More than two-thirds of hospitals had fully or partially implemented EHRs

More than two-thirds of hospitals had fully or partially implemented EHRs. An EHR integrates electronically originated and maintained patient-level clinical health information, derived from multiple sources, into one point of access. An EHR replaces the paper medical record as the primary source of patient information.

*Note: This question was first asked in 2006. No trend data are available.
Larger hospitals more likely to have EHRs than smaller hospitals

Percent of hospitals reporting EHRs by bed size, 2006

- < 50 beds: 46% (43% fully implemented, 3% partially implemented)
- 50 - 99 beds: 63% (56% fully implemented, 7% partially implemented)
- 100 - 299 beds: 79% (66% fully implemented, 13% partially implemented)
- 300 - 499 beds: 87% (64% fully implemented, 23% partially implemented)
- 500+ beds: 92% (69% fully implemented, 23% partially implemented)
Urban hospitals more likely to have EHRs than their rural counterparts

Percent of hospitals reporting EHRs by location, 2006

- Rural: 5% (Fully implemented) + 53% (Partially implemented) = 58%
- Urban: 16% (Fully implemented) + 61% (Partially implemented) = 77%
Teaching hospitals more likely to have EHRs than their non-teaching counterparts

Percent of hospitals reporting EHRs by teaching status, 2006

- Non-teaching:
  - Fully implemented: 9%
  - Partially implemented: 56%
- Teaching:
  - Fully implemented: 17%
  - Partially implemented: 64%

American Hospital Association
In 10 percent of hospitals, more than half of treating physicians routinely ordered medications electronically.

Share of physicians ordering medications electronically, 2006

- None: 73%
- 1-24 percent: 14%
- 25-49 percent: 3%
- 50 to 74 percent: 2%
- 75-100 percent: 8%
In 16 percent of hospitals, more than half of treating physicians routinely ordered tests electronically.
Hospitals used many electronic laboratory, radiology, and pharmacy functions

<table>
<thead>
<tr>
<th>Function</th>
<th>2006</th>
<th>2005</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results review, Lab</td>
<td>66%</td>
<td>64%</td>
<td>2% increase</td>
</tr>
<tr>
<td>Order-entry, Lab</td>
<td>60%</td>
<td>62%</td>
<td>2% decrease</td>
</tr>
<tr>
<td>Order-entry, Radiology</td>
<td>59%</td>
<td>62%</td>
<td>3% decrease</td>
</tr>
<tr>
<td>Results review, Radiology report</td>
<td>65%</td>
<td>60%</td>
<td>5% increase</td>
</tr>
<tr>
<td>Results review, Radiology images</td>
<td>47%</td>
<td>41%</td>
<td>6% increase</td>
</tr>
<tr>
<td>Order-entry, Pharmacy</td>
<td>46%</td>
<td>48%</td>
<td>2% decrease</td>
</tr>
</tbody>
</table>

Percent of hospitals reporting that they have fully or partially implemented various clinical IT functions

Fully implemented □ Partially implemented

Results review, Lab: 78% (2006) vs 75% (2005)
Order-entry, Lab: 72% (2006) vs 73% (2005)
Order-entry, Radiology: 70% (2006) vs 71% (2005)
Results review, Radiology report: 77% (2006) vs 72% (2005)
Results review, Radiology images: 64% (2006) vs 60% (2005)
Hospitals increased use of decision-support functions

Percent of hospitals reporting that they have fully or partially implemented various decision-support functions

<table>
<thead>
<tr>
<th>Function</th>
<th>2006</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time drug alerts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>31%</td>
<td>10%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>20%</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>51%</td>
<td>23%</td>
</tr>
<tr>
<td>Back-end drug alerts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>37%</td>
<td>14%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>56%</td>
<td>27%</td>
</tr>
<tr>
<td>Clinical guidelines and pathways</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Total</td>
<td>36%</td>
<td>35%</td>
</tr>
<tr>
<td>Other clinical alerts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>26%</td>
<td>43%</td>
</tr>
<tr>
<td>Total</td>
<td>43%</td>
<td></td>
</tr>
</tbody>
</table>
# Hospitals increased use of electronic record management functions

