From 1999 to 2002, almost 5 million Americans were diagnosed with heart failure, and deaths from heart failure increased 35.3 percent. 11, 37

• In 2005, the estimated cost of heart failure in the United States was $27.9 billion. 11, 37

• One study showed that during the past 20 years, heart failure has not declined, but survival after being diagnosed has increased. 11, 37

• Between 1970 and 2000, the death rate for heart failure patients more than doubled, from about 9 percent in 1970 to more than 19 percent in 2000. 13, 37
For more information about heart failure

- American Heart Association: www.americanheart.org
- American College of Cardiology: www.acc.org
- National Heart, Lung, and Blood Institute: www.nhlbi.nih.gov
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart failure patients who are given specific discharge instructions about their condition and care when they leave the hospital.

RESULTS

• In 2007 Joint Commission-accredited hospitals achieved national average performance of 77.5 percent in providing discharge instructions to heart failure patients—an improvement of 7.2 percentage points from 2006.

• Performance rates among states ranged from 56.5 to 92.1 percent.

WHAT'S IMPORTANT TO KNOW ABOUT HEART FAILURE AFTER BEING HOSPITALIZED

• One study showed that during the past 20 years, heart failure has not declined, but survival after being diagnosed has increased.11, 37

• Patient education about activities, diet, follow-up, medicines, worsening symptoms and monitoring weight can prevent further hospitalization. National guidelines strongly support patient education.14, 37
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart failure patients received discharge instructions but were excluded from these data for one or more of the following reasons:

• The patient had a left ventricular assist device (LVAD) or heart transplant.
• The patient was younger than 18 years of age.
• The patient received comfort care only.
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart failure patients who received an in-depth evaluation of the function of the main pumping chamber of the heart (the left ventricle) during their hospitalization, or during pre-admission to, or after discharge from, the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 95.4 percent in providing a left ventricular systolic function assessment to heart failure patients—an improvement of 2.0 percentage points from 2006.

• Performance rates among states ranged from 86.8 to 98.0 percent.

WHAT’S IMPORTANT TO KNOW ABOUT HEART FAILURE AND LEFT VENTRICULAR FUNCTION ASSESSMENT

• The left ventricle is the thickest muscle of the heart and carries the major workload of the heart. 15, 37

• Left ventricular heart failure is one of the most common forms of heart failure in the United States. It is a condition in which the muscles of the left side of the heart (left ventricle) become weakened and have to work harder to pump blood. This type of heart failure often causes breathing difficulties. 16, 37
The tests that can help determine left ventricular function include echocardiograms, radionuclide angiography and cardiac catheterizations. If the test shows that the left ventricle is not pumping blood effectively, the condition is known as left ventricle systolic dysfunction (LVSD). 16, 37

National guidelines promote left ventricular systolic function assessment as the single most important test for heart failure patients. 16, 37

WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart failure patients had their left ventricular systolic function assessed but were excluded from these data for one or more of the following reasons:

• The patient had a reason documented by the doctor for not doing the evaluation.
• The patient had a left ventricular assist device (LVAD) or heart transplant.
• The patient was younger than 18 years of age.
• The patient was transferred to another acute care or federal hospital.
• The patient was discharged to hospice.
• The patient left against medical advice.
• The patient received comfort care only.
• The patient died.
WHAT THIS INFORMATION TELLS US
These data report the percentage of heart failure patients who were given advice or counseling about quitting smoking.

RESULTS
• In 2007, Joint Commission-accredited hospitals achieved national average performance of 95.7 percent in advising heart failure patients to quit smoking—an improvement of 3.6 percentage points from 2006.
• Performance rates among states ranged from 85.6 to 98.4 percent.

WHAT’S IMPORTANT TO KNOW ABOUT HEART FAILURE AND SMOKING
• More than 25 percent of adult American men and 20 percent of adult American women are smokers. 
• Studies show that smokers are more likely to quit smoking if a doctor advises them to stop.
• One year after quitting smoking, a person’s risk of heart disease decreases by 50 percent.
• National guidelines strongly recommend smoking cessation counseling for heart failure patients who smoke.
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart failure patients received smoking cessation advice but were excluded from these data for one or more of the following reasons:

• The patient had a left ventricular assist device (LVAD) or heart transplant.
• The patient was younger than 18 years of age.
• The patient was transferred to another acute care or federal hospital.
• The patient was discharged to hospice.
• The patient left against medical advice.
• The patient received comfort care only.
• The patient died.
WHAT THIS INFORMATION TELLS US

These data report the percentage of heart failure patients who received a prescription for medicine called an ACE inhibitor or an ARB when they were discharged from the hospital. ACE stands for angiotensin converting enzyme. ARB stands for angiotensin receptor blocker. ACE inhibitors, also called ACEIs, and ARBs are medicines taken by mouth that reduce blood pressure and strengthen the heart beat.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 90.1 percent in prescribing ACE inhibitor and/or ARB medication of heart failure patients when they were discharged from the hospital—an improvement of 4.5 percentage points from 2006.

• Performance rates among states ranged from 85.5 to 96.9 percent.

WHAT’S IMPORTANT TO KNOW ABOUT ACE INHIBITORS, ARBS AND HEART FAILURE

• ACE inhibitor and ARB medicines improve the heart’s ability to pump blood to the body. 17, 37

• Heart failure patients who take ACE inhibitor and ARB medicine have fewer symptoms, are physically better, and reduce their risk of returning to the hospital. 18, 19, 37

• National guidelines strongly recommend ACE inhibitor or ARB medicine for heart failure patients. 14, 37
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some heart failure patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive an ACE inhibitor and/or ARB due to an allergy to the medicine or other medical reasons.

• The patient had a left ventricular assist device (LVAD) or heart transplant.

• The patient was younger than 18 years of age.

• The patient was transferred to another acute care or federal hospital.

• The patient was discharged to hospice.

• The patient left against medical advice.

• The patient received comfort care only.

• The patient died.
**WHAT THIS INFORMATION TELLS US**

These graphs show the national performance rates of Joint Commission-accredited hospitals over the course of five consecutive years (2002-2007) for the four heart failure measures evaluated in this report.

**RESULTS**

- In 2007, Joint Commission-accredited hospitals reported steady improvement over the course of the study in all of the heart failure measures, with the most significant improvement in providing both smoking cessation advice and discharge instructions to heart failure patients. Providing discharge instructions improved since 2006, up 7.2 percent to 77.5 percent.

Key to abbreviations: ACEI: Angiotensin converting enzyme inhibitor, ARB: angiotensin receptor blocker, LVS: Left ventricular systolic. See Glossary for definitions.

(This is the same graph used in the Key Performance Results section.)
• The best rates of performance were for:
  - Providing smoking cessation advice improved from 42.2 percent in 2002 to 95.7 percent in 2007.
  - Providing left ventricular systolic (LVS) assessment improved from 81.5 percent in 2002 to 95.4 percent in 2007.
  - Providing ACE inhibitor or ARB at discharge improved from 74.2 percent in 2002 to 90.1 percent in 2007.

WHAT’S IMPORTANT TO KNOW ABOUT HEART FAILURE

• About one in every 100 people over the age of 65 has chronic heart failure. 11, 37

• Heart failure affects 2 to 3 million Americans. 12, 37

• From 1999 to 2002, almost 5 million Americans were diagnosed with heart failure. 11, 37

• One study showed that during the past 20 years, heart failure has not declined, but survival after being diagnosed has increased. 11, 37

• From 1999 to 2002, almost 5 million Americans were diagnosed with heart failure, and deaths from heart failure increased 35.3 percent. 11, 37

• In 2005, the estimated cost of heart failure in the United States was $27.9 billion. 11, 37

WHAT ONE SHOULD KNOW ABOUT THE DATA

• These data measure specific “processes” of care for heart failure. In this instance, the study counts the number of patients receiving the recommended care for heart failure.

• While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in this graph.
PNEUMONIA CARE PERFORMANCE DETAIL

Pneumonia Care

What is pneumonia?

• Pneumonia is mainly caused by viruses, bacteria or a combination of both. Pneumonia can also be caused by inhaling food, liquid, gases, or dust, and by fungi. Certain diseases, such as tuberculosis, can also cause pneumonia. 20

• Half of all pneumonia cases are caused by viruses. Most viral pneumonia occurs in the very young. The symptoms of viral pneumonia are similar to influenza—fever, dry cough, headache, muscle pain, weakness and breathlessness. 20

What's important to know about pneumonia

• Approximately 5 million cases of pneumonia occur annually. 20

• Pneumonia is the cause of nearly 55 million days of restricted activity, 31.5 million bed days, and 1.3 million hospitalizations each year. 31

• Inpatient treatment for pneumonia amounts to more than $7.5 billion annually. 22

For more information about pneumonia

• American Lung Association:  www.lungusa.org

• National Institute of Allergy and Infectious Diseases:  www3.niaid.nih.gov
**WHAT THIS INFORMATION TELLS US**

These data report the percentage of pneumonia patients who had the amount of oxygen in their bloodstream measured.

