Background: The National Hospital Quality Initiative, endorsed by the Centers for Medicare and Medicaid Services and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), has identified heart failure (HF) as a focus area for quality improvement. HF is a chronic, progressive medical condition that has shown an epidemic increase in prevalence over the last 20 years. St. John Hospital and Medical Center (SJH&MC) has identified the HF core measures as an area for improvement. The Continuing Medical Education (CME) program at SJH&MC has collaborated with the Quality Assurance (QA) department to design a Performance Improvement–Continuing Medical Education (PI-CME) initiative that will serve to both improve compliance with the HF core measures and provide a valuable learning opportunity for physicians. Participation in this PI-CME activity will allow physicians to receive AMA PRA category 1 credit™ as well as meet the JCAHO credentialing requirement in the general competency area of Practice-Based Learning and Improvement (PBLI).

Method: The design of the PI-CME initiative for HF involved several key steps: 1) developing a PI-CME plan to address improvement in HF core measure compliance; 2) meeting with key physicians to discuss the concepts of PI-CME and to obtain buy-in; 3) working closely with the QA department to gather relevant baseline and postimplementation data; 4) data analysis and dissemination of findings to participating physicians; and 5) reflective learning based on the findings and re-evaluation for purposes of further quality improvement. The CME Specialist, the Director of Medical Education, and the QA Department met to discuss the strategies in place to address the performance gap in the HF core measures at SJH&MC, and how this performance gap might serve as the basis for a physician PI-CME initiative. The PI-CME initiative was designed based upon the QA Department’s current mechanism of identifying physicians who have instances of noncompliance with core measures. A pilot group of physicians was identified to participate in the PI-CME activity. With the PI-CME plan developed, meetings with key physicians will be held to discuss the concepts, requirements, and benefits of PI-CME and to obtain buy-in. The initiative will be evaluated by comparing preintervention compliance rates with postimplementation compliance rates within the targeted study group and hospital-wide. Data will be disseminated to participating physicians for the purposes of reflective learning.

Conclusion: This initiative will provide a mechanism (PI-CME) for quality improvement that will complement a rule indicator approach currently in use. We believe PI-CME has the important added dimensions of providing participating physicians CME credit, providing PBLI activity applicable toward hospital re-credentialing, and engaging the physician in a more meaningful educational opportunity that involves both active and reflective learning as part of the quality improvement initiative.
St. John Hospital and Medical Center (SJH&MC) is a 600-bed academic medical center serving the metropolitan Detroit area. SJH&MC is recognized as a “Top 100” hospital for heart care in the United States and is continuously striving to improve its compliance with the HF core measures. From consideration of the various methods of educating physicians and other caregivers in order to improve performance on these measures, it became apparent that the HF core measures would be an ideal subject for a model Performance Improvement-Continuing Medical Education (PI-CME) initiative.

The American Medical Association (AMA) describes PI-CME activities as structured, long-term processes by which a physician or a group of physicians can:

- Learn about specific performance measures;
- Retrospectively assess their practice;
- Apply these measures prospectively over a useful interval; and
- Re-evaluate their performance [6].

The AMA guidelines require that physicians participating in PI-CME activities must integrate 3 stages to develop a complete PI-CME activity:

1. **Stage A**: Learning from current practice performance assessment—which includes assessing current practice using identified performance measures, either through chart review or another mechanism;
2. **Stage B**: Learning from the application of PI-CME to patient care—which includes implementing an intervention based on the performance measures selected in Stage A, using suitable tracking tools; and
3. **Stage C**: Learning from the evaluation of the PI-CME effort—which includes re-evaluating and reflecting upon performance in practice (Stage B), by comparing to the assessment done in Stage A. This stage also includes summarizing any practice, process, and/or outcome changes that resulted from the activity [6].

Physicians may receive varying levels of **AMA PRA Category I credit™** based upon the completion of one, some, or all of the stages of the PI-CME activity. In addition, participation in a PI-CME activity will help physicians meet the JCAHO credentialing requirement in the general competency area of Practice-Based Learning and Improvement (PBLI) [7].

The purpose of this paper is to describe the development of a model PI-CME activity based upon the goal of improving hospital-wide performance on the core HF measures at SJH&MC. This approach will serve to provide physicians with an opportunity for active and reflective learning, be useful in earning CME credits and in the credentialing process, and ultimately improve quality of care.

**METHODS**

The design of the PI-CME initiative for HF requires several key steps:

- Developing a PI-CME plan, based upon the existing QA initiatives for the HF core measures;
- Meeting with key physicians to discuss the concepts and value of PI-CME activities and attaining their buy-in;
- Working closely with the QA department to gather relevant baseline data and postimplementation data;
- Analyzing data and disseminating findings to participating physicians; and
- Reflecting on the process and results and re-evaluating the PI-CME activity for purposes of further quality improvement.

1. **Development of the PI-CME Activity**

Routine data collection on quality indicators demonstrated that the performance on the HF core measures at SJH&MC could be improved. The CME Specialist, the Director of Medical Education, and the QA Department met to discuss the strategies in place to address the performance gap in the HF core measures at SJH&MC and how this performance gap might serve as the basis for a physician PI-CME initiative.

The current strategy for addressing noncompliance with the HF core measures is based upon the concept of rule indicators. Rule indicators, based on standards or generally recognized professional guidelines for medical practice, provide a mechanism to give practitioners feedback when a rule is violated.

SJCH&MC defined compliance with HF core measures using a rule indicator approach. Using chart review to identify when a HF rule indicator is broken, an educational letter is sent directly to the physician. The physician is not expected to respond to the letter, but to use the letter as a self-corrective tool. If a physician is found to consistently fall below the set standards of performance, more intensive follow-up and education is provided.

