PROFESSIONAL DEVELOPMENT

How to Use *The Core Competencies in Hospital Medicine: A Framework for Curriculum Development*

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BACKGROUND: The seminal article that coined the term *hospitalist,* published in 1996, attributed the role of the hospitalist to enhancing throughput and cost reduction, primarily through reduction in length of stay, accomplished by having a dedicated clinician on site in the hospital. Since that time the role of the hospitalist has evolved, and hospitalists are being called upon to demonstrate that they actually improve quality of care and the education of the next generation of physicians. A companion article in this issue describes in detail the rationale for the development of the Core Competencies document and the methods by which it was created.

METHODS: Specific cases that hospitalists may encounter in their daily practice are used to illustrate how the Core Competencies can be applied to curriculum development. The cases illustrate 1) a specific problem and the need for improvement; 2) a needs assessment of the targeted learners (hospitalists and clinicians in training); 3) goals and specific measurable objectives; 4) educational strategies using the competencies to provide structure and guidance; 5) implementation (applying competencies to a variety of training opportunities and curricula); 6) evaluation and feedback; and 7) remaining questions and the need for additional research.

RESULTS: This article illustrates how to utilize *The Core Competencies in Hospital Medicine* to educate trainees and faculty, to prioritize educational scholarship and research strategies, and thus to improve the care of our patients.

CONCLUSIONS: Medical educators should compare their learning objectives to the Core Competencies to ensure that their trainees have achieved competency to practice hospital medicine and improve the hospital setting. *Journal of Hospital Medicine* 2006;1:57–67. © 2006 Society of Hospital Medicine.

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The seminal article that coined the term *hospitalist,* in 1996, attributed the role of the hospitalist to enhancing throughput and cost reduction, primarily through reduction in length of stay, accomplished by having a dedicated clinician on site in the hospital.[1] Since that time the role of the hospitalist has evolved to address the needs of multiple stakeholders at a time when traditional residency programs in inpatient adult medicine do not adequately train physicians to become effective agents of change in complex and potentially unsafe hospital systems. Continuing the trend of pediatrics, obstetrics, gynecology, and geriatrics, hospitalists have emerged as a distinct group of physicians who fill a needed clinical niche and are demonstrating the benefits of bringing a unique role and skill sets to the general hospital ward.[2]

The eligibility requirements for certification by the American

Board of Internal Medicine specify that the discipline "must 1) have a distinct and unique body of knowledge, 2) have clinical applicability sufficient to support a distinct clinical practice, 3) generate new information and research, 4) require a minimum training period of 12 months, and 5) have a substantial number of trainees and training programs nationwide."[3] The Society of Hospital Medicine (SHM), the national professional organization of hospitalists, commissioned a task force to develop *The Core Competencies in Hospital Medicine: A Framework for Curriculum Development* (referred to from here on as the Core Competencies) to standardize the expectations of practicing hospitalists, serve as a foundation for curricula and other professional development experiences, prioritize educational scholarship and research strategies, and assess the adequacy and improvement opportunities for current training and accreditation of hospital medicine physicians.[4] The preceding companion article "The Core Competencies in Hospital Medicine: Development and Methodology," describes in detail the rationale for the development of the Core Competencies and the methods by which the document was created.[5]

PURPOSE

The purpose of this article is to illustrate how curriculum developers can apply the *Core Competencies in Hospital Medicine* to educate trainees and faculty, to prioritize educational scholarship and research strategies, and thus to improve the care of our patients.

TARGET AUDIENCE

The Core Competencies specifically targets directors of continuing medical education (CME), hospitalist programs and fellowships, residency programs, and medical school internal medicine clerkships. It is also intended for health educators, hospital administrators, potential employers, policy makers, and agencies funding quality-improvement initiatives in the hospital setting. For residency program directors and clerkship directors, the chapters can guide in the development of curricula for inpatient medicine rotations or in meeting the Accreditation Council on Graduate Medical Education's Outcomes Project. For directors developing medical education curricula, *The Core Competencies in Hospital Medicine* can serve as a template for CME. For hospitalists, hospital administrators, and potential employers, the Core Competencies can be used to as the starting point in local program development and as a resource for refining the skills of all hospitalists, even very experienced practicing clinicians.