**RESULTS**

- In 2007, Joint Commission-accredited hospitals achieved national average performance of 99.7 percent in measuring blood oxygen level in pneumonia patients—an improvement of 0.1 percentage points from 2006.

- Performance rates among states ranged from 99.1 to 100 percent.

- Of all the measures covered in this report, hospitals showed the best performance on this particular treatment. This measure also showed the least variability, meaning it was provided more consistently at all Joint Commission-accredited hospitals.

**WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA AND OXYGENATION ASSESSMENT**

Giving oxygen has been shown to improve survival rates for pneumonia patients with low levels of oxygen. 25, 26
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some pneumonia patients had the oxygen in their bloodstream measured but were excluded from these data for one or more of the following reasons:

• The patient was not diagnosed with pneumonia at the time of admission to the hospital.

• The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.

• The patient had cystic fibrosis.

• The patient was involved in clinical trials.

• The patient was younger than 18 years of age.

• The patient was transferred from another acute care or critical access hospital, including another emergency department.

• The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.

• The patient was discharged on the day of arrival at the hospital.

• The patient was discharged to hospice.

• The patient left the hospital against medical advice on the day of or day after arrival at the hospital.

• The patient received comfort care only.

• The patient died on the day of or day after arrival at the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients ages 65 years and older who were screened and vaccinated to prevent pneumonia.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 83.9 percent in screening and vaccinating pneumonia patients for pneumonia—an improvement of 8.1 percentage points from 2006.

• Performance rates among states ranged from 64.8 to 95.3 percent.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA SCREENING AND VACCINATION

• It’s important to give pneumonia vaccine because of the increasing resistance of pneumonia bacteria to antibiotics. 25

• Studies show that vaccination is up to 60 percent effective in preventing bacterial infection. 26, 27

• National guidelines recommend that pneumococcal vaccine be given to all patients age 65 or older and younger patients who have medical conditions associated with increased risk for pneumonia. A one time revaccination is recommended after five to seven years for persons 65 years of age or older who were less than 65 years of age at the time of their first dose. 25, 28
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some pneumonia patients received pneumococcal screening and vaccination but were excluded from these data for one or more of the following reasons:

• The patient was not diagnosed with pneumonia at the time of admission to the hospital.

• The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.

• The patient had cystic fibrosis.

• The patient was involved in clinical trials.

• The patient was younger than 65 years of age.

• The patient was transferred from another acute care or critical access hospital, including another emergency department.

• The patient was transferred to another general or federal hospital.

• The patient was discharged to hospice.

• The patient left the hospital against medical advice.

• The patient received comfort care only.

• The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients in the intensive care unit (ICU) who had a blood culture (test) to check for the presence of bacteria before they were given antibiotics.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 92.7 percent in taking a blood culture of pneumonia patients in the ICU before giving them antibiotics—an improvement of 2.3 percentage points from 2006.

• Performance rates among states ranged from 87.4 to 96.1 percent.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA AND BLOOD CULTURES

Pneumonia treatment guidelines recommend that blood cultures be taken for critically ill pneumonia patients to determine the most effective treatment.29
WHAT ONE SHOULD KNOW ABOUT THE DATA

• Prior to 2006, this measure was called “blood cultures before giving antibiotics.” By 2006, the measure was divided into two measures to enable performance measurement in two distinct settings of care, the intensive care unit (ICU) and emergency department (ED).

• Some pneumonia patients were given a blood culture in the intensive care unit (ICU) before being given antibiotics but were excluded from these data for one or more of the following reasons:

  – The patient was not diagnosed with pneumonia at the time of admission to the hospital.
  – The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.
  – The patient had cystic fibrosis.
  – The patient was involved in clinical trials.
  – The patient was younger than 18 years of age.
  – The patient was not admitted or transferred to the ICU within 24 hours of arrival at the hospital.
  – The patient was transferred from another acute care or critical access hospital, including another emergency department.
  – The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.
  – The patient was discharged to hospice.
  – The patient left the hospital against medical advice.
  – The patient received comfort care only.
  – The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients in the emergency department (ED) who had a blood culture (test) to check for the presence of bacteria before they were given antibiotics.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 91.0 percent in taking a blood culture of pneumonia patients in the ED before giving them antibiotics—an improvement of 0.9 percentage points from 2006.

• Performance rates among states ranged from 85.8 to 94.8 percent.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA AND BLOOD CULTURES

Pneumonia treatment guidelines recommend that pretreatment blood cultures be taken for critically ill pneumonia patients to determine the most effective treatment. 29
WHAT ONE SHOULD KNOW ABOUT THE DATA

• Prior to 2006, this measure was called “blood cultures before giving antibiotics.” By 2006, the measure was divided into two measures to enable performance measurement in two distinct settings of care, the intensive care unit (ICU) and emergency department (ED).

• Some pneumonia patients were given a blood culture in the emergency department (ED) before being given antibiotics but were excluded from these data for one or more of the following reasons:
  – The patient did not receive antibiotics or have a blood culture.
  – The patient was not diagnosed with pneumonia at the time of admission to the hospital.
  – The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.
  – The patient had cystic fibrosis.
  – The patient was involved in clinical trials.
  – The patient was younger than 18 years of age.
  – The patient was transferred from another acute care or critical access hospital, including another emergency department.
  – The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.
  – The patient was discharged on the day of arrival at the hospital.
  – The patient left the hospital against medical advice.
  – The patient received comfort care only.
  – The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients who were given advice or counseling about quitting smoking.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 93.7 percent in advising pneumonia patients to quit smoking—an improvement of 4.3 percentage points from 2006.

• Performance rates among states ranged from 84.7 to 97.8 percent.

• Smoking cessation advice is the only measure provided for heart attack, heart failure and pneumonia care. Performance in providing smoking cessation advice to heart attack and heart failure patients improved at a faster rate than advice provided to pneumonia patients.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA AND STOPPING SMOKING

• More than 25 percent of adult American men and 20 percent of adult American women are smokers.  

• Studies show that smokers are more likely to quit smoking if a doctor advises them to stop.

• One year after quitting smoking, a person’s risk of heart disease decreases by 50 percent.

• National guidelines recommend smoking cessation counseling for pneumonia patients who smoke.
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some pneumonia patients received smoking cessation advice but were excluded from these data for one or more of the following reasons:

• The patient was not diagnosed with pneumonia at the time of their admission to the hospital.

• The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.

• The patient had cystic fibrosis.

• The patient was involved in clinical trials.

• The patient was younger than 18 years of age.

• The patient was transferred to another federal or general hospital.

• The patient was discharged to hospice.

• The patient left against medical advice.

• The patient received comfort care only.

• The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients (those with a certain type of pneumonia called community-acquired pneumonia) in the intensive care unit (ICU) who started taking guideline recommended antibiotics within 24 hours of arriving at the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved a national average performance of 63.9 percent in starting ICU patients with community-acquired pneumonia on antibiotics within 24 hours of arrival at the hospital—an improvement of 4.0 percentage points from 2006.

• Performance rates among states ranged from 48.9 to 82.8 percent, showing wide variability across the nation.

WHAT'S IMPORTANT TO KNOW ABOUT COMMUNITY-ACQUIRED PNEUMONIA AND ANTIBIOTICS

• Antibiotics are the primary treatment for pneumonia.

• Pneumonia may be caused by a variety of organisms for which accurate identification takes time. National guidelines recommend specific antibiotic regimens for the initial treatment of pneumonia in ICU patients that cover a broad variety of organisms. 28, 29, 30, 31
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some pneumonia patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive antibiotics while in the hospital or within 36 hours after arriving at the hospital.

• The patient was not diagnosed with pneumonia at the time of admission to the hospital.

• The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.

• The patient had a type of pneumonia called health care-associated pneumonia.

• The patient had another possible infection in addition to pneumonia.

• The patient’s immune system was already susceptible to infection.

• The patient was not in the ICU.

• The patient was involved in clinical trials.

• The patient was younger than 18 years of age.

• The patient was transferred from another acute care or critical access hospital, including another emergency department.

• The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.

• The patient was discharged on the day of arrival at the hospital.

• The patient left the hospital against medical advice.

• The patient received comfort care only.

