Lifelong Learning

PHYSICIAN COMPETENCY DEVELOPMENT

American Hospital Association's
PHYSICIAN LEADERSHIP FORUM

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Background

HEALTH CARE IS FACING RAPID FIRE CHANGE that will require broad reforms in health care delivery. Changing demographics, increasing rates of chronic disease, advances in medical science, health information technology's ability to make care safer and more efficient, skyrocketing costs, and the short- and long-term impacts of the Patient Protection and Affordable Care Act (ACA) all are strong drivers for reform of the entire system, from the education of our health care workforce to the system in which our care is delivered. As the Institute for Healthcare Improvement put forth in 2007, improving health care delivery in the United States requires a focus on three areas:

- improving the experience of care
- improving the health of populations
- reducing per capita costs of health care.[1]

All care providers will need new skills and knowledge to reach this triple aim. As health care financing moves from volume-based to value-based payments, clinicians will be required to work in inter-professional teams, coordinate care across settings, utilize evidence-based practices to improve quality and patient safety, and promote greater efficiency in care delivery. The health care system will need to adapt to support these changes, and hospitals and health systems will need to acquire new competencies.

Physicians will also need new skills to be able to lead and manage a reformed health care delivery system and be a meaningful part of the transformation. The move from individual health management to population health management and from individual performance to team performance needs to be embraced by the provider community.

WITH THE PASSAGE OF THE ACA, the health care environment is specifically moving towards closer integration and alignment of physicians and hospitals through coordinated payments and accountable care. At the same time, the economic climate and the outlook of a new generation of physicians is moving the physician community toward employment and joint venture models to increase financial security and meet work/life balance goals. In fact, hospitals now employ more than 20 percent of practicing physicians, raising the importance of the competencies and the shared responsibility for achieving them. Finally, hospitals and health care systems are realizing the strength of increased clinical representation in leadership to help align interests. This strengthening of the relationship between physicians and hospitals should be leveraged for a coordinated approach to improving and valuing the competencies that lead to delivering high-value health care.

Issues

As part of the policy process in the fall of 2011, the American Hospital Association (AHA) asked its regional policy boards, governing councils, and committees to review the Accreditation Council for Graduate Medical Education (ACGME) and American Board of Medical Specialties' (ABMS) six competencies that physicians should meet at the end of their residencies (see Table 1).

Physicians and hospitals will need to work even more closely together as health reforms take shape. As the training ground for a large portion of the nation's physicians, it is important that hospitals reflect on and understand how they can increase the valuation of the competencies throughout their organizations and specifically the role they can play in helping to ingrain the competencies into training programs within their facilities.

Key questions to consider are:

- How can we affect physician education and development to move to the next generation of health care delivery?
- What is the current level of success in preparing physicians during residency to be prepared to practice in today's health care environment?

Members of these AHA groups were asked to rank how evident and how important each of the competencies were in their organizations (see Table 2). As a reflection of the competencies outlined by the Institute of Medicine in 2003, use of informatics was added to the list of competencies reviewed. The American Osteopathic Association's (AOA) competencies are similar to the list in Table 1, with the addition of a competency around the use of osteopathic manipulative treatment.

TABLE 1: CORE COMPETENCIES

1. Medical knowledge

- Demonstrate knowledge of biomedical, clinical, and cognate sciences and application to patient care

2. Patient care

- Provide patient care that is compassionate, appropriate, and effective

3. Practice-based learning and improvement

- Investigate and evaluate patient care practices, appraise and assimilate scientific evidence
- Improve patient care practices

4. Systems-based practice

- Provide cost-conscious, effective medical care
- Work to promote patient safety
- Coordinate care with other health care providers

5. Professionalism

- Commitment to carrying out responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population

6. Interpersonal & communication skills

- Demonstrate skills that result in effective information exchange
- Work effectively with other members of the health care team

7. Use of informatics

TABLE 2: AHA POLICY GROUPS RANK HOW EVIDENT AND HOW IMPORTANT EACH COMPETENCY IS IN THEIR ORGANIZATION.

COMPETENCY/SKILL	OVERALL EVIDENCE RATING	OVERALL IMPORTANCE RATING	GAP
Medical knowledge	**4.56**	**4.89**	**-0.33**
Patient care	**4.09**	**4.91**	**-0.82**
Practice-based learning			
Investigate evaluate, appraise & assimilate	**3.81**	**4.68**	**-0.87**
Improve patient care practices	**3.83**	**4.81**	**-0.98**
Systems-based practice			
Cost-conscious, effective medical care	**3.35**	**4.77**	**-1.42**
Promote patient safety	**3.95**	**4.90**	**-0.95**
Coordinate care with other providers	**3.45**	**4.72**	**-1.27**
Professionalism	**3.95**	**4.71**	**-0.76**
Interpersonal & communication skills			
Effective information exchange	**3.46**	**4.78**	**-1.32**
Work effectively with health care team	**3.65**	**4.86**	**-1.21**
Use of informatics	**3.65**	**4.74**	**-1.09**

The AHA policy groups were asked to discuss the skills they felt physicians needed to practice and lead in a reformed health care environment and whether the competencies above appropriately reflected those skills. Members were also asked to share what they are doing in their own organizations to address some of the gaps in training. It is important to underscore that while the competencies reviewed apply to medical students and residents, members felt that all those involved in the delivery of health care should display these competencies.

