

TRENDWATCH

Teaching Hospitals: Preparing Tomorrow's Physicians Today

Teaching hospitals serve as centers for training future health care professionals, while also supporting an environment in which biomedical and clinical research can flourish, offering specialized services and providing patient care, often in the most disadvantaged communities. Training new physicians, a time-intensive process that can take up to 14 years, is an essential part of the mission of teaching hospitals. First, physicians must complete four years of medical school, followed by clinical residency training of three to seven years, often referred to as graduate medical education (GME). Physicians in some specialties undertake additional clinical fellowships that last from one to three years.¹ Teaching hospitals are a vital part

of this process, sponsoring the majority of residency and fellowship programs.²

In addition to training physicians in hands-on clinical patient care, faculty in teaching hospitals also prepare physicians for the new demands of a changing health care environment, such as using health information technology, coordinating care across the continuum, caring for patients in outpatient clinics and delivering team-based care. The Accreditation Council for Graduate Medical Education (ACGME), which accredits 9,500 residency programs,³ sets educational standards to ensure consistent resident training curricula at each institution. These standards continually evolve to incorporate emerging changes in health care.

Congress has long recognized the public responsibility of teaching hospitals for producing well-trained physicians and has directed the Medicare program to pay its proportionate share of certain GME costs since its inception in 1965.⁴ Today, teaching hospitals receive two Medicare payments with an education label: direct graduate medical education (DGME) and indirect medical education (IME) payments.⁵ DGME payments support Medicare's share of the infrastructure investments, residents' stipends and benefits and faculty necessary to train the physicians needed today and in the future. IME payments are payments for patient care that help cover the higher operating costs of teaching hospitals compared to non-teaching hospitals.

Teaching Hospitals Play Important Roles in Addition to Training Physicians

Teaching hospitals are centers for specialty care, biomedical, behavioral and clinical research and are often critical components of the health care safety net. Teaching hospitals offer many services less commonly available in other types of hospitals. For example, teaching hospitals house 82 percent of Level-I trauma centers, 78 percent of burn units, 74 percent of advanced certified

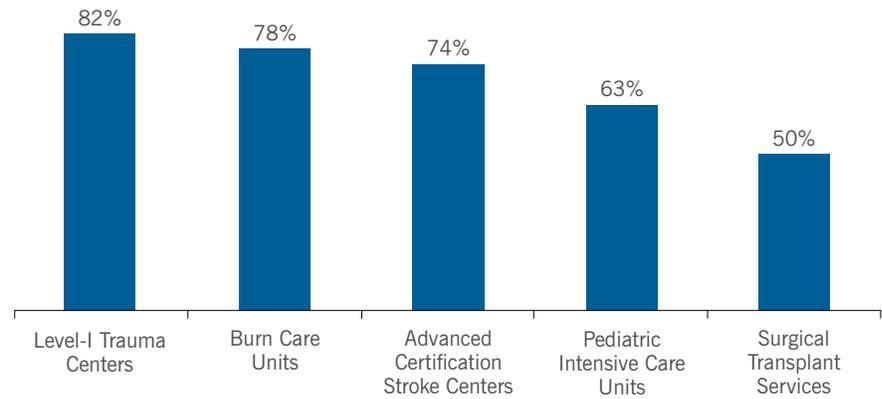
stroke centers, 63 percent of pediatric intensive care units and 50 percent of surgical transplant services.⁶ These hospitals also serve as centers of research and innovation, helping to develop new treatments and cures. The first live polio vaccine, intensive care unit for newborns and pediatric heart transplant were pioneered at teaching hospitals.⁷ Currently, medical schools and

teaching hospitals receive more than half of the extramural research funding awarded by the National Institutes of Health.⁸ Teaching hospitals also play important roles in the safety net. Even though teaching hospitals represent only 26 percent of all hospitals, they account for 56 percent of all uncompensated care provided by hospitals and more than half of all Medicaid hospitalizations.⁹

Evolving health care needs and the geographic and specialty distribution of physicians have caused some policymakers to focus on reducing Medicare's contribution to GME financing and on encouraging ambulatory training. Unfortunately, several proposals overlook the rationale for Medicare's current GME financing structure and would replace it with new, untested financing models. Many of the proposed changes could threaten the stability of a system that depends on consistent investment in physician training over many years. Ultimately, policymakers should recognize that any changes to Medicare financing of GME will undermine the overall financial support necessary for teaching hospitals to continue training a talented and diverse pool of physicians.

Teaching hospitals offer specialized services not available at many other facilities.

Chart 1: Percent of Specialized Services Offered by Teaching Hospitals⁽¹⁾, 2013



Source: Association of American Medical Colleges. (2013). Patient Care at AAMC-Member Teaching Hospitals. (1) Includes data on the nearly 400 teaching hospitals and health systems that are members of the Association of American Medical Colleges

Teaching Hospitals Receive Supplementary Payments for Physician Training and Patient Care

In 1965, Congress directed Medicare to make supplementary payments to teaching hospitals. In the legislative history of the original Medicare legislation Congress stated:

Many hospitals engage in substantial education activities, including the training of medical students [and] internship and residency programs... Educational activities enhance the quality of care in an institution, and it is intended, until the community undertakes to bear such education costs in some other way, that a part of the net costs of such activities (including stipends of trainees as well as compensation of teachers and other costs)

should be considered as an element in the cost of patient care, to be borne to an appropriate extent by the hospital insurance program.¹⁰

– *Senate and House Reports, 89th Congress (1965), (emphasis added)*

Today, Medicare makes two payments with an education label to teaching hospitals: the DGME payment, a per-resident amount, and the IME payment, an add-on to each Medicare-severity diagnosis-related group (MS-DRG) reimbursement rate. The IME adjustment has been part of the inpatient prospective payment system (PPS) since its inception in 1983. In fiscal year (FY) 2012, Medicare paid an

estimated \$2.8 billion for DGME and \$6.8 billion for IME.¹¹

The federal government also contributes some residency training support through a variety of other programs, from the departments of Veterans Affairs and Defense to the Health Resources and Services Administration (HRSA) within the Department of Health and Human Services. In particular, HRSA administers many health care professional education and community-based workforce training programs and supports GME through, for example, the Children's Hospitals GME program (CHGME), preventive medicine and primary care medicine residencies and

“ ”

from the field

“The policy and statutory intent of the indirect medical education adjustment for teaching hospitals is clear: IME payments are designed to account for limitations in the DRG classification system and to recognize that clinical training of new physicians results in increased operating costs for hospitals.”

– Bruce C. Vladeck, Ph.D. senior advisor, Nexera Inc. and former administrator, Health Care Financing Administration (now the Centers for Medicare & Medicaid Services)

What Are Medicare DGME and IME Payments?

Direct graduate medical education payments compensate hospitals for costs directly associated with GME, such as stipends and fringe benefits for residents, and salaries and fringe benefits of faculty who supervise the residents, other direct costs such as salaries for staff in the GME administrative offices, and administrative overhead expenses, such as classroom space, electricity and maintenance. These payments are made on a hospital-specific, per-resident basis. Medicare pays its share of direct costs for the number of filled full-time equivalent residency positions in each hospital as limited by the Balanced Budget Act of 1997.¹² Teaching hospitals incur approximately \$100,000 per year in direct training costs for each resident, but receive an average of \$40,000 in DGME payments representing Medicare's share of total costs.¹³ Medicare does not make

payments related to the education of medical students.