• The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients (those with a certain kind of pneumonia called community-acquired pneumonia) who were not in the intensive care unit (ICU) and who started taking guideline recommended antibiotics within 24 hours of arriving at the hospital.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved a national average performance of 91.9 percent in starting patients with community-acquired pneumonia who were not in the ICU on antibiotics within 24 hours of arrival at the hospital—an improvement of 3.1 percentage points from 2006.

• Performance rates among states ranged from 86.9 to 95.6 percent.

WHAT’S IMPORTANT TO KNOW ABOUT COMMUNITY-ACQUIRED PNEUMONIA AND ANTIBIOTICS

• Antibiotics are the primary treatment for pneumonia.

• Pneumonia may be caused by a variety of organisms for which accurate identification takes time. National guidelines recommend specific antibiotic regimens for the initial treatment of pneumonia in non-ICU patients that cover a broad variety of organisms.\(^4\)
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some pneumonia patients received this treatment but were excluded from these data for one or more of the following reasons:

• The patient did not receive antibiotics while in the hospital or within 36 hours after arriving at the hospital.

• The patient was not diagnosed with pneumonia at the time of admission to the hospital.

• The patient’s chest X-ray or CT scan was not positive for pneumonia anytime during the patient’s stay in the hospital or within 24 hours before the patient arrived at the hospital.

• The patient had a type of pneumonia called health care-associated pneumonia.

• The patient had another possible infection in addition to pneumonia.

• The patient’s immune system was already susceptible to infection.

• The patient was in the ICU.

• The patient was involved in clinical trials.

• The patient was younger than 18 years of age.

• The patient was transferred from another acute care or critical access hospital, including another emergency department.

• The patient was transferred to another acute care or federal hospital on the day of or day after arrival at the hospital.

• The patient left the hospital against medical advice.

• The patient was discharged on the day of arrival at the hospital.

• The patient received comfort care only.

• The patient died while in the hospital.
WHAT THIS INFORMATION TELLS US

These data report the percentage of pneumonia patients who were screened and vaccinated to prevent influenza.

RESULTS

• In the 2006-2007 flu season, Joint Commission-accredited hospitals achieved a national average performance of 79.5 percent in screening and vaccinating pneumonia patients for influenza. This is the first year this data are being reported.

• Performance rates among states ranged from 64.5 to 91.6 percent showing wide variability across the nation.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA AND INFLUENZA

• Vaccines for pneumococcal disease and influenza are important for preventing community-acquired pneumonia.

• National guidelines recommend vaccination of older adults.

• Influenza vaccine has been effective in preventing pneumonia, hospitalization and death. 38, 39
WHAT ONE SHOULD KNOW ABOUT THE DATA

• Data is reported for the flu season (fourth quarter 2006 to first quarter 2007), not the calendar year.

• Some pneumonia patients received this treatment but were excluded from these data for one or more of the following reasons:
  – The patient was not diagnosed with pneumonia at the time of admission to the hospital.
  – The patient's chest X-ray or CT scan was not positive for pneumonia anytime during the patient's stay in the hospital or within 24 hours before the patient arrived at the hospital.
  – The patient had influenza with pneumonia at the time of hospitalization.
  – The patient had cystic fibrosis.
  – The patient was involved in clinical trials.
  – The patient was younger than 50 years of age.
  – The patient was transferred from another acute care or critical access hospital, including another emergency department.
  – The patient was transferred to another acute care or federal hospital.
  – The patient was discharged to hospice.
  – The patient left the hospital against medical advice.
  – The patient received comfort care only.
  – The patient died while in the hospital.
Pneumonia Care: National Rates by Year

Antibiotic Selection - ICU

Antibiotic Selection - Non ICU

Blood Cultures in the ED

Blood Cultures in the ICU

Oxygenation Assessment

Pneumococcal Vaccination

Smoking Cessation Advice

See Glossary for definitions.

(This is the same graph used in the Key Performance Results section.)
WHAT THIS INFORMATION TELLS US

These graphs show the national performance rates of Joint Commission-accredited hospitals for three pneumonia care measures evaluated over the course of five consecutive years (2002-2007), for two measures evaluated over three years (2005-2007), and for two more measures evaluated over two years (2006-2007). The influenza screening and vaccination measure is new this year so historic data is not available.

RESULTS

• Joint Commission-accredited hospitals reported improvement during the course of the study for all of the pneumonia measures, with the most significant improvement in providing pneumococcal screening and vaccination.

• The best rates of performance were for:

  – Measuring oxygen in the bloodstream improved from 95.0 percent in 2002 to 99.7 percent in 2007.

  – Providing smoking cessation advice improved from 37.2 percent in 2002 to 93.7 percent in 2007.

  – Taking a blood culture before giving antibiotics in the ICU improved from 90.5 percent in 2006 to 92.7 percent in 2007. (Before 2006, this measure was called “taking a blood culture before giving antibiotics.” In 2006, it was split into two measures for taking a blood culture “before giving antibiotics in the ICU” and “before giving antibiotics in the ED.”)

• While performance in providing ICU patients with antibiotics within 24 hours of arrival is improving, there is still room for further improvement. In 2007, 63.9 percent of hospitals nationwide were providing ICU patients with antibiotics within 24 hours of their arrival in the hospital compared to 59.8 percent in 2006.

WHAT’S IMPORTANT TO KNOW ABOUT PNEUMONIA

• Approximately 5 million cases of pneumonia occur annually. 20

• Pneumonia is the cause of nearly 55 million days of restricted activity, 31.5 million bed days, and 1.3 million hospitalizations each year. 31

• Inpatient treatment for pneumonia amounts to more than $7.5 billion annually. 22

WHAT ONE SHOULD KNOW ABOUT THE DATA

While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in these graphs.
SURGICAL CARE PERFORMANCE DETAIL

Surgical Care

What is an infection and what is a surgical site infection?
• An infection is a condition where a harmful organism—either a parasite, a virus, or bacteria—invades the human body or its tissues and causes disease.
• A surgical site infection is a condition where a harmful organism invades the human body or its tissues through the opening on the skin at the site of surgery.

What’s important to know about surgical infection
• Surgical site infections are not contagious. However, these infections can have devastating effects on the patient and their families.
• Surgical site infections are the second most common hospital-acquired infections in the United States. ³³
• Of 40 million operations performed in the United States annually, 0.8 million to 2 million are associated with surgical site infections. ³⁴
• Surgical site infections prolong hospital stays by an average of 7.5 days. ³⁴
• Surgical site infections cost the nation between $130 million to $845 million each year. ³⁴
• It is estimated that 40 percent to 60 percent of surgical site infections could be prevented. ³⁴
• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. ³⁴

What is venous thromboembolism (VTE)?
• Venous thromboembolism, also called VTE, is a common complication of surgery. VTE is when a blood clot forms in a deep vein in the body, such as in the leg.

What’s important to know about venous thromboembolism (VTE)
• The frequency of VTE is related to the type and duration of surgery, patient risk factors, postoperative immobilization and use or nonuse of treatment to prevent VTE.
• Surgery was associated with a more than twenty-fold increase in the odds of being diagnosed with VTE. ⁴¹
For more information about surgical care

• Surgical Care Improvement Project: www.medqic.org/scip
• Centers for Disease Control and Prevention: www.cdc.gov
• Association for Professionals in Infection Control and Epidemiology: www.apic.org
• Association of periOperative Registered Nurses: www.aorn.org
• Consumer Reports: www.consumersunion.org/campaigns/stophospitalinfections/learn.html
Surgical Care Graph
Antibiotic Received Within One Hour of Surgery: 2007 State Rates

Source: The Joint Commission

Key to abbreviations: CAGB: Coronary artery bypass graft surgery. See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These data report the percentage of surgical patients at Joint Commission-accredited hospitals throughout the nation who received an antibiotic within one hour before the first surgical cut. Infection is lowest when patients receive antibiotics to prevent infection within one hour before the skin is surgically cut. This measure is one of five surgical care measures covered in this report. It is one of three measures that reports the rates on seven specific surgical procedures, as well as the overall measure rate.

The box plots show the 25th, 50th and 75th percentile and the range of data (the “whiskers”) for each surgical procedure and for this measure overall. Data represented by this illustration were reported by the following numbers of hospitals: CABG 510; cardiac 532; colon 1,076; hip 1,047; hysterectomy 1,061; knee 1,046; and vascular 875. Note: Not every surgery requires antibiotics and this measure reports on those selected surgeries where evidence or experts have identified that antibiotics would be helpful.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 89.5 percent in providing surgical patients with antibiotics within one hour before the first surgical cut—an improvement of 2.9 percentage points from 2006.