Members suggested that to work in a reformed health care environment, physicians need to develop skills to both lead and facilitate a care team, understand and use systems theory and information technology to improve quality and patient safety, and understand organizational behavior. There was a strong suggestion that increased inter-professional training and teams are needed to allow physicians and other clinicians to work more collaboratively and understand the roles that each could fulfill in providing patient care. Finally, governance members also saw the need for additional education for the care delivery team around population health management, options for palliative care, resource management, medical economics, organizational governance, and health policy.

TABLE 3: PHYSICIAN SKILLS REQUIRED FOR THE NEXT GENERATION OF HEALTH CARE DELIVERY

- **Leadership training**
- **Systems theory and analysis**
- **Use of information technology**
- **Cross-disciplinary training/ multidisciplinary teams**
  - Understanding and respecting the skills of other practitioners
- **Additional education around:**
  - Population health management
  - Palliative care/end-of-life
  - Resource management/ medical economics
  - Health policy and regulation
- **Interpersonal and communication skills**
  - Less "captain of the ship" and more "member/leader of the team"
  - Empathy/customer service
  - Time management
  - Conflict management/ performance feedback
  - Understanding of cultural and economic diversity
  - Emotional intelligence

"Members suggested that to work in a reformed health care environment, physicians need to develop skills to both lead and facilitate a care team, understand and use systems theory and information technology to improve quality and patient safety."

While interpersonal and communication skills are among the current competencies, members felt that more emphasis on teamwork, empathy, conflict management, and customer service were needed. Members also suggested the need to screen for emotional intelligence as part of this competency (see Table 3).

The AHA policy groups provided various suggestions for how to improve the impact of the current competencies through several environmental and process changes. They felt that the entire health care field needed to foster a continuous learning environment and suggested a shift was needed in professional culture (i.e., increased emphasis around the use of efficiency and evidence-based practices in certification rather than strictly numbers of procedures) as well as a clear aligning of financial incentives to embrace the competencies. Members also pointed out that hospitals, as the sites of resident training, could provide feedback to medical schools for improvement, and that accreditation and evaluation of residency programs should include the integration of residents into the quality and patient safety programs of the hospital.

In terms of process changes, members suggested that training for evaluators and faculty on how to teach and evaluate the competencies would provide a more uniform base and ensure that residents receive similar training regardless of training site. They felt it was important to include greater weighting for the competencies to emphasize the importance of the non-clinical aspects since they are as important to patient care as the clinical. Members reported success with using 360-degree feedback for residents, as well as post-residency orientation to new settings of care to help close the gaps between training and "real world" needs. They also suggested adding requirements for medical staff reappointment linked to the core competencies.

Members shared ways they are addressing the gaps in their own organizations through training and development opportunities, structural changes in management, and changes in culture. Some examples of training include leadership programs for physicians and administrators, multidisciplinary team training

and team-based rounds, dedicated time for residents to learn administrative skills, and use of simulation labs. Others described structural changes in management including employment models, service line management, use of non-physician practitioners, and divisions of physician management among others. Several noted the use of data and scorecards as well as peer dynamics to help influence these changes. Finally, some organizations have focused on cultural changes including drafting a code of conduct for all employees reflecting some of the competencies and fostering a culture of continuous learning.

Members were asked to rank the competencies for how evident they were in their organizations and their relative importance (see Table 4). Across all groups the greatest gaps were found in four areas:

- Systems-based practice: Provide cost-conscious, effective medical care
- Communication skills: Effective information exchange
- Systems-based practice: Coordinate care with other providers
- Communication skills: Work effectively with health care team

While across all the groups use of informatics ranked fifth, it was cited as the largest gap for two of the governing councils (small or rural hospitals and health care systems).