## Percent of hospitals reporting that they had fully or partially implemented various EHR functions

<table>
<thead>
<tr>
<th>Function</th>
<th>2006</th>
<th>2005</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to patient demographics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>68%</td>
<td>62%</td>
<td>6%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>11%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>79%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>Access to current medical records</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>32%</td>
<td>30%</td>
<td>2%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>32%</td>
<td>30%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>64%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Access to medical history</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>34%</td>
<td>29%</td>
<td>5%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>30%</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>64%</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>Access to patient flow sheets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>27%</td>
<td>21%</td>
<td>6%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>24%</td>
<td>24%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>51%</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Results review-Consultant report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implemented</td>
<td>43%</td>
<td>45%</td>
<td>2%</td>
</tr>
<tr>
<td>Partially implemented</td>
<td>19%</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>62%</td>
<td>61%</td>
<td></td>
</tr>
<tr>
<td>Patient support through home-monitoring, etc.</td>
<td>24%</td>
<td>22%</td>
<td>2%</td>
</tr>
<tr>
<td>Patient access to EHRs*</td>
<td>4%</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

*Note: This question was first asked in 2006.*
## Spectrum of health IT use

<table>
<thead>
<tr>
<th>Level of Use</th>
<th>Functions</th>
</tr>
</thead>
</table>
| **Getting Started** | 0-3 Functions *(0-25%)*  
Fully Implemented |
| • Access to current medical records  
• Access to medical history  
• Access to patient flow sheets  
• Access to patient demographics  
• Order-entry – lab  
• Results review – lab |
| **Low** | 4-7 Functions *(26-50%)*  
Fully Implemented |
| • Order-entry - radiology  
• Results review - radiology images (incl. PACS)  
• Results review - radiology report  
• Results review - consultant report  
• Order-entry – pharmacy |
| **Moderate** | 8-11 Functions *(51-75%)*  
Fully Implemented |
| • Real time drug interaction alerts  
• Back-end drug interaction alerts  
• Clinical guidelines and pathways  
• Patient support through home monitoring, self-testing, and interactive patient education |
| **High** | 12-15 Functions *(76-100%)*  
Fully Implemented |
Hospitals used more health IT in 2006

Distribution of hospitals by level of health IT use

2005

- Getting started: 36%
- Low: 27%
- Moderate: 27%
- High: 10%

2006

- Getting started: 32%
- Low: 22%
- Moderate: 30%
- High: 16%

American Hospital Association
Larger hospitals used more health IT and saw greater growth from 2005 to 2006

Distribution of hospitals across levels of health IT use by bed size

- Getting started
- Low
- Moderate
- High
Urban hospitals used more health IT than rural hospitals, but both groups increased use.
Teaching hospitals used more health IT than non-teaching hospitals, but both groups increased use.

Level of health IT use by teaching status:

- **Teaching**
  - 2005: 13% Getting started, 43% Low, 30% Moderate, 15% High
  - 2006: 19% Getting started, 40% Low, 24% Moderate, 18% High

- **Non-teaching**
  - 2005: 9% Getting started, 24% Low, 26% Moderate, 24% High
  - 2006: 15% Getting started, 27% Low, 21% Moderate, 37% High

Legend:
- Getting started
- Low
- Moderate
- High
Hospitals that were members of systems used more health IT than those that were not, but both groups increased use.

**Level of health IT use by system status**

- **System**
  - 2005: 14% Getting started, 32% Low, 26% Moderate, 28% High
  - 2006: 19% Getting started, 32% Low, 18% Moderate, 23% High

- **Non-system**
  - 2005: 7% Getting started, 28% Low, 28% Moderate, 23% High
  - 2006: 14% Getting started, 28% Low, 24% Moderate, 28% High
Hospitals with positive margins used more health IT in both 2005 and 2006.

