SPECIAL REPORT

The Next GME Accreditation System — Rationale and Benefits

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In 1999, the Accreditation Council for Graduate Medical Education (ACGME) introduced the six domains of clinical competency to the profession,[1] and in 2009, it began a multiyear process of restructuring its accreditation system to be based on educational outcomes in these competencies. The result of this effort is the Next Accreditation System (NAS), scheduled for phased implementation beginning in July 2013. The aims of the NAS are threefold: to enhance the ability of the peer-review system to prepare physicians for practice in the 21st century, to accelerate the ACGME's movement toward accreditation on the basis of educational outcomes, and to reduce the burden associated with the current structure and process-based approach.

Self-regulation is a fundamental professional responsibility, and the system for educating physicians answers to the public for the graduates it produces.[2] As the accreditor for graduate medical education (GME), the ACGME serves this public trust by setting and enforcing standards that govern the specialty education of the next generation of physicians. In this article, we discuss the NAS, including elements and attributes of interest to stakeholders (program directors, leaders of sponsoring institutions, ACGME's partner organizations, residents, and the public). The ACGME's public stakeholders have heightened expectations of physicians. No longer accepting them as independent actors, they expect physicians to function as leaders and participants in team-oriented care. Patients, payers, and the public demand information-technology literacy, sensitivity to cost-effectiveness, the ability to involve patients in their own care, and the use of health information technology to improve care for individuals and populations; they also expect that GME will help to develop practitioners who possess these skills along with the requisite clinical and professional attributes.[3-7]

LIMITATIONS OF THE CURRENT SYSTEM

When the ACGME was established in 1981, the GME environment was facing two major stresses: variability in the quality of resident education[8] and the emerging formalization of subspecialty education. In response, the ACGME's approach emphasized program structure, increased the amount and quality of formal teaching, fostered a balance between service and education, promoted resident evaluation and feedback, and required financial and benefit support for trainees. These dimensions were incorporated into program requirements that became increasingly more specific during the next 30 years.

The results have been largely salutary. Performance on certifying examinations has improved, residents are prepared to deal with the dramatically increasing volume and complexity of information in their specialty, and graduates and academic institutions have contributed to clinical advances and innovation that the public enjoys today.[9,10] In addition, the role of the program director has been established as an educational career path, and the formal teaching and assessment of residents and fellows have improved substantially.

Yet success has come at a cost. Program requirements have become prescriptive, and opportunities for innovation have progressively disappeared. As administrative burdens have grown, program directors have been forced to manage programs rather than mentor residents, with a recent study reporting administrative tasks related to compliance as a factor in burnout among directors of anesthesiology programs.[11] Finally, educational standards often lag behind delivery-system changes. The introduction of innovation through accreditation is limited and is often viewed as an unfunded mandate.

THE NEXT ACCREDITATION SYSTEM

In July 2013, the NAS will be implemented by 7 of the 26 ACGME-accredited core specialties (emergency medicine, internal medicine, neurologic surgery, orthopedic surgery, pediatrics, diagnostic radiology, and urology). In the remaining specialties and the transitional year (a year of preparatory education for specialties such as ophthalmology and radiology that accept residents at the second postgraduate year), the NAS will be implemented in July 2014. Educational milestones (developmentally based, specialty-specific achievements that residents are expected to demonstrate at established intervals as they progress through training) have been completed or nearly completed for the seven specialties in the first phase of implementation. The residency review committees in these specialties will be in an excellent position to begin to collect milestone data during the 2012–2013 academic year to create a baseline data set for the NAS.

The NAS moves the ACGME from an episodic "biopsy" model (in which compliance is assessed every 4 to 5 years for most programs) to annual data collection. Each review committee will perform an annual evaluation of trends in key performance measurements and will extend the period between scheduled accreditation visits to 10 years. In addition to the milestones, other data elements for annual surveillance include the ACGME resident and faculty surveys and operative and case-log data. The NAS will eliminate the program information form, which is currently prepared before a site visit to describe compliance with the requirements. Programs will conduct a self-study before the 10-year site visit, similar to what is done by other educational accreditors. It is envisioned that these self-studies will go beyond a static description of a program by offering opportunities for meaningful discussion of what is important to stakeholders and showcasing of achievements in key program elements and learning outcomes.

