



A Framework for Evaluating Implementation and Derived Value of Ambulatory Electronic Health Records

Guidelines for Applying to the Davies Recognition Program

Nicholas E. Davies Ambulatory Care Award of Excellence January 2010

In 2003, HIMSS announced the launch of the Davies Award of Excellence for primary care practices, and in 2006 HIMSS announced that this award was extended to include all ambulatory independent physician practices.

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Purpose of the Award

The purpose of this award is to recognize the most exemplary implementations and utilizations of electronic health records in independent ambulatory practices.

Requirements to apply include the following:

- Applicants must be independent, physician-owned (not hospital-owned) ambulatory practices.
- Must have leveraged technology to impact patient-centric practice of medicine and derived value.
- Be willing to share approaches and lessons learned more broadly that are applicable to others.

It is necessary that physician practices share their strategy and approach to the project specifically addressing how the EHR:

- Was fully incorporated into daily care processes.
- Strengthened the practice’s ability to monitor and provide preventive care.
- Impacted workflow and processes.
- Augmented efficiency.

History of the Award

The Davies Award Program was originally created by CPRI-HOST in honor of Dr. Nicholas Davies, an Atlanta-based physician who was committed to improving patient care through better health information management. He was a member of the Institute of Medicine's patient record study committee. In April 1991, he was tragically killed in a plane crash with Sen. John G. Tower (D-Texas). His ideals live on through the Davies Recognition Program, now managed by HIMSS. The Davies Award Program has four tracts: Organizational, Ambulatory Care, Public Health and Community Health Organizations, which together have acknowledged more than 60 hospitals, private practices, community health organizations and public health efforts for their exemplary EHR implementations.

Award Recipient Recognition

Award winners will be invited to participate as Davies Committee members and are highly encouraged to participate for at least one year on the Davies Ambulatory Committee.

Winners of the Davies Ambulatory Care Award will be invited to give their case presentation at the Annual HIMSS Conference & Exhibition in 2011. The winners must also agree to participate in a "lessons learned" panel discussion at the conference and sign a copyright agreement to include the application paper in the conference proceedings and other HIMSS publications. HIMSS will cover travel and registration expenses within allowable budget for the application author lead (or appropriate designee).

Timeline of Events

- **January 2010:** 2010 Application criteria opens second week of the month.
- **April 30, 2010:** Davies Ambulatory Award application deadline.
- **Mid-May 2010:** Davies Ambulatory Committee reviews, scores and votes on site visit candidates.
- **June-August 2010:** Davies Ambulatory Committee conducts site visits to select applicants, who will be recognized as "Finalists".
- **September 2010:** Davies Ambulatory Committee votes on Award winners and notifies recipients.
- **Late September 2010:** 2010 Davies Ambulatory Award winners announced in HIMSS press release.
- 2010 Davies Ambulatory Award winners present their stories at the 2011 Annual HIMSS Conference & Exhibition in Orlando, Feb. 20-24, 2011.

Please visit the [Davies Ambulatory Award winning applications online](#).

How to Apply

The application process provides you and your team with an in-depth, introspective look at your practice.

The applicant is ultimately responsible for application integrity. If plagiarism is found, your application will automatically be disqualified. Your work must be original and footnoted and referenced when citations are made.

The application is a *personal* story (with footnotes or references if necessary or appropriate), such as you might submit for publication, covering the topics requested below under Guidelines. The Awards Committee independently scores submitted applications and then discusses as a full Awards Committee to select finalists and winners. Submission of an application indicates acceptance of the judges' decisions. There is no appeal process. Award winning applications also are published to highlight accomplishments and share approaches and lessons learned. The appropriate length of the completed application is 10 to 15 pages. Longer submissions are discouraged.

The Award Committee utilizes an objective scoring tool for an initial selection process as part of the independent scoring decision. A total of 165 points can be achieved for your application. The maximum number of points per section that can be awarded are included in the subject headings of the application. Organizations that are selected for a site visit are based *both* on the total points received as well as the subjective judgment and subject matter expertise of the Committee members. Those selected for site visits will be recognized as "Finalists".