DEFINITION OF CORE COMPETENCIES IN HOSPITAL MEDICINE

The Core Competencies in Hospital Medicine provides a framework for curricular development based on a shared understanding of the essential knowledge, skills, and attitudes expected of physicians working as hospitalists. The development process will be ongoing, with revisions reflecting the evolving specialty of hospital medicine, the needs of practicing hospitalists, and feedback from users of the Core Competencies.

PROBLEM IDENTIFICATION AND GENERAL NEEDS ASSESSMENT

Delivery of health care has large gaps compared to ideal performance. Since the publication by the Institute of Medicine of *To Err Is Human,* in 1999, multiple agencies including the American Hospital Association, the National Quality Forum, and the U.S. Agency for Health Care Research and Quality (AHRQ) have reported on the incidence of medical errors in U.S. hospitals.[6,7] Recognizing that medical errors represent a major health concern in the United States, the Joint Commission on the Accreditation of Health Care Organizations (JCAHO) now requires patient safety initiatives for hospital accreditation.[8] Problem-based learning and improvement and systems based practice are now required competencies in medical residency curricula by the Accreditation Council for Graduate Medical Education (ACGME) and these requirements have led to the development of continuous quality techniques for preventing errors and a variety of patient safety initiatives.[9]

In 2002 the SHM recognized the need for identifying a distinct set of competencies in hospital medicine. The published competencies highlight the current gap in training of hospitalists and the imperative for revising curricula relating to inpatient care, hospital systems, and teaching.[4] With adequate training and preparation, hospitalists can take the lead in implementing systems for best practices from admission through discharge and care transition, and they can direct the development of a safer, more patient-centered, and cost-efficient culture.

By defining the role of the hospitalist, the Core Competencies reflects the view of the SHM about

what is possible but does not suggest how a training program might be modified to achieve desired outcomes or provide any content, resources, or teaching strategies. It will be up to curriculum developers to determine the scope of cognitive, psychomotor, and affective objectives that targeted learners—hospitalists, residents, and other members of the multidisciplinary team—should be required to acquire through lectures, discussions, syllabus material, clinical experience, and other venues. We agree with a broader definition of the term *curriculum* for graduate medical education, one that "goes beyond curriculum as a plan and takes into account the learners' experiences, both planned and unplanned" in the hospital setting.[10] "In contrast to the technologic theory of curriculum, in which lists of knowledge and skills represent final destinations, in the experiential model of curriculum, the lists provide only points of departure."[11] The goal of the Core Competencies is to facilitate curriculum development using complex teaching environments as building blocks through which learning can occur.

CORE COMPETENCIES FOR HOSPITALISTS: OVERVIEW

The Core Competencies in Hospital Medicine is the first published competency-based framework for professional development of hospitalists and provides the basis for accreditation in hospital medicine.[12] The Core Competencies is organized into three sections—Clinical Conditions, Procedures, and Healthcare Systems. The supplement intentionally does not focus on content; rather, specific competencies describe unambiguous, measurable learning objectives. Each chapter can be used as a stand-alone chapter to develop training and curricula for a particular topic area. Each chapter divides competencies into three domains of educational outcomes: cognitive (knowledge), affective (attitudes), and psychomotor (skills). Each domain has defined levels of proficiency going from knowledge, the lowest level, to evaluation, the highest.[12,13] A specific level of proficiency is articulated in the competencies through careful selection of corresponding action verbs, which clearly indicate how mastery could be assessed (see Table 1).

In addition to specific competencies in these commonly accepted learning domains, the Clinical Conditions and Procedure sections of the Core Competencies articulate the proficiencies that hospitalists should possess in systems organization and improvement. The clinical topics were selected to set expectations of leading or participating in system improvements specific to a clinical area and

TABLE 1
Establishing Proficiency within a Competency

GI Bleed Example—Levels of Proficiency in the Cognitive Domain (Knowledge)

UNDERSTAND the advantages and disadvantages of medical, endoscopic, and surgical treatments for patients with upper and lower GI bleeding	The first option, use of the verb *understand* gives little insight into level of proficiency. A patient could read a list on a pamphlet and truthfully claim to have achieved "understanding" of the advantages of each approach. An experienced gastroenterologist could make the same claim. Yet the two obviously differ in their level of comprehension.
LIST the advantages and disadvantages of medical, endoscopic, and surgical treatments for patients with upper and lower GI bleeding	In the second option, use of the verb *list* indicates that the expectation for a learner is to be able to literally make a quick list of advantages, perhaps merely regurgitating what was read in a text, indicating the lowest level of learning outcome, or *knowledge.*
COMPARE the advantages and disadvantages of medical, endoscopic, and surgical treatments for patients with upper and lower GI bleeding	In this option, use of the verb *compare* indicates that a clinician must be able to grasp the meaning of material and consider all options, indicating a higher level of learning outcome, or *comprehension.*