Ongoing data collection and trend analysis will base accreditation in part on the educational outcomes of programs while enhancing ongoing oversight to ensure that programs meet standards for high-quality education and a safe and effective learning environment. Programs that demonstrate high-quality outcomes will be freed to innovate by relaxing detailed process standards that specify elements of residents' formal learning experiences (e.g., hours of lectures and bedside teaching), leaving them free to innovate in these areas while continuing to offer guidance to new programs and those that do not achieve good educational outcomes.

THE EDUCATIONAL MILESTONES

A key element of the NAS is the measurement and reporting of outcomes through the educational milestones, which is a natural progression of the work on the six competencies. Starting more than 10 years ago, the ACGME, in concert with the American Board of Medical Specialties (ABMS), established the conceptual framework and language of the six domains of clinical competency and introduced them into the profession's lexicon, mirroring the move toward outcomes and learner-centered approaches in other domains of education.[12]

In each specialty, the milestones result from a close collaboration among the ABMS certifying boards, the review committees, medical-specialty organizations, program-director associations, and residents. The earliest efforts involved internal medicine, pediatrics, and surgery,[13-15] and by late 2011, milestones were being developed in all specialties. The aim is to create a logical trajectory of professional development in essential elements of competency and meet criteria for effective assessment, including feasibility, demonstration of beneficial effect on learning, and acceptability in the community.[16]

Programs in the NAS will submit composite milestone data on their residents every 6 months, synchronized with residents' semiannual evaluations. Although the internal collection of milestone data may be more comprehensive, the data submitted to the ACGME will consist of 30 to 36 dimensions that represent the consensus of the assessment committee on the educational achievements of residents, informed by evaluations the program has performed. Table 1 shows a sample of generic milestones for professionalism, interpersonal and communication skills, practice-based learning and improvement, and systems-based practice. The milestones are based on the published literature on these competencies[17-22] and were developed by an expert panel with representation from the specialties in the early phase for use in milestone development.

At the completion of training, the final milestones will provide meaningful data on the per-

