



Wisconsin Hospitals Build HIT Foundation

In December 2006, the Wisconsin eHealth Action Plan was adopted with two immediate goals: statewide adoption and use of electronic health records by providers and development and implementation of a statewide health information exchange architecture. In January 2009, the American Recovery and Reinvestment Act was enacted by Congress including a significant amount of incentive funding for providers to adopt and use certified electronic health record technology that can be connected in a way that provides for the electronic exchange of health information. To make this vision a reality, all health care organizations must first transition their patient care and operational information into electronic health information systems.

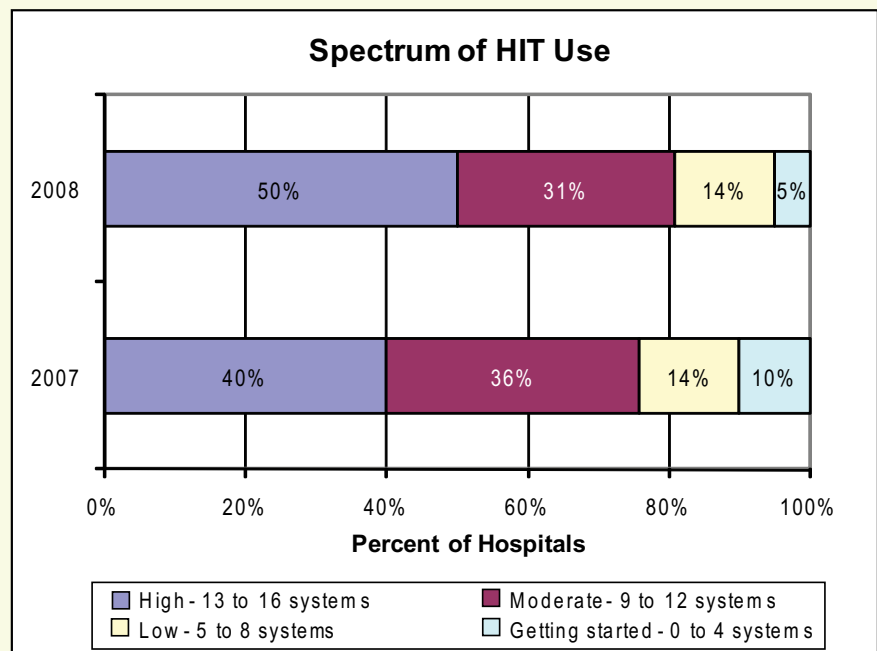
To assess the degree of health information technology (HIT) adoption by Wisconsin hospitals, the Wisconsin Hospital Association (WHA) conducts an annual survey. This report provides a comparison of the degree to which HIT adoption has changed since 2007, as well as the cost to Wisconsin hospitals to purchase and support these technologies. The information in this report is obtained from the WHA Information Center, LLC Annual Survey of Hospitals Fiscal Year ending 2008 and reflects the results of Wisconsin's 125 acute care hospitals. The survey had a 100 percent response rate for HIT systems and an 84 percent response rate for cost information.

Use of Health Information Technology

Hospitals use multiple information technology systems to meet operational and patient care needs. This survey evaluates the implementation of 16 HIT systems that are commonly used by hospitals. Although not a comprehensive list of all HIT systems used in hospitals today, the 16 HIT systems included in this report constitute many of the key systems (see table on page 4 for list of systems).

Wisconsin hospitals continue to expand their use of HIT as shown in Graph 1. By the end of Fiscal Year 2008, 50 percent of Wisconsin hospitals were classified as "high" users, defined as having fully or partially implemented at least 13 HIT systems. This is a 25 percent increase from 2007. Nearly all Wisconsin hospitals have fully implemented key patient care systems including a lab information system (92%), computerized radiography (77%), a radiology information system (76%) and a pharmacy system (73%). In addition, 82 percent of hospitals support a master person index. The master person index is used to identify and keep track of patient records, and is considered the cornerstone of many systems integration projects.

