Physician deficit in USA - where is the bottleneck?

Ärztemangel in den USA - wo wird es eng?

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Abstract

The population of physician professionals in the US has been carefully controlled over the last century to ensure profitable work for people in the profession and provide physician workforce for the nation. However, the emergence of managed care in the US has spurred speculations that the US will experience a substantial excess of physicians by the beginning of the 21st century. In light of these forecasts, the number of residency positions funded by Medicare has been restricted. Additionally, enrollment at allopathic medical schools has been decreasing over the last two decades of the Twentieth Century.

It is now evident that those predictions were erroneous and that the current supply of physicians does not exceed the demand for their services. That is why the Association of American Medical Colleges now aims to increase the number of US medical school graduates by 3,000 yearly by the year 2015. However, even if this difficult mission can be accomplished, the US can still have a deficit of 200,000 physicians by the year 2020. The reason is the bottleneck that controls the flow of medical graduates aiming to enter residency programs and get clinical training in order to obtain the license required to practice medicine. With the restriction on the number of Medicare-funded residency positions in the US an increase in US medical school graduates will only displace an equal number of international medical graduates applying for residency positions and consequently reduce the number of international medical graduates who join the physician workforce. This will probably not increase the number of practicing physicians. Shortage of physicians will remain an issue and undeniably make access to medical care problematic for all citizens.

Keywords: medical education, physician deficit, residency cap

Zusammenfassung

Im 20. Jahrhundert wurde die Zahl der Ärzte in den Vereinigten Staaten sorgfältig reguliert, um lohnende Arbeitsbedingungen im ärztlichen Beruf und die Versorgung mit Ärzten für die Bevölkerung zu gewährleisten. Allerdings hat die Entwicklung von Managed Care in den Vereinigten Staaten zur Annahme geführt, dass es zu Beginn des 21. Jahrhunderts zu einem gravierenden Ärzteüberschuss kommen könnte. Aufgrund dieser Prognose wurden die durch Medicare finanzierten Weiterbildungsstellen deutlich reduziert. Zusätzlich hat die Zahl der Studierenden an den Medizinischen Fakultäten in den 1980er und 1990er Jahren abgenommen.

Jetzt ist klar geworden, dass die Prognosen falsch waren und die aktuelle Versorgung mit Ärzten die Nachfrage nicht übersteigt. Deshalb sieht die Association of American Medical Colleges eine Erhöhung der Absolventen an den Medizinschulen der Vereinigten Staaten um jährlich 3.000 bis zum Jahr 2015 vor. Aber auch wenn dieses schwierige Vorhaben gelingen sollte, könnte in den Vereinigten Staaten um 2020 ein Mangel an 200.000 Ärzten gegeben sein. Grund dafür ist der Engpass, der den Eintritt der Absolventen in die Weiterbildungsprogramme bestimmt, die die Voraussetzung für den Erwerb der Berufsberechtigung

darstellen. Solange die Zahl der von Medicare getragenen Weiterbildungsstellen in den Vereinigten Staaten unverändert bleibt, bedeutet eine Zunahme an Absolventen der US-amerikanischen medizinischen Fakultäten lediglich die Verdrängung einer entsprechenden Anzahl ausländischer Absolventen, die sich in den Vereinigten Staaten weiterbilden wollen. Damit würde es zur Reduktion der Zahl jener ausländischen Absolventen kommen, die ihren Beruf in den Vereinigten Staaten aufnehmen können und damit die Zahl der Ärzte erhöhen würden. Unter dem Strich würde die Zahl der in der Patientenversorgung tätigen Ärzte dann nicht erhöht. Ärztemangel wird also ein Thema bleiben und könnte sicherlich den Zugang zur ärztlichen Versorgung erschweren.

Schlüsselwörter: Medical Education, Ärztemangel, Mangel an Weiterbildungsstellen

Kommentar

Human resources are the most important constituent of the healthcare system. Modern medical education in the United States (US) has been effectively providing the US healthcare system with medics for decades. It built an excellent reputation in preparing medical students and postgraduate trainees as they explore the depth and breadth of medicine while keeping the focus on the central mission of excellent patient care.

An appropriate supply of well-educated and trained physicians is an essential prerequisite to ensure access for all Americans to quality healthcare services. Since the mid-twentieth century, the physician-to-population ratio has been increasing in the US. The population of physician professionals has been carefully monitored to ensure profitable work for those who enter the profession and provide for the nation's demand of caregivers. However, the advent of managed care in the US encouraged by the enactment of the Health Maintenance Organization Act of 1973 has spurred speculations that the US will experience a substantial excess of physicians by the beginning of the 21st century. In light of these forecasts, the Congress imposed a cap on the number of residency positions funded by Medicare. The cap was part of the Balanced Budget Act of 1997, which was passed after a recommendation from six medical organizations - the Association of American Medical Colleges, American Medical Association, American Association of Colleges of Osteopathic Medicine, American Osteopathic Association, Association of Academic Health Centers, and National Medical Association - that signed the 1996 "consensus statement" calling the Congress to "reduce the number of graduate medical education (GME) positions funded by the federal government to a number close to that of the graduates of US allopathic medical schools." It came at a time when policy makers feared the growth of managed care would reduce the demand for physician services and an oversupply of practicing physicians would cause a significant decrease in physicians' income and a rise in overall healthcare cost [1]. Additionally, the Council on Graduate Medical Education (COGME) and the Association of American Medical Colleges (AAMC) recommended steps to reduce physician supply in order to obviate the predicted surplus. As a result, enrollment at allopathic medical schools has been steadily decreasing over the last two decades of the Twentieth Century.