Indirect medical education payments compensate teaching hospitals for the higher patient care costs associated with treating more complex, higher acuity patients that are not captured by the MS-DRG system and for specialized services not available at many non-teaching hospitals.¹⁴ The Centers for Medicare & Medicaid Services (CMS) adds IME payments to MS-DRG rates, as determined by a hospital's ratio of residents-to-hospital beds and a factor, known as a multiplier, set by Congress in the inpatient PPS.¹⁵

In establishing the rationale for IME payments, Congress noted:

This adjustment is provided in light of doubts... about the ability of the DRG case classification system to account fully for factors such as severity of illness of patients requiring the

specialized services and treatment programs provided by teaching institutions and the additional costs associated with the teaching of residents... The adjustment for indirect medical education costs is only a proxy to account for a number of factors which may legitimately increase costs in teaching hospitals. – *Committee on Finance, Senate Report No. 98-23, March 11, 1983 and Committee on Ways and Means, House Report No. 98-25, March 4, 1983 (emphasis added).*

According to the Association of American Medical Colleges (AAMC), Medicare supports approximately \$6.8 billion of these higher patient care costs through the IME adjustment. Yet the actual cost of providing specialized services to communities is often significantly higher and often unrecognized by private payers.¹⁶

teaching health centers. HRSA programs rely on appropriations, making their funding relatively unreliable compared to the Medicare program. For example, the Teaching Health Center program was funded in the Affordable Care Act (ACA) with a mandatory appropriation, but only through FY 2015. Most HRSA programs require annual appropriations.

State Medicaid programs are not required by the federal government to support GME, although most do. Currently, 42 states and the District of Columbia provide Medicaid GME payments; however, every state has contributed at some point in the past.¹⁷ States that ended their contributions typically did so due to increased budgetary pressure. For the states that contribute to

GME financing on behalf of Medicaid patients, reimbursement mechanisms vary widely—from additional per-case payments on top of hospital payments to a lump sum payment based on the hospital's total share of Medicaid revenue or patient volume.¹⁸

Health plans may provide higher reimbursement rates to teaching hospitals to ensure access to specialized services for their members but rates can vary greatly across teaching hospitals, as private payers do not have a statutory obligation to contribute to GME.¹⁹ Ultimately, private payers may be less likely to provide financial support for GME costs in the current price-competitive health care environment.²⁰

Rates paid by state Medicaid programs and private payers, as well as government

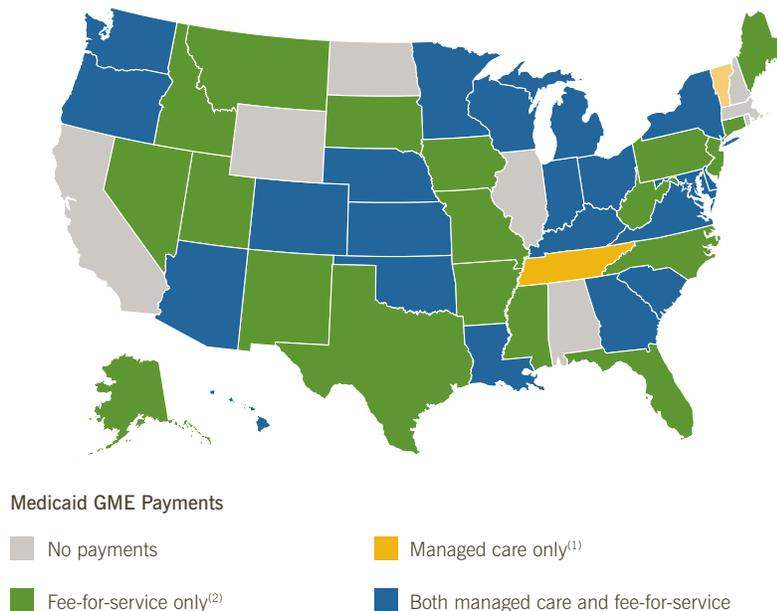
appropriations for GME, may be subject to annual redeterminations. However, DGME and IME payments, as part of Medicare mandatory spending, provide a relatively stable source of funding, enabling teaching hospital sponsors of GME programs to enter into multi-year commitments with tens of thousands of new residents annually.²¹ This distinction is significant. For example, payments to free-standing children's hospitals that support training pediatric physicians are made through the federal appropriations process. Children's teaching hospitals must engage in annual appropriations debates to fund the CHGME program. These appropriations have led to unpredictable annual funding levels for children's hospitals.²² In 2014, Congress re-authorized the

program at a level of \$300 million annually through FY 2018. However, funding for CHGME has decreased significantly, from \$317.5 million in FY 2010 to \$265 million in FY 2015.²³

Another example is the funding of the Teaching Health Center GME program. Authorized by the Public Health Service Act, the program received \$230 million over five years through the ACA to increase the number of primary care residents and dentists trained in ambulatory patient care settings. About 550 residents are being trained at 60 medically underserved locations. Administered by HRSA and started in FY 2011, the program required re-authorization by Congress before the end of FY 2015. The Medicare Access and CHIP Reauthorization Act of 2015 includes \$60 million for the program in both FY 2016 and 2017. Advocates for the centers note that without a third-year of funding to support the entire three-years of needed training, programs will find it difficult to maintain physician education.

The majority of state Medicaid programs contribute funding to graduate medical education.

Chart 2: State Medicaid Programs that Contribute to GME, by Type of Contribution, 2012



Source: Association of American Medical Colleges. (2013). Medicaid Graduate Medical Education Payments: A 50-State Survey 2013. (1) Includes implicit payments in higher capitation rates or explicit payments to teaching hospitals under managed care contracts. (2) Includes payments made to teaching hospitals under a per-case/per-diem rate and/or a separate, direct payment.

Teaching Hospitals Train the Physicians of Tomorrow

The path to becoming a practicing physician is long. After completing undergraduate education, students train for four years at an allopathic or osteopathic medical school. Together, these schools had nearly 23,000 graduates in 2014.^{24,25}

Deans of medical schools and others have noted that medical school enrollment growth is outpacing growth in GME training opportunities. The number of allopathic and osteopathic medical schools is growing. In 2002, there were 125 accredited medical schools in the U.S. As of March 2014, 16 additional medical schools had received some type of accreditation status from the Liaison Committee on Medical Education,

raising the total to 141 U.S. allopathic medical schools. The number of degree-granting osteopathic medical schools has doubled from 20 in 2003 to 40 schools in 2014. While M.D.-granting schools' enrollment increased 22 percent from 2002 to 2013, enrollment in osteopathic schools grew 117 percent.²⁶

Following medical school, graduates usually begin a residency program sponsored by a teaching hospital that lasts from three to seven years.²⁷ To apply for a residency, most graduates participate in the Main Residency Match administered by the National Resident Matching Program (NRMP). The program, known

as the "Match," pairs applicants with open residency slots based on the preferences of graduates and program directors at teaching hospitals.

