



# The Value of Electronic Health Records

The healthcare provider organizations listed in this booklet are customers of EHR Association member companies, and have installed electronic health records (EHR) solutions provided by those companies. These busy hospitals, clinics and physicians have documented results of their EHR implementations that demonstrate quality improvements and operational efficiencies as well as increased throughput and patient/staff satisfaction. For further information on any of these organizations and their EHR suppliers, please contact [info@himssehra.org](mailto:info@himssehra.org).

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Site Description	Patient Safety & Quality Improvements	Operational Efficiencies & Cost Savings	Improvements in Throughput and Patient/Staff Satisfaction
<p>Cardiology Consultants of Philadelphia, PA</p> <ul style="list-style-type: none"> <li>• 21 sites</li> <li>• 79 cardiologists</li> </ul>		<ul style="list-style-type: none"> <li>• Transcription costs reduced to under \$100,000 from a pre-EHR cost of \$800,000, a reduction of 88%</li> <li>• Filing clerk positions cut in half, saving \$350,000</li> <li>• 3.5% reduction in malpractice insurance expense representing a \$70,000 savings</li> </ul>	
<p>Central Utah Multi-Specialty Clinic, UT</p> <p>59 physicians</p>		<ul style="list-style-type: none"> <li>• \$380,000 saved from reduced need for transcription services</li> <li>• \$221,692 saved from decreased labor and supply costs for chart maintenance and creation</li> <li>• \$248,000 saved due to reduced medical records storage space</li> <li>• \$103,059 in increased revenue from better E&amp;M coding</li> </ul>	
<p>CentraState Medical Center, NJ</p> <ul style="list-style-type: none"> <li>• 271 beds</li> <li>• 450 physicians</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced the occurrence of nosocomial pressure ulcers from 6.25% of patients to 1.80% in 2 years. (Benchmark rate of 4% is provided by the American Nurses Association National Database of Nursing Quality Indicators)</li> <li>• Reduced peripheral IV infection rate from 2% to 0%, based on infections per 1000 peripheral IV days</li> </ul>		
<p>Children's Hospital of Wisconsin, WI</p> <ul style="list-style-type: none"> <li>• Inpatient services</li> <li>• 70 specialty clinics</li> <li>• Level 1 trauma center</li> </ul>	<ul style="list-style-type: none"> <li>• Calculated a statistically significant change in pharmacist interventions before and after CPOE               <ul style="list-style-type: none"> <li>– Undesirable activities dropped from less than 23% to 15%</li> <li>– Desirable activities increased from 5% to 10%</li> <li>– Neutral activities also increased from 19% to 27%</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Decreased time from order entry to delivery of medication to floor from 3+ hours to an estimated average of 90 minutes through CPOE</li> </ul>
<p>Chester County Hospital, PA</p> <ul style="list-style-type: none"> <li>• 238 beds</li> <li>• 18,048 discharges</li> <li>• 69,499 patient days</li> </ul>	<ul style="list-style-type: none"> <li>• 100% compliance with CMS Core Measure for smoking cessation counseling (v. state-wide averages in the 80 %ile, and in the top 10% nationwide)</li> <li>• 86% compliance with CMS Core Measure for pneumovac administration (v. state average of 74%)</li> <li>• 23% reduction in MRSA cases</li> <li>• Hospitalized congestive heart failure patients receiving discharge instructions more than tripled from 23% to 77%</li> </ul>		
<p>Dekalb Medical Center, GA</p> <ul style="list-style-type: none"> <li>• 627 beds</li> <li>• 23,700 admissions</li> <li>• 209,700 outpatient visits</li> <li>• 110,761 ED visits</li> </ul>	<ul style="list-style-type: none"> <li>• 66% reduction in medication administration-related errors including wrong person, wrong drug and wrong route</li> <li>• 89% reduction in medication-related errors such as duplicate medication orders and errors of omission</li> <li>• 80% reduction in errors associated with delayed medication administration</li> <li>• Quality of patient-specific information available increased 9%</li> </ul>	<p>Streamlined ordering and results