TABLE 4: GAPS BETWEEN EVIDENT COMPETENCIES AND THEIR IMPORTANCE ACROSS ALL GOVERNANCE GROUPS

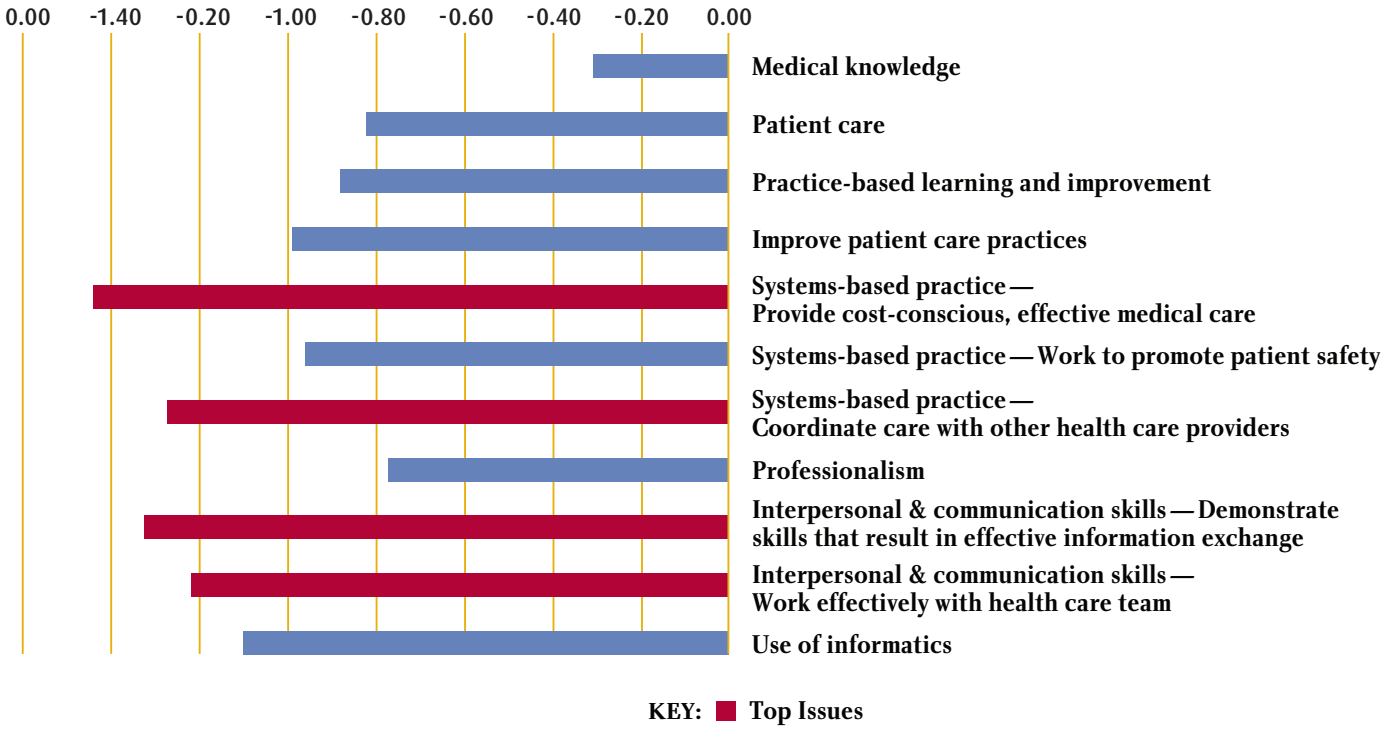

TABLE 5: KEY OBSERVATIONS

Greatest Gaps and Least Evident

- Systems-based practice: Provide cost-conscious, effective medical care
- Communication skills: Effective information exchange
- Systems-based practice: Coordinate care with other providers
- Communication skills: Work effectively with health care team

Most Important

- Patient care
- Systems-based practice: Promote patient safety
- Medical knowledge
- Communication skills: Work effectively with health care team

Missing Competencies

- Conflict management/performance feedback
- End-of-life/palliative care
- Systems theory and analysis
- Customer service/patient experience
- Use of informatics

Task Force

A task force of physicians and other clinicians (see page 19) was assembled in late October 2011 to review the results from the AHA policy process and provide recommendations to both the medical education community and the health care field for ways to improve the focus and uptake of the competencies.

The task force agreed that while the competencies were essential to providing good patient care, not all of the competencies were emphasized in physician training and practice. Task force members strongly believed that if the full range of competencies could be ingrained into the fabric of health care delivery, it would improve quality, reduce costs, and improve the patient experience, as well as serve to better coordinate the care of the chronically ill. The group further agreed that without the proper alignment of incentives and valuing of the competencies, it would be difficult to ingrain them into health care practice.

While the task force agreed that the competencies should apply to all caregivers involved in the delivery of health care, they felt that the scope of the committee's work would best be focused on recommendations around physician adoption of the competencies.

As a place to begin, task force members felt that communications — both effective information exchange and working effectively with the health care team — are essential to the delivery of health care in a safe and efficient manner and should be emphasized in every interaction. While physicians are armed with a strong technical knowledge, as well as a capacity to absorb large amounts of information, historically, medical training and residency programs have not valued the full scope of competencies. Past focus has been on the technical skills of medicine and the acquisition of clinical knowledge, which do not form the full picture of safe and efficient patient care. To be able to provide care to an increasingly complex panel of patients, physicians will need the full involvement and support of the health care delivery system, which will require that the full team communicate effectively and coordinate the delivery of care.

Task force members felt strongly that the communication and teamwork competencies require focus as early as possible in medical training and need to be an essential part of every health care interaction to ensure safety and efficiency. While the task force viewed all the competencies as important to health care delivery, it believed that effective resource management and quality improvement were better emphasized as part of the residency and in post-residency continuing education. While all the competencies are important, given the changes coming as part of health care reform and the need to ensure the safety of patients, communication, teamwork, and resource management were viewed as requiring the most immediate focus.