The Match

Since 1952, medical school seniors and graduates have applied for residency positions via the Main Residency Match administered by the NRMP.²⁸ The Match system provides a common timeline for applicants and residency program directors to apply, review and accept applications. After registering for the Match, applicants interview with program directors at teaching hospitals and prepare application materials for submission

through the Electronic Residency Application Service (ERAS). After the interviews, individuals submit their applications and a ranked list of their desired residency programs and enter the Match system. In turn, program directors review applications received through ERAS and create their own ranked list of applicants.

During Match week, an annual process conducted in mid-March, the system uses an algorithm to “match” applicants to their preferred residency programs and the preferences of the residency program directors. After the Main Residency Match, some residency programs have unfilled slots because they are unable to attract enough applicants. Applicants who do not receive a Match can apply for these unfilled slots via the Supplemental Offer and Acceptance Program (SOAP)^a, which operates similar to the Main Residency Match.²⁹ On Match Day, the NRMP releases the results of the Main Residency Match and SOAP. In 2014, of the 26,600 first-year residency slots, fewer than 1,000 were unfilled after the Main Residency Match. Approximately 100 first-year residency slots remained unfilled after SOAP.³⁰

The 26,600 first-year residency slots in the Match³¹ are offered by over 1,100 teaching hospitals³² and include 9,500 slots available through the Veterans Health Administration.³³ While the total number of available residency slots exceeds the number of graduates from U.S. allopathic and osteopathic medical schools annually, these individuals also must compete with graduates from prior years who were not placed in residency programs during the previous Match, as well as graduates of international medical schools (i.e., U.S. and non-U.S. citizens) seeking U.S.-based residency training. Across these three groups, more than 34,200 graduates applied for first-year residency positions in 2014, resulting in a shortfall of nearly 7,600 positions.³⁴ The shortfall is

More than 7,700 individuals were not matched to a residency in 2014.

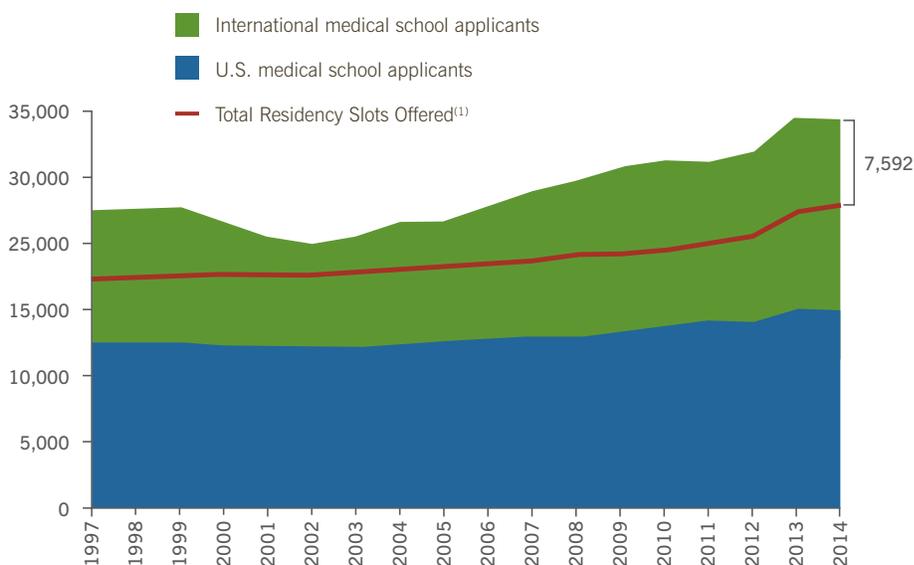
Chart 3: Main Residency Match and SOAP Results for First-year Residencies, 2014

	Main Residency Match	Supplemental Offer and Assistance Program
Applicants	34,270	N/A ⁽¹⁾
Available First-year Residencies	26,678	930 ⁽²⁾
Matched Applicants	25,687	882
Unmatched Applicants	8,583	7,701
Unfilled Residencies	991	109

SOAP = Supplemental Offer and Assistance Program; NRMP = National Resident Matching Program
 Source: Avalere analysis of 2014 Main Residency Match data from the NRMP.
 (1) NRMP did not release the number of SOAP applicants for first-year residencies.
 (2) All but 61 unfilled residency slots after the Main Residency Match were offered in the SOAP.

More U.S. and international medical school graduates apply for residency slots than are currently available.

Chart 4: Total First-year Residency Slots Available Compared to Total U.S. and International Medical School NRMP Applicants, 1997-2014



NRMP = National Resident Matching Program
 Source: Avalere analysis of 1997-2014 Main Residency Match data from NRMP.
 (1) Includes residency slots financed by Medicare and self-funded by teaching hospitals.
 NOTE: the increase in slots between 2012 and 2013 is primarily due to a policy change by NRMP, which required all participating programs to include all of their available slots in the Match.

particularly high for certain specialties; in 2014, more than 4,700 applications were received in excess of the number of the available slots for an internal medicine residency.³⁵

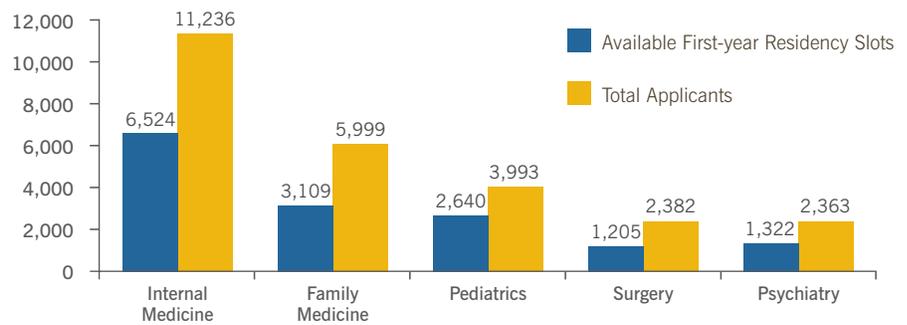
Data from the Match, however, show that U.S. allopathic medical school graduates are not choosing primary care specialties. In the 2014 Match, only 45 percent of first-year positions offered in family medicine residencies were filled by seniors graduating from U.S. allopathic medical schools, and 49 percent of first-year internal medicine positions were filled by seniors graduating from U.S. allopathic medical schools. In psychiatry, 52 percent of first-year residency positions offered through the Match were filled by U.S. seniors. Graduates of U.S. osteopathic medical schools, medical schools outside the U.S. (i.e., international medical graduates who may be

either U.S. citizens or non-U.S. citizens), previous graduates of allopathic medical schools and others filled the remaining positions. In contrast, U.S. seniors at allopathic medical schools

sought training in dermatology, orthopedic surgery, otolaryngology, neurological surgery and radiation oncology, filling very high percentages of first-year positions offered in those specialties.³⁶

Demand for residency positions exceeds supply in many specialties.

Chart 5: Specialties with the Greatest First-year Residency Slot Shortfalls, 2014⁽¹⁾



Source: Avalere analysis of 2014 Main Residency Match data from the National Resident Matching Program.
 (1) The analysis includes U.S. and international medical school graduates, and excludes specialties with fewer than 500 first-year positions offered in 2014 and post-graduate, year-one only residencies (e.g., transitional, medicine-preliminary).