It is now evident that those predictions were erroneous and the current supply of physicians does not exceed the demand for physicians' services [2]. On the contrary, there have been aa growing number of reports warning that shortages already exist or will soon exist in particular specialties or states [3], [4], [5], [6].

The appropriate physician-to-population ratio generally depends on the level of economic development and the type of healthcare system management in each country. Rich countries with capitalist economies and reimbursements by third party payors, like the USA, carefully control their physician-to-population ratios. Poor countries often suffer from physician shortages and maldistribution resulting in paradoxical deficiency of medical services in rural regions and unemployment of doctors in urban centers.

The physician-to-population ratio has been steadily growing in the US over the second half of the Twentieth Century reaching 257.9 per 100000 in 2000 [7]. It is, however, expected to plateau starting from 2010 and decline afterwards [8]. Growing demand on physicians in USA is in part a function of demographics. The US population is projected to grow from 285 million in 2000 to 335 million by 2020 with more than 20% of the population over 60 [9]. With increased longevity, Boomers will have more years to enjoy and, in turn, more years in need of health care services. Since the most important factors that demand medical services and consume healthcare resources are the prevalence of chronic illnesses among the elderly and the level of their functionality/disbility the aging population will put increasing demands on the healthcare system.

The AAMC's goal aims currently to increase the number of US medical school graduates by 3,000 yearly by 2015 [10]. However, even if this difficult mission can be accomplished, the US can still have a deficit of 85,000 physicians by the year 2020 and according to some sources from 55, 000 to 200,000 [10]. Twenty five new medical schools are needed to partially meet the shortage [11]. Moreover, an overall health care worker shortage is

evolving that involves nurses, pharmacists, administrators, and coders, among others [12]. Shortages of specialists are predicted to be deeper than shortages of primary care physicians [8], [13], [14]. Aging of healthcare professionals themselves will add to the effect of aging population and consequently increase pressure on the healthcare system.

Medical schools are not very attractive to American students because of the high cost and the many years required for medical education [15]. In addition, the litigation and malpractice concerns are discouraging the youth from pursuing careers in medicine and deterring medical students from entering high-risk specialties like obstetrics and gynecology [16]. This problem is stressing physicians and forcing some of them to move from one state to another with less tight regulations on physicians' credentials and licensure or even leave the medical profession completely [17]. That is why the highest authorities in the country are now paying much attention to this evolving crisis [18].

Another important factor affecting the accessibility of physician services is the level of urbanization and the demographic, environmental, economic and social characteristics of the population. In general, the relative lack of physicians in non-metropolitan/rural areas has been attributed to the professional and personal isolation experienced by physicians and their families, the lack of hospitals and medical technologies, and differences in income. Another factor impacting the availability of physicians in less populated areas is increased physician specialization. As physicians become more specialized, they require larger patient population to support their specialty. Concomitantly, throughout most of the past century, the relative number of physicians electing to practice primary care declined. As a result, the US healthcare system relied heavily on physician migration from other countries to meet these workforce needs.

The physician pool in the US is supplied from residency programs spread across the country which provide medical graduates with the clinical training necessary to apply for license and join the physician workforce. Medical graduate stream comes mainly from US allopathic medical school graduates, US osteopathic medical school graduates, Canadian medical graduates, and international medical graduates. Currently, enrollment in US medical schools is rising considerably. First-year enrollment will grow to nearly 19900 in year 2012 from 16500 in 2002, an increase of nearly 21% according to a recent report by AAMC [19]. However, the increased enrollment may not offset the looming physician shortage. There is a bottleneck narrowing the the flow of medical graduates into the physician workforce (see Figure 1). The cap imposed by the Congress in 1997 limits the number of graduate medical education positions funded by Medicare available to desiring medical graduates. The residency cap is without doubt not in the spirit of free market economy where demand and offer determine the price.

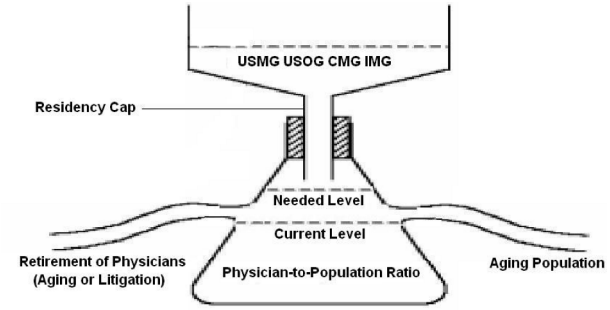

Figure 1: Physician supply schema in the American healthcare system. USMG - US Medical Graduates; USOG – US Osteopathic Schools Graduates; CMG - Canadian Medical Graduates; IMG – International Medical Graduates.

There is sufficient evidence at hand to indicate that the increase in medical school enrollment is not the solution for the Nation's doctors' deficit. If the cap on residency slots is removed and graduate medical education programs increased this may be more effective [20]. This conclusion is bolstered by the realization that with the present restriction on the number of Medicare-funded residency positions an increase in US medical school graduates will just reduce the number of international medical graduates accepted into residency rather than increase the number of trained and licensed physicians. Shortage of physicians will regrettably remain and make access to medical care more difficult for all citizens. These shortages will increase the delays individuals encounter in scheduling appointments and the distances they need to travel for various types of healthcare services. Shortages will be especially problematic for the indigent population who already has substantial financial barriers to these services.

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Please cite as
Walid MS. Physician deficit in USA - where is the bottleneck?. GMS Z Med Ausbild. 2009;26(2):Doc19.

This article is freely available from
http://www.egms.de/en/journals/zma/2009-26/zma000611.shtml

Received: *2008-08-07*
Revised: *2009-01-09*
Accepted: *2009-01-28*
Published: *2009-05-15*