Graph 1



Medicare classifies larger, generally urban acute care hospitals as prospective payment (PPS), and smaller, rural hospitals as critical access (CAH) for the purpose of reimbursement. Some of Wisconsin's CAHs are owned by or closely aligned with multi-hospital systems, while others are independent community hospitals. The influence of system affiliation on the speed of HIT implementation is revealed in Graph 2.

Electronic Medical Record

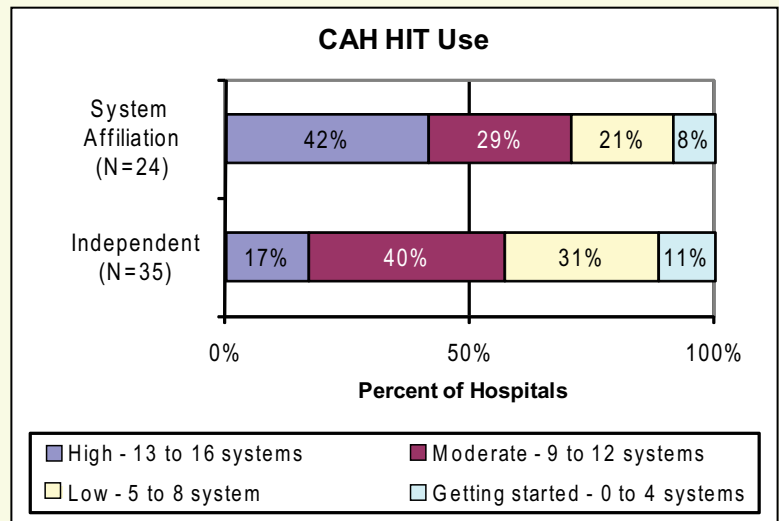
At this time, there is no single definition of what constitutes an electronic medical record (EMR) or how data on EMR implementation rates should be collected. For example, some surveys ask "Does your hospital have an EMR?" This approach allows for a wide range of interpretations by survey responders. Therefore, comparison of the implementation rate in this report to other reported rates may not be valid.

For the purpose of this report, a hospital must have fully or partially implemented seven systems that Wisconsin HIT experts generally agree are needed to replace the paper medical record as the primary source of patient information. The seven systems are:

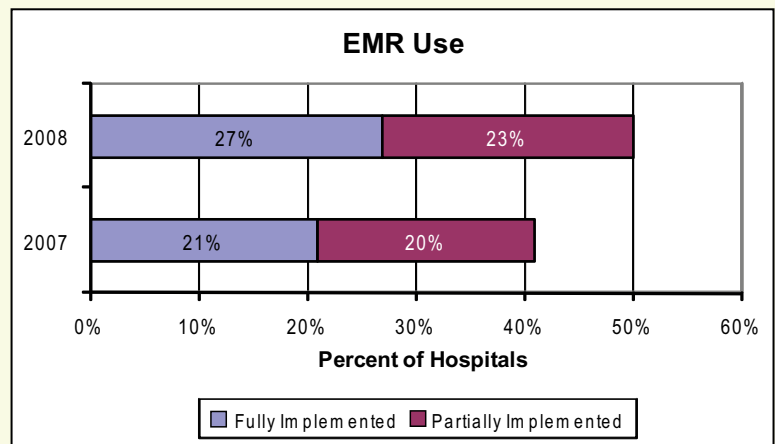
1. Core master person index database
2. Lab information system
3. Pharmacy system
4. Enterprise medication administration record
5. Radiology information system
6. Order entry and results
7. Inpatient charting

Based on these criteria, 50 percent of Wisconsin hospitals are well on their way to completing their EMR