Residency Caps Restrict the Future Supply of Physicians

In the Balanced Budget Act of 1997 (BBA), Congress imposed limits on the number of residency positions for which the Medicare program would make DGME and IME payments, limiting the growth in Medicare spending for GME. These caps restrict the number of residency slots for which hospitals may receive Medicare DGME funding and limit the number of residents that hospitals may include in calculating their ratio of residents-to-beds, which affects IME payments. The caps are hospital-specific, meaning that to stay within its limit, a hospital cannot expand Medicare-funded

slots in one residency program without corresponding reductions in another.³⁷ As demand for residency training has exceeded the number of Medicare-financed slots, some teaching hospitals have self-funded new residency positions³⁸ in excess of the cap.³⁹

Since the caps took effect, the number of first-year residency slots has grown slowly, with growth primarily driven by hospitals self-funding new slots.⁴⁰ The total number of first-year positions grew from approximately 20,200 in 1997 to 26,600 in 2014, a compound annual growth rate of only 1.6 percent.⁴¹ During that same

period, the number of U.S. and international applicants for first-year residencies increased at a compound annual growth rate of nearly 5.7 percent.⁴² Since the BBA, Congress has made small adjustments to redistribute some unfilled residency slots at certain hospitals to other hospitals. For example, in the Medicare Prescription Drug, Improvement, and Modernization Act enacted in 2003, Congress reduced the number of residency slots for hospitals with unused positions, and redistributed them to other hospitals based on certain priorities, such as residency programs located in rural and small urban areas.

“ ”
from the field

“The single most important way Medicare can influence the mix of physicians... is to reform how it pays for services.”

– Medicare Payment Advisory Commission, June 2010⁴³

GME is Evolving to Meet Today's Delivery System Needs

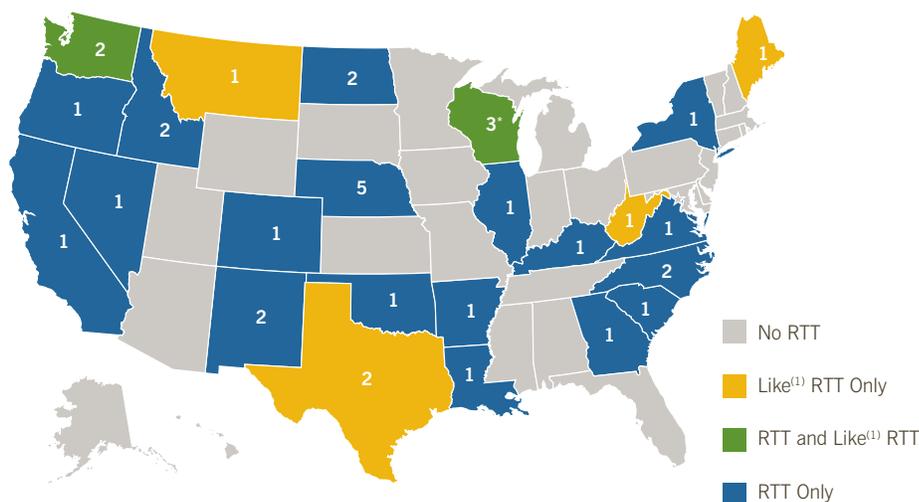
After a successful Match, physicians enter a residency program to gain the clinical knowledge and experience necessary to practice independently or within a hospital or clinic. Over time, residency programs have shifted their focus to prepare physicians proactively for current and future health care needs, including preparing individuals to participate in the new care models advanced by health care reform.

Recent changes to residency curricula have been made in response to emerging clinical needs. For example, physicians are treating more patients with multiple comorbidities.⁴⁴ To learn how to treat and manage these patients, residents train increasingly in multispecialty and interdisciplinary teams. For example, in 2010, Brigham and Women's Hospital started its Integrated Teaching Unit rotation, which assembles an interdisciplinary team of interns, residents, attending physicians, nurses, case managers, social workers and physical therapists.⁴⁵ The team-based learning and delivery model gives providers, including residents, the opportunity to learn new and more practical skills, and has improved resident satisfaction and patient outcomes, including reduced length of stay, 30-day readmissions and mortality.⁴⁶

Similarly, as new payment and delivery models emphasize primary care to improve patient outcomes and reduce costs, and as more care shifts to outpatient settings, teaching hospital faculty and residency program directors have responded by creating ambulatory residency rotations. These rotations combine inpatient and outpatient clinical training to prepare well-rounded primary care and other specialists to help serve the estimated 50 million Americans who live in areas with an under-supply of primary care physicians.⁴⁷ These programs are based on many years of experience with

Teaching hospitals sponsor rural training tracks in 24 states.

Chart 6: Rural Training Tracks by State, 2014



RTT = Rural Training Track

Source: Train Rural. (2014). Directory of Rural Programs.

(1) Teaching hospitals that do not have the required RTT accreditation for their residency program, but offer a rural training track that meets the 24-month requirement of practicing in a rural clinic or family practice site, as required by ACGME, are considered "like" RTTs.

*Wisconsin has two accredited RTTs and one like RTT.

continuity clinics in which residents in primary care specialties have the opportunity to follow patients in outpatient settings over the entire course of their training. For example, the University of Cincinnati College of Medicine developed this approach with an ambulatory residency rotation called "long block" that immerses residents in the patient-centered medical home (PCMH) model^b for an entire year.⁴⁸ Over the last five years, many more teaching hospitals have embraced longer rotations in outpatient clinics to train residents in the provision of ambulatory care.⁴⁹

Some policymakers have called for more physician training in rural areas to help alleviate the shortage of physicians in those locations.⁵⁰ Some teaching hospitals, however, have offered rural-based training programs for a long time. For example, the University of

Washington School of Medicine has led a regional medical education consortium since the early 1970s to train primary care physicians from the states of Washington, Wyoming, Alaska, Montana and Idaho.⁵¹ Known as WWAMI, the consortium rotates physicians through a variety of settings, particularly in underserved and rural areas. In 1999, Congress encouraged the development of Rural Training Track (RTT) programs.^{52,53} In accredited RTT residencies, physicians work in an urban area for one year and then transfer to a rural setting for two additional years of training. The effect of RTTs is lasting; for example, over 57 percent of students who completed the University of Missouri's RTT went on to practice in a rural location.⁵⁴ Today, there are 29 RTTs with an additional seven "like RTTs"^c active in 24 states.⁵⁵

What is the Accreditation Council for Graduate Medical Education (ACGME)?

Established in 1981, the ACGME is a private non-profit organization that accredits residency programs. It is governed by a board of directors comprised of directors nominated by the ACGME member organizations—the AAMC, American Hospital Association (AHA), American Board of Medical Specialties, American Medical Association (AMA), Council of Medical Specialty Societies, and most recently, the American Osteopathic Association (AOA) and the American Association of Colleges of Osteopathic Medicine (AACOM). Among others, the board also includes a non-voting federal representative appointed by the Department of Health and Human Services and two members of the public serving the interests of patients and communities. Accreditation is voluntary, but residency programs must be ACGME-accredited to receive GME funding from CMS. Residents must graduate from an ACGME-accredited program to be eligible to take their board certification examinations.