Application deadline for the 2010 Award is Thursday, **April 30, 2010, at 5 p.m. (ET)**. Applications should be sent electronically as a PDF file to [David Collins](#), Director, Healthcare Information Systems, HIMSS.

Who Can Apply?

- Independent ambulatory care and specialty medical practices can apply for the award. "Independent" means physician-owned private practices, not those owned by an organizational entity. Practices that *do not* qualify include those owned by an academic medical center, IPAs, hospital systems, etc. If you are unsure if you qualify to apply, please contact [David Collins](#) via e-mail or by phone, 804-550-1619.
- The Committee highly values personalization of the application. An example of this is telling the story of how the decision was made to move forward with an

EHR, which EHR was selected, etc. (e.g., conveying this information from first-hand experience.)

- Vendors may not apply.

Application Process Essentials: Core Requirements to Apply

- All physicians and other staff in a qualifying practice need to have incorporated the EHR into routine care to improve the operation of the practice and the management of the patient care processes.
- One hundred percent of providers and clinical staff must, at the minimum, use the EHR to:
 1. Enter all patient encounters at the point of care and any patient request for data, including phone messages, medication refill requests, forms, etc.
 2. Generate prescriptions (ideal would be to see successful use of e-prescribing). Please indicate if your practice participates in e-prescribing incentive initiative offered by the Centers for Medicare and Medicaid Services (CMS), such as Medicare Improvements for Patients and Providers Act (MIPPA) or other payor-related incentive programs.
 3. Where possible place electronic orders out and/or receive electronic results. (An example would be between the practice EHR and an outside laboratory.)
 4. Using an EHR in a meaningful way should result in improvement in patient care and not just monitoring. A strong application will show both successful monitoring, as well as clear improvements in patient care that can be attributed to the use of the EHR. Show evidence of quality monitoring, which includes but are not limited to the following:
 - At the point of care, have a quality measurement system integrated into the EHR.
 - Produce quality reports within clinic or statewide or national measures, such as HPV vaccine administration.
 - Physician Quality Reporting Initiative (PQRI) participation and use of results is acceptable as evidence of quality monitoring, but responsiveness to this information resulting in improved patient care is essential.
- As the Davies Award measures success in terms of the value achieved through EHR implementation, the practice also needs to have been using the system for all providers at all locations since at least July 1 of the year previous to submitting the application. This is required in order to provide sufficient evidence of improvements in efficiency, quality, service and staff or patient satisfaction as appropriate to the local expectations that led to the investment in the first place.

Please provide answers to each of the 12 yes/no statements below to your application submission. If you have not accomplished these items, you may not be ready to submit a Davies Award application.

	Yes (Y)	No (N)
My practice has accomplished 100 percent usage of the system by all clinical staff, including providers, since July 1 of the previous year.		
All clinical staff at my practice use computers at the point of care.		
My practice was able to improve quality, safety, efficiency and/or reduce health disparities.		
My practice's implementation of an EHR allows us to engage patients and families.		
My practice's implementation of the EHR improved care coordination.		
My practice's implementation of the EHR ensures adequate privacy and security for personal healthcare information.		
Where possible, my practice utilizes e-prescribing and the EHR to generate all appropriate prescriptions.		
My implementation of the EHR has functional interfaces that allow receiving or transmitting lab results or orders.		
My practice has tested the EHR disaster recovery mode.		
My practice demonstrates efficient workflow.		
My practice's EHR implementation and usage is a model for other practices.		
My practice is willing to share our experience with others.		

What Counts as an EHR?

EHRs must be multi-functional and demonstrate different areas of use. As a guiding principle, the [Commission for Certification of Health Information Technology](#) (CCHIT) has established criteria for EHR functionality. If you have implemented an EHR within the past 24 months, your system needs to be CCHIT-certified. You and the Awards Committee may refer to CCHIT functionality as a guideline for identifying EHR capabilities.

