Medicine in 2035: Selected Insights From ACGME's Scenario Planning

Thomas J. Nasca, MD, MACP
Charles W. Thomas

Abstract

The Accreditation Council for Graduate Medical Education (ACGME) has the responsibility for overseeing the preparation of future physician specialists and subspecialists to serve the American public. To ensure ACGME's ability to adapt and sustain its accreditation activities in a future marked by significant uncertainty, its administration and board of directors embarked on a planning process that would frame its strategic actions in support of this responsibility. We describe the scenario planning process, and report key insights that resulted from it. We also discuss in greater depth a subset of those insights, which challenge certain conventional truths, call for new collaborative directions for the ACGME, and reaffirm the importance of professionalism in service of the public across all future scenarios evaluated.

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Introduction

It is the responsibility of the medical profession to prepare the next generation of physicians to provide excellent medical care to patients and to the public. To do so with anything less than our best effort is to fail in the profession's responsibility to maintain medicine as a public trust.[1,2] That preparation encompasses the needs of present-day medical practice, but what of the future? Physicians graduating from residency in 2015 will practice medicine into the 2050s. What knowledge and skills will they require in 2035? What business models will be in place to deliver care to patients, both those with and those without resources? What will the technology tool kit look like? What new health professions might arise, and how will they and the existing professions work together to a common purpose? How can we understand the knowledge and skills needed in the future, for which physicians in training must be prepared?

The Accreditation Council for Graduate Medical Education (ACGME) approached this challenging series of questions using "alternative futures" scenario-based planning.[3] This technique is used in circumstances where the pace of change is accelerating, uncertainty about future operating circumstances is high, and control of critical future conditions is often in the hands of others. To appreciate this approach to strategic planning, one must understand that scenarios are *not forecasts*. They are risk management tools designed to address the range of future uncertainties, in this case facing health care and graduate medical education. In this instance, the aim was to prepare the ACGME for strategic risk management, rather than planning by prediction of a single endpoint. The products of this technique are insights into the future and robust strategies. Robust strategies are those things ACGME can begin to initiate today that will be viable and beneficial across a range of future operating environments. We are under no illusions that our insights and strategies are perfect. They are simply the best we can do in an uncertain world. We also understand that our "futures work" did not end with the formulation of the new strategic plan—it will be ongoing and, just as was done in this planning cycle, ACGME will continue to invite our colleagues across the medical professions to join us in each successive cycle.

Strategic Planning Process

After extensive research, including more than 100 interviews across the health professions, ACGME developed 4 widely varied, plausible, internally consistent scenarios describing the range for the future context for health care delivery. The 4 original scenarios described a range of environments exogenous to health care, within which America's health care system would have to operate in 2035. The first project workshop was made up of 50 leaders in the health care community from the United States and other countries. Attendees "lived" in the 4 scenarios

Thomas J. Nasca, MD, MACP, is Chief Executive Officer, Accreditation Council for Graduate Medical Education (ACGME) and ACGME International, and Professor of Medicine (vol), Jefferson Medical College, Thomas Jefferson University; and **Charles W. Thomas** is Principal, Futures Strategy Group.

Corresponding author: Thomas J. Nasca, MD, MACP, 515 North State Street, Suite 2000, Chicago, IL 60654, tnasca@acgme.org

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BOX **Common Insights About the Future of Medical Systems, Medical Education, and Accreditation**