Many states require completion of an ACGME-accredited residency program for physician licensure.

This year, the ACGME forged a historic relationship with the AOA and the AACOM to create a single accreditation system for all U.S. GME programs, thereby ensuring all physicians will be trained to uniform standards.⁵⁶ This is another example of the ACGME promoting the highest standards in GME and assuring that the public receives care from well-trained, competent physicians.

The ACGME takes seriously its responsibility for increasing the accountability of GME programs. It promotes change in the GME curricula by working with each specialty board to develop competency-based developmental outcomes to determine resident and clinical fellow performance within six ACGME core competencies. Called the Milestones Project, this effort sets progressive measurable targets for each stage of medical education. These targets encompass core skills including participation in new care delivery models, such as team-based care, with the goals of achieving high quality in patient care, and ensuring patient safety. One purpose of the project is to

enhance public accountability, reporting at a national level on aggregate competency outcomes by specialty. Teaching hospital residency programs must submit reports on these measures every six months to maintain accreditation.^{57,58} The Milestones Project has received support from the AAMC, the AHA and the AMA.

More recently, the ACGME established the Clinical Learning Environment Review program to assess the learning environment in teaching hospitals. The ACGME designed the program to provide teaching hospitals, medical centers, health systems and other clinical settings affiliated with ACGME-accredited institutions with periodic feedback that addresses six areas: supervision, patient safety, professionalism, care transitions, health care quality and duty hours and fatigue management and mitigation.⁵⁹ Through this program, the ACGME will generate national data that will show a continuum of progress toward achieving optimal resident and clinical fellow engagement.

Policymakers Have Offered Several Proposals to Change GME Financing

Policymakers have presented a variety of proposals to change GME. Some advocate dramatic changes to the current system, while others advance proposals to lift the restrictive cap on Medicare-funded residency positions or increase the number of primary care physicians, particularly in rural or underserved areas. For example, in November 2011 the Josiah Macy Jr. Foundation, a philanthropic organization focused on improving medical education,

published a pair of reports that recognized and reiterated the public's responsibility to support GME.^{60,61} To ensure the stability and longevity of GME funding, the foundation recommended identifying additional sources of funding, as well as a one-time increase in the number of GME residency slots supported by Medicare. The foundation also advocated for greater accountability through public reporting of GME outcomes and formal engagement

with consumer organizations and patient interest groups. In addition, the foundation called on the ACGME to redesign the accreditation process to account for resident training in team-based care and to permit greater flexibility in curriculum and duration based on specialty. The ACGME has advanced these reforms under its Milestones Project and its single accreditation system initiative with the AOA and the AACOM.

In the 114th Congress, there is bipartisan support for addressing the shortfall in Medicare-funded residency positions. The Resident Physician Shortage Reduction Act of 2015 (H.R. 2124) was introduced in April 2015 by Reps. Joe Crowley (D-NY) and Charles Boustany (R-La.). Sens. Bill Nelson (D-Fla.), Charles Schumer (D-N.Y.) and Harry Reid (D-Nev.) have introduced a companion bill (S. 1148). Both bills would add 3,000 residency positions each fiscal year from 2017 through 2021 for a total of 15,000 positions above the Medicare limit. The bills differ slightly in how the additional residency positions would be distributed among teaching hospitals, but priority would be given to hospitals in states with new medical schools, hospitals in training partnerships with Veterans Affairs medical centers and additional factors.

Other proposals to change GME have focused on altering Medicare’s GME financing structure and, in some cases, have proposed reducing IME payments to hospitals, and in some proposals, redistributing them, sometimes to non-hospital entities. A 2010 report from the Medicare Payment Advisory Commission (MedPAC) asserted that IME payments exceed costs and recommended using the “excess” amount for a performance-based payment program that would reward hospitals that meet unspecified educational outcomes and standards.^{62,63} The commission also recommended that the Department of Health and Human Services study a range of issues, including the optimal number of residency slots needed by specialty. MedPAC did not recommend an increase in the number of residency positions.⁶⁴

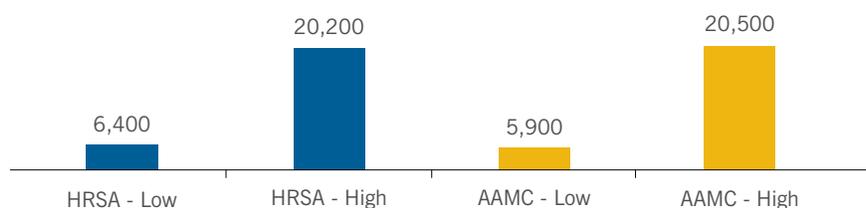
In his FY 2016 budget, President Obama proposed to reduce IME funding by \$16.3 billion over the next 10 years and use a portion of the savings to fund the Targeted Support for GME program. The president would use \$5.3 billion over 10 years to promote “the goals of higher value health care that reduces long-term costs.” The program would distribute competitive grants to teaching hospitals, children’s hospitals and community-based

consortia and other health care entities to support training in primary and preventive care.⁶⁵

While MedPAC and the president’s FY 2016 budget proposed cuts to IME payments, a July 2014 Institute of Medicine (IOM) report recommended sweeping changes to GME financing, including a precipitous reduction in funding to current teaching hospitals.⁶⁶ The IOM recommended maintaining the total

HRSA and the AAMC project similar levels of physician shortages through 2020.

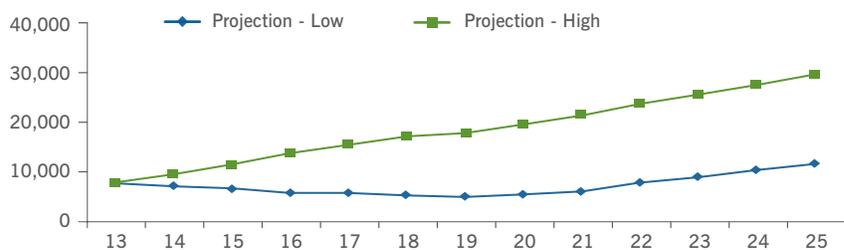
Chart 7: Projected Primary Care Physician Shortage, 2020



HRSA = Health Resources and Services Administration; AAMC = Association of American Medical Colleges
 Sources: (1) Health Resources and Services Administration. (November 2013). Projecting the Supply and Demand for Primary Care Practitioners Through 2020. (2) IHS, Inc. (March 2015). The Complexities of Physician Supply and Demand: Projections from 2013 to 2025. [prepared for Association of American Medical Colleges]

Projections from the AAMC anticipate growing primary care physician shortages in 2025.

Chart 8: Projected Primary Care Physician Shortage, 2025



AAMC = Association of American Medical Colleges
 Sources: IHS, Inc. (March 2015). The Complexities of Physician Supply and Demand: Projections from 2013 to 2025. [prepared for the Association of American Medical Colleges]



“The doctor shortage is worse than most people think. The population is getting older so there is a greater need for primary care physicians. At the same time physicians are getting older too, and they are retiring earlier.”