Ambulatory Care Application

Section A: Identifiers (first page of application)

1. Name and title of submitter
2. Practice name
3. Mailing address, including city, state and ZIP code
4. Telephone and fax numbers
5. E-mail address
6. Web site address
7. Specialty
8. Number of providers (physicians and mid-levels [PAs and NPs]) in practice
9. Number of FTEs (list by staff category)
10. Number of sites/locations
11. Provide detailed information regarding any commercial/employment agreements with the vendor/s of EHR hardware/software. If no such arrangements/agreements exist, please indicate “No commercial/employment relationships with any vendor of our EHR system.”
12. Annual number of patient encounters per provider. Also, specify total number of active patients per provider.
13. List the names of the members of the EHR Implementation Team (who should be considered authors of the application).
14. Tell us your story: Provide a 1-page (maximum) story summary, as a cover letter, describing your personal journey of motive to go digital, lessons learned, and value derived in your workflow, clinical outcomes, and operations.

Submit the application by e-mail to [David Collins](#) by 5 p.m. (ET) on **April 30, 2010**.

Section B: Guidelines for Application (second to fifteenth page of application)

These guidelines present the outline and topics that must be addressed in the application paper. Be sure to answer or address each question or area in the order they are outlined here. The application criterion provides guidance for telling the Davies Committee about your optimal EHR implementation. The Committee scores each criterion requested on this application. If criteria are not addressed, the Committee will assume the applicant

was unable to meet these criteria, and will not receive credit. **Therefore, please address all criteria and provide details for implementation or the rationale for why it was not possible.** Failure to discuss application criteria will detract from the cumulative application score. For example, if lab interfaces are not addressed, then the Committee will score zero for lab interfaces. Alternatively, if there are challenges and rationale for not implementing a lab interface, please describe these challenges to receive an appropriate score. For questions, contact [David Collins](#) via e-mail or call 804-550-1619.

I. The Organization (3 points)

Provide a general description of the organization, including the culture of your organization; the sites, size and organization of the practice; the patient population it serves; and the payor mix.

II. Management: Business Objectives

1. II-1 Management: Business Objectives-Pre-implementation (6 points)

Describe why the practice decided to implement an EHR. Include specific expectations framed in a business case or used to justify the investment. Note that this will provide the framework for discussing what you have accomplished.

Detail the anticipated impact on the following:

- a. Daily operations.
- b. Fiscal vitality.
- c. Clinical outcomes.
- d. Provider, staff and patient satisfaction.
- e. Lessons learned.

2. Project Organization: Describe roles and responsibilities for managing the EHR effort, including accountability for success, and the resources assigned.

a. II-2-a Management: Project Organization-Leadership/Governance (3 points)

- i. Describe your approach and rationale for rolling out the EHR system. For example, did you do a phased-in approach or did you rollout the implementation all at once (“big bang approach”)?
- ii. Include methods used for encouraging adoption and managing change in the practice’s culture.
- iii. Describe the practice’s project governance and staffing plan, including details on individual staff, group, team or committee roles, responsibilities and time commitments.
- iv. Describe the EHR vendor’s roles and responsibilities.
- v. Implementing an EHR creates new roles and responsibilities for the practice.
 - a. Describe leadership and practice management’s efforts for establishing standards and minimizing variation in clinical care, workflow and system utilization. Examples may include standardization of data fields, variations in

templates or macros, discreet data vs. free text, and utilization across different specialties and/or different providers within the practice.

- b. Describe any other new roles that have been created. For example, who is in charge of interfaces? New forms? Whose role is it to create templates? New data fields?
- vi. Describe how you obtained IT support initially and your ongoing IT resources.
- vii. Lessons learned.

b. **II-2-b Management: Project Organization-Implementation Planning (5 points)**

- i. Readiness.
 - i. Describe the planning process for your practice's EHR implementation, including implementation goals and how they were developed and accomplished.
 - ii. Include details on the practice's initial plan and how you planned to accomplish a successful system implementation with minimal disruptions to patient care.
- iii. Lessons learned.