Although the differences in these statements may seem subtle, they are essential to discerning a level of proficiency. Verbs that convey higher levels of proficiency in the cognitive domain include:
- *Apply,* or the ability to use learned material in new and concrete situations,
- *Analyze,* which requires an understanding of both content and its organizational structure,
- *Synthesize,* or the ability to create new patterns of structures, and
- *Evaluate,* or the ability to judge the value of material (statement, research) for a given purpose, the highest level.

Learning outcomes in the evaluation category are the highest because they contain elements of all other categories plus conscious value judgments based on clearly defined criteria.[13]

Each competency in the Core Competencies was crafted to indicate the relevant concept, its level of proficiency, and how mastery could be evaluated. The teaching processes and learning experiences that must take place to achieve competency is left to the design of the curriculum developers and instructors.

TABLE 2
First Case Example

A Common Problem That Seemed to Defy the Right Approach to Solving It

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A 52-year-old female, status posthysterectomy for endometrial cancer, presents with shortness of breath.
- High pretest probability of pulmonary embolism (PE): suggestive symptoms, major risk factors, and omission of appropriate perioperative venous thromboembolism (VTE) prophylaxis.
- Her presentation complicated by emesis, hypotension, hypoxia after presumed aspiration, and likely PE.
- Chest computed tomography (CT), PE protocol, reportedly negative for PE but positive for multilobar pneumonia.
- Small bowel obstruction, 51% bandemia, and acute renal failure.
- Subsequent emergency incarcerated hernia repair without VTE prophylaxis.
She is transferred to general medicine for hemodynamic monitoring and evaluation of hemoptysis and elevated troponin, presumably caused by a PE.
- Transthoracic echocardiogram notable for right ventricular (RV) dilation and pulmonary hypertension.
- Review of two chest CT scans, one PE protocol significant for an enlarged right ventricle and multilobar pneumonia but no PE.
- Absence of confirmatory evidence of suspected PE by subsequent extensive testing, including beta-natriuretic peptide (BNP) level, repeat PE protocol CT, repeat transthoracic echocardiogram, bilateral lower extremity ultrasound, persantine positron emission tomography (PET) scan, cardiac magnetic resonance imaging (MRI), and right heart catheterization.
- Discharge plan: home on warfarin.
- Repetitive testing did not alter management.
Retrospective review: Using the enlarged right atrium and ventricle as the radiographic clue to look more closely for PE, an experienced chest radiologist was able to diagnose the presence of acute PE on the first chest CT.

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to prevent predictable complications of acute illness. Competencies in the Systems Organization and Improvement section indicate mastery of multiple competencies across categories. The Core Competencies describes how the hospitalist approach facilitates coordination among all participants within the hospital system (clinical and nonclinical) and effects system changes that improve patient care processes. At the same time, the statements indicate a range of involvement from participation to leadership. For example, "lead, coordination or participate in" acknowledges the unique needs of different practice settings and suggests a potential professional evolution. The Systems Organization and Improvement competencies of each clinical and procedure chapter strive to capture the essence of hospitalists whose goals are to improve patient outcomes for a specific population of patients. Hospitalists do not solely focus on the care of the patient with x disease, but rather develop systems to provide the best and most efficient care for *all* patients with x disease, successfully transitioning these patients to outpatient care and avoiding readmission.

The third section of chapters in the Core Competencies, Healthcare Systems, distinguishes a hospitalist from others working in the inpatient setting whether practicing at academic medical centers, community hospitals, teaching hospitals, managed-care settings, or for-profit settings. The Healthcare Systems section identifies the integral components of the successful practice of hospital medicine and mastery of multiple competencies. This section highlights how hospitalists can facilitate coordination among all care providers within the hospital and with outpatient care providers. Hospitalists can effect system changes that improve complex care processes. It is likely that additional work experience and training beyond residency are required to attain global proficiency in the care of hospital medicine patients.