– Steven Berk M.D., dean of the School of Medicine, Texas Tech University⁶⁷

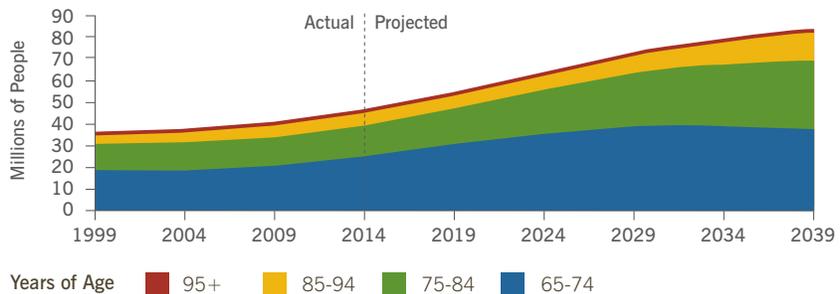
level of GME funding, but phasing out the distinction between DGME and IME payments in favor of a single GME payment based on a per-resident amount, adjusted geographically. This change would uncouple Medicare GME payments from Medicare volume and would permit funds designated for teaching hospitals to go to other entities that do not treat Medicare patients.⁶⁸ Over five years, IOM estimated that these changes would reduce GME payments to existing teaching hospitals by more than 35 percent. In addition, the IOM recommended reevaluating and reassessing the need for continued Medicare funding of GME after 10 years.

The IOM also recommended moving to a performance-based financing system by dividing total Medicare GME spending (i.e., combined DGME and IME payments) into two subsidiary funds: operational and transformational. The operational fund would receive 70 to 90 percent of the GME budget to finance ongoing residency programs, with the remaining 10 to 30 percent going to the transformational fund to support the development of innovative programs to improve performance, accountability and transparency.

Beyond recommending extreme changes to the GME financing structure, the IOM did not support an increase in the number of Medicare-funded residency positions because it presumes that new models of care delivery will utilize non-physician clinicians and thus alleviate any physician shortages. However, the annual physician survey by Merritt Hawkins found that “protracted wait times persist[ed]” in 2013 despite the increasing prevalence of physician assistants and nurse practitioners in practice workflows.⁶⁹ Two trends exacerbating physician shortages are the increasing number of individuals with insurance due to ACA-related coverage expansion and the aging population. Studies predict growing shortages of physicians. A HRSA study predicts a shortage of between

An increasing number of Americans are expected to live past 75.

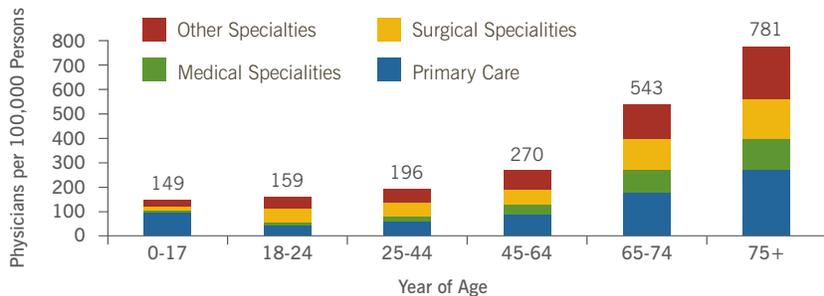
Chart 9: Number of People Age 65 and Older, by Age, 1999-2039



Source: Congressional Budget Office. (July 2014). The 2014 Long-Term Budget Outlook.

Older Americans have much higher physician utilization when compared to younger individuals.

Chart 10: Estimated Number of Physicians Needed per 100,000 Persons, by Age



Source: Health Resources and Services Administration. (December 2008). The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand.

6,400 and 22,200 physicians between now and 2020.⁷⁰ A study conducted by IHS Inc. for the AAMC predicts a deficit of between 12,500 and 31,100 primary care physicians in 2025.⁷¹

Absent mandatory financial support from private payers and consistent funding from Medicaid, teaching hospitals are undercompensated for the full costs of training physicians. Reducing Medicare IME payments would threaten the stability and predictability that teaching hospitals need to invest in residency programs to train physicians for evolving health care needs. Failure to lift the limit on the number of Medicare-funded total residency slots could create significant access challenges,

especially as the number of individuals with insurance increases. The aging population intensifies this issue, since seniors have much higher physician utilization and often rely heavily on specialists, many of whom are in shortage today. These shortages are expected to increase with current estimates of non-primary care shortages ranging from 28,200 to 63,700 additional specialists needed by 2025.⁷²

Taken together, the IOM’s recommended GME payment reduction, redistribution and dismissal of evidence indicating a physician shortage would not only negatively affect teaching hospitals, but potentially create physician vacancies in rural and urban community hospitals, possibly threatening patient access to care.

Conclusion

Teaching hospitals provide an environment for residents to learn and faculty to serve as educators, providers and researchers. These roles advance the broad mission of teaching hospitals to prepare each generation of physicians, provide critical patient care and specialized services, often to the disadvantaged; and facilitate the discovery of new therapies and treatments. Congress has long recognized the public's responsibility to support physician training in teaching hospitals, funding DGME costs since the inception of Medicare

and IME since the introduction of the inpatient PPS in 1983. While the current system offers the predictability necessary to train tens of thousands of physicians each year, residency caps increase the risk of physician shortages and threaten patients' access to care.

The purpose and value of residency training in clinical settings and the financial support needed to sustain physician education will only increase as the U.S. population lives longer with more complex health conditions.

To ensure GME can meet the future needs of the newly insured and aging population, policymakers and stakeholders must commit to the consistent and current level of GME funding and lift Medicare's limit on funded residency positions. Policymakers must ensure that payment or policy changes to GME do not upend a world-class graduate medical education system and a financing mechanism that has achieved the longstanding goal of supporting hospitals in the mission of training physicians.

POLICY QUESTIONS

1. How can policymakers preserve the unique role that teaching hospitals play in education, research and patient care?
2. Physician education and clinical training is widely considered a social good. Should all payers be required to contribute to ensure the sustainability of graduate medical education?
3. How can policymakers support the ACGME's efforts to assure residency training programs meet the needs of the 21st century health care delivery system?
4. What incentives should be offered to stimulate medical students' interest in choosing primary care specialties and/or practicing in underserved areas?