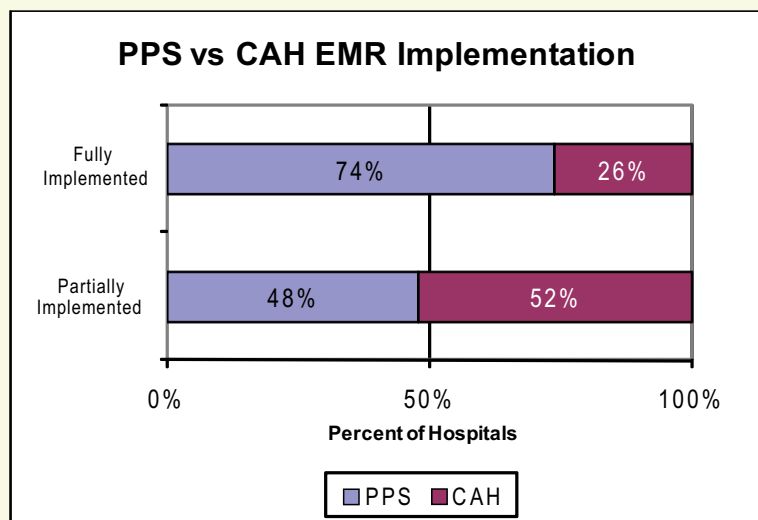
Graph 2



Graph 3



Graph 4



(Graph 3). In 2008, 27 percent had completed implementation of all seven systems, a 28 percent increase over the previous year.

In their 2007 report "Continued Progress: Hospitals Use of Information Technology" the American Hospital Association (AHA) reported that larger hospitals, those in urban areas and teaching hospitals used more HIT than their smaller and rural counterparts. In Wisconsin, larger hospitals (PPS) are leading smaller, rural hospitals (CAH) comprising three fourths of hospitals that have completed their EMR implementation (Graph 4). But, CAHs are making significant progress representing over half of the hospitals in the partially implemented category.

Safety Technology

Two HIT systems, bedside medication verification and the computerized physician order entry (CPOE), are specifically designed to reduce adverse events including the most common causes of an adverse event, medication errors. The use of bedside medication verification systems increased at a faster rate than CPOE systems from 2007 to 2008 (Graph 5). Wisconsin's CPOE adoption rate is similar to the national rate of 8 percent reported in the AHA report.

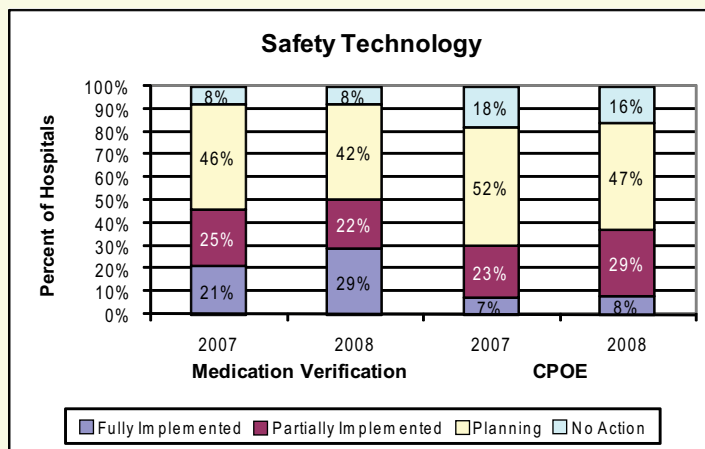
Health Information Technology Costs

The capital and operational cost of HIT is frequently cited as the largest barriers to HIT adoption. To better understand these expenditures by Wisconsin hospitals, the WHA collected 2008 cost information directly from Wisconsin hospitals. The amounts are expressed in terms of median dollars per bed to ensure a common comparison across all hospitals. Compared to the 2006 national figures in the AHA report, Wisconsin hospitals spent considerably more on both capital investment and ongoing operations.

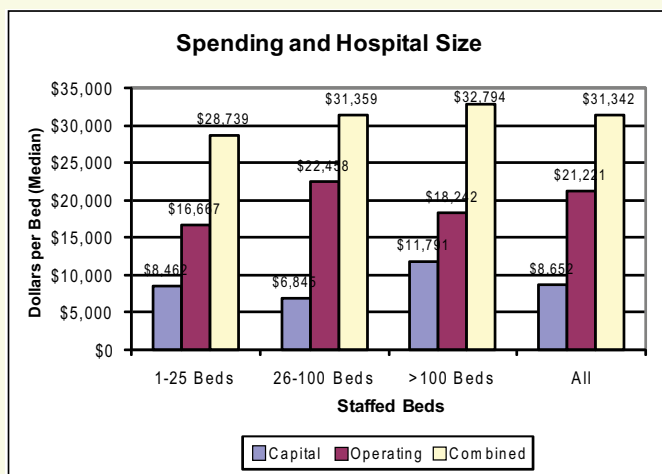
Median Spending per Bed	2008 Wisconsin Hospitals	2006 National Hospitals
Capital	\$8,652	\$5,556
Operational	\$21,221	\$12,060