HOW TO USE THE CORE COMPETENCIES TO DEVELOP A CURRICULUM

The whole document, three sections and 51 chapters, develops expectations about the role of the hospitalist. Proficiency can be acquired through multiple means and should match the needs of the targeted learners in order to develop and maintain the necessary level of performance within the discipline of hospital medicine. Specific cases that hospitalists may encounter in their daily practice are used to illustrate how the Core Competencies can be applied to curriculum development.

The cases will employ the following six-step approach described in *Curriculum Development in Medical Education*[14]:

1. A problem and a need for improvement (the actual case and quality gap)
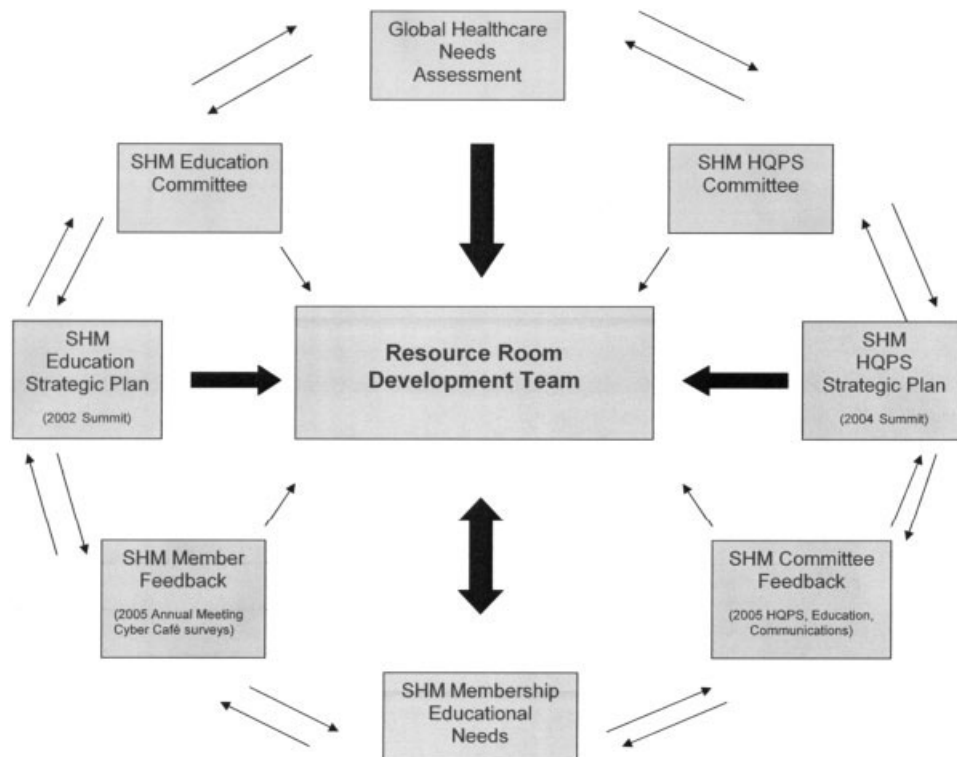2. Needs assessment of targeted learners (hospitalists, clinicians-in-training)

FIGURE 1. VTE resource room development process.

3. Goals and specific measurable objectives (with competencies bridging the gap between traditional roles and setting expectations about the hospitalist role)

4. Educational strategies (with competencies providing structure and guidance to educational efforts)

5. Implementation (applying competencies to a variety of training opportunities and curricula)

6. Evaluation and feedback (ongoing nationally, regionally, locally).

Like any quality-improvement educational initiative, subsequent steps in curriculum development for hospitalists should include, after evaluation and feedback, dissemination of core competencies and promotion of rigorous ongoing evaluation and adaptation as needs and expectations evolve.

The first case example, failure to prevent and diagnose pulmonary embolism (see Table 2), illustrates quality issues relating to prevention of predictable complications of illness, clinical problem solving in complex conditions of uncertainty, repetitive and nondiagnostic testing, and triage of a critically ill patient between services. The Core Competencies sets expectations about the ideal role of the hospitalist that might lead to improved outcomes.