ENDNOTES

1. American Medical Association. (5 November 2014). Requirements for Becoming a Physician. <http://www.ama-assn.org/ama/pub/education-careers/becoming-physician.page?>
2. Kirch DG. (29 July 2014). IOM's Vision of GME Will Not Meet Real-World Patient Needs. Association of American Medical Colleges. <https://www.aamc.org/newsroom/newsreleases/381882/07292014.html>
3. Accreditation Council for Graduate Medical Education. (6 November 2014). About ACGME. <https://www.acgme.org/acgmeweb/tabid/116/About.aspx>
4. Rich EC, et al. (April 2002). Medicare Financing of Graduate Medical Education. *Journal of General Internal Medicine*. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495035/>
5. Bronnikova O and Cohen J. (17 October 2014). Training the Workforce for a Changing Health System. Alliance for Health Reform. http://www.allhealth.org/publications/GME-Toolkit_160.pdf
6. Association of American Medical Colleges. (2013). Patient Care at AAMC-Member Teaching Hospitals. <https://www.aamc.org/download/379180/data/patientcareone-pager.pdf>
7. Association of American Medical Colleges. (2009). What Roles Do Teaching Hospitals Fulfill? <https://www.aamc.org/download/54360/data/whatrolesdothefulfill.pdf>
8. Association of American Medical Colleges. (15 January 2015) AAMC Comments on the Report of the IOM Committee on Governance and Financing of Graduate Medical Education.
9. Avalere analysis of 2014 American Hospital Association Annual Survey Data.
10. S. Rep. N. 404, 80th Cong., 1st Sess. 36 (1965); H.R. Rep. No. 213, 89th Cong., 1st Sess. 32 (1965).
11. Eden J, et al. Institute of Medicine. (July 2014). Graduate Medical Education that Meets the Nation's Health Needs. <http://www.iom.edu/Reports/2014/Graduate-Medical-Education-That-Meets-the-Nations-Health-Needs.aspx>
12. Bronnikova O and Cohen J. (17 October 2014). Training the Workforce for a Changing Health System. Alliance for Health Reform. http://www.allhealth.org/publications/GME-Toolkit_160.pdf
13. Paz HL. (November 2011). Funding for Medical Education Under Fire. Penn State Milton S. Hershey Medical Center College of Medicine. Perspectives. <http://www.libraries.psu.edu/psul/hershey/about/ceo-perspectives/funding-for-medicaleducationunderfire.html>
14. Association of American Medical Colleges. (March 2013). Graduate Medical Education. <https://www.aamc.org/download/385618/data/graduatemedicaleducation.pdf>
15. Bronnikova O and Cohen J. (17 October 2014). Training the Workforce for a Changing Health System. Alliance for Health Reform. http://www.allhealth.org/publications/GME-Toolkit_160.pdf
16. Association of American Medical Colleges. (2014). What Does Medicare Have to Do with Graduate Medical Education? https://www.aamc.org/advocacy/campaigns_and_coalitions/gmefunding/factsheets/253372/medicare-gme.html
17. Association of American Medical Colleges. (2013). Medicaid Graduate Medical Education Payments: A 50-State Survey 2013.
18. Ibid.
19. Metzler IS, et al. (8 November 2012). The Critical State of Graduate Medical Education Funding. Bulletin of the American College of Surgeons. <http://bulletin.facs.org/2012/11/critical-state-of-gme-funding/>
20. Ibid.
21. Fleming C. (9 September 2014). Rethinking Graduate Medical Education Funding: An Interview with Gail Wilensky. *Health Affairs Blog*. <http://healthaffairs.org/blog/2014/09/09/rethinking-graduate-medical-education-funding-an-interview-with-gail-wilensky/>
22. Children's Hospital Association. (April 2014). The Children's Hospitals Graduate Medical Education Program (CHGME). <http://www.childrenshospitals.net/Content/ContentFolders34/PublicPolicy/Issues/GME/CHGMEOnePageSummaryApril2014.pdf>
23. Children's Hospital Association. (11 March 2015). Children's Hospitals Graduate Medical Education Program Overview. <https://childrenshospitals.org/issues-and-advocacy/graduate-medical-education/issue-briefs-and-reports/childrens-hospitals-graduate-medical-education-program-overview>