> *"Hospitals, as sites of significant physician training and practice, can be leveraged to encourage full adoption of the competencies."*

In addition, the group felt that medical training needs to distinguish among those skills and competencies that a physician needs to possess and competencies that are best demonstrated by being aware of and utilizing available resources and expertise from other practitioners within the health care system. Physicians need to understand and make use of the resources and knowledge available from other practitioners to provide the best patient care. In the same way that clinical knowledge has been subdivided by specialty and sub-specialty, physicians need to use the full resources of the health care system to provide the best care for their patients, whether those resources are clinical, quality, risk management, social work, or many others.

Finally, the group felt that focus on the competencies should begin with admission to medical school, be emphasized in resident training, and remain a required part of continuing medical education.

Approaches

The task force suggested a two-pronged approach:

- Recognition of the roles and responsibilities of hospitals and of the delivery system to fully value the competencies and ingrain them into their practice; and,
- Recommendations for ways to influence three areas of medical training: medical school selection and education, post-graduate training, and ongoing professional development.

The task force felt that while underlying changes to the educational system need to be addressed, the current drivers of health care reform and value-based care require activity simultaneously with current physicians as well as work to achieve educational reform. Hospitals, as sites of significant physician training and practice, can be leveraged to encourage full adoption of the competencies.

Members also emphasized the need for additional feedback from patients, clinical staff, hospitals, and others in care delivery to shape competency efforts and influences to the educational system to ensure all viewpoints are included. The task force felt that the competencies should be embraced by all of those providing care, but focused their work on the existing physician competencies and how to address their broader adoption and use.

Hospitals and the Delivery System

THE HOSPITAL ROLE

Hospitals play a vital role in education and training and provide the milieu in which physicians and other clinicians practice. **It is essential that hospitals create an environment that fosters the development of and continuously supports the competencies so that they are not an isolated activity, but rather ingrained in every transaction and exchange.**

Many hospitals, health systems and associations, recognizing that physician leadership is crucial to the effectiveness of care delivery, have developed physician leadership academies or other learning opportunities to hone leadership skills and teach management techniques. Some examples include Catholic Healthcare Partners[2], Carilion Clinic[3], Iowa Health System[4], and many others. In addition to system and hospital-based programs, many state and metropolitan hospital associations are offering leadership development courses for physicians.

Hospitals should look at ways to provide feedback to physicians on their efforts around the competencies and offer tools to improve.
Peer dynamics, medical staff credentialing and privileging committees, and reappointment processes could all provide an opportunity to demonstrate the value of the competencies. In addition, adding formal training around the competencies for medical directors and department leaders could provide a uniform base for leadership. Medical staffs should consider discussing and including criteria based upon the core competencies as part of their credentialing/

privileging activities, Maintenance of Certification and Ongoing Professional Practice Evaluation and what forms of education can be provided around the competencies through online training or webinars.

Crew resource management (CRM), originally developed in the aviation industry, has been used successfully in hospitals around the country to reduce communication errors and improve teamwork. Some organizations require all new clinicians to complete a CRM course as part of the on-boarding process [5].

- *At Marquette General Health System (MI), physicians complete a self-evaluation based upon the core competencies as part of the Ongoing Professional Practice Evaluation process. Residents are also invited to participate in the self-evaluation to become exposed to the process.*

- *The American Board of Medical Specialties is piloting a project with the Mayo Clinic (MN) to provide credit for a portion of the Maintenance of Certification for physicians who participate in approved hospital patient safety and improvement projects, helping to increase alignment and coordination between physicians and hospitals.*

Physicians should be involved in the full scope of the delivery of health care and fully understand the business of health care.
Hospitals should look for opportunities to increase this involvement and create a better partnership with physicians. In addition, as efforts move towards clinical integration, the leadership of physicians within the hospital and health care system will be crucial. Establishing strong leadership in partnership with physicians within the hospital and system leadership ranks could provide a strong base as clinical integration efforts move forward.

The American Society of Clinical Pathology, in conjunction with others, has created a curriculum, grounded in the competencies, to assist pathology residents and physicians in developing the skills needed for laboratory management [6].

- *Tucson Medical Center (AZ), as part of their accountable care organization, Southern Arizona ACO, is partnering with Optum to create a sustainable health community. Optum's data and analytic tools keep Tucson Medical Center and their independent physicians connected and aligned. Physicians participating in the program agree to be measured and rewarded based upon delivering high-quality patient care, patient satisfaction and reduced costs [7].*

Hospitals have a role in educating and involving physicians in their quality improvement and patient safety projects.
Safety is a system-based activity and requires that all parts of the system work together. For positive change to take place, all members of the team need to be educated in improvement science and be committed to lifelong learning efforts. Early involvement of students and residents, as well as a drive to include all clinicians, will enhance the ability of the system to improve.