• The performance rates among states for specific surgical procedures were:
  – Coronary artery bypass graft (CABG) surgery: 89.3 percent—an improvement of 1.7 percentage points from 2006. Performance rates among states ranged from 67.8 to 100 percent.
  – Cardiac surgery (other than CABG): 88.9 percent—an improvement of 1.9 percentage points from 2006. Performance rates among states ranged from 63.1 to 100 percent.
  – Colon surgery: 82.4 percent—an improvement of 4.4 percentage points from 2006. Performance rates among states ranged from 64.2 to 95.7 percent.
  – Hip joint replacement surgery: 89.2 percent—an improvement of 2.4 percentage points from 2006. Performance rates among states ranged from 66.7 to 96.4 percent.
  – Hysterectomy surgery: 89.9 percent—an improvement of 2.9 percentage points from 2006. Performance rates among states ranged from 77.0 to 96.7 percent.
  – Knee joint replacement surgery: 92.2 percent—an improvement of 1.8 percentage points from 2006. Performance rates among states ranged from 80.8 to 96.6 percent.
  – Vascular surgery: 85.1 percent—an improvement of 4.0 percentage points from 2006. Performance rates among states ranged from 53.3 to 97.6 percent.
WHAT’S IMPORTANT TO KNOW ABOUT ANTIBIOTICS BEFORE SURGERY AND SURGICAL INFECTION PREVENTION

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. 34

• Overuse, underuse, inappropriate use and improper timing of antibiotics could result in a surgical site infection, an increased risk of antibiotic resistance, an antibiotic shortage and increased health care costs.

• Based on scientific evidence, health care personnel can take specific steps to prevent surgical site infections for some operations, including starting the preventive antibiotic within one hour of the first surgical skin cut (except for vancomycin or fluoroquinolone antibiotics, which should be given within two hours before the first surgical skin cut).

WHAT ONE SHOULD KNOW ABOUT THE DATA

• The smaller number of hospitals reporting on the surgical care measures may be a result of the majority of hospitals selecting the acute myocardial infarction, heart failure and pneumonia measure sets to meet both Joint Commission requirements and receive a financial incentive from Medicare. Hospitals receiving reimbursement from Medicare had a financial incentive in 2007 to submit data on 21 measures from the acute myocardial infarction, heart failure and pneumonia measure sets, or receive a lower payment if not reported. However, as requirements and incentives change, it is anticipated that a larger number of hospitals will select this measure set.

• Some surgical patients received an antibiotic within one hour before the first surgical cut but were excluded from these data for one or more of the following reasons:
  – The patient was taking antibiotics within 24 hours before arriving at the hospital (except colon surgery patients taking oral antibiotics).
  – The patient was taking antibiotics more than 24 hours before surgery.
  – The patient had another surgery that required general or spinal anesthesia that occurred within three days (four days for CABG and other cardiac surgery) before or after the surgery during this hospital stay.
  – The patient had a hysterectomy and a caesarean section performed during this hospitalization.
  – The patient’s surgery was performed entirely by laparoscope.
  – The patient’s surgery occurred before the date of admission.
  – The patient already had an infection or infectious disease.
  – The patient was involved in a clinical trial.
  – The patient was younger than 18 years of age.
Surgical Care: National Rates by Year
Antibiotic Received Within One Hour Prior to Surgical Incision

See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These graphs show the national performance rates of Joint Commission accredited hospitals from 2005 to 2007 for the surgical care measure on providing antibiotics within one hour before surgery. The overall rate is shown as well as rates for the specific types of surgery.

RESULTS

• Joint Commission-accredited hospitals reported improvement during the course of the study for all of the surgical care measures related to providing antibiotics within one hour before surgery. The most significant improvement was for colon surgery, which improved 10.2 percent—from 72.2 percent in 2005 to 82.4 percent in 2007.

• The best rates of performance for receiving antibiotics within one hour before surgery were for:
  – Knee joint replacement surgery improved from 90.4 percent in 2006 to 92.2 percent in 2007.
  – Hysterectomy surgery improved from 86.9 percent in 2006 to 89.9 percent in 2007.
  – Coronary artery bypass graft (CABG) surgery improved from 87.5 percent in 2006 to 89.3 percent in 2007.

• Even though receiving antibiotics within one hour before colon surgery has improved significantly since 2005, there is more room for improvement. Out of the seven surgeries for this measure, colon surgery had the lowest national performance with 82.4 percent.

WHAT’S IMPORTANT TO KNOW ABOUT SURGICAL INFECTION PREVENTION

• Surgical site infections are not contagious. However, these infections can have devastating effects on the patient and their families.

• Surgical site infections are the second most common hospital-acquired infections in the United States. 33

• Of 40 million operations performed in the United States annually, 0.8 million to 2 million are associated with surgical site infections. 34

• Surgical site infections prolong hospital stays by an average of 7.5 days. 34

• Surgical site infections cost the nation between $130 million to $845 million each year. 34

• It is estimated that 40 percent to 60 percent of surgical site infections could be prevented. 34

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. 34

• Ways that the patient can prevent or minimize surgical infections are:
  – Stop smoking. Patients who smoke have significantly higher rates of surgical infections.
  – Wash your hands before touching your surgical site or any other open site and ask that others do the same—including health care professionals. Hand washing is the single most important means of preventing infections.
WHAT ONE SHOULD KNOW ABOUT THE DATA

While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in these graphs.
Surgical Care Graph
Antibiotic Discontinued Within 24 Hours After Surgery: 2007 State Rates

Source: The Joint Commission

Key to abbreviations: CABG: Coronary artery bypass graft surgery. See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These data report the percentage of surgical patients at Joint Commission-accredited hospitals throughout the nation whose antibiotic was stopped within 24 hours after having surgery (or within 48 hours of having CABG or other cardiac surgery). Giving medicine that prevents infection for more than 24 hours after the end of surgery is not helpful unless there is a specific reason (for example, known infection). This measure is one of five surgical care measures covered in this report. It is one of three measures that reports the rates on seven specific surgical procedures, as well as the overall measure rate.

The box plots show the 25th, 50th and 75th percentile and the range of data (the “whiskers”) for each surgical procedure and for this measure overall. Note: Not every surgery requires antibiotics and this measure reports on those selected surgeries where evidence or experts have identified that antibiotics would be helpful. Data represented by this illustration were reported by the following numbers of hospitals:  CABG 510; cardiac 532; colon 1,076; hip 1,047; hysterectomy 1,061; knee 1,046; and vascular 875.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 85.6 percent in stopping antibiotics within 24 hours after surgery—an improvement of 6.5 percentage points from 2006.

• The performance rates among states for specific surgical procedures were:
  – Coronary artery bypass graft (CABG) surgery: 89.5 percent—an improvement of 2.5 percentage points from 2006. Performance rates among states ranged from 76.2 to 100 percent.
  – Cardiac surgery (other than CABG): 89.5 percent—an improvement of 3.7 percentage points from 2006. Performance rates among states ranged from 67.4 to 100 percent.
  – Colon surgery: 74.7 percent—an improvement of 9.5 percentage points from 2006. Performance rates among states ranged from 54.2 to 94.1 percent.
  – Hip joint replacement surgery: 84.0 percent—an improvement of 9.2 percentage points from 2006. Performance rates among states ranged from 46.2 to 92.8 percent.
  – Hysterectomy surgery: 90.2 percent—an improvement of 1.1 percentage points from 2006. Performance rates among states ranged from 76.1 to 97.5 percent.
  – Knee joint replacement surgery: 85.5 percent—an improvement of 9.3 percentage points from 2006. Performance rates among states ranged from 59.6 to 96.5 percent.
  – Vascular surgery: 76.9 percent—an improvement of 9.6 percentage points from 2006. Performance rates among states ranged from 40.0 to 95.3 percent.

WHAT'S IMPORTANT TO KNOW ABOUT STOPPING ANTIBIOTICS AFTER SURGERY AND SURGICAL INFECTION PREVENTION

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. 34
• Overuse, underuse, inappropriate use and improper timing of antibiotics could result in a surgical site infection, an increased risk of antibiotic resistance, an antibiotic shortage and increased health care costs.

• Based on scientific evidence, health care personnel can take specific steps to prevent surgical site infections for some operations, including stopping the preventive antibiotic within 24 hours after the surgery (48 hours for CABG or other cardiac surgery).

• Ways that the patient can prevent or minimize surgical infections are:
  – Stop smoking. Patients who smoke have significantly higher rates of surgical infections.
  – Wash your hands before touching your surgical site or any other open site and ask that others do the same—including health care professionals. Hand washing is the single most important means of preventing infections.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• The smaller number of hospitals reporting on the surgical care measures may be a result of the majority of hospitals selecting the acute myocardial infarction, heart failure and pneumonia measure sets to meet both Joint Commission requirements and receive a financial incentive from Medicare. Hospitals receiving reimbursement from Medicare had a financial incentive in 2007 to submit data on 21 measures from the acute myocardial infarction, heart failure and pneumonia measure sets, or receive a lower payment if not reported. However, as requirements and incentives change, it is anticipated that a larger number of hospitals will select this measure set.