In Wisconsin, hospital size had little influence on median spending per bed with larger hospitals spending slightly more than the smaller hospitals in the state (Graph 6). The cost to purchase, implement and support HIT systems increased as more systems were added, but there may be a "leveling off" of expenditures once all systems are purchased and the initial implementation is nearly complete (Graph 7). This rate of spending equates to an average of four percent (median 2.7%) of hospital net patient revenue.

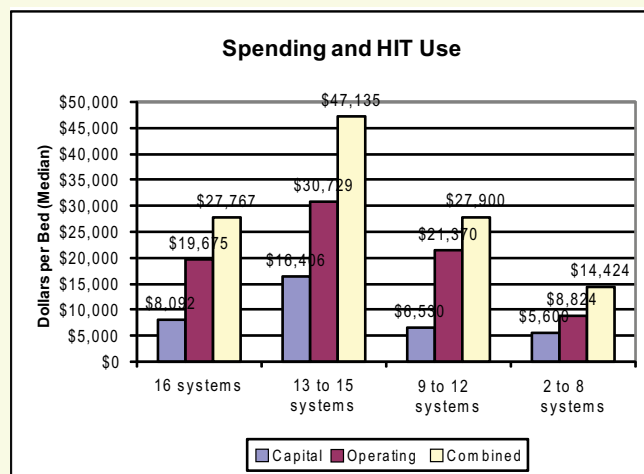
Graph 5



Graph 6



Graph 7



Summary

Wisconsin hospitals continue to make measurable advances in HIT adoption despite the complexity and costs of putting HIT systems into practice. Wisconsin hospitals know that HIT is not about the technology, but a means to improve the quality, safety, efficiency and value of health care through timely access to information. As public policy decisions are made over the next few years, it will be essential to support this ongoing transformation through data driven distribution of incentive funding, procurement and implementation support, assurance of an adequate HIT workforce, and training for front line care givers.

Wisconsin Hospital Adoption Rate per HIT System

Health Information Technology System	Fully Implemented		Partially Implemented		Planning		No Plan at This Time	
	2007	2008	2007	2008	2007	2008	2007	2008
Master person index database	82%	82%	7%	8%	7%	5%	5%	6%
Lab information system	88%	92%	9%	6%	2%	2%	1%	0%
Pharmacy system	70%	73%	17%	17%	11%	10%	2%	1%
Enterprise medication administration record	41%	53%	22%	22%	30%	22%	7%	4%
Medication dispensing	49%	66%	30%	18%	12%	12%	8%	5%
Radiology information system	70%	76%	11%	8%	14%	9%	4%	7%
Computerized radiography	56%	77%	30%	14%	13%	8%	2%	2%
Picture archiving and communication system	58%	66%	20%	18%	19%	14%	3%	2%
Order entry & results	66%	67%	20%	21%	12%	10%	2%	2%
Inpatient charting	34%	39%	21%	30%	36%	27%	8%	4%
Bedside medication verification	21%	29%	25%	22%	46%	42%	8%	8%
Computerized physician order entry	7%	8%	23%	29%	52%	47%	19%	16%
Health electronic record portal	21%	36%	24%	12%	37%	38%	18%	14%
Bulk scanning	19%	26%	30%	32%	35%	28%	16%	14%
Surgery management system	37%	52%	17%	11%	29%	23%	17%	14%
Interface engine	53%	57%	15%	14%	17%	14%	15%	15%

Note: Due to rounding, not all system percentages total 100%.