Using this case example, the Evidence-Based Medicine (EBM) chapter establishes explicit expectations for hospitalists in clinical problem solving, including 1) explaining how the tests help to verify a suspected diagnosis, 2) describing the human factor in test interpretation (e.g., technical limitations of the most recent multi-detector-row spiral CT), and 3) explaining how timing relative to the onset of symptoms affects test results. Rather than an overreliance on technology, leading to repeating the chest CT with PE protocol and subsequent excessive nondiagnostic testing, the hospitalist would use knowledge of pretest probability and test characteristics to determine the best diagnostic strategy. The hospitalist approach to patient care, articulated in the affective (attitudes) domains of each chapter, integrates the application of EBM principles to clinical problem solving with deliberation of cost effectiveness and efficiency.

Continuing with this case example, the Team Approach and Communication chapters establish explicit expectations for practicing hospitalists who

FIRST CASE EXAMPLE: APPLYING THE CORE COMPETENCIES TO CURRICULUM DEVELOPMENT

STEP 1

The current problem and the need for improvement

Quality Issues
- Prevention of predictable complications of illness: VTE still underutilized.
- Clinical problem-solving in complex systems, cost-effective, diagnostic testing.
- Triage of patients between services.

STEP 2

Needs assessment of hospitalists and other members of the inpatient team

The Current Approach: The focus of traditional medical education.
- How to manage a specific disease rather than how to manage complex patients with multiple co-morbidities.
- Didactic lectures on the pathophysiology of VTE .rather than prevention, QI.
- Individual feedback, morbidity and mortality conferences

STEP 3

Goals and specific measurable objectives

The Ideal Approach: Competencies as a framework for setting expectations about the role of the hospitalist
- Direct therapy against predictable complications of serious illness.
- Critically review prophylaxis.
- Devise strategies to bridge the gap between knowledge and practice.

STEP 4

Educational strategies

The first in a new online series: *The VTE Resource Room,* by SHM
- Key knowledge, approaches, methods, and tools can be applied to improve performance despite variances due to particular systems and advances in medicine.
- Enhance the ability of hospitalists as self-directed learners to improve inpatient outcomes.

STEP 5

Implementation

The VTE Resource Room
- A downloadable workbook and companion project outline for the improvement process.
- A slide set to disseminate valuable information about a safer system for VTE prevention.
- A moderated forum of VTE and QI experts to pose questions.

STEP 6

Evaluation and feedback

Ongoing Evaluation and Feedback
- Continuous with other steps (see Fig. 1).

STEP 7

Remaining questions—the need for additional research

Research Questions
- Identifying barriers to VTE prophylaxis in the hospital setting.
- Root cause analysis to determine prevention, process improvements, and training practices to encourage the safety of hospitalized patients.

TABLE 3
Second Case Example

The Hand-Off: Avoiding Pitfalls in the Hospitalist System

A 30-year-old female, status post–ruptured uterus and caesarian section for pregnancy, presents with hypotension.
- Shortness of breath post–exploratory laparoscopy during fluid resuscitation.
- Spiral CT performed to rule out pulmonary embolism, signed out as "negative" based on verbal report.
- Estimated pulmonary arterial systolic pressure of 70 mmHg by transthoracic echocardiogram.
- Extensive testing for underlying causes of pulmonary hypertension, hypercoagulable states.
- Outpatient right heart catheterization scheduled by cardiology.
- Sleep study advised to complete the workup of pulmonary hypertension.

After diuresis with a corresponding reduction in pulmonary capillary wedge pressure, her pulmonary hypertension resolves and her outpatient right heart catheterization is cancelled.
- Final reading of chest CT (not signed out to receiving attending) reportedly notable for moderate right-sided pleural effusion, small left-sided effusion, and an apparent filling defect of right subclavian vein
- Six days after the original spiral CT, unsuccessful thoracentesis attempted, with removal of 1 cc of fluid consistent with exudate.
- Video-assisted thorascopic surgery (VATS) procedure required to avoid chronic disability from trapped lung.

Retrospective review: Early drainage of a parapneumonic infection in the setting of sepsis might have avoided this complication.

SECOND CASE EXAMPLE: APPLYING THE CORE COMPETENCIES TO CURRICULUM DEVELOPMENT

STEP 1

The current problem and the need for improvement

Quality issues in the transfer of care.
- Failure to review radiographic study.
- Signing out pending test results.
- Failure to correlate imaging abnormalities with the patient's clinical presentation.

STEP 2

Seeds assessment of hospitalists and other embers of the inpatient team

The Current Approach: Inherent discontinuities of inpatient care.
- ACGME legislated work hours: resident shifts.
- Transfer of care to and from primary care physicians to hospitalists and between hospitalists.