• Some surgical patients’ antibiotics were discontinued within 24 hours after surgery but were excluded from these data for one or more of the following reasons:
  – The patient was taking antibiotics within 24 hours before arriving at the hospital (except colon surgery patients taking oral antibiotics).
  – The patient was taking antibiotics more than 24 hours before surgery (except colon surgery patients taking oral antibiotics).
  – The patient was diagnosed with an infection within two days (three days for CABG and other cardiac surgery) after surgery.
  – The patient did not receive any antibiotics during this hospitalization.
  – The patient’s surgery occurred before the date of admission.
  – The patient’s surgery was performed entirely by laparoscope.
  – The patient already had an infection or infectious disease.
  – The patient was involved in a clinical trial.
  – The patient was younger than 18 years of age.
Surgical Care: National Rates by Year
Antibiotic Discontinued Within 24 Hours After Surgery

See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These graphs show the national performance rates of Joint Commission accredited hospitals from 2005 to 2007 for the surgical care measure on stopping antibiotics within 24 hours after surgery. The overall rate is shown as well as rates for the specific types of surgery.

RESULTS

• Joint Commission-accredited hospitals reported improvement during the course of the study for all of the surgical care measures related to stopping antibiotics within 24 hours after the end of surgery. The most significant improvement was for cardiac surgery (other than CABG), which improved 26.8 percent—from 62.7 percent in 2005 to 89.5 percent in 2007.

• The best rates of performance for stopping antibiotics within 24 hours after surgery were for:
  – Hysterectomy surgery improved from 89.1 percent in 2006 to 90.2 percent in 2007.
  – Coronary artery bypass graft (CABG) surgery improved from 87.0 percent in 2006 to 89.5 percent in 2007.
  – Cardiac surgery (other than CABG) improved from 85.8 in 2006 to 89.5 percent in 2007.

• The greatest need for improvement is for stopping antibiotics within 24 hours after colon surgery with 74.7 percent national performance, although it has improved from 65.2 percent in 2006.

WHAT’S IMPORTANT TO KNOW ABOUT SURGICAL INFECTION PREVENTION

• Surgical site infections are not contagious. However, these infections can have devastating effects on the patient and their families.

• Surgical site infections are the second most common hospital-acquired infections in the United States. 33

• Of 40 million operations performed in the United States annually, 0.8 million to 2 million are associated with surgical site infections. 34

• Surgical site infections prolong hospital stays by an average of 7.5 days. 34

• Surgical site infections cost the nation between $130 million to $845 million each year. 34

• It is estimated that 40 percent to 60 percent of surgical site infections could be prevented. 34

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. 34

• Ways that the patient can prevent or minimize surgical infections are:
  – Stop smoking. Patients who smoke have significantly higher rates of surgical infections.
  – Wash your hands before touching your surgical site or any other open site and ask that others do the same—including health care professionals. Hand washing is the single most important means of preventing infections.
WHAT ONE SHOULD KNOW ABOUT THE DATA

While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in these graphs.
Surgical Care Graph
Prophylactic Antibiotic Selection for Surgical Patients: 2007 State Rates

Source: The Joint Commission

Key to abbreviations: CABG: Coronary artery bypass graft surgery. See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These data report the percentage of surgical patients at Joint Commission-accredited hospitals throughout the nation who received antibiotics selected from current guidelines to prevent infection specific to the type of surgery the patient was having. This measure is one of five surgical care measures, and one of three new surgical care measures covered in this report. It is one of three measures that reports the rates on seven specific surgical procedures, as well as the overall measure rate.

The box plots show the 25th, 50th and 75th percentile and the range of data (the “whiskers”) for each surgical procedure and for this measure overall. Data represented by this illustration were reported by the following numbers of hospitals: CABG 510; cardiac 532; colon 1,076; hip 1,047; hysterectomy 1,061; knee 1,046; and vascular 875. Note: Not every surgery requires antibiotics and this measure reports on those selected surgeries where evidence or experts have identified that antibiotics would be helpful.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 94.9 percent in providing surgical patients with appropriate antibiotics—an improvement of 1.9 percentage points from 2006.

• The performance rates among states for specific surgical procedures were:

  – Coronary artery bypass graft (CABG) surgery: 97.9 percent—an improvement of 3.3 percentage points from 2006. Performance rates among states ranged from 55.2 to 100 percent.

  – Cardiac surgery (other than CABG): 96.2 percent—an improvement of 4.8 percentage points from 2006. Performance rates among states ranged from 30.8 to 100 percent.

  – Colon surgery: 75.7 percent—an improvement of 6.1 percentage points from 2006. Performance rates among states ranged from 41.0 to 89.6 percent.

  – Hip joint replacement surgery: 98.0 percent—an improvement of 1.0 percentage point from 2006. Performance rates among states ranged from 87.6 to 100 percent.

  – Hysterectomy surgery: 93.7 percent—an improvement of 2.6 percentage points from 2006. Performance rates among states ranged from 82.9 to 97.8 percent.

  – Knee joint replacement surgery: 98.2 percent—an improvement of 1.1 percentage points from 2006. Performance rates among states ranged from 92.7 to 100 percent.

  – Vascular surgery: 95.1 percent—an improvement of 2.1 percentage points from 2006. Performance rates among states ranged from 65.7 to 100 percent.

WHAT'S IMPORTANT TO KNOW ABOUT APPROPRIATE ANTIBIOTICS AND SURGICAL INFECTION PREVENTION

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur. 34
• Overuse, underuse, inappropriate use and improper timing of antibiotics could result in a surgical site infection, an increased risk of antibiotic resistance, an antibiotic shortage and increased health care costs.

• Based on scientific evidence, health care personnel can take specific steps to prevent surgical site infections for some operations, including selecting the antibiotics recommended by clinical practice guidelines specific to the type of surgery the patient is having.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• The smaller number of hospitals reporting on the surgical care measures may be a result of the majority of hospitals selecting the acute myocardial infarction, heart failure and pneumonia measure sets to meet both Joint Commission requirements and receive a financial incentive from Medicare. Hospitals receiving reimbursement from Medicare had a financial incentive in 2007 to submit data on 21 measures from the acute myocardial infarction, heart failure and pneumonia measure sets, or receive a lower payment if not reported. However, as requirements and incentives change, it is anticipated that a larger number of hospitals will select this measure set.

• Some surgical patients received the antibiotics recommended for their specific surgical procedure but were excluded from these data for one or more of the following reasons:

– The patient was taking antibiotics within 24 hours before arriving at the hospital (except colon surgery patients taking oral antibiotics).

– The patient was taking antibiotics more than 24 hours before surgery (except colon surgery patients taking oral antibiotics).

– The patient did not receive any antibiotics before or during surgery, or within 24 hours after surgery end time.

– The patient did not receive any antibiotics during this hospitalization.

– The patient’s surgery occurred before the date of admission.

– The patient’s surgery was performed entirely by laparoscope.

– The patient already had an infection or infectious disease.

– The patient was involved in a clinical trial.

– The patient was younger than 18 years of age.
Surgical Care: National Rates by Year
Prophylactic Antibiotic Selection for Surgical Patients

See Glossary for definitions.
WHAT THIS INFORMATION TELLS US

These graphs show the national performance rates of Joint Commission accredited hospitals from 2005 to 2007 for the surgical care measure on providing antibiotics selected from current guidelines to prevent infection specific to the type of surgery the patient is having. The overall rate is shown as well as rates for the specific types of surgery.

RESULTS

• Joint Commission-accredited hospitals reported improvement during the course of the study for all of the surgical care measures related to providing surgical patients with appropriate antibiotics. The most significant improvement was for cardiac surgery (other than CABG), which improved 8.9 percent—from 87.3 percent in 2005 to 96.2 percent in 2007.

• The best rates of performance for providing selected antibiotics were for:
  – Knee joint replacement surgery improved from 97.0 percent in 2006 to 98.2 percent in 2007.
  – Hip joint replacement surgery improved from 97.0 percent in 2006 to 98.0 percent in 2007.
  – Coronary artery bypass graft (CABG) surgery improved from 94.6 percent in 2006 to 97.9 percent in 2007.

• The greatest need for improvement is for receiving antibiotics within one hour before colon surgery with 75.7 percent national performance.

WHAT’S IMPORTANT TO KNOW ABOUT SURGICAL INFECTION PREVENTION

• Surgical site infections are not contagious. However, these infections can have devastating effects on the patient and their families.