24. Association of American Medical Colleges. (March 2014). Results of the 2013 Medical School Enrollment Survey. <https://members.aamc.org/eweb/upload/13-239%20Enrollment%20Survey%20201310.pdf>
 25. American Association of Colleges of Osteopathic Medicine. (2014). Trends in Osteopathic Medical School
 26. Applicants, Enrollment and Graduates. <http://www.aacom.org/docs/default-source/data-and-trends/2014-trends-COM-AEG-PDF.pdf?sfvrsn=26>
 27. Ibid.
 28. National Resident Matching Program. (28 January 2015) About the Main Residency Match. <http://www.nrmp.org/residency/main-residency-match>
 29. National Resident Matching Program. (28 January 2015). SOAP. <http://www.nrmp.org/residency/soap/>
 30. National Resident Matching Program. (April 2014). Results and Data: 2014 Main Residency Match. <http://www.nrmp.org/wp-content/uploads/2014/04/Main-Match-Results-and-Data-2014.pdf>
 31. Ibid.
 32. Centers for Medicare & Medicaid Services. (1 October 2013). Open Payments: List of Teaching Hospitals. [http://www.cms.gov/Regulations-and-Guidance/Legislation/National-Physician-Payment-Transparency-Program/Downloads/2014-Open-Payments-Cycle-Teaching-Hospital-List-\(October-2013\).pdf](http://www.cms.gov/Regulations-and-Guidance/Legislation/National-Physician-Payment-Transparency-Program/Downloads/2014-Open-Payments-Cycle-Teaching-Hospital-List-(October-2013).pdf)
 33. Association of American Medical Colleges. (September 2014). VA Graduate Medical Education. https://www.aamc.org/advocacy/budget/va/74964/va_gme.html
 34. National Resident Matching Program. (April 2014). Results and Data: 2014 Main Residency Match. <http://www.nrmp.org/wp-content/uploads/2014/04/Main-Match-Results-and-Data-2014.pdf>
 35. Ibid.
 36. National Resident Matching Program. (April 2014). Results and Data: 2014 Main Residency Match. <http://www.nrmp.org/wp-content/uploads/2014/04/Main-Match-Results-and-Data-2014.pdf>
 37. England C. (August 2013). Raising the Residency Cap. *Chicago Medical Society*. <http://www.cmsdocs.org/news-publications/chicago-medicine-magazine/2013-issues/August2013Issue.pdf>
 38. Sidney E. (December 2013). Graduate Medical Education in a State of Flux. *Chicago Medical Society*. <http://www.cmsdocs.org/news/graduate-medical-education-in-state-of-flux>
 39. Weick R. (4 July 2014). GR Hospitals Turning Away Residency Applicants. *Grand Rapids Business Journal*. <http://www.grbj.com/articles/80066-gr-hospitals-turning-away-residency-applicants>
 40. Harwood JL and Pugely AJ. (September 2014). The Evolution of GME Funding: U.S. Healthcare Workforce Reaches a Crossroads. *AAOS Now*. <http://www.aaos.org/news/aaosnow/sep14/advocacy3.asp>
 41. Avalere analysis of National Resident Matching Program data from 1997 to 2014.
 42. Ibid.
 43. Medicare Payment Advisory Commission. (June 2010). Report to Congress: Aligning Incentives in Medicare. Chapter 4: Graduate Medical Education: Focusing on Educational Priorities. http://medpac.gov/documents/reports/Jun10_EntireReport.pdf?sfvrsn=0
 44. American Hospital Association. (May 2013). Issue Brief: Sicker, More Complex Patients are Driving up Intensity of ED Care. <http://www.aha.org/content/13/13issuebrief-ed.pdf>
 45. Brigham and Women's Hospital. (8 October 2014). BWH Internal Medicine Residency: Innovation. http://www.brighamandwomens.org/departments_and_services/medicine/medical_professionals/residency/medical/innovation.aspx
 46. McMahon GT, et al. (8 April 2010). Evaluation of a Redesign Initiative in an Internal-Medicine Residency. *The New England Journal of Medicine*. <http://www.nejm.org/doi/full/10.1056/NEJMsa0908136>
 47. UnitedHealth Center for Health Reform & Modernization. (September 2014). Advancing Primary Care Delivery: Practical, Proven, and Scalable Approaches. <http://www.unitedhealthgroup.com/-/media/UHG/PDF/2014/UNH-Primary-Care-Report-Advancing-Primary-Care-Delivery.aspx>
 48. Dardani W and Lyles M. (November 2010). Moving the Medical Home Forward: Innovations in Primary Care Training and Delivery. *Association of American Medical Colleges*. http://www.ucdmc.ucdavis.edu/internalmedicine/newsroom/teach_aamc.pdf
 49. Colbert JA. (8 August 2013). Experiments in Continuity—Rethinking Residency Training in Ambulatory Care. *New England Journal of Medicine*. <http://www.nejm.org/doi/full/10.1056/NEJMp1301604>
 50. National Association of Community Health Centers. (March 2014). Access Is the Answer: Community Health Centers, Primary Care & the Future of American Health Care. <http://www.nachc.com/client/PIBrief14.pdf>
 51. University of Washington Medicine. (6 November 2014). WWAMI. <http://www.uwmedicine.org/education/wwami>
 52. H.R. 3426 Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999. (17 November 1999). <https://www.congress.gov/106/bills/hr3426/BILLS-106hr3426ih.pdf>
 53. Representative Baldacci (ME). (5 November 1999). Balanced Budget Refinement Act of 1999. *Congressional Record*. p. H11596. <https://www.congress.gov/crec/1999/11/05/CREC-1999-11-05-pt1-PgH11596-2.pdf>
 54. Quinn KJ, et al. (November 2011). Influencing Residency Choice and Practice Location Through a Longitudinal Rural Pipeline Program. *Rural Medical Education*. <http://www.ncbi.nlm.nih.gov/pubmed/21952065>
 55. Train Rural. (2014). Directory of Rural Programs. <http://www.traindocsrural.org/rural-residency/directory-of-rural-programs/>
 56. American Council on Graduate Medical Education. (19 July 2014). Press Release: ACGME, AOA, AACOM Single GME Accreditation System. https://www.acgme.org/acgmeweb/Portals/0/PDFs/Nasca-Community/AOA_letter_to_the_Community.pdf
 57. American Council on Graduate Medical Education. (August 2014). Milestones: Frequently Asked Questions. <http://www.acgme.org/acgmeweb/Portals/0/PDFs/Milestones/MilestonesFAQ.pdf>
 58. American Council on Graduate Medical Education. (23 July 2014). Milestones by Reporting Date. <http://www.acgme.org/acgmeweb/Portals/0/PDFs/Milestones/MilestonesByReportingDate.pdf>
 59. Accreditation Council for Graduate Medical Education. (2014). CLER Pathways to Excellence: Expectations for an optimal clinical learning environment to achieve safe and high quality patient care. http://www.acgme.org/acgmeweb/Portals/0/PDFs/CLER/CLER_Brochure.pdf
 60. Josiah Macy Jr. Foundation. (November 2011). Ensuring an Effective Physician Workforce for America: Recommendations for an Accountable Graduate Medical Education System. http://www.macyfoundation.org/docs/macy_pubs/Effective_Physician_Workforce_Conf_Book.pdf
 61. Josiah Macy Jr. Foundation. (November 2011). Ensuring an Effective Physician Workforce for the United States: Recommendations for Graduate Medical Education to Meet the Needs of the Public. [http://macyfoundation.org/docs/macy_pubs/JMF_GME_Conference2_Monograph\(2\).pdf](http://macyfoundation.org/docs/macy_pubs/JMF_GME_Conference2_Monograph(2).pdf)
 62. Medicare Payment Advisory Commission. (June 2014). Report to Congress: Aligning Incentives in Medicare. Chapter 4: Graduate Medical Education Financing: Focusing on Educational Priorities. http://www.medpac.gov/documents/reports/Jun10_Ch04.pdf?sfvrsn=0
 63. Letter from the Association of American Medical Colleges to Chairman Hackbarth of the Medicare Payment Advisory Commission. (7 July 2010). https://www.aamc.org/download/133874/data/june_7_aamc_response_to_medpac_letter.pdf
 64. Medicare Payment Advisory Commission. (June 2014). Report to Congress: Aligning Incentives in Medicare. Chapter 4: Graduate Medical Education Financing: Focusing on Educational Priorities. http://www.medpac.gov/documents/reports/Jun10_Ch04.pdf?sfvrsn=0
 65. U.S Department of Health and Human Services. (November 2014). Fiscal Year 2016 Budget in Brief: Strengthening Health and Opportunity for All Americans. <http://www.hhs.gov/budget/fy2016/fy-2016-budget-in-brief.pdf>
 66. Eden J, et al. Institute of Medicine. (July 2014). Graduate Medical Education that Meets the Nation's Health Needs. <http://www.iom.edu/Reports/2014/Graduate-Medical-Education-That-Meets-the-Nations-Health-Needs.aspx>
 67. Mercer M. (March 2013). How to Beat the Doctor Shortage. *AARP Bulletin*. <http://www.aarp.org/health/medicare-insurance/info-03-2013/how-to-beat-doctor-shortage.html>
 68. American Hospital Association. (3 October 2014). Graduate Medical Education: Factsheet. <http://www.aha.org/content/14/fs-gme.pdf>
 69. Miller P. (2014). Merritt Hawkins. Physician Appointment Wait Times and Medicaid and Medicare Acceptance Rates. <http://www.merrithawkins.com/uploadedFiles/MerrittHawkins/Surveys/mha2014waitsurvPDF.pdf>
 70. Health Resources and Services Administration. (November 2013). Projecting the Supply and Demand for Primary Care Practitioners Through 2020. <http://bhrp.hrsa.gov/healthworkforce/supplydemand/usworkforce/primarycare/projectingprimarycare.pdf>
 71. IHS Inc. (March 2015). The Complexities of Physician Supply and Demand: Projections from 2013 to 2025. https://www.aamc.org/download/426242/data/ihsreportdownload.pdf?cm_mmc=AAMC_-_ScientificAffairs_-_PDF_-_ihsreport
 72. Ibid.
- a. In 2012, SOAP replaced a process called the Scramble, which had involved unmatched applicants receiving a list of all unfilled programs from NRMP on Match Day and then having to contact teaching hospitals directly. Nearly all slots would fill within a few days.
 - b. PCMHs are specialty or primary care practices that provide accessible, continuous, comprehensive, and coordinated care. PCMH providers engage patients in shared decision-making, offer extended hours, communicate electronically, and coordinate with the range of providers seen by their patients.
 - c. Teaching hospitals that do not have the required RTT accreditation for their residency program, but offer at least 24-months of training in a rural clinic or family practice site, as required by ACGME, are considered "like" RTTs.

TrendWatch, produced by the American Hospital Association, highlights important trends in the hospital and health care field. Avalere Health supplies research and analytic support.

TrendWatch—June 2015
Copyright © 2015 by the American Hospital Association.
All Rights Reserved



American Hospital Association
800 10th Street, NW
Two CityCenter, Suite 400
Washington, DC 20001-4956
202.638.1100
www.aha.org



Avalere Health LLC
1350 Connecticut Avenue, NW
Suite 900
Washington, DC 20036
202.207.1300
www.avalere.com