3. **II-3 Management: Project Organization: Training (5 points)**

Describe the model used for supporting users during the initial implementation and post-implementation phases.

- a. Detail your training methods and thought process that went into your training approach. Please comment on how you trained specific groups, such as nurses, physicians and front office staff.
- b. Describe the practice's initial and current training, education and support strategy.
- c. Include details on how, when and where training was accomplished.
- d. Lessons learned.

4. **II-4 Management: Project Organization-Implementation (8 points)**

- a. Explain your strategy for the transition to the EHR. How was this strategy developed, i.e. vendor suggested, etc.? What systems or models did you develop to support the practice during the transition or phase-in process? For example, how did your practice enter historical clinical data? Did you key in the data, scan old records or both? When did you enter the data, during the first visit on the EHR or the day before?
- b. Describe the successes and failures of your practice's implementation process.
- c. List lessons learned through experience that could have benefited the effort from the outset.
- d. Describe in detail the main areas that were or were not successful and how they affected or changed your strategy.
- e. Include the process used for tracking the estimated and actual implementation schedule.

- f. Discuss how your practice encouraged broad participation in the EHR implementation planning and process. Discuss specific challenges and how you overcame them.
- g. Describe how you measured the success of your EHR implementation plan and the training of your staff.
- h. Describe the model used for supporting users during post-implementation phases.
- i. Lessons learned.

5. II-5 Management: Project Organization-Information Technology Support (3 points) IT Support

- a. Detail who was made responsible for the integration or set-up of interfaces and testing. What interfaces were initially chosen, and why?
- b. Describe how your practice accomplished purchasing and installing the hardware required to support the EHR.
- c. Describe how you monitored and evaluated participants and how they fulfilled their roles and responsibilities. For example, who was responsible for customizing the clinical content of the EHR to the needs of your practice? Was it your EHR vendor, your staff or a team effort?
- d. How did the practice find IT partners and/or support? Was your IT support provided in-house or outsourced? What were the hardware and other costs? Describe your successes and lessons learned.
- e. Did the actual IT cost exceed initial expectations?
- f. Lessons learned.

6. II-6 Management: Project Organization-Disaster Recovery (6 points)

- a. Provide as an Appendix your policy (not the entire manual) for disaster recovery from your HIPAA Security Rule Manual. Please reference the following section of the [HIMSS Privacy & Security Toolkit](#) which clarifies the *HIPAA Security Rule Standard* for guidance.
 - Contingency Plan (section) 164.308(a)(7) specifies the practice is required to have: a data backup plan, a disaster recovery plan and an emergency mode operation plan.
 - Testing and revision procedure (of such plan) and applications and data criticality analysis (needed as part of any backup).
- b. Describe who last tested your disaster recovery plan and when, and if a complete system restore was performed. This is an essential component of the application and site visit evaluation.
- c. Describe what you confirmed and/or learned from this test.
- d. Lessons learned.

III. Technology Purchasing: Vendor/System Selection

1. III-1 Technology: Purchase Selection (6 points) Outline your selection process, starting with how you obtained your initial list of products to evaluate.

- a. Describe any criteria or selection tools you used in the selection and evaluation process:
 - For example, demonstration scripts, demos of the products.
 - b. Identify the product(s) your organization selected.
 - i. Identify the final number and/or products that were demonstrated.
 - ii. Include reasons vendors may have been automatically excluded or included (i.e., functionality, risk, technical requirements).
 - iii. Specifically address the rationale behind the selection (i.e., the ability to improve workflow, improve patient care, improve provider or staff satisfaction or have a net financially positive effect.)
 - c. Identify the decision makers in the selection process and their specific roles.
 - d. Outline the timeline, budget and work involved in the selection of your software.
 - e. What had the greatest non-financial impact on your decision to select one vendor over another?
 - Some considerations may include site visits, informal discussions with current users and attendance at user-group meetings.
 - f. Lessons learned.
2. **III-2 Technology: Interfaces (6 points)** Briefly describe the technology, including interfaces with other systems and the user interfaces employed, and how this played a part in the software selection process.
- a. In-house devices used in your specialty (i.e., spirometry, ultrasound, digital x-ray, spot vitals, etc.)
 - b. External clinical services, such as laboratories, pathology, radiology, pharmacies, etc.
 - c. Was all the functionality in place at the time of purchase or were certain features promised in future upgrades?
 - d. Lessons learned.