Level of use of fully implemented IT systems by margin level:

Positive Margin:
- 2005: 11% Getting started, 29% Low, 32% Moderate, 27% High
- 2006: 17% Getting started, 32% Low, 22% Moderate, 22% High

Negative Margin:
- 2005: 6% Getting started, 22% Low, 26% Moderate, 11% High
- 2006: 11% Getting started, 24% Low, 22% Moderate, 11% High
Hospitals increased use of bar-coding

Percent of hospitals with fully or partially implemented bar-code systems

- **Lab specimens**
  - 2006: 38% (fully implemented) 19% (partially implemented) 57%
  - 2005: 35% (fully implemented) 18% (partially implemented) 53%

- **Patient ID**
  - 2006: 25% (fully implemented) 17% (partially implemented) 42%
  - 2005: 20% (fully implemented) 17% (partially implemented) 37%

- **Supply chain management**
  - 2006: 16% (fully implemented) 24% (partially implemented) 40%
  - 2005: 16% (fully implemented) 24% (partially implemented) 40%

- **Tracking pharmaceuticals**
  - 2006: 14% (fully implemented) 19% (partially implemented) 33%
  - 2005: 12% (fully implemented) 18% (partially implemented) 30%

- **Pharmaceutical administration**
  - 2006: 14% (fully implemented) 12% (partially implemented) 26%
  - 2005: 12% (fully implemented) 11% (partially implemented) 23%

[Image of bar charts showing the percent of hospitals with fully or partially implemented bar-code systems for various categories, such as lab specimens, patient ID, supply chain management, tracking pharmaceuticals, and pharmaceutical administration.]
Hospitals adopting telemedicine and other technologies

Percent of hospitals with fully or partially implemented systems

- **Telemedicine**
  - 2006: 24% fully implemented, 34% partially implemented, total 58%
  - 2005: 24% fully implemented, 37% partially implemented, total 61%

- **Physician use of personal digital assistance (PDAs)**
  - 2006: 8% fully implemented, 23% partially implemented, total 31%
  - 2005: 9% fully implemented, 21% partially implemented, total 30%

- **Radio frequency identification (RFID)**
  - 2006: 3% fully implemented, 6% partially implemented, total 9%
  - 2005: 2% fully implemented, 6% partially implemented, total 8%

Legend:
- ■ Fully implemented
- □ Partially implemented
Hospitals using administrative systems

Percent of hospitals with administrative systems, 2006

- Patient accounts: 97%
- Patient scheduling: 75%
- Pharmaceutical supply chain management: 71%
- Medical-surgical supply chain management: 70%
Spending on health IT is high and increasing

Median one-year spending per bed

Capital spending

2005: $5,500
2006: $5,556

Operating costs

2005: $11,538
2006: $12,060
Hospitals continued to report cost as greatest barrier to IT adoption

Percent of hospitals indicating barrier is a “significant barrier” or “somewhat of a barrier”

- **Initial costs**
  - 2006: 54% (significant), 40% (somewhat)
  - 2005: 59% (significant), 36% (somewhat)

- **Ongoing costs**
  - 2006: 32% (significant), 55% (somewhat)
  - 2005: 33% (significant), 54% (somewhat)

- **Interoperability with current system**
  - 2006: 27% (significant), 52% (somewhat)
  - 2005: 25% (significant), 52% (somewhat)

- **Acceptance by clinical staff**
  - 2006: 23% (significant), 59% (somewhat)
  - 2005: 24% (significant), 58% (somewhat)

- **Availability of well-trained IT staff**
  - 2006: 16% (significant), 51% (somewhat)
  - 2005: 15% (significant), 49% (somewhat)

- **Inability of technology to meet needs**
  - 2006: 11% (significant), 51% (somewhat)
  - 2005: 12% (significant), 48% (somewhat)

- Hospitals continued to report cost as greatest barrier to IT adoption.

