



Nicholas E. Davies Award of Excellence – Organizational Award Hard and Soft Return On Investment (ROI)

Additional information: www.himss.org/davies

History of The Davies Award

The HIMSS Nicholas E. Davies Award of Excellence recognizes excellence in the implementation and use of health information technology, specifically electronic health records (EHRs), for healthcare organizations, private practices and public health systems. Originally created by CPRI-HOST in 1994, the first three recipients of the Davies Organizational Award were recognized in 1995. Today management of the program continues under HIMSS of which CPRI-HOST merged with in 2002.

The Award honors Dr. Nicholas E. Davies, an Atlanta-based practicing physician, president-elect of the American College of Physicians, and a member of the Institute of Medicine Committee on Improving the Patient Record, when he tragically died in an airplane crash in 1991 with Senator John Tower. Dr. Davies was an accomplished physician who believed that the computer-based patient record was needed to improve patient care.

The Davies Award is based on an evaluation framework that involves a two-step process, and modeled after the Baldrige Award. Applicants are asked for assessment and documentation of their progress based on four key areas including management, functionality, technology and overall value. The application process serves as an introspective self-assessment that is valuable for planning an EHR implementation. A Committee of the applicant's peers, many former Davies recipients, independently score the applications, and then convene to determine site visit candidates.

Return on investment: A calculation used to determine whether a proposed investment is wise, and how well it will repay the investor. It is calculated as the ratio of the amount gained (taken as positive), or lost (taken as negative), relative to the basis.

---“Hard return on investment”---

Two measurements: Quantifiable returns that can be demonstrated in financial terms and process improvements that would suggest cost savings that may fit an identifiable—or measurable—metric. Three major categories: patient flow, materials and staffing reductions, and billing improvements.

---“Soft return on investment”---

Soft ROI carries just as much—and possibly more—importance to healthcare institutions, because many soft-return factors are transformative.

- Medication error reduction via decision support systems saves lives
- Access to a patient's entire healthcare history helps improve care
- Aggregated data analysis assists in focusing providers on performance enhancements

<i>Patient Safety - - “Hard and Soft ROI</i>	Nemours (‘10) – 4 hospitals	<ul style="list-style-type: none"> • 99% medication error-free rate due to the closed-loop bar-coding system in the EHR. • Rate of complete documented outpatient medication reconciliation improved from 30% of encounters to near 90%. • Electronic systems assure charges for items used during surgery are appropriately captured ; w/o increase in volume or price for items used, • OR total charges (remain) increased 30%, 1M+/quarter
<i>Patient Safety “Hard & Soft ROI</i>	Sentara Healthcare (‘10) – 8 Hospitals	<ul style="list-style-type: none"> • \$9.4 M in length of stay savings due to streamlined care processes • CPOE reduced medication order entry to administration time from 59 minutes to 4 minutes.
<i>Benefits Realization – “Hard & Soft ROI”</i>	MultiCare Health System (‘09) – 4 hospitals	<ul style="list-style-type: none"> • Total cost of ownership over a 10-year period (go live 6/1/07) \$126 million (implementation hardware, implementation software, implementation operating expenditures, implementation, personnel, facilities, ongoing capital expenditure, and ongoing operating expenditures) (\$58.4 million for implementation expenses and \$67.4 in ongoing expenses). • ROI: Improved staff efficiency, reduction in practice variation, improved reimbursement, improved “patient responsibility” cash collection, improved billing cycle process, adverse drug reaction avoidance, and hospital-acquired condition avoidance. Initial net benefit \$42.6M. ROI projections show 2012 break-even.
<i>Quality Improvement – “Hard ROI”</i>	Eastern Maine Medical Center (‘08) – 411 Beds	<ul style="list-style-type: none"> • 50% decrease in use of blood products resulting in a cost savings of \$1.2 million. • For the CMS Physician Quality Reporting Initiative (PQRI) Reporting, EMMC reports data on diabetics (HgbA1c, BP and cholesterol meeting targets), coronary artery disease patients on aspirin and fall risk assessment as ascertained from the EHR -approx \$28,000 annually
<i>Patient Safety – “Soft ROI”</i>	Allina Hospitals & Clinics (‘07) – 11 hospitals	<p>Improved nursing documentation – examples include:</p> <ul style="list-style-type: none"> ▪ 28% improvement in nutrition screening ▪ 26% improvement in documentation of response to pain intervention ▪ 17% improvement in discharge screening ▪ 3% improvement in weight documented within 24 hours
<i>Patient Safety – “Soft ROI”</i>	Generations+/Northern Manhattan Health Network (‘06) 3 hospitals	<ul style="list-style-type: none"> ▪ 40% reduction in medication errors in the first 12 months after CPOE implementation was reported. Errors due to illegible orders were virtually eliminated. Errors due to incomplete orders were reduced by 70%. ▪ Online medication administration resulted in a 66% reduction in administration errors by Nursing, with a 94% satisfaction rating by Nursing. ▪ Reduction in medication administration by almost 50%, improving nurse productivity.

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<i>Patient Flow – “Hard ROI”</i>	Citizens Memorial ('05) – 74 beds	<ul style="list-style-type: none"> ▪ 23% increase in net patient revenues after the EMR implementation, with positive patient volume influence
<i>Reducing and Reallocating Resources – “Hard ROI”</i>	Evanston Northwestern ('04) – 200+/facility	<ul style="list-style-type: none"> ▪ Savings - Increased volume with its EMR equivalent to eliminating 65 full-time employees throughout the corporation (\$4M); eliminating forms, a scheduling system, and dictation (\$1.94M)
<i>Billing Improvements – “Hard ROI”</i>	Maimonides Medical Center ('02) – 705 beds	<ul style="list-style-type: none"> ▪ '96 profits \$761,000, '01 profits \$6.1M post- implementation; 25% revenue increase from EMR, 9.4 % ROI annually. ▪ 4.84-year payback on its \$43.8 million investment
<i>Patient Safety – “Soft ROI”</i>	Maimonides Medical Center ('02) – 705 beds	<ul style="list-style-type: none"> ▪ 58% decrease in medication orders, 55% decrease in medication discrepancies ▪ Decision support feature -- “High alert medications,” confusing look-alike and sound-alike drug names, patients with similar names ▪ Identified 164,250 alerts, resulting in 82,125 prescription changes
<i>Process Improvement – “Soft ROI”</i>	University of Illinois Chicago Medical Center ('01) – 450 beds	<ul style="list-style-type: none"> ▪ 75% reduction in chart pull requests, expected to increase ▪ 12 paper forms eliminated ▪ 100% availability patient records (previously 40%)
<i>Regulatory Compliance – “Soft ROI”</i>	Ohio State University Health System ('01) – 849 beds	<ul style="list-style-type: none"> ▪ Full compliance institutional do-not-resuscitate orders and restraint orders ▪ Allows daily reports to Ohio State Pharmacy Board, controlled substances compliance