- Complexity will escalate in patient care delivery, specifically calling for an ever more seamless and disciplined interprofessional team-based approach to health care delivery and medical education.
- Information transparency will increase, with accompanying challenges to the veracity and perceived value of competing offerings of data and analyses.
- It is not possible to determine the future shape of health care delivery and to project the workforce needed; therefore, the maximization of provider career flexibility will be crucial.
- "Commoditization" of health care services will accelerate. It will include increasingly standardized (price-driven) services at entry level and shifting responsibilities and risks among health professionals in interprofessional team-based care. It will also impact formerly "high-end" procedures that can be rigorously standardized or automated.
- There will be little tolerance for approaches to accreditation, credentialing, and licensing with burdensome process inefficiencies and multiple actors with either conflicting or incompatible standards.
- The potential diversity in medical delivery approaches will be so profound that the current dichotomous conceptualizations of the physician workforce (eg, "primary care–subspecialist," "generalist-specialist") turn out to be narrow, and distracting approaches to thinking about the future.
- There is no clear optimal specialty distribution for the future (given the pace and differential cross-impacts of technology, economics, and societal issues); therefore, the medical education system must be capable of supplying a wide distribution of physicians by specialty.
- There will be profound societal pressures to deprofessionalize all of the health care professions, not just physicians.

for 3 days, and developed detailed "US health care systems" that would flow logically from the circumstances in each scenario.

In a second workshop, the ACGME Board of Directors used the scenarios and the health systems designed during the first workshop to describe (1) the medical education systems that would support the health care delivery models developed for each scenario, and (2) the ACGME strategies that would support that educational system. The robust insights below are the result of the deliberations of the 2 workshops.

The public version of our strategic planning document is available at www.acgme.org.

Insights from 2035

Many insights were generated by the 2 workshops with very distinguished membership. Of those, a few key issues appeared consistently as touchstones for future medical systems, education, and accreditation—regardless of the scenario. They are shown in the BOX.

Of the list of insights germane to all 4 possible permutations of the future health care enterprise, we discuss in detail 2 interrelated insights.[4]

Commoditization of the Profession

The term "commoditization" addresses the effects of several conditions. The term captures the accelerating future trend for some patient-medical system interfaces to be differentiated by price or convenience alone. It also captures the phenomenon of growth in new low-cost entrants (or existing professionals enhancing their scope of service) by asserting similar skills and knowledge as physicians, delivered at lower prices to patients who in all the scenarios are expected to assume more personal financial risk.

Economic, technological, and societal pressures will hasten and augment emerging low price "immediate access" health care providers with little or no close supervision by physicians. This will typically focus on entry-level "routine" acute care, and will frequently result in a public image that all health care profession expertise and advice are equally appropriate. This tendency will accelerate with "sensored or wired" patients monitored and advised 24/7 by computerized medical care "systems." In many circumstances health care will no longer be a "batch" process, but a continuous part of daily life—health care interactivity will be no different than phone connectivity. This commoditization will also affect "high-end" applications. Some very difficult, but routine, procedures might be so fully automated that price alone will be used to differentiate.

This commoditization of entry-level care in turn will lead to an increasing tendency for providers and insurers to "push" patient care to lower priced health care staff, automated systems, or self-care approaches. This trend accelerated in all the worlds examined. We termed this the "Ladder Effect," and observed that this phenomenon (while accentuated in the future) has been present since the incorporation of prospective reimbursement for hospital services in the mid-1980s,[5] and will be accelerated by organizational responses to similar "batch payment" models for clinician services now gaining momentum in the United States. One need only to look at the impact of prospective reimbursement on the nursing profession, with commoditization of many of the previous elements of nursing practice—now delivered by technicians, nurses' aides, and licensed practical nurses—to identify this trend. Indeed, this trend is articulated today in the call for individuals to practice "at the top of their licenses," provoking scope of practice pressure from the immediate lower "rung" all along the health professions "ladder."

Physicians will not be immune to this phenomenon, and all involved in the planning process expressed concern that commoditization is predicated on task performance, rather than understanding the complexity and range of clinical disorders where that task might be appropriately used (or not used), and the value of the physician (and other professionals) in the clinical encounter. Whether it is

pharmacists providing an influenza vaccination, nurse practitioners providing elements of primary care, certified registered nurse anesthetists providing operative anesthesia, or physician assistants serving as surgical assistants, tasks previously the exclusive domain of the physician are now being provided by others. These phenomena will accelerate in the future.