10.1056/NEJMsr1200117 NEJM.ORG

Table 1. Four Selected General Milestones in the Next Accreditation System.*

Milestone	Level 1	Level 2	Level 3	Level 4	Level 5
Professionalism	Recognizes the importance and priority of patient care, with an emphasis on the care that the patient wants and needs; demonstrates a commitment to this value Is aware of basic bioethical principles and is able to identify ethical issues in clinical situations	Is consistently able to recognize and identify own beliefs and values and their impact on practice of medicine; recognizes internal and external barriers that interfere with patient care Consistently recognizes ethical issues in practice and is able to discuss, analyze, and manage such issues in common and frequent clinical situations	Demonstrates awareness of own values and beliefs and how they affect perspective on ethical issues; is able to effectively manage personal beliefs to avoid any negative effect on patient care Is able to effectively analyze and manage ethical issues in complicated and challenging clinical situations	Develops and applies a consistent and appropriate approach to evaluating care, possible barriers, and strategies to intervene that consistently prioritizes the patient's best interest in all relationships and situations Consistently considers and manages ethical issues in practice and develops and applies a systematic and appropriate approach to analyzing and managing ethical issues when providing medical care	Is knowledgeable about, consistently uses, and effectively manages ethical principles of medicine in general and as related to specialty care Demonstrates leadership and mentorship on understanding and applying bioethical principles clinically, particularly responsiveness to patients above self-interest and self-monitoring Develops institutional and organizational strategies to protect and maintain these principles
Interpersonal and communication skills	Identifies team-based care as the optimal approach and is able to describe and appreciate the expertise of each team member, including the patient and family	Actively participates in team-based care; supports activities of other team members, communicates their value to the patient and family	Facilitates or leads team-based patient care activities Actively participates in meetings not directly related to patient care	NA	Seeks leadership opportunities within professional organizations Facilitates or leads meetings within the organization or system
Practice-based learning and improvement	Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning Categorizes the study design of a research study	Ranks study designs according to their ability to minimize threats to validity and to generalize to larger populations Identifies critical threats to study validity when reading a research paper or study synopsis Distinguishes research outcomes that directly affect patient care from other outcomes Formulates a searchable question from a clinical question (e.g., using the PICO format)	Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical-practice guidelines Critically evaluates information from others: colleagues, experts, pharmaceutical representatives, and patient-delivered information	Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery	Independently teaches and assesses evidence-based medicine and information-mastery techniques Can cite evidence supporting several common practices
Systems-based practice	Can describe systems theory and the characteristics of high-reliability organizations Understands the epidemiology of medical errors and the differences between medical errors, near misses, and sentinel events Can define human-factors engineering	Reports problematic devices, architecture, and processes (including errors and near misses) to supervisor, institution, or program, as appropriate Illustrates with examples how human-factors engineering promotes patient safety (e.g., Stroop effect, perceptual illusions, easily confused medications)	Analyzes the causes of adverse events through root-cause analysis Demonstrates basic usability testing and critique design of devices, architecture, and processes on the basis of principles of human-factor engineering	Can compare and contrast failure modes and effects analysis with root-cause analysis as a patient-safety tool in health care Develops content for and facilitates a morbidity-and-mortality presentation or conference focusing on systems-based errors in patient care	Recommends and justifies characteristics of high-reliability organizations (e.g., reporting adverse events, root-cause analysis, and failure modes and effects analysis) to organizational leadership to promote patient safety Develops and works with multidisciplinary teams (e.g., human-factors engineers, reference librarians, and cognitive and social scientists) to find solutions to patient-safety problems

* The four listed milestones, which were developed by an ACGME expert panel, reflect the following expected levels of performance: level 1, typical graduating medical student; levels 2 and 3, resident during the program; level 4, graduating resident; and level 5, advanced, specialist resident or practicing physician. NA denotes not applicable, and PICO patient, population, or problem; intervention; comparison (alternative to intervention); and outcome.

formance that graduates must achieve before entering unsupervised practice. This process moves the competencies "out of the realm of the abstract and grounds them in a way that makes them meaningful to both learners and faculty."[13] The final milestones also create the entry point into the maintenance of certification and licensure phase of lifelong learning. The initial milestones for entering residents will add a performance-based vocabulary to conversations with medical schools about graduates' preparedness for supervised practice.[23] Over time, the milestones will reach into undergraduate medical education to follow the adoption of the competencies by many medical schools. This will contribute to a more seamless transition across the medical-education continuum.

Another key element of the NAS is emphasis on the responsibility of the sponsoring institutions for the quality and safety of the environment for learning and patient care, a key dimension of the 2011 common program requirements.[24] This will be accomplished through periodic site visits to assess the learning environment. Institutions will see their results, and the first visit will establish a baseline for self-comparison over time. The process will generate national data on program and institutional attributes that have a salutary effect on quality and safety in settings where residents learn and on the quality of care rendered after graduation.[25]

BENEFITS AND LIMITATIONS

The visits to sponsoring institutions will ensure that residents are exposed to an appropriate learning environment, and the milestones will ensure that they demonstrate readiness for independent practice and possess the attributes that the public deems to be important in physicians. As future competencies emerge, the milestones will enhance the ability of the ACGME to ensure their successful incorporation into the physician's armamentarium. The NAS will enhance education focused on physician competencies that are deemed to be relevant to the health of individuals and populations. Through this, the NAS will benefit employers of new graduates and the public by enhancing the competence of future physicians in areas that are relevant to a well-performing, efficient, and cost-effective health care system and that have been recommended by experts and stakeholder groups.[3-7]