STEP 3

Goals and specific measurable objectives

The Ideal Approach: Development of a standardized method of communication between hospitalists and between residents.
- A hand-off checklist would include pending tests, including final readings of radiographic studies.
- Systematic review of all films with a radiologist.

STEP 4

Educational strategies

Critical examination of local practice for variability in sign-outs.
- Development of curricula with an agreed-upon standard using the Core Competencies as a template—the Patient Hand-Offs chapter.
- Measure quality of hand-off and provide feedback.

STEP 5

Implementation

Dissemination of the expectations of the hand-off.
- Series of didactic talks for residents, physician assistants, and medical students by hospitalists based on specific cases.[19]
- Using the core competencies as a framework; didactic lectures on hospital medicine topics can be revised to better reflect the continuing educational needs of hospitalists and their roles and responsibilities.

STEP 6

Evaluation and feedback

A Framework for Educational Scholarship: the process of evaluation.
- Innovative educational pilots, designed for members of the multidisciplinary care team
- Clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique.
- New curricular designs and materials development in topics not traditionally taught during medical school and residency such as patient hand-offs[20,21]
- Not limited to publication; educational scholarship can be funded through risk management and hospital-funded seed grants.

STEP 7

Remaining questions—the need for additional research

Research Questions
- What are the key components of the sign-out process?
- How can an electronic medical record or other system be utilized to standardize and improve the process?

would take the extra steps to communicate with multiple members of the care team. Knowledgeable about the hospital, the hospitalist would review the chest CT with a radiologist skilled in chest interpretation and specifically query about the significance of an enlarged right atrium and right ventricle in the setting of a high pretest clinical probability of PE. Together the radiologist and hospitalist would consider a different imaging modality if the patient "flunked" the chest CT when the pretest probability was high. Rather than simply deferring to the medical specialist who is consulting, the hospitalist would be expected to improve the efficiency of care and reduce cost by only ordering tests that would change clinical management, perhaps with improved outcomes.

The Hospitalist as Teacher chapter provides a framework—core competencies for impromptu learning—based on the patient encounter. Members of the multidisciplinary care team can be exposed to explicit clinical decision making, an approach made possible by hospitalists on site, who can provide teaching moments in real time when decisions have to be made and educational feedback is needed. Teaching expectations for hospitalists include unambiguous clinical problem solving at the bedside and possibly directing the education of residents, physician assistants, and nurses on how to initiate a quality improvement (QI) project in a hospital setting.

The Quality Improvement and Venous Thromboembolism chapters clarify the role of the hospi-

TABLE 4
Third Case Example

'No Problem'

A proposal has been made that a new academic hospitalist service care for neurosurgical patients in order to meet the goals of the neurosurgical residency program to maximize the operating room exposure of surgeons in training.
- Patients would be admitted to the hospitalist service, with subsequent neurosurgical consultation.
- Another proposal has been made that the hospitalist service care for "uncovered patients" without residents in order to meet the goals of the medical residency program.
- Hospital leaders assume the hospitalist service would have no problem with this proposal.
- The hospitalists, who are not in-house at night, are asked to handle off-hours triage issues when there is disagreement between two services; their proposed role would be to support the medical residents who do not feel empowered to say "no" to the surgical team seeing patients in the emergency department.

The hospitalist service has the following concerns:
- Assuming responsibility for a nonteaching service undermines the vision of this new hospitalist service in an academic tertiary care facility.
- Assuming responsibility for a surgical specialty service increases medical legal risk and concerns about timely backup.
- Setting a bad precedent sends the wrong message.
- Hospitalists functioning as "superresidents" damages the reputation of the service.
- The proposal comes with a price, namely, accelerating physician burnout, declining job satisfaction, and inevitable turnover.
- The proposal would adversely affect future physician recruitment and promotion through the medical school clinician educator track.

Existing problems with the work environment of this new hospitalist service include:
- The service already does not have time to meet the responsibilities of inpatient care expected of hospitalists because of rapid growth and the need for further recruitment.
- Lack of advocacy by hospital administrators who may not understand the role of the hospitalist and entertain other solutions is an ongoing concern.
- Lack of support for other missions of teaching and quality improvement research, coupled with a changing job description and the daily unpredictability of the work, promotes the view that hospital medicine may not be sustainable as a career.