notification improved turnaround times for STAT lab orders:</p> <ul style="list-style-type: none"> <li>• 25% (97 minutes to 73 minutes) reduction in STAT HGM turnaround time</li> <li>• 35% reduction in STAT HGM orders over 60 minutes-</li> </ul>	<p>Streamlined ordering and results notification improved turnaround times for STAT lab orders:</p> <ul style="list-style-type: none"> <li>• 22% increase in patients discharged by noon</li> <li>• Satisfaction with the ordering processes for medications, labs and imaging increased 11%</li> <li>• Physicians report an 11% increase in satisfaction with the amount of time they are able to spend with patients</li> </ul>
<p>Denver Health and Hospital Authority, CO</p> <ul style="list-style-type: none"> <li>• 477 beds</li> <li>• Level 1 trauma center</li> <li>• 8 family health clinics plus 12 school-based clinics</li> </ul>			<ul style="list-style-type: none"> <li>• 54% reduction in time between specimen collection and care delivery with laboratory results availability on-line</li> <li>• 62% reduction in time between exam and care delivery with radiology results availability on-line</li> <li>• 83% reduction in time between medication order and administration with e-prescribing</li> </ul>
<p>Eden Park Pediatric Associates, PA</p> <ul style="list-style-type: none"> <li>• 4 pediatricians (DOs and MDs)</li> <li>• 2 Certified Pediatric NPs</li> <li>• 5 nurses</li> <li>• 3 medical assistants</li> <li>• 6 administrative staff</li> </ul>	<ul style="list-style-type: none"> <li>• Increased revenues from pay for performance, PQRI, HEDIS and quality incentives by more than \$40,000</li> </ul>	<ul style="list-style-type: none"> <li>• Saved an annualized \$114,000, 10.4% of operating budget, by reducing administrative staff by 25%</li> <li>• Replaced traditional transcription with electronic methods for documenting patient encounters and saved \$28,533.59 in 2004 and an estimated \$30,000 in 2005 on transcription fees</li> </ul>	

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<p>Evans Medical Group, GA</p> <ul style="list-style-type: none"> <li>• 4 physicians</li> <li>• 1500+ patients/mo</li> </ul>		<ul style="list-style-type: none"> <li>• Savings in staff time for pulling and re-filing charts and other efficiencies add up to ~\$183,000 per year</li> </ul>	
<p>Family Medicine of Port Angeles, TX</p> <ul style="list-style-type: none"> <li>• 7 physicians</li> <li>• 3 NPs</li> <li>• 5 nurses</li> <li>• 4 medical assistants</li> <li>• 13 administrative and support staff</li> </ul>	<ul style="list-style-type: none"> <li>• Went from exceeding 8 quality measures for diabetic care in June 2004 to exceeding 33 measures in June 2006</li> <li>• Increased %age of hypertension patients whose blood pressure measure was controlled from 45.4% to 77.6%, twice the national average and well above benchmark</li> </ul>		
<p>Hospital of Saint Raphael, CT</p> <ul style="list-style-type: none"> <li>• 511 beds</li> <li>• 26,579 annual inpatient visits</li> <li>• 262,387 annual outpatient visits</li> </ul>	<ul style="list-style-type: none"> <li>• Increased pharmacokinetic dosing conversion from 6% to 20% in first year</li> </ul>	<ul style="list-style-type: none"> <li>• Saved \$200,000 by boosting the IV-to-oral medication conversion rate from 20% to 50%</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced turnaround time for medications order to dispensing to less than 30 minutes, a 75% reduction</li> <li>• Boosted patient satisfaction by reducing distribution time of pain medications from 2 hours to 20 minutes</li> </ul>
<p>Massachusetts Eye Research and Surgery Institute, MA</p>		<ul style="list-style-type: none"> <li>• Saved \$1,500 a month in transcription costs</li> <li>• Saved \$80,000 in staff costs for hiring 1 billing FTE and 1 front desk FTE</li> </ul>	
<p>MedCentral Health System, OH</p> <ul style="list-style-type: none"> <li>• 351 beds</li> <li>• 2600 employees</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminated the pre-implementation practice of boarding patients – some intensive care unit patients – in the ED</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminated radiology film costs for an annual savings of \$450,000</li> <li>• Reduced ED capacity from over 100% to ~90%</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced radiology turn-around time from 24-48 hours to 6 hours</li> <li>• Reduced triage-to-discharge time from more than 5 hours to 3.2 hours</li> <li>• Reduced triage-to-admission time from almost 8 hours to 4.5 hours</li> </ul>