In the context of our aspirations for the NAS, it is important to note the limits of accreditation. Much has been written about the constrained environment for GME, including threatened reductions in support for physician training and increased productivity pressures on academic institutions and their faculties. The development of the NAS is sensitive to these factors, since they are characteristics of the environment in which GME programs, sponsoring institutions, and the ACGME operate. At the same time, accreditation is not a panacea, and no accreditation model by itself can effectively compensate for the overuse of resources, inefficiencies, and disparities that characterize aspects of the nation's health care system. It would be presumptuous to expect accreditation to effectively resolve these problems. Rather, its roles are to arm the next generation of physicians with knowledge, skills, and attributes that will enhance care in the future and to expand the traditional role of residents in the care of underserved populations to an enhanced understanding of the problem of health disparities and how to eradicate them.[26]

Finally, although accreditation must be sensitive to the burden it creates on programs, institutions, and individuals, it would be dangerous to expect accreditation to reduce its expectations to accommodate the host of other pressures on the system of physician training. Any move to create a reductionist model of accreditation to avoid burdening the system may further erode public support for physician education and public trust in the physicians the system produces. Constrained finances and future threats of reductions make it even more important for accreditation to ensure that learners are not unduly burdened with service obligations that do not meaningfully contribute to their education[27] and that education and patient care proceed in an environment that complies with requirements for duty hours, supervision, and other elements important to the safety of patients and residents.[28] This makes the visits to sponsoring institutions a critical component of the NAS in the untoward event of serious cuts in support for GME.

10.1056/NEJMsr1200117 NEJM.ORG

CONCLUSIONS

Key benefits of the NAS include the creation of a national framework for assessment that includes comparison data, reduction in the burden associated with the current process-based accreditation system, the opportunity for residents to learn in innovative programs, and enhanced resident education in quality, patient safety, and the new competencies. Over time, we envision that the NAS will allow the ACGME to create an accreditation system that focuses less on the identification of problems and more on the success of programs and institutions in addressing them.

Although the ACGME has not piloted the NAS in its entirety, pivotal elements of the system have been tested successfully in the Educational Innovation Project in internal medicine and in a multiyear pilot in emergency medicine. Besides testing annual data collection, the Educational Innovation Project provided the ACGME with insight into standards that could be relaxed for high-performing programs (i.e., a 40% reduction in requirements for the internal medicine program, which went into effect in July 2009[29]). Knowledge about acquisition of data elements around the milestones is being gained from the ACGME's international accreditation effort in Singapore and will benefit the implementation of the NAS. Finally, the learning gained from the first phase of the NAS will benefit the specialties that will implement the NAS in the second phase.

Much work remains to be done. The next step in moving toward the NAS will involve informing the GME community about the NAS, with a particular focus on the milestones. This work will continue in close collaboration with program-director organizations, the ABMS boards, the specialty colleges, and related academic organizations. The ACGME will continue its role in educating program directors, faculty, and others by building on its annual conference, with a focus on faculty development that is sensitive to time and financial constraints for many faculty members.

The NAS will support the education of physicians to provide care for Americans into the middle of the century. This requires an enduring system that takes the best of the current system and enhances it with a more explicit focus on attributes of the learning environment that carry over into a lifetime of practice in a clinical specialty. By encouraging high-performing programs to innovate, the system will open the quality ceiling and produce new learning. Simultaneously, an ongoing process-based approach for programs with less-than-optimal performance will continue to raise the floor for all programs.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

We thank the members of the ACGME expert milestone panel: Susan Swing, Ph.D., ACGME, Arden Dingle, M.D., Emory Medical School, Catherine A. Marco, M.D., University of Toledo College of Medicine, Karen Brasel, M.D., M.P.H., Medical College of Wisconsin, Rich Frankel, Ph.D., Indiana University, Joanne Schwartzberg, M.D., American Medical Association, Tina Foster, M.D., M.P.H., Dartmouth–Hitchcock Medical Center, Gary Loyd, M.D., M.M.M., University of Louisville School of Medicine, Prathibha Varkey, M.B., B.S., M.H.P., M.H.E.P., Mayo Clinic; and Robin Hemphill, M.D., M.P.H., Douglas Paull, M.D., and Linda Williams, R.N., M.S.I., VA National Center for Patient Safety.

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This article (10.1056/NEJMsr1200117) was published on February 22, 2012, at NEJM.org.

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