• Surgical site infections are the second most common hospital-acquired infections in the United States.  

• Of 40 million operations performed in the United States annually, 0.8 million to 2 million are associated with surgical site infections.  

• Surgical site infections prolong hospital stays by an average of 7.5 days.  

• Surgical site infections cost the nation between $130 million to $845 million each year.  

• It is estimated that 40 percent to 60 percent of surgical site infections could be prevented.  

• In about 25 percent to 50 percent of operations, overuse, underuse, improper timing and inappropriate use of antibiotics occur.  

• Ways that the patient can prevent or minimize surgical infections are:
  – Stop smoking. Patients who smoke have significantly higher rates of surgical infections.
  – Wash your hands before touching your surgical site or any other open site and ask that others do the same—including health care professionals. Hand washing is the single most important means of preventing infections.
WHAT ONE SHOULD KNOW ABOUT THE DATA

While improvement sometimes is less than 1 percentage point, these are statistically significant improvements because of the larger number of hospitals that reported these data during the time period covered in these graphs.
WHAT THIS INFORMATION TELLS US

These data report the percentage of surgical patients at Joint Commission-accredited hospitals throughout the nation for whom doctors ordered medicine or treatment for venous thromboembolism, also called VTE. A common complication of surgery, VTE is when a blood clot forms in a deep vein in the body, such as in the leg. This measure is one of five surgical care measures and one of three new surgical care measures covered in this report.

RESULTS

- In 2007, Joint Commission-accredited hospitals achieved national average performance of 87.1 percent in ordering VTE medicine or treatment for surgical patients.
- Performance rates among states ranged from 71.8 to 97.4 percent.

WHAT’S IMPORTANT TO KNOW ABOUT THE PREVENTION OF VTE

- The frequency of VTE is related to the type and duration of surgery, patient risk factors, postoperative immobilization and use or nonuse of treatment to prevent VTE.
- Surgery was associated with a more than twenty-fold increase in the odds of being diagnosed with VTE. 41
- Studies have shown that appropriately used preventative treatment has a positive risk/benefits ratio and is cost effective. 42
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some surgical patients did have the recommended VTE prophylaxis ordered but were excluded from these data for one or more of the following reasons:

• The patient had reasons for not receiving both medication and other treatment for the prevention of VTE.

• The patient was taking the drug warfarin before admission.

• The patient’s surgery was performed entirely by laparoscope.

• The patient’s surgery was performed in 30 minutes or less.

• The patient’s surgery occurred before the date of admission.

• The patient was in the hospital 24 hours or less after surgery.

• The patient was a burn patient.

• The patient was involved in a clinical trial.

• The patient was younger than 18 years of age.
WHAT THIS INFORMATION TELLS US

These data report the percentage of surgical patients at Joint Commission-accredited hospitals throughout the nation who were provided with medicine or treatment for venous thromboembolism, also called VTE. A common complication of surgery, VTE is when a blood clot forms in a deep vein in the body, such as in the leg. This measure is one of five surgical care measures and one of three new surgical care measures covered in this report.

RESULTS

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 83.1 percent in providing surgical patients with VTE medicine or treatment.
• Performance rates among states ranged from 70.3 to 96.1 percent.

WHAT’S IMPORTANT TO KNOW ABOUT THE PREVENTION OF VTE

• The frequency of VTE is related to the type and duration of surgery, patient risk factors, postoperative immobilization and use or nonuse of treatment to prevent VTE.
• Surgery was associated with a more than twenty-fold increase in the odds of being diagnosed with VTE. 41
• Studies have shown that appropriately used preventative treatment has a positive risk/benefits ratio and is cost effective. 42
WHAT ONE SHOULD KNOW ABOUT THE DATA

Some surgical patients did receive the recommended VTE prophylaxis but were excluded from these data for one or more of the following reasons:

• The patient had reasons for not receiving both medication and other treatment for the prevention of VTE.
• The patient was taking the drug warfarin before admission.
• The patient’s surgery was performed entirely by laparoscope.
• The patient’s surgery was performed in 30 minutes or less.
• The patient’s surgery occurred before the date of admission.
• The patient was in the hospital 24 hours or less after surgery.
• The patient was a burn patient.
• The patient was involved in a clinical trial.
• The patient was younger than 18 years of age.
National Patient Safety Goal 1: Improve the accuracy of patient identification.

Requirement 1A: Use at least two patient identifiers when providing care, treatment or services.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals using at least two patient identifiers when providing care, treatment or services.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 97.2 percent in using at least two patient identifiers.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 2: Improve the effectiveness of communication among caregivers.

Requirement 2A: For verbal or telephone orders or for telephonic reporting of critical test results, verify the complete order or test result by having the person receiving the information record and “read-back” the complete order or test result.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that verified complete orders or test results of verbal or telephone orders or for telephone reporting of critical test results by having the person receiving the information record and “read-back” the complete order or test result.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 96.3 percent in verifying complete orders or test results by recording and reading back the complete order or test result.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 2: Improve the effectiveness of communication among caregivers.

Requirement 2B: Standardize a list of abbreviations, acronyms, symbols, and dose designations that are not to be used throughout the organization.

What this information tells us

These data report the percentage of hospitals that standardized a list of abbreviations, acronyms, symbols, and dose designations not to be used throughout the organization.

Result

- In 2007, Joint Commission-accredited hospitals achieved national average performance of 76.4 percent in standardizing a list of “do not use” abbreviations, acronyms, symbols, and dose designations.

What one should know about the data

- 1,466 hospitals underwent onsite surveys during 2007.
- Delaware, Montana, and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 2: Improve the effectiveness of communication among caregivers.

Requirement 2C: Measure and assess, and if appropriate, take action to improve the timeliness of reporting, and the timeliness of receipt by the responsible licensed caregiver, of critical test results and values.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that measured and assessed, and if needed, took action to improve the timeliness of reporting, and the timeliness of receipt by the responsible licensed caregiver, of critical test results and values.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 64.9 percent in improving the timely reporting of critical test results and values.

What one should know about the data

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 2: Improve the effectiveness of communication among caregivers.

Requirement 2E: Implement a standardized approach to “hand-off” communications, including an opportunity to ask and respond to questions.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that implemented a standardized approach to “hand off” communications, including an opportunity to ask and respond to questions.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 98.2 percent in implementing a standardized approach to “hand off” communications.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 3: Improve the safety of using medications.

Requirement 3B: Standardize and limit the number of drug concentrations used by the organization.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that standardized and limited the number of drug concentrations used by the organization.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 99.3 percent in standardizing and limiting drug concentrations.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 3: Improve the safety of using medications.

Requirement 3C: Identify and, at a minimum, annually review a list of look-alike/sound-alike drugs used by the organization, and take action to prevent errors involving the interchange of these drugs.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that identified and, at a minimum, annually reviewed a list of look-alike/sound-alike drugs used by the organization, and took action to prevent errors involving the interchange of these drugs.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 94.6 percent in identifying and reviewing a list of look-alike/sound-alike drugs and taking action to prevent errors involving these drugs.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 3: Improve the safety of using medications.

Requirement 3D: Label all medications, medication containers (for example, syringes, medicine cups, basins), or other solutions on and off the sterile field.

Labeling of All Medications and Medication Containers: 2007 State Rates

Source: The Joint Commission

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that labeled all medications, medication containers (for example, syringes, medicine cups, basins) or other solutions on and off the sterile field.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 82.0 percent in labeling all medications, medication containers and other solutions on and off the sterile field.

What one should know about the data

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 7: Reduce the risk of health care-associated infections.

Requirement 7A: Comply with current Centers for Disease Control and Prevention (CDC) hand hygiene guidelines.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that complied with current Centers for Disease Control and Prevention (CDC) hand hygiene guidelines.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 91.2 percent in complying with current CDC hand hygiene guidelines.

What one should know about the data

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 7: Reduce the risk of health care-associated infections.

Requirement 7B: Manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a health care-associated infection.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that managed as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a health care-associated infection.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 100 percent in managing as sentinel events all cases of unanticipated death or permanent function loss associated with health care-associated infection.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 8: Accurately and completely reconcile medications across the continuum of care.

Requirement 8A: There is a process for comparing the patient’s current medications with those ordered for the patient while under the care of the organization.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals having a process for comparing the patient’s current medications with those ordered for the patient while under the care of the organization.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 82.1 percent in having a process for comparing the patient’s current medications with those ordered for the patient while under the care of the organization.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 8: Accurately and completely reconcile medications across the continuum of care.