**Legend**
- Significant barrier
- Somewhat of a barrier
While a barrier for all, smallest hospitals were most likely to see ongoing costs as significant barrier

Percent of hospitals indicating ongoing costs are a “significant barrier” or “somewhat of a barrier” by size, 2006

- <50 beds: 42% Significant barrier, 49% Somewhat of a barrier, 91% Total
- 50-99 beds: 36% Significant barrier, 55% Somewhat of a barrier, 91% Total
- 100-299 beds: 28% Significant barrier, 59% Somewhat of a barrier, 87% Total
- 300-499 beds: 25% Significant barrier, 61% Somewhat of a barrier, 86% Total
- 500+ beds: 38% Significant barrier, 45% Somewhat of a barrier, 83% Total
Rural hospitals more likely to see costs as significant barrier

Percent of hospitals indicating ongoing costs are a “significant barrier” or “somewhat of a barrier” by location, 2006

<table>
<thead>
<tr>
<th>Location</th>
<th>Initial Costs</th>
<th>Ongoing Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>60%</td>
<td>38%</td>
</tr>
<tr>
<td>Urban</td>
<td>51%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Significant barrier | Somewhat of a barrier

- Initial Costs
  - Rural: 96%
  - Urban: 93%

- Ongoing Costs
  - Rural: 90%
  - Urban: 86%
Hospitals most commonly shared electronic patient information with physician offices

Most commonly reported organizations for sharing of electronic patient health care information among hospitals that shared data

- Private-practice physician office:
  - 2006: 67%
  - 2005: 66%

- Laboratories:
  - 2006: 46%
  - 2005: 40%

- Payers:
  - 2006: 42%
  - 2005: 39%

- Other hospitals:
  - 2006: 39%
  - 2005: 38%

- Public health department:
  - 2006: 31%
  - 2005: 28%

- Long-term care facilities:
  - 2006: 23%
  - 2005: 27%
## Comparison of sample to universe

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Universe (%)</th>
<th>Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bed size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 50 beds</td>
<td>28.4</td>
<td>29.1</td>
</tr>
<tr>
<td>50 to 99 beds</td>
<td>20.3</td>
<td>18.6</td>
</tr>
<tr>
<td>100 to 299 beds</td>
<td>35.4</td>
<td>33.0</td>
</tr>
<tr>
<td>300 to 499 beds</td>
<td>11.0</td>
<td>12.6</td>
</tr>
<tr>
<td>500+ beds</td>
<td>4.9</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>59.3</td>
<td>53.5</td>
</tr>
<tr>
<td>Rural</td>
<td>40.7</td>
<td>46.5</td>
</tr>
<tr>
<td><strong>Teaching status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-teaching</td>
<td>78.3</td>
<td>80.4</td>
</tr>
<tr>
<td>Teaching</td>
<td>21.7</td>
<td>19.6</td>
</tr>
</tbody>
</table>

**Note:** Universe includes all 4,936 community hospitals in the 2005 AHA Annual Survey. Sample includes 1,543 community hospitals responding to the 2006 AHA Health IT Survey.
## Comparison of sample to universe (2)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Universe (%)</th>
<th>Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England</td>
<td>4.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>9.6</td>
<td>11.6</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>15.1</td>
<td>13.2</td>
</tr>
<tr>
<td>East North Central</td>
<td>15.1</td>
<td>14.5</td>
</tr>
<tr>
<td>East South Central</td>
<td>8.9</td>
<td>7.7</td>
</tr>
<tr>
<td>West North Central</td>
<td>13.7</td>
<td>18.7</td>
</tr>
<tr>
<td>West South Central</td>
<td>15.0</td>
<td>12.8</td>
</tr>
<tr>
<td>Mountain</td>
<td>7.4</td>
<td>7.6</td>
</tr>
<tr>
<td>Pacific</td>
<td>11.1</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-profit</td>
<td>59.9</td>
<td>62.5</td>
</tr>
<tr>
<td>Investor owned</td>
<td>17.6</td>
<td>9.7</td>
</tr>
<tr>
<td>State/local government</td>
<td>22.5</td>
<td>27.7</td>
</tr>
<tr>
<td><strong>System Membership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td>55.0</td>
<td>41.7</td>
</tr>
<tr>
<td>Non-member</td>
<td>45.0</td>
<td>58.3</td>
</tr>
</tbody>
</table>

**Note:** Universe includes all 4,936 community hospitals in the 2005 AHA Annual Survey. Sample includes 1,543 community hospitals responding to the 2006 AHA Health IT Survey.