The PI-CME initiative, on the other hand, involves building upon the ongoing QA approach by involving physicians in understanding their performance gap (AMA Stage A); using their self-directed participation in the PI-CME project, along with their responsiveness to the rule indicator methodology, as opportunities for learning (AMA Stage B); and measuring changes in compliance with core measures and using this activity as an opportunity for reflective learning (AMA Stage C).

We identified selected physicians to participate in this...
model PI-CME activity. The benefits of physician participation in this initiative are the ability to earn CME credits and an opportunity to demonstrate proficiency in the core competency area of PBLI, as required by JCAHO for credentialing.

2. Attaining Buy-In from Key Physicians
After determining that the HF action plan was worthwhile for a physician PI-CME initiative, the next step is to present the PI-CME initiative to key physicians. These meetings will address the concepts and values of PI-CME activities and will emphasize the ability of physicians to use this opportunity to obtain CME credit and to demonstrate PBLI competency for credentialing. The meetings will be an opportunity to discuss the evolution of CME from the traditional lecture approach to an actively engaged problem-based approach that fosters both active and reflective learning. Obtaining consensus that physician participation in the PI-CME activity will be educational and valuable to the individual physician and the hospital is necessary for program success and a goal for PI-CME.

3. Gathering Relevant Baseline and Postintervention Data for Program Evaluation
Baseline data collection has been ongoing as part of normal quality assurance/improvement activities and did not need to be developed for this project. The CME specialist will work collaboratively with the QA department on data collection for purposes of evaluation of the PI-CME activity. An initial meeting will be conducted by the CME unit and the QA department with the physicians in the pilot group to discuss the HF index and its components, the stages of a PI-CME project, and address any questions of the physician participants.

After the HF project has been started, monthly emails will be sent to the physicians to answer any questions or concerns. At the completion of the HF project, a final meeting will be held with the physicians to review their Stage C findings and reflections, answer any final questions, and obtain feedback on how to improve the mechanics of future PI-CME activities.

4. Analyzing Data and Disseminating Findings
Using data collected by the QA department, the hospital’s medical research department will assist with data analysis. The baseline core measure compliance rates will be compared with the postimplementation core compliance rates to determine what changes have occurred. These results will then be disseminated to the participating physicians to serve as necessary information for reflective learning.

In addition to looking at changes in compliance in the targeted group of physicians, changes in compliance over the same period will be analyzed hospital-wide. By comparing the change in performance in the pilot group with the hospital-wide change in performance over the specified time period, we will be able to determine the effect of the intervention beyond any simple temporal change. Given that physicians work closely with each other and share information, it is expected that there may be improved hospital-wide performance resulting from the experience of the physicians in the pilot group.

5. Reflecting and Re-evaluating for Further Quality Improvement
As members of the pilot group, individual physicians will be provided an excellent opportunity to evaluate their own behaviors and to reflect upon what they have learned by being a part of the process. This reflective learning process may not only help physicians in their care of patients with HF, but also may trigger reflection and behavior change in other areas of practice or in patients presenting with other conditions. For the hospital and health system, the demonstration of a successful model PI-CME activity may promote the formulation of similar PI-CME activities for other health care quality measures. Problems and pitfalls that may arise during the process will provide opportunities to refine the PI-CME activity and to continuously improve how we care for patients and measure the quality of that care.

DISCUSSION
In this paper, we have identified a PI-CME activity that is designed to address an area of patient care for improvement. SJH&MC physicians will be provided with a unique learning experience by participating in this PI-CME activity. Instead of sitting in the usual lecture hall, listening to presentations about HF, core measures, and quality of care, physicians will be actively involved in understanding the problem, participating in an action plan designed to address the problem, evaluating the results of the plan, and using this experience to reflect upon their practice behaviors. The active learner approach with opportunity for reflection and re-evaluation should provide physicians a more meaningful continuing education experience that will not only relate to HF, but to other areas of practice and patient groups as well.

For the CME professional, the shift from the traditional lecture-based programs to active participatory learning is both challenging and exciting. CME is a rapidly evolving field, and CME professionals are required to continually learn new requirements and processes. In 2006, the Accreditation Council for Continuing Medical Education (ACCME) released its Updated Criteria for Continuing Medical Education. Accredited CME providers are now required to understand their physician learners, to recognize that performance and outcomes
may need to be improved, and to integrate CME into the process of improving professional practice. A goal for CME professionals is to provide CME for physicians that will lead to improvements in the quality of patient care. The Updated Criteria call for practice-based learning, identifying professional gaps, changing physician competence and performance, and evaluating effectiveness.

CME professionals will now become more involved with the hospital Quality Assurance activities—an entirely new horizon. This first initiative, attempting to launch PI-CME in HF, has led to new working relationships with the hospital QA Department and new collaborations to understand the performance gap and to brainstorm methods of improving performance on the core measures. The addition of PI-CME to the CME armamentarium will allow the CME professional to learn new approaches to education, expand skills, and develop new working relationships. Although these changes may be difficult at first, the reward in terms of personal growth, improved physician education, and, ultimately, improvement in patient care will make the process both gratifying and valuable.

CONCLUSIONS

HF is a serious and costly medical condition that is highly prevalent in the US population today. The prevalence of HF and its associated costs will only increase with the aging of the population. We have described an initiative that will provide a mechanism (PI-CME) for quality improvement in the area of HF based upon a rule indicator approach that is currently in use. We believe PI-CME has the important added dimensions of providing participating physicians CME credit, providing PBLI activity applicable toward hospital re-credentialing, and engaging the physician in a more meaningful educational opportunity that involves both active and reflective learning as part of the quality improvement initiative. The results of our experience with this initiative will serve as a model for the design of additional PI-CME projects that will benefit physicians, the health system, and ultimately, our patients.

REFERENCES