Requirement 8B: A complete list of the patient’s medications is communicated to the next provider of service when a patient is referred or transferred to another setting, service, practitioner or level of care within or outside the organization. The complete list of medications is also provided to the patient on discharge from the facility.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that communicated a complete list of the patient’s medications to the next provider of service when it referred or transferred a patient to another setting, service, practitioner or level of care. Also, discharged patients were provided with a complete list of their medications.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 88.1 percent in communicating a complete list of patient medications to the next service provider and providing the list of medications to discharged patients.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 9: Reduce the risk of patient harm resulting from falls.

Requirement 9B: Implement a fall reduction program including an evaluation of the effectiveness of the program.

Implement and Evaluate a Fall Reduction Program: 2007 State Rates

WHAT THIS INFORMATION TELLS US
These data report the percentage of hospitals that implemented a fall reduction program and evaluated its effectiveness.

RESULT
• In 2007, Joint Commission-accredited hospital achieved national average performance of 94.9 percent in implementing and assessing a fall reduction program.

WHAT ONE SHOULD KNOW ABOUT THE DATA
• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 13: Encourage patients’ active involvement in their own care as a patient safety strategy.

Requirement 13A: Define and communicate the means for patients and their families to report concerns about safety and encourage them to do so.

WHAT THIS INFORMATION TELLS US
These data report the percentage of hospitals that defined and communicated the means for patients and their families to report concerns about safety and encouraged them to do so.

RESULT
• In 2007, Joint Commission-accredited hospital achieved national average performance of 99.5 percent of defining and communicating the means for patients and their families to report concerns about safety and encouraged them to do so.

WHAT ONE SHOULD KNOW ABOUT THE DATA
• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
National Patient Safety Goal 15: The organization identifies safety risks inherent in its patient population.

Requirement 15A: The organization identifies patients at risk for suicide.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that identified patients at risk for suicide.

RESULT

• In 2007, Joint Commission-accredited hospital achieved national average performance of 97.8 percent in identifying patients at risk for suicide.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• These data were reported only by psychiatric hospitals and those general hospitals that had patients being treated for emotional or behavioral disorders.

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.

Requirement UP 1A: Conduct a preoperative verification process as described in the Universal Protocol.

**Performance Detail**

**Preoperative Verification Process: 2007 State Rates**

Source: The Joint Commission

**WHAT THIS INFORMATION TELLS US**

These data report the percentage of hospitals that conducted a preoperative verification process as described in The Joint Commission’s Universal Protocol.

**RESULT**

- In 2007, Joint Commission-accredited hospitals achieved national average performance of 99.0 percent in conducting a preoperative verification process as described in the Universal Protocol.

**WHAT ONE SHOULD KNOW ABOUT THE DATA**

- 1,466 hospitals underwent onsite surveys during 2007.
- Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.

Requirement UP 1B: Mark the operative site as described in the Universal Protocol.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that marked the operative site as described in The Joint Commission's Universal Protocol.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 93.5 percent in marking the operative site as described in the Universal Protocol.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.

• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.

Requirement UP 1C: Conduct a “time out” immediately before starting the procedure as described in the Universal Protocol.

WHAT THIS INFORMATION TELLS US

These data report the percentage of hospitals that conducted a “time out” immediately before starting the procedure as described in The Joint Commission’s Universal Protocol.

RESULT

• In 2007, Joint Commission-accredited hospitals achieved national average performance of 78.8 percent in conducting a “time out” immediately before starting the procedure as described in the Universal Protocol.

WHAT ONE SHOULD KNOW ABOUT THE DATA

• 1,466 hospitals underwent onsite surveys during 2007.
• Delaware, Montana and Vermont did not have enough surveys in 2007 to make state comparisons useful.
## NUMBER OF SURVEYS FOR NATIONAL PATIENT SAFETY GOALS IN 2007

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**Total** 1,468
BACKGROUND INFORMATION

In this section of the report, you will find essential information about the importance of performance measurement and how it supports quality and safety. You will see an explanation of how the quality measures were created, as well as background on the medical conditions included in the report. The Joint Commission’s deep commitment and involvement in patient safety and performance improvement also is outlined.

JOINT COMMISSION ACCREDITATION

How Performance Measurement Supports Quality Improvement and Patient Safety

“The mission of The Joint Commission is to continuously improve the safety and quality of care provided to the public through the provision of health care accreditation and related services that support performance improvement in health care organizations.”

The fundamental goal of Joint Commission accreditation is performance improvement. Four major sets of activities support Joint Commission accreditation services: information dissemination, public policy initiatives and the two others given special focus in this report—performance improvement and patient safety.

The Joint Commission has been involved in performance measurement since 1986, viewing it as a critical way to extend the reach and sophistication of the accreditation process. The Joint Commission’s 1990 publication, *The Primer on Clinical Indicator Development and Application*—its all-time best-selling technical book—created a readily adaptable template for performance measure development that is still in wide use today and established The Joint Commission as a leader in this arena.

The Joint Commission continues this leadership through initiatives such as the creation of a performance measure data network. Today, this network of 48 measurement systems, all under contract to The Joint Commission, is the source of all quality-related data on The Joint Commission’s Quality Check Web site (www.qualitycheck.org) and provides 93 percent of the data displayed on the Centers for Medicare and Medicaid Services’ (CMS) Hospital Compare Web site.

In the early 2000s, The Joint Commission established National Patient Safety Goals (NPSGs) and related requirements. NPSGs were soon accompanied by additional standards encouraging organizations to establish internal patient safety programs, to undertake proactive risk analyses, and to be transparent in sharing information about adverse events with patients and their families. Today, more than 50 percent of The Joint Commission's standards relate directly to patient safety. The Joint Commission continues to issue “lessons learned” advisory *Sentinel Event Alerts* in response to serious adverse events and updates all adverse event and root cause data in its Sentinel Event database. The Sentinel Event Policy encouraging the reporting and requiring the root cause analysis of sentinel events began in response to a series of serious adverse events in hospitals that captured national public attention in 1995.
In 2005, the World Health Organization (WHO) designated The Joint Commission and Joint Commission International as a Collaborating Centre for Patient Safety Solutions as part of the broader World Alliance for Patient Safety.

To improve health care quality and safety, The Joint Commission continues to disseminate pertinent and necessary information and to serve as an advocate for improved public policies.

Understanding the Quality of Care Measures

Why they were created, what they report and why the results are important

*Improving America’s Hospitals: The Joint Commission’s Annual Report on Quality and Safety* presents the overall performance of Joint Commission accredited hospitals on quality of care measures relating to the care provided to heart attack, heart failure, pneumonia and surgery patients. All of the measures described in this report were chosen because they provide concrete data about the best kinds of treatments or practices for common conditions for which Americans enter the hospital and seek care. Hospitals that performed well are those that consistently provide “evidence-based” treatments—practices demonstrated by scientific evidence to lead to the best outcomes.

The results are important because they show that hospitals have improved. The results identify opportunities for further improvement, and support continual measurement and reporting. Quality improvement in hospitals contributes to saved lives, better health and quality of life for many patients, as well as to lower health care costs.

Why these measures?

The Joint Commission worked closely with clinicians, health care providers, hospital associations, performance measurement experts, and health care consumers across the nation to identify the quality measures. This collaborative process identified measures that reflect the best “evidence-based” treatments for heart attack, heart failure, pneumonia and surgical care patients. These measures are the product of The Joint Commission’s Hospital Core Measure Initiative that sought to create a set of standard national measures that would permit comparisons across organizations. Subsequently, The Joint Commission collaborated with other organizations, including the Centers for Medicare and Medicaid Services (CMS) and the National Quality Forum (NQF), to align these measures with other measurement efforts to ease data collection efforts by hospitals and to ensure that the measure data were gathered and calculated in a consistent way in all organizations. These measures also are used for the “Hospital Quality Alliance (HQA): Improving Care through Information” initiative.

The HQA is a public-private partnership that was founded in 2002 for the purpose of developing a process for hospitals to voluntarily collect and publicly report their performance data. The HQA was initiated through the leadership of the American Hospital Association, Association of American Medical Colleges, and the Federation of American Hospitals. HQA is supported by the Centers for Medicare and Medicaid Services, the Agency for Healthcare Research and Quality, the National Quality Forum, The Joint Commission, the American Medical Association, the American Nurses Association, the National Association of Children’s Hospitals and Related Institutions, National Association of Public Hospitals and Health Systems, the Consumer-Purchaser Disclosure Project, the AFL-CIO, AARP, U.S. Chamber of Commerce, America’s Health Insurance Plans, Blue Cross and Blue Shield Association, and the National Business Coalition on Health.
Related Quality Reporting Efforts of Other Organizations. The CMS Hospital Compare Web site (www.hospitalcompare.hhs.gov) reports quality information from U.S. hospitals on treatments for heart attack, heart failure, pneumonia and surgical care. Hospitals voluntarily submit these data from their medical records about the treatments their adult patients receive for these conditions, including patients with Medicare and those who do not have Medicare. Consumers can use Hospital Compare to compare care of local hospitals to state and national averages. The Hospital compare Web site was created through the efforts of CMS and the Hospital Quality Alliance (HQA). Unlike Quality Check, Hospital Compare includes data from some unaccredited organizations but does not include Veterans Administration, Department of Defense and Indian Health Service hospitals.