- *OSF HealthCare, an integrated health care delivery system serving parts of Illinois and Michigan, was an early leader in promoting a collaborative approach to patient safety improvement. OSF has enhanced these efforts during the past five years by continuing to build awareness of safety risks through system-wide error reporting and local risk assessment, by identifying clinicians who can serve as models for their peers, and by engaging staff in intra-organizational learning and competition to spur improvement. It also has raised performance expectations by educating hospital- and system-level board members about patient safety issues and quality improvement techniques [8].*

The Society of Hospital Medicine's Mentored Implementation is a year-long program in which institutions are coached by national experts in implementing a specific quality intervention. During

this process, mentors will meet with their mentee sites via conference calls, webinars, email, and on-site visits to provide continuous support and guidance. Participating sites also have the opportunity to share in the Mentored Implementation Collaborative which includes a listserv and project community website, where resources, tools, information, and questions are shared among all participants[9].

Hospitals should look to current collaborative projects, such as the Keystone efforts around quality and patient safety, as a framework for sharing and ingraining the competencies throughout the facility. In similar fashion to initiatives developed around patient safety and quality topics, a similar approach could be used regarding care delivery to emphasize the competencies.

Use of simulation centers should be increased.
Simulation centers and other role playing activities has been shown to improve teamwork across units and provide a strong teaching tool to residents, physicians and the full health care delivery team. Hospitals should consider the increased use of simulation not only for procedure-based training, but for team-based training and education as well as communication and interpersonal skills.

- *The University of Delaware's Standardized Patient Program, a collaboration between the College of Health Sciences and the Department of Theatre, prepares students for their roles as health care professionals. Undergraduate theatre majors are trained to portray patients and family members so that students can practice taking medical histories and doing physical exams. Nemours/A.I. duPont Hospital for Children is planning to implement the approach in training first-year pediatric emergency fellows and Christiana Care Health System is applying it with third- and fourth-year medical residents[10].*

Consider encouraging grand rounds including all members of the team.
As part of team-based care delivery and stronger team interaction, hospitals should encourage grand rounds, where appropriate, to partner clinicians and administrators to help provide clearer perspective on the roles of each team member. Hospitals and health systems should also look within their ranks for physician champions to help move these types of changes forward.

THE DELIVERY SYSTEM ROLE

Population health science and the greater use of information technology should be encouraged.
Health care delivery is moving from individual interactions to a greater consideration of population health. At the same time, care delivery is becoming more complex as medical knowledge increases. The appropriate use of health information technology across the delivery system can provide powerful tools for these changes and allow a greater use of standard order sets, evidence-based protocols and other tools that have been shown to improve quality, efficacy and efficiency across the care continuum. Information technology might also provide tools for improvements around care transitions within the system. Physicians should be involved in efforts to develop and enhance electronic medical records to ensure they meet the clinical and data needs that would support quality and safety and improve practice.

Payment models will need to encourage and value the competencies.
As health delivery changes, incentives and reimbursements need to be aligned to the competencies. Current access to payment encourages models that do not emphasize the competencies. As transitions are made to new models of care based on the competencies, payment will need to adapt to support continued adoption.

Periodic review and updates to the competencies should be considered.
As health care continues to evolve, additional competencies may need to be added or existing competencies emphasized. A mechanism for thoughtful review and adaptation should be considered.

For example, the use of "cost-conscious care" in the competencies has been refined in the health reform discussions to account for the influence of quality on the value of health care and the need to include cost and quality together to determine value.

Medical Training and Ongoing Learning

While the recommendations below are divided into categories based on where the primary focus and effort should be, whether in medical school, post-graduate training, or ongoing professional development, each recommendation should be touched upon as early as appropriate to ensure that the best possible groundwork is set for the development on each competency at later points. Conversely, while some of the competencies are listed under medical school and residency, lifelong learning and continuous improvement should be emphasized.

MEDICAL SCHOOL ADMISSIONS AND CURRICULUM

While medical education reform cannot address all of the existing problems in health care delivery, changes will help prepare the next generation of clinicians to be able to lead reform into the future. The changes need to be approached in light of the growing workforce shortage among physicians and ensure that changes made do not further exacerbate the shortage.

Broaden the reach of medical school admissions.
As many of the underlying skills reflected in the competencies such as interpersonal skills begin to develop well before the admissions process, medical schools should consider reviewing the process and developing tools to evaluate applicant attributes beyond basic sciences knowledge to look for those that are exemplified by high-performing physicians. Specific attention should be paid to factors outside of "traditional" intelligence to include "emotional intelligence."

- *Stanford University (CA) employs the Multi-Mini Interview, a timed circuit of short interviews with scripted questions designed to measure character and critical-thinking skills rather than scientific knowledge* [11].

The Association of American Medical Colleges (AAMC) has announced changes to the Medical College Admissions Test beginning in 2015. The test will include a section on behavioral and social sciences and a section on critical analysis and reasoning to replace the writing sample to reflect that behavioral and social factors play a major role in health and illness [12].

Medical school admission requirements should also be studied to determine if there are additional pre-requisite courses that would help develop the competencies. Consideration should be given to the traditional "pre-med" curriculum and whether there are changes needed to reflect the competencies more accurately. Attention should also be paid to the newer medical schools with less traditional admissions process to understand whether there are lessons to be applied across the admissions process.

