The Future of Primary Care for Older Adults

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Demographics

Like all developed nations, the United States is experiencing an increase in the number of its citizens who are older. People are living longer. The US Census estimates that there will be more than ten million Americans 90 years of age or older by 2050. Increasing life expectancy leads to an increase in the number of older patients who need primary care services. Increased longevity is frequently associated with an increase in the number of chronic diseases and associated disability, which further increases primary care needs for older patients. According to the Centers for Disease Control, 34% of Americans 75 years of age or older have three or more chronic medical conditions compared to 2.1% of Americans less than 45 years of age (http://www.cdc.gov/nchs/data/ahcd/namcs_summary/2012_namcs_web_tables.pdf). Most of us wish for a long, happy, fulfilling life, free of disease, pain, disability, and dependency. Though this is a laudable goal, many Americans do not achieve it. A healthy lifestyle throughout a lifetime may only postpone disease burden in old age [1]. Recent data show that women in particular are more likely to experience late-life disability [2]. For the foreseeable future, increasing numbers of older Americans, with an increasing number of chronic medical conditions, will require an increasing number of primary care providers.

Though the United States will experience an unprecedented increase in the number of older people over the next 30 years, because of a relatively high birth rate and because of net immigration, the percentage of seniors in the total population of the United States will be lower than many other developed nations. Italy and Japan are examples of nations with low birth rates and low levels of immigration. Unless birth rates increase or immigration policies change, they will have an even greater percentage of seniors in the future than the United States. Without a sufficient number of

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younger working residents, a nation with a high number of seniors will have significant difficulty funding and providing healthcare and community services for its seniors.

There will come a time when the baby boom generation has passed into history. It is not clear now what the demographics of the United States will look like when that happens. Mortality rates, birth rates, and immigration will all play a role. There is the possibility that aging and associated mortality will be altered significantly through genetic manipulation, a process which has already been used to significantly extend life expectancy in lower life forms.

The Senior Care Workforce

Senior care workforce issues can be further subdivided into supply and education.

Supply

Historically, adult primary care in the United States has been provided by internal medicine and family medicine practitioners. The majority of primary care for seniors will continue to be provided by internal medicine and family medicine providers. These practitioners are mostly physicians, though an increasing amount of care is being provided by nurse practitioners and physician assistants. There is a current and a projected worsening of primary care availability (https://www.aamc.org/download/458082/data/2016_complexities_of_supply_and_demand_projections.pdf). Factors contributing to this shortage include the increase in the population of the United States, an expansion in the availability of health insurance for low-income Americans related to changes implemented by the Affordable Care Act, an increase in the duration of physician visits [3], and a relatively modest increase in both new medical schools and in class size in existing schools.

Geriatricians also provide primary care for older patients. However, geriatrics is a distinct medical discipline with a distinct knowledge base and approach to patient care. It is more than internal medicine or family medicine for older patients. Just like cardiologists have a particular expertise in the medical care of patients with complex cardiac conditions, geriatricians have a particular expertise in the medical care of older patients with complex age-associated conditions.

There is a current shortage of geriatrics-trained providers, and the number of geriatrics providers is falling, even though the need for their services is increasing. Because their patients are frail and have multiple chronic medical conditions, a full-time clinical geriatrician can provide primary care for approximately 700 patients, less than half the number of patients a typical family physician or general internist would have in their practice. Even if geriatricians were to limit their patient panel to those 90 or older, there would not be enough of them to provide care for all current Americans who are that old.

The benefits of ensuring an adequate supply of primary care providers are being increasingly recognized by payers of healthcare, including government agencies.

Access to primary healthcare providers has been shown to lead to better medical outcomes for Medicare beneficiaries [4]. Because they help improve care and because of a projected shortage, there have been a variety of efforts to increase the number of primary care providers in the United States. To date, these efforts been largely unsuccessful. There will be renewed efforts to increase the number of primary care providers. Three issues will determine their success: changes in how graduate medical education is funded, better reimbursement for primary care providers and better working conditions with less bureaucratic duties, and more direct patient care opportunities.