<p>Mid-Carolina Cardiology, NC</p> <ul style="list-style-type: none"> <li>• 25 cardiologists</li> <li>• 45,000 visits per year</li> </ul>		<ul style="list-style-type: none"> <li>• Increased revenue by 35%</li> <li>• Improved Medicare denial rate from 25-40% to less than 1%</li> <li>• Reduced transcription costs by \$72,000 in the first year</li> <li>• Reduced postage costs by \$20,000</li> </ul>	<ul style="list-style-type: none"> <li>• Increased patient throughput by 25% with no increase in staff</li> </ul>
<p>M&amp;M Orthopaedics, IL</p> <ul style="list-style-type: none"> <li>• 19 physicians, 41 staff</li> <li>• 77,000 annual visits</li> </ul>		<ul style="list-style-type: none"> <li>• Reduced medical records staff by 3 FTEs</li> <li>• Received 2% discount on malpractice insurance</li> <li>• Converted medical records storage area to revenue-producing MRI unit</li> </ul>	
<p>North Fulton Family Medicine, P.C., GA</p> <ul style="list-style-type: none"> <li>• 7 physicians, 1 nurse practitioner and 8 physicians' assistants</li> <li>• 38 additional staff</li> <li>• 51,000 annual visits</li> </ul>		<ul style="list-style-type: none"> <li>• \$775,000 saved by eliminating transcription costs</li> <li>• \$253,978 saved by eliminating paper chart tasks, automating referral letters and other administrative tasks</li> </ul>	
<p>Nevada Health Centers, Inc., NV</p> <ul style="list-style-type: none"> <li>• 26 medical and dental centers</li> </ul>		<ul style="list-style-type: none"> <li>• Eliminated commercial clearinghouse to save \$42,000 a year</li> <li>• Improved accounts receivable from 30-45 days to 9 days</li> </ul>	
<p>Oklahoma Arthritis Center, P.C., OK</p> <ul style="list-style-type: none"> <li>• 3 physicians, 3 nurses and 2 physicians' assistants</li> <li>• 23 additional staff</li> <li>• 15,600 annual visits</li> </ul>		<ul style="list-style-type: none"> <li>• \$60,000 saved by eliminating chart pull FTE</li> <li>• \$21,700 saved by reducing or eliminating paper chart-related costs</li> <li>• \$154,000 increase in provider productivity in first 18 months post-activation</li> </ul>	
<p>Oswego County OB-GYN, NY</p> <ul style="list-style-type: none"> <li>• 9 medical professionals</li> <li>• 200 encounters/day</li> <li>• 5 locations</li> </ul>		<ul style="list-style-type: none"> <li>• Increased gross collection rate from 52.2% to 56.4%</li> </ul>	<ul style="list-style-type: none"> <li>• Lab results reviewed in ~3 hours vs. 36 hours, saving physicians 60 minutes/day, allowing them to see 24 more patients/week, increasing revenues by \$56,000/year without working longer hours</li> </ul>

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<p>Professional Park Medical Services, GA</p> <ul style="list-style-type: none"> <li>• 89,000 encounters/year</li> <li>• 4 MDs and 1 nurse practitioners</li> <li>• 5 nurses and 1 medical assistant</li> </ul>		<ul style="list-style-type: none"> <li>• Increased billed charges by 101.4%</li> <li>• Decreased transcription costs by 96.5%</li> <li>• Reduced chart supply costs by 100.0%</li> <li>• Net benefit per provider per month = \$38,489</li> </ul>	
<p>Sarasota Memorial Health Care System, FL</p> <ul style="list-style-type: none"> <li>• 25,863 admissions</li> <li>• 77,085 ED visits</li> <li>• 725 physicians</li> <li>• 363,032 outpatient visits</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased charts missing allergy information from 36% to 11% by creating an electronic reminder for prescribing clinicians</li> <li>• Avoiding approximately 42 potential anti-coagulant overdoses per month by using an alert designed to notify clinicians of duplicate anticoagulant orders</li> </ul>	<ul style="list-style-type: none"> <li>• Increased annual savings of therapeutic inter-changes by \$52,750 by automating existing manual processes</li> <li>• Facilitated savings exceeding \$100,000 by applying data-driven infection control benchmarking</li> </ul>	<ul style="list-style-type: none"> <li>• Quantified annual savings of \$65,000 by increasing frequency of IV to PO switches during early stages of alert refinement</li> <li>• Quantified \$60,000 in annual savings from switching just 4 IV meds to PO (Cipro, Fluconazole, Levofloxacin and Metronidazole)</li> <li>• Improved ICU utilization through the reduction in LRM admissions from 47% to 35%</li> </ul>