Decompress educational load and broaden the modes of education.
Given the tight schedules of medical school and residency training, greater efficiency and a broader array of modes of education need to be considered to ensure training beyond the clinical to encompass the competencies that strongly impact health care delivery.

Medical schools should review the options for decompressing the educational load, particularly in the first two years, by potentially moving appropriate and selected foundational science courses to the college level and expanding the curriculum around the science of teamwork, quality improvement, culture of innovation, and safety.

Review of the format of education in management/business programs could provide lessons for ingraining a teamwork approach into the study of medicine. Also consider linkages between Masters of Health Administration and Masters of Business Administration programs and clinical education to increase exposure and foster early teamwork efforts.

Consider the use of social media and other technologies to expand the learning opportunities for students and residents.

RESOURCES

- The Institute for Healthcare Improvement (IHI) Open School for Health Professions website, with news, resources, courses, and discussion sections, is free to students and residents. With over 71,000 students and residents registered and nearly 9,500 faculty, IHI's Open University has offered courses on quality and patient safety to nearly 40,000, with nearly 2,700 earning a certificate of completion of the 16 required courses. Classes are offered online in quality improvement, patient safety, leadership, patient and family-centered care and managing health care operations. In addition to coursework, the site maintains a social network for participants to connect and discuss quality and safety issues [13].
- The AHA's Hospitals in Pursuit of Excellence website (www.hpoe.org) maintains hundreds of case examples, reports, white papers, and other resources on care coordination, patient safety, quality, efficiency, workforce and culture, health care equity, new payment and care delivery models, and others.

- *Eastern Virginia Medical School recently became the first in the United States to formally require all students to complete the 16 courses of the IHI Open School Basic Certificate of Completion before residence [14].*

Further ingrain <u>all</u> of the core competencies into the value structure of medical training.
All six competencies are essential to good patient care and efforts need to be made to ensure that all competencies are given equal weight and importance by both students and evaluators at the appropriate time in the training schedule.

"Non-clinical" departments focusing on quality improvement, clinical integration, team-based care delivery, and other areas to encourage the uptake of competencies around practice-based learning and systems-based practice, along with support for faculty in these areas, could provide opportunities to increase the attention to these competencies. At the same time, ensuring that faculty in the clinical departments are well prepared to exhibit and embrace teaching the competencies could improve uptake by the students.

Practice of the competencies should be incorporated into every health care interaction and steps should be taken to ensure that both educators and mentors have the training to impart and evaluate successful achievement of the competencies.

Evaluation and measurement should be used to understand and improve the uptake of the competencies at the beginning and end of medical school.

Study implications of different medical career paths on the educational structure.
Increasingly, clinical care is being provided in a variety of settings and the increase in gender diversity among graduates has changed the traditional physician career path to include more part-time and work balance approaches than seen previously. Rising costs for tuition have also begun to impact specialty selection and could change the landscape of the physician workforce. Consideration should be given to incentives to increase the primary care workforce.

To ensure a broad array of physicians exemplifying the core competencies best suited to their practice, medical schools should review the traditional educational structure to see if there are adaptations for the different career paths available to today's physicians.

POST-GRADUATE TRAINING

Residency training faces many of the same challenges in imparting the competencies as medical school curricula and should include the same emphasis on ingraining the competencies into the culture of the residency program. As foreign medical school graduates apply for and participate in residency training programs in the United States, attention should be paid to ensure they have received the same training regarding the competencies as required in US medical schools.

Consider use of inter-professional training to strengthen care delivery.
Teamwork is rapidly becoming the new paradigm of health care delivery and payment models. Inter-professional training and education allows for the creation of efficient teams and a team-focused culture

at the onset of medical practice. Understanding the skills other non-physician clinicians bring to the table allows physicians to best use the resources of the health delivery system to provide maximum benefit for the patients. Early understanding and respect for the expertise of fellow clinicians encourages strong teamwork and better efficiency.

Residency and training programs should look at the feasibility of joint training of teams with nursing, pharmacy, and possibly other allied health professionals. In addition to fostering camaraderie and exposing clinicians to each other early in the process, cross-training in shared science courses could provide economies of scale.

Health care delivery will need to utilize the full professional capabilities of all members of the clinical team, practicing within their recognized disciplines, and a clear respect and understanding of all the skills of the different allied health professionals, possibly achieved through joint training programs, will enhance the ability for health care delivery teams to function effectively. Use of simulation centers to improve teamwork and communication skills has shown promise in many organizations.