IV. Functionality

The Davies Award Committee is not interested in receiving a checklist of your EHR's functionality. The Davies Ambulatory Committee is interested to know the following about the functionality of your EHR:

1. **IV-1 Functionality: In Use (10 points)** What functionality is being utilized? Has it improved care and/or impact cost savings or revenue generation? Include lessons learned.
2. **IV-2 Functionality: Not In Use (10 points)** What functionality have you specifically chosen *not* to implement? Share lessons learned on how that decision was made.

V. Value

1. Success in Meeting Objectives.

a. V-1-a Value: Success in Meeting Business Objectives (10 points)

Using the Business Objectives (discussed above) to organize the discussion, review the extent to which your practice has achieved the expectations it set for the EHR system. Formal research is ideal, but not required. Include lessons learned.

b. V-1-b Value: Success in Meeting Clinical Objectives (15 points)

The essence of the Davies Award is seeing systems used to improve patient care. Utilize the best qualitative and quantitative evidence available in the following areas:

- i. Clinical objectives: Were there demonstrable improvements in patient care? Describe, and if possible, include metrics before and after improvements attributable to the use of the electronic systems.
- ii. Other objectives:
 - a. Provider satisfaction: Time gained realized to a more balanced life (e.g., are you or your staff leaving the office earlier or spending less time on work in “off patient” hours?)
 - b. Patient satisfaction: Have patient wait-times been reduced? Do they feel as if their information is better managed and maintained?
 - c. Descriptions of transformed processes (i.e., prescription refills, phone queries, etc.)
 - d. Measures of quality, process efficiency, productivity, customer service, etc.
 - e. Describe how your EHR implementation aligns with CMS’s definition of meaningful use as currently understood. Please explain what you are presently doing or have done to meet CMS’ proposed criteria for meaningful use. Meeting CMS's definition of meaningful use does not guarantee Award status. We believe that the meaningful use criteria are of value to pursue regardless of intent to take advantage of incentives.

Visit [HIMSS Web site, www.himss.org/economicstimulus](http://www.himss.org/economicstimulus) for up-to-date analysis and information regarding ARRA. Additionally, view this link

http://www.federalregister.gov/OFRUpload/OFRData/2009-31217_PI.pdf to the latest [proposed rule for meaningful use](#).

iii. Lessons learned

2. V-2 Value: Improvements (10 points). Since the implementation of your EHR, please describe your ongoing areas of improvement. Include lessons learned.

3. **V-3 Value: External Networking (10 points)**. Due to the importance of information sharing, networking with entities outside of the practice is more prevalent today. What connections to the community does the practice have in place (e.g., labs, x-rays, regional health information organization [RHIO] activity; or other practices, hospitals, payors, other healthcare continuum partners; or reporting for immunization registries, pay for performance measures or other quality reporting? Include lessons learned.

4. **V-4 Value: Costs and Benefits (10 points)**

- a. Regarding implementation costs and benefits, detail how you funded the purchase and implementation of your EHR (i.e., self-funded, grants, outside funding sources).
- b. How many dollars were allocated? How it was decided to spend these dollars? What *percent* of your total budget was dedicated to the implementation? Describe the baseline, i.e., what percentage of the infrastructure was already in place? In the Appendix section there are directions for creating an ROI table. Please follow this outline and provide a table as an Appendix.
- c. Any financial benefits realized to date that offset that investment (e.g., decreased or omitted chart pulls, ability to participate in payor pay-for-performance initiatives).
- d. What would you do differently in allocating funds throughout the implementation (e.g., vendor suggestions vs. what was discovered as best fit for the practice)?
- e. Lessons learned.