<p>Spartanburg Regional Medical Center, SC</p> <ul style="list-style-type: none"> <li>• 486 beds</li> <li>• 26,054 admissions</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced overall ventilator days by 11% from 2007 to 2008</li> <li>• Avoided 378 ventilator days and 375 patient days in the ICU among patients with sepsis disease</li> </ul>		<ul style="list-style-type: none"> <li>• Decreased overall ICU patient days by 1,202 from September 2005 through December 2006</li> </ul>
<p>Springhill Medical Center, AL</p> <ul style="list-style-type: none"> <li>• 252 bed</li> <li>• 31,000 ED visits per year</li> </ul>			<ul style="list-style-type: none"> <li>• Reduced patient wait times on average by 1 hour</li> <li>• Reduce average time patients wait to be seen by a physician by 30 minutes</li> <li>• Reduced overall length of stay per patient by an average 60 minutes</li> <li>• Managed 100% increase in patient volume during Hurricane Katrina</li> <li>• 15% increase daily patient throughput with evidence-based order sets</li> </ul>
<p>St. Mary's Medical Center, WV</p> <ul style="list-style-type: none"> <li>• 358 beds</li> <li>• 14,516 admissions</li> </ul>	<ul style="list-style-type: none"> <li>• Trauma population standardized mortality ratio (SMR) now 41% better than expected</li> <li>• Low risk monitor (LRM) admissions among trauma population reduced from 20% to 8%</li> <li>• 40% improvement in overall ICU ventilator utilization since 2005</li> </ul>		<ul style="list-style-type: none"> <li>• In 2008, ICU length of stay in trauma improved to 3% better than expected</li> <li>• Aggregate LOS in the ICU for trauma patients improved from 677 ICU days to 45 ICU days</li> </ul>
<p>University Medical Center, AZ</p> <ul style="list-style-type: none"> <li>• 355 beds</li> <li>• 21,508 admissions</li> </ul>	<ul style="list-style-type: none"> <li>• Prescription errors decreased 88% <ul style="list-style-type: none"> <li>– Distribution-related errors decreased 60%</li> <li>– Transcription-related errors decreased 35%</li> <li>– Administration-related errors decreased 43%</li> </ul> </li> <li>• Overall prescriber-related ADEs on the 2 pediatric units, decreased from 7.3 per 1,000 patient days to 0.84 per 1,000 patient days</li> </ul>		
<p>Urban Health Plan, Inc. (UHP), NY</p> <ul style="list-style-type: none"> <li>• 31,000 patients</li> <li>• 176,000 visits</li> </ul>	<ul style="list-style-type: none"> <li>• Increased the %age of HIV patients practicing safe behaviors from 39.1% to 88%</li> <li>• Increased the %age of women age 42+ receiving mammograms from 24.5% to 49.4%</li> <li>• Increased the %age of diabetic patients receiving flu vaccines from 8.6% to 28.5%</li> </ul>	<ul style="list-style-type: none"> <li>• Saved \$28,620 in forms in the first year</li> <li>• Saved \$55,300 in medical records storage space</li> </ul>	
<p>5 ambulatory offices within the University of Rochester Medical Center, NY (pilot project)</p>		<ul style="list-style-type: none"> <li>• 79% reduction in chart pulls 6 months after implementation of the EHR and a 96% reduction at 2 years translates to an annual savings of \$246,934 at 2 years</li> <li>• Annual savings of \$27,872 with the elimination of new patient paper chart creation</li> <li>• 2.5 positions were avoided because of the increase in office efficiency avoiding salary expense of \$91,000</li> <li>• Reduced transcription costs for total annual savings of \$30,560</li> </ul>	
<p>20 community-based family or general internal medicine practices in 14 states using the same electronic medical record</p>	<ul style="list-style-type: none"> <li>• Participating practices improved 22.4% (from 11.3% to 33.7%) in adherence to 21 quality indicators to improve cardiovascular care</li> </ul>		