As we "simplify" knowledge about elements of the role and tasks of the physician (and other professionals) and make that knowledge accessible to others, economic and workforce shortage pressures will force that "task" to the lowest provider on the ladder who is competent to provide the service, or to the latest technology that can substitute or largely substitute for tasks previously performed by humans. Across the 4 scenarios, this parsing of care into tasks will create circumstances where subtle or early presentations of complex conditions may be missed, and the motivation for parsing may be economic or expediency, rather than efficiency of safe, high-quality care delivery. Furthermore, it elevates the importance of team communication and systems of care that organize these "tasks" into seamless care for the patient.

These pressures will challenge the meaning of professionalism across all health care professions in the future, and led the scenario workshop teams to conclude that the very nature of what it means to be a physician will change. Physicians will be identified less by the specialty knowledge they possess and more by their experience, insight, unique technical skill, and clinical judgment.

Physician Roles and Career Flexibility

The social-technical context within which health care will be delivered will become increasingly complex. Particularly, the wide availability of data and analysis across all economic sectors will impact consumer and patient decision making and hasten the blurring between health care and other sectors of the economy. That trend will be accelerated by the proliferation of home-based sensors and embeddable biotechnology tools for automated diagnosis and care. Insurers and providers off-loading more risk (both cost and outcomes) onto patients will add personal and societal stress to these phenomena. This in turn will highlight the efficacy of informed patient engagement and the roles physicians must assume to help patients navigate through care regimens in which they shoulder more responsibilities.

A variety of conditions across all of the scenarios (including technology development, financial pressures, patient demands for immediate solutions, and commoditization of care) will result in a blurring or even dissolution of many traditional delivery silos. Right now there is no clear answer to the question, "What specialties, or balance of specialties, will we need?" This led workshop participants to the observation that greater physician career flexibility will be needed to address shifting care needs. Locking physicians into narrow specialties will prove to be a poor solution to rapidly changing conditions. The swift pace of technology change (much originating outside the profession) will make delivery approaches and therapies obsolete in unpredictable patterns. This will require seamless alternative training opportunities or we risk gains in patient safety and outcomes, as well as the possibility of losing talented individuals to other professions.

Across the scenarios, a wide diversity of images of medical delivery approaches will be possible. One thing, however, was quite clear—the current dichotomous conceptualizations of the physician workforce (eg, "primary care–subspecialist," "generalist-specialist") will not be useful for thinking about and planning the future of the medical profession and medical education. Additionally, in several scenarios almost all well-educated people will enjoy the opportunities for multiple and varied careers. If we want to attract the best and the brightest into medicine, then physicians, too, must have the ability to transition in and out of various specialties (or in and out of the profession) with greater flexibility and ease than today.

Implications

Based on an extensive scenario planning effort, and the insights derived from it, ACGME has crafted a strategic plan that is designed to support the education of the next generation of physicians to serve the American public in a fashion that permits members of the profession to adapt to a wide range of circumstances that may develop over the course of their careers.

Implications of the commoditization of the physician professions for the ACGME and other accreditors that commoditization will require closer, rather than more distant, relationships among the health professions and among their accreditors. The design of delivery systems, and their microsystems of care, must be structured for the betterment of the patients, not the professionals or the delivery systems within which they function. The only way for physicians to "decompress" the system will be to continue to explore and develop new modes of treatment that will bring value to patients and society, and lengthen the professional value ladder for all.

The implication from observations regarding the growing demand for career flexibility is a need for ACGME to work closely with others in the practice phase of the continuum to support that flexibility. Not discussed, but equally important, is the need for ACGME to collaborate

with accreditors in other health professions, to coordinate standards for interprofessional team-based education and clinical care, and to foster shared values. Finally, and perhaps most importantly, the stresses on all members of the health care team in today's and tomorrow's world demand that all of us redouble our efforts in fostering professionalism. We must have the courage of our convictions, manifest through these and other efforts, to hand professions, rather than guilds, to those who follow in our footsteps.

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