VI. Lessons Learned

This is an opportunity to summarize what steps you took in the selection and implementation that allowed for your success. Each section of the application should have a lessons learned portion that is summarized and brought together here. [Please provide two to three paragraphs for your description.]

- 1. **VI-1 Lessons Learned: Success Factors (10 points)** To what do you attribute your success?
- 2. **VI-2 Lessons Learned: Hindsight (10 points)** In hindsight, what do you wish you had known before you started?
- 3. **VI-3 Lessons Learned: Advice (10 points)** Many other ambulatory practices hope to implement EHRs and need as much advice as they can gather. Share your thoughts on what is important:
 - a. In organizing the effort, in purchasing an EHR, etc.
 - b. In achieving the necessary technical performance.

VII. Future Plans.

As health IT implementations are constantly evolving based on the needs of the practice and changes in the industry, there is no definitive “stop” for an implementation.

1. **VII-1 Future Plans: Expansion (6 points)** Describe what the practice is planning to expand to next (i.e., what additional functionality will be added, how will it be selected and why?)

2. **VII-2 Future Plans: Keeping Current and Connecting to Others (5 points)** Because of rapid changes in technology describe plans to keep current and facilitate a continuum of care record. Does the practice have plans to connect to and share information with entities outside of the practice, such as a RHIO, disease or immunization registry, pay-for-performance reporting, etc.?

APPENDIX: Return on Investment (ROI) Table

ROI Table to be completed, as described in the Value section above, specifically, V4b.

Please look through the various cost categories and fill in the dollar amounts paid for your EHR.

Feel free to customize the tables below to better communicate your expenditures and returns. Please add items that may not be listed in the tables.

There may have been some time since the implementation of the EHR and this may make filling out an investment table more difficult, which is understood, but you are expected to provide best effort.

INVESTMENT**I. EHR SOFTWARE**

a. EHR software (licenses for providers, users and enterprise).	
b. EHR-related software (scanning, voice recognition, report writer, etc.)	
c. EHR software billed yearly (e-prescribing, CPT/ICD, medical necessity, etc.)	
d. Interfaces (labs, PM system, devices, hospitals, etc.)	
e. Yearly EHR and EHR-related software maintenance/support.	

II. HARDWARE

a. Local servers (for EHR, images, etc.)	
b. EHR user devices (PCs, tablets, laptops, scanners, upgrades to existing PCs, etc.)	
c. Networking equipment (racks, switches, wireless, cabling, UPS, generator, etc.)	
d. External connectivity (internet, T1 lines, etc.)	
e. External services (hosting, disaster recovery, data center, etc.)	

III. ADDITIONAL COSTS

a. Training costs for EHR and EHR-related software (I.A. and I.B.)	
b. Ancillary costs related to training (travel, temporary classrooms, etc.)	
c. Technical support.	
d. Server software (SQL, Windows, backup software, faxing software, etc.)	
e. Additional personnel costs directly related to the EHR	
f. One time implementation costs (scanning, temporary services, etc.)	

RETURNS

I.

Paper Chart Cost savings

a. Reduction in Transcription costs	
b. Malpractice reductions	
c. Reduction in paper chart supplies	
d. Reduced need for paper chart space and storage	

II.

Staffing savings

a. Reduction in overtime hours paid	
b. Reduction in staff to provider ratio	
c. Reduction in billing costs	

III.

Increased Collections

a. Increased Collections for Providers	
b. Increased Procedure Charges	
c. PQRI Incentives	
d. Grants or other pay for performance moneys	
e. Change in level of service billing before and after implementation	
f. Reduction in AR relative to monthly billings	