The challenge and opportunity: Expertise in strategic planning and operations management is needed in order to effectively respond to conflicting pressures and focus on goals that will sustain the ability to change, grow, and continuously improve.

talist, who should direct therapy against predictable complications of serious illness, critically review prophylaxis, provide hospital-specific data to clinicians, identify and lower barriers to prevention, devise strategies to bridge the gap between knowledge and practice, develop automated reminder systems, and participate in clinical research.

The SHM has used the Core Competencies to develop educational resources to better meet the needs of the healthcare system. Although patient safety initiatives are mandated by JCAHO for hospital accreditation and AHRQ has identified areas for safety improvement that lists venous thromboembolism (VTE) prevention as the number one priority, VTE prophylaxis is still underutilized in the United States. Although some mechanisms are in place to educate residents and hospitalists about how to manage a specific disease, traditional medical education does not focus on teaching students and residents how to manage complex patients with multiple comorbidities, to prevent predictable complications of illness, and to examine and improve care processes.[15,16] When it comes to leading quality improvement (QI), individual feedback and traditional curricula, which may include didactic lectures on the pathophysiology of VTE and mor-

bidity and mortality conferences, have not demonstrated improved outcomes.[17]

The SHM QI Web-based resource rooms offer support to any QI effort and raise collective awareness of a performance gap.[18] Each resource room will describe the evidence-based practices that should be put into effect and will leverage experience with the disease as well as with the improvement process. The underlying goal of the resource rooms is to enhance the ability of hospitalists to actually improve inpatient outcomes through self-directed learning (see Fig. 1).

Hospitalists, residency directors, and directors of hospitalist fellowships and continuing education can use *The Core Competencies in Hospital Medicine* to develop curricula for their local hospitalist service and request that invited speakers develop learning objectives and content based on core competencies rather than giving a prepared lecture on a specific clinical condition. This case of PE illustrates that risk assessment, prophylaxis, EBM clinical problem solving, and QI are core topics that should be emphasized in the training of hospitalists and physicians in training.

The second case example, the hand-off (see Table 3), illustrates quality issues related to transfer

THIRD CASE EXAMPLE: APPLYING THE CORE COMPETENCIES TO CURRICULUM DEVELOPMENT

STEP 1

The current problem and the need for improvement

Hospitalist Services cannot succeed by attempting to offer all things to all people.
- Distracting members from their work and from concentrating on their goals.
- Always saying "yes" to whoever asks for help as a Band-Aid, a short-term fix that impedes the effort and creativity required for durable long-term solutions to problems.

STEP 2

Needs assessment of hospitalists and other members of the inpatient team

The Current Approach: Problems with the work environment
- Hospital medicine, a new specialty, does not yet have a similar supportive infrastructure analogous to other well-established specialties with most hospitalist programs within divisions of general medicine.
- Multiple stakeholders—administrators, primary care providers, residency and clerkship directors, specialty services.
- Leadership and administrative skills are not consistently acquired proficiencies during residency training.

STEP 3

Goals and specific measurable objectives

The Ideal Approach: Hospitalists can proactively improve their work life by developing skills and knowledge in hospital systems.
- Develop personal, team, and program goals.
- Identify and resolve conflicts using specific negotiation techniques
- Enhance program development and growth.
- Identify senior physician leaders as mentors and advocates.

STEP 4

Educational strategies

Annual retreats to generate enthusiasm, establish a strategic plan, continue a trajectory of success.
- Invite an outside expert in QI or professional development to facilitate discussion.
- Recruit hospitalists and colleagues with expertise in healthcare systems to mentor and educate other members of the hospitalist service how to lead QI and other initiatives.

STEP 5

Implementation

Use the core competencies to advocate for resources to support professional goals.
- Funding for leadership courses and further training in business.
- Directors of CME sponsored by SHM have begun the process of using the core competencies as the framework for the development of hospital medicine curricula in leadership and QI.

STEP 6

Evaluation and feedback

Consider using the Core Competencies to develop an internal report card on performance.
- A self-assessment tool based on the core values and goals of the hospitalist program.
- A means to help identify areas for improvement, modifiable risk factors for turnover, and opportunities to provide incentives to measure interventions, reward success, and ultimately deliver on the mandate to improve inpatient care.

STEP 7

Remaining questions—the need for additional research

Challenges facing hospitalists practicing in multiple settings.
- How to make processes of care efficient by examining specific tasks that hospitalists do and determining what tools, technologies, organizational structure, and supporting staff need to be available to make the performance of these tasks efficient.
- How to make hospital medicine a sustainable and satisfying career.