- *Brigham and Women's Hospital (MA) created their Integrated Teaching Unit (ITU) to increase time for learning among residents, improve communication and collaboration among personnel, and reduce costs. In its short existence, the ITU has proved successful, significantly reducing length of stay, mortality, and readmissions while increasing time for educational activities and satisfaction among attendings, residents, and nurses [15].*

- *The University of Washington's Center for Health Sciences Interprofessional Education, Research and Practice is dedicated to creating an atmosphere of openness and commitment to furthering collaboration between the different health care professions. The Center's core faculty and staff are multidisciplinary health sciences faculty and clinicians from Dentistry, MEDEX, Medicine, Nursing, and Pharmacy who are passionate about advancing interprofessional communication to improve patient safety and quality in health care. Created in 1997, the Center's provides educational opportunities for students to learn means of interprofessional practice and to be prepared to take their places in current and future healthcare systems, as well as educating faculty to be future leaders and facilitators in interprofessional education [16].*

In addition, patients and families must be considered an essential part of the care team, and physician training must emphasize this critical role.

Quality and patient safety need to be an integral part of residency programs.
To master the competency around practice-based learning and improvement and begin to learn to practice within the larger system of health care, residents should be involved in the quality and patient safety improvement efforts within the hospital in which they train.

In the same way residents track their exposure to and completion of procedures, they should maintain an improvement project portfolio highlighting the skills they have acquired in quality and patient safety.

Hospital quality improvement programs provide opportunities to educate residents beyond clinical knowledge, and hospitals should welcome residents in hospital improvement initiatives as early as is feasible within the training schedule.

- *In setting out to improve safety through enhanced team communications, Abington Memorial Hospital (PA) implemented TeamSTEPPS™ (Strategies and Tools to Enhance Performance and Patient Safety) with other initiatives. As a result, the hospital has experienced significant improvements in patient outcomes and care processes since reinvigorating this effort in 2006. Quantifiable results include a 27% decline in inpatient adverse events and a 30% decrease in mortality, more proactive rescue of at-risk patients, better hand hygiene, improved staff perceptions of teamwork, and anecdotal reports of*

better communication processes. As of April 2010 the hospital has trained more than 2,000 nurses and nearly 200 residents (representing more than 95% of the nursing and resident staff) and almost 700 attending physicians [17].

Training should reflect the wide variety of environments in which health care is practiced.
Residents train in a wide range of hospital environments, which may or may not reflect the environment in which they begin their careers. The competencies should allow for additional resources, training, or education to facilitate smoother transitions between training environments and practice.

Residents are trained nearly exclusively in inpatient environments, while the large majority of care is provided outside the hospital. Additional focus and exposure of residents to the full continuum of care should form part of the residency training. Residents should have opportunities to develop deeper knowledge of health care delivery in the full health system and a better understanding of the different levels and modes of care delivery. Exposure to new models of care delivery, including patient-centered medical homes, should be encouraged.

Focus on patient wishes.
Patient-centered health care will continue to increase and drive care delivery models and physicians will need the communication skills and knowledge to help guide their patients. Increased opportunities should be afforded to residents to enhance their skills as advisers, counselors, and navigators to help patients make informed decisions when facing complex treatment choices. While patient education often happens in the physician office, residents trained primarily in hospitals may not have sufficient exposure to these skills prior to completing residency unless specific efforts are made. In addition, efforts around wellness and prevention should be included in resident training to better prepare them to handle future practice needs. Finally, patients and families are a critical part of the care team and as such physicians must learn to understand and respect their crucial role.

In addition, exposure to palliative and end-of-life care programs will allow residents to provide the full range of options that best meet the needs and wishes of their patients. Palliative care helps patients understand the nature of their illness and make informed decisions and benefit from palliative care at any stage of their illness.

- *The Matthew and Carolyn Bucksbaum Family Foundation has given $42 million to the University of Chicago (IL) to create the Bucksbaum Institute for Clinical Excellence, a unique initiative that will focus on how to improve doctor-patient interaction. It will support training and career development at three levels — from medical students to junior faculty to senior faculty, who will serve as master clinician role models for the students and junior faculty. The expectation is that physicians who have trained at the Bucksbaum Institute will have a positive impact on patient care at the University of Chicago and other institutions [18].*

- *The Internal Medicine Residency Program at Abington Memorial Hospital (PA) is particularly interested in promoting and honing good communication skills in residents. At Abington, the residency program employs several methods to educate and evaluate the residents. First, video recording of resident-patient interactions occurs at least three times per resident in three years. Using the video recordings, a detailed reflection on communication, case management, and patient outcomes is fostered during a daily, hour-long session on selected inpatient rotations. Second, some of these videos are sent to Dr. Debra Roter at Johns Hopkins University, a well-known researcher in the field of communication [19].*

- *Froedtert Hospital (WI) was among the first palliative care models developed in an academic medical center. In response to intense national interest in improving end-of-life care, the Palliative Care Program expanded its educational and clinical care services and now includes the End-of-Life/Palliative Care Resource Center which offers tools, resources, and grant funding to medical schools to start or*

improve their palliative care curriculum for 3rd and 4th year medical students. The Froedtert & Medical College of Wisconsin Palliative Care Program offers a range of education projects and programs designed for all levels of physician and nurse education, as well as pharmacists, social workers and clergy[20].