Data Collection Methods. In 2007, The Joint Commission required most hospitals to select three measure sets (in 2008, the requirement increased to four measure sets). Hospitals choose sets best reflecting their patient population and report on all the applicable measures in each of the sets they choose. Hospitals submit monthly data on all measures of performance within specific sets they choose to third-party vendors, which compile and provide data to The Joint Commission each quarter. Hospitals can obtain feedback reports through The Joint Commission's extranet.

Note on Calculations and Methodology. For each of the three measure sets tracked continuously from 2002 to 2007 (heart attack care, heart failure care and pneumonia care), a composite measure was created. A composite measure is calculated by adding or “rolling up” the number of times recommended care was provided over all the process measures in the given measure set and dividing this sum by the total number of opportunities for providing this recommended care, determined by summing up all of the process measure populations for this same set of measures. The composite measure shows the percentage of the time that recommended care was provided.

For example, if a heart attack patient receives each treatment included in the heart attack measure set, that’s a total of seven treatments in seven opportunities. If 60 patients receive all seven treatments, that’s 420 treatments in 420 opportunities—100 percent composite performance. However, if some of the 60 patients don’t receive all seven treatments, and the treatments given to the 60 patients add to a total of 378, the composite score is 90 percent.

Composite performance measures are useful in integrating performance measure information in an easily understood format that gives a summary assessment of performance for a given area of care in a single rate. The three composite measures in this report are based on combining all of the process rate-based measures in the measure set. For a performance measure, each patient identified as falling in the measure population can be considered an opportunity to provide recommended care.

Inclusions and Exclusions. This report only includes data about patients considered “eligible” for one of the evidence-based treatments or measures. “What one should know about the data” information is included in the Performance Detail section of this report for each measure. This information describes the kinds of patients whose results are excluded from this report’s data. It’s important to understand that not every patient gets—or should get—a treatment. Often, patients have health care conditions or factors that influence the effectiveness of treatments, or whether or not a provider orders a particular treatment. Also, a patient may choose to refuse treatment or not follow the instructions of his or her care plan.
The Joint Commission's Commitment to Safety

The Joint Commission’s commitment to patient safety is inherent in its mission. At its heart, accreditation is a risk-reduction activity and compliance with the standards is intended to reduce the risk of bad outcomes. The Joint Commission demonstrates its commitment to patient safety through other numerous efforts, including its Sentinel Event database, its Sentinel Event Alert patient safety newsletter, and the establishment of annual Joint Commission National Patient Safety Goals. The Joint Commission also participates in several coalitions organized to improve patient safety, including the World Health Organization World Alliance for Patient Safety, Champions for Patient Safety, the National Coordinating Council on Medication Error Reporting & Prevention, the National Patient Safety Foundation, the National Quality Forum and Consumers Advancing Patient Safety.

The Joint Commission is also involved with the Action in Patient Safety (High 5s) initiative at the World Health Organization, established through the collaboration of the Commonwealth Fund, the WHO World Alliance for Patient Safety and the WHO Collaborating Centre for Patient Safety. The High 5s initiative's goal is to implement innovative, standardized operating protocols for patient safety solutions that would broadly prevent avoidable catastrophic adverse events causing death or serious injury in hospitals and to measure the success of implementing these solutions within several countries.

LINKS FOR MORE INFORMATION

The Joint Commission:  www.jointcommission.org
Quality Check:  www.qualitycheck.org
Patient Safety:  http://www.jointcommission.org/PatientSafety/
Sentinel Events:  http://www.jointcommission.org/SentinelEvents/
WHO Collaborating Center for Patient Safety Solutions:  http://www.ccforpatientsafety.org/
**GLOSSARY**

**ACE Inhibitors or ACEI.** ACE stands for “angiotensin converting enzyme.” ACE inhibitors are medicines that are used to treat heart failure and high blood pressure. These medicines block an enzyme in the body that is responsible for causing the blood vessels to narrow. If the blood vessels are relaxed, blood pressure is lowered and more oxygen-rich blood can reach the heart. ACE inhibitors also lower the amount of salt and water in the body, which helps to lower blood pressure.

**AMI – Acute Myocardial Infarction.** The medical term for "heart attack." Acute myocardial infarction results from a blockage in one or more of the blood vessels leading to the heart. Damage to the heart muscle results, due to the lack of blood flow.

**Antibiotic timing.** The length of time from arrival at the hospital until antibiotics are given. Antibiotics are generally given as soon as possible to pneumonia patients to speed their recovery.

**ARB.** ARB stands for “angiotensin receptor blocker.” An ARB is a medicine taken by mouth that reduces blood pressure and strengthens the heart beat. ARBs are useful in the treatment of cardiac diseases such as heart attack and heart failure.

**At Arrival.** The time period lasting from 24 hours before to 24 hours after a patient arrives at a hospital.

**At Discharge.** The time during which a patient is preparing to leave the hospital. At discharge, patients often receive information and advice about medicines, diet, activities and signs to watch for to prevent further hospitalization.

**Beta blocker.** This type of medicine blocks the action of certain hormones on the heart. By blocking these hormones, beta blockers help to reduce the heart rate and blood pressure, thereby reducing the amount of oxygen needed by the heart.

**Blood cultures.** Blood tests that look for bacteria in the blood. These tests are given to pneumonia patients before antibiotics are administered.

**CABG.** CABG stands for coronary artery bypass graft surgery—an operation in which a section of vein or artery is used to bypass a blockage in a coronary artery, allowing enough blood to flow to deliver oxygen and nutrients to the heart muscles. CABG is performed to prevent damage from a myocardial infarction (heart attack) or to relieve angina.

**Composite measure.** A measure that combines the results of all process measures within a set into a single rating.

**Fibrinolytic therapy.** Medication that dissolves blood clots. Breaking up blood clots increases blood flow to the heart. If blood flow is returned to the heart muscle quickly during a heart attack, the risk of death is decreased.

**Heart failure.** A condition in which the heart loses its ability to efficiently pump blood throughout the body.

**LVAD.** LVAD stands for Left Ventricular Assist Device—a device that is used to aid the pumping action of a weakened heart ventricle.

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LVS assessment. An in-depth evaluation of heart muscle function that helps determine the correct treatment for heart failure. LVS stands for “left ventricular systolic.” An LVS assessment evaluates how well the left ventricle—the heart’s main pumping chamber—is functioning. Left ventricular diastolic dysfunction results when the heart chamber is not pumping all the blood out before it refills for the next heartbeat. This results in high pressure within the heart and can produce heart failure.

Joint Commission National Patient Safety Goals. A series of specified actions that accredited organizations are expected to take in order to prevent medical errors.

National Quality Improvement Goals. Standardized performance measures that can be applied across accredited hospitals.

Oxygenation assessment. A test measuring the amount of oxygen in a patient’s bloodstream.

Percentage points. This is the difference on a percentage scale between two rates. For example, the difference between 2002 performance and 2007 performance.

PCI therapy. PCI stands for “percutaneous coronary interventions.” PCI therapy is a coronary angioplasty procedure performed by a doctor who threads a small device into a clogged artery to open it, thereby improving blood flow to the heart. A lack of blood supply to the heart muscle can cause lasting heart damage. PCI therapy is used as an alternative treatment to coronary artery bypass surgery (CABG).

Pneumonia. An acute infection of lung tissue that is associated with at least some symptoms of acute infection, such as altered or abnormal breathing sounds.

Pneumococcal screening and vaccination. A vaccination and a series of tests that help to prevent pneumonia.

VTE. VTE stands for venous thromboembolism. VTE is a common complication of surgery and is when a blood clot forms in a deep vein in the body, such as in the leg.
REFERENCES


7 Agency for Health Care Policy and Research: *Smoking cessation; Clinical Practice Guideline #18,* Rockville, Md., 1996


14 Agency for Health Care Policy and Research: *Heart failure: evaluation and care of patients with left-ventricular systolic dysfunction; Clinical Practice Guideline #11.* Rockville, Md., 1994


34 Bratzler DW: The Surgical Care Improvement Project; An Overview. Presentation at Performance Measurement System Briefing, sponsored by The Joint Commission, 2006. See Surgical Care Improvement Project (SCIP) overview, available online: www.medqic.org/scip (accessed 7/8/08)