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of care from one physician to another. In this example, if the patient with moderate pleural effusion had been signed out, an earlier thoracentesis to drain a presumptive parapneumonic infection might have relieved this patient's shortness of breath and saved her from undergoing a subsequent VATS procedure. This case also demonstrates the importance of correlating imaging abnormalities with a patient's clinical presentation rather than using the traditional approach of just "ruling out" potential diagnoses to determine the cause of a problem. This case highlights elements of the process and system of care that can be modified to improve patient outcomes. Being proficient in transferring care of patients can save the hospitalist from error and prevent adverse events.

The Team Approach chapter establishes the need to acquire proficiencies not ordinarily obtained during residency in order to lead a multidisciplinary care team. This role requires a level of functioning beyond that of simply being the attending of record. The hospitalist must be able to synthesize information rather than simply defer to the consultant. Competencies specified in the Diagnostic Decision-Making chapter can be used to identify the educational needs of hospitalists, who are ex-

pected to minimize diagnostic errors by knowing when to ask for help and where to get it, recognizing common diseases with uncommon presentations, and generating a broad differential diagnosis where there is uncertainty. The Patient Handoff chapter defines the proficiencies hospitalists need to facilitate the safe transfer of patients to other physicians on their service.

The third case example, which expands the responsibilities of hospitalist to include meeting important needs in the hospital (see Table 4), illustrates that hospitalist services cannot succeed by offering all things to all people, a distraction that that keeps the members of these services from concentrating on their goals. Always saying "yes" to whoever asks for help is a band-aid, a short-term fix that impedes the effort and creativity required for durable long-term solutions to problems.

The Core Competencies sets expectations about the roles of hospitalists, who serve as well-informed clinicians and clinical opinion leaders; effective educators, mentors, and role models; empathetic and timely communicators; efficient caregivers; and creative problem solvers arriving at durable, longer-term solutions. The competencies demonstrate the knowledge, skills, and attitudes required to be effective agents of change. Changing business as usual almost always requires significant improvements in the underlying system, however uncomfortable. The Leadership chapter articulates competencies that hospitalists need in order to define their roles within the hospital, promote group cohesiveness, expand their practices intelligently, and anticipate and respond to change. This chapter details the proficiencies that hospitalists need in order to develop personal, team, and program goals and to identify and resolve conflicts using specific negotiation techniques. The Business Practices chapter articulates the fundamental skills needed to enhance program development and growth. Hospitalists can use the Core Competencies to identify educational needs and develop curricula to enhance their leadership and business skill sets.

Medical educators should examine the outcomes of current training practices and assess what modifications of objectives, content, and instructional strategies should be made to better prepare the current and next generations of physicians to practice hospital medicine and to improve the hospital setting. Given the scope of the field of hospital medicine, the Core Competencies should guide: 1) what to teach and how much to teach; 2) how to teach and assess trainees, and how to assess and compare faculty development programs; 3) how to design systems for improving quality of care and assuring patient safety; and 4) how to establish priorities for hospital medicine research.

TRANSLATING A SET OF COMPETENCIES INTO CURRICULA: POTENTIAL BENEFITS

The Core Competencies in Hospital Medicine transcends hospital type, size, and setting and standardizes what the expectations for and proficiencies of a practicing hospitalist should be. By defining the role of the hospitalist, the Core Competencies serves as a resource for refining inpatient skills and assists in program development at the local, regional, and national levels. In addition, by using the Core Competencies as the standard and framework for the development of preparatory curricula, hospital administrators and other employers can rely on hospitalists having had a common preparation.

The medical profession is constantly evolving. Internal medicine curricula address the challenges hospital medicine physicians faced yesterday but could improve the training and preparation of physicians to serve in their new and emerging roles as leaders of multidisciplinary healthcare teams working to improve patient outcomes and the system of inpatient care. Hospital medicine no longer represents a group of physicians merely supporting other specialists and primary care physicians; it is itself a specialty, composed of physicians leading, directing, and improving inpatient care. The competencies presented in *The Core Competencies in Hospital Medicine: A Framework for Curriculum Development,* by the Society of Hospital Medicine, should spark debate about the adequacy and appropriateness of current training and certification expectations and serve as a foundation for the development of curricula to improve hospital medicine education.

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