- *Fletcher Allen Health Care offers support to hospitals and health care providers throughout Vermont and northern New York in providing the best possible palliative care services. Through their Rural Palliative Care Network, Fletcher Allen provides expertise and educates clinicians and community hospitals about palliative care. The network is an expansion of Fletcher Allen's Palliative Care Service — an interdisciplinary, patient and family-centered program designed to deliver excellent pain and symptom management, advanced care planning, and end-of-life care for people with life-threatening illness*[21].

ONGOING PROFESSIONAL DEVELOPMENT/ CONTINUING MEDICAL EDUCATION

Completion of residency training should be considered a beginning rather than an end of education. Ongoing learning, including efforts to ease the transition from resident to practicing physician, needs to be considered. Several examples are included in the hospital/delivery system roles cited earlier since they are largely based within the hospital. Hospitals and the delivery system should provide encouragement as appropriate to increase participation in meaningful continuing medical education (CME).

Development of the competencies is an ongoing process and should be approached over a lifetime. As with all medical education, mastery of the core competencies is a continuous process. While the competencies should be part of the educational system, development of certain skills should be emphasized earlier in training than others. Systems-based practice and practice-based learning lend themselves to emphasis during and following residency training.

ACGME has recognized that mastery of the competencies is an ongoing process, and as a result is working with its review committees, specialty medical organizations, and specialty boards to develop specific benchmarks of skills and knowledge that residents in every specialty must achieve at certain stages in their residencies. These benchmarks, or milestones, of skills and knowledge will document their steadily increasing mastery of the six competencies.

The Accreditation Council of Continuing Medical Education (ACCME) requires accredited continuing medical education programs develop learning opportunities in the context of desirable physician attributes, including the core competencies.

Continuing professional education provides a strong support to ongoing development. To increase opportunities to ingrain the competencies into medical education, expanded use of the many continuing medical education programs should be emphasized and leveraged.

- *Lancaster General Hospital (PA) has had success integrating education with quality improvement and medical staff services at a state-accredited community hospital that includes a physician leadership development course that the CME department has developed and implemented*[22].
- *Jennie Edmundson Hospital (IA) has taken advantage of the opportunity to change physician performance through continuing medical education based on performance measurement data*[23].
- *Kaiser Permanente (CA) has integrated continuing medical education into their process for improving professional practice and has been collaborating with community organizations to develop continuing medical education for community-based physicians about local heath priorities*[24].

Continuing medical education can offer a unique opportunity for rapid response to emerging gaps in training given that accreditation is renewed yearly. Ongoing review of emerging professional practice gaps and the underlying competencies can serve to make continuing medical education well suited for a rapid response to emerging problems.

- *HealthPartners Institute for Medical Education (MN) developed a regional initiative to address professional practice gaps for family physicians and other health care practitioners treating returning U.S. veterans with significantly higher incidence of mental health disorders and suicide risk*[25].

Increased availability and simplicity of attaining continuing medical education credit for involvement in practice/hospital-based improvement projects and efforts around systems-based practice should be considered.
Additional education and certification specifically around the core competencies, as well as tools and resources for improvement, should also be highlighted and made readily available.

The influence of professional societies could impact the valuation of the competencies among the physician community. Societies should consider elevating mastery of the competencies in their maintenance of certification requirements, as well as adapting certification requirements to the full scope of competencies. Licensing boards should also consider stronger focus on the core competencies as part of the licensing process.

Embracing the use of evaluation and tools to improve within the scope of practice evaluation and continuous improvement efforts should be considered.
The use of scorecards and evaluation websites will only increase as consumer-driven care increases.

Given the rapid advancements in medicine and health care delivery, consideration should be given to increased exposure to change management curricula both in training and in ongoing education for both clinicians and administrators.

Communications Strategy

Members were asked to provide their thoughts on potential avenues for disseminating the recommendations to the medical educational community and to the hospital field. As a start, they suggested that case examples from successful hospital efforts to incorporate the competencies into residency programs and continuing education should be collected, shared, and highlighted in publications for broader awareness.

Members also suggested, in addition to sharing the recommendations with the accrediting agencies with which AHA is currently working, that AHA pursue opportunities with other medical specialty societies to disseminate this document as broadly as possible to encourage their memberships to embrace and value the competencies. They also suggested a broad sharing within the hospital community through AHA and the state and metropolitan hospital associations.

Members also suggested sharing this document with the hospital field as a discussion tool to stimulate thinking about how hospitals can begin to ingrain the competencies into their organizations and help support efforts to move towards greater adoption of the competencies outside of medical schools and residency programs.

Next Steps

This paper incorporates input from the AHA Board of Trustees, the Physician Leadership Forum advisory committee, additional input from the task force, and the regional policy boards, governing councils and committees. It also includes initial comment from numerous organizations involved in medical education, training, continuing education, and accreditation, including, ACGME, ACCME, AAMC, American Medical Association, ABMS, AOA and others. These organizations, as well as the AHA and others all play a key role in improving the uptake of the core competencies.

Using the competencies as a common framework, this document will help stimulate dialogue on the ways we might collaborate to advance the competencies in the health care delivery system.

Notes

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4 Iowa Health System Physician Leadership Academy: http://www.ihs.org/body.cfm?id=335

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