In the United States, graduate medical education is funded primarily by Medicare, the federal health insurance program for older Americans. Almost all of this funding goes to teaching hospitals which have historically emphasized and promoted the training of physician specialists. The federal government has capped the number of training positions they will pay for. Hospitals are reluctant to develop new training programs for primary care because they do not have well-established community-based training sites and because they may have to reduce the number of specialist trainees. If the supply of primary care physicians is to increase, this will need to change (https://www.ncbi.nlm.nih.gov/books/NBK248022/#sec_000098). Medicare has supported the training of nurses only to a limited degree. There have been recent efforts to rectify this through the funding of several nurse education demonstration projects (http://www.aacn.nche.edu/government-affairs/ian/2015/September-2015.pdf). More funding needs to be directed toward teaching programs that are community based and which emphasize the training of primary care providers (http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2014/GME/GME-RB.pdf). More funding needs to be directed toward the education of APRNs and PAs who are planning to follow a career in primary care. As Medicare is held more accountable for the money it spends on the training of the future healthcare workforce and as Medicare and other health insurance program seek to promote the education of a healthcare workforce which better meets the needs of older Americans, these funding changes will occur.

In the face of the demographic imperative and an impending workforce crisis, geriatrics is beginning to reconsider the role it should play in the provision of clinical services for older patients [5]. Instead of providing clinical care for a small number of older Americans, it has been recommended that geriatrics concentrate on research, education, and policy development as a means of promoting high-quality care for all older Americans. Geriatricians will still provide primary care, but will do so almost exclusively as a means of teaching other providers geriatrics skills and as a laboratory for determining ideal care for seniors.

Education

Assuming efforts to increase the supply of primary care providers in the future are successful, it will be critical that these providers are trained to deliver high-quality geriatrics care [6]. Current primary care providers feel ill equipped to meet the

needs of their older patients [7]. With few exceptions, all healthcare providers need to be trained to meet the needs of older patients. Exposure to the principles of high-quality geriatrics practices need to be introduced early in the process of training healthcare providers. For those who ultimately choose a career in primary care, this training needs to be more extensive. Teaching experiences need to be available across all medical care settings including the patient's home, nursing homes, assisted living, hospice, post-acute care, primary care offices, and acute care settings. For medical trainees in the United States, the scope of their training is determined by the Accreditation Council for Graduate Medical Education (ACGME). The current ACGME requirements regarding geriatrics training for both family physicians and internists will need to be expanded. The ACGME must seek input from geriatricians regarding the adoption and implementation of training requirements that will prepare the future physician workforce to meet the complex medical needs of older patients. Primary care APRNs and PAs will also be required to have extensive training in the management of the complex medical needs of older patients. Geriatricians and geriatrics APRNs and PAs will play an important role in teaching the new generation of primary care providers.

Innovation

As the funding of healthcare has evolved and as technology has improved, we are beginning to see examples of innovation in terms of the way care is delivered, where it is delivered, who is providing that care, how that care is being documented, and how it is being paid for. Several innovative models of care have been described in earlier chapters of this book.

Technology will play an increasingly important role in the delivery of healthcare in the future. We are in the very early stages of using electronic health records (EHR). Healthcare providers are EHR pioneers and our current EHRs are like Conestoga wagons; they get us to where we want to go, but it is slow and uncomfortable. We can now fly safely across the United States in a few hours; someday our EHRs will fly too. In the future, while seeing a patient or shortly after seeing a patient, the healthcare provider will speak instructions into the EHR. "Arrange a follow-up appointment for Mrs. Smith with me in three months. Book a cardiology consult for the evaluation of a systolic murmur. Arrange for a CBC and a basic metabolic panel to be done this afternoon. Provide Mrs. Smith with some information on exercise and a heart healthy diet and follow up with her every two weeks for the next two months to see if she has any questions. Let her know the results of her lab work when it is available. Check in on her BP measurements and weight which are being streamed to you every time they are done and let me know if her systolic BP is above 150 or her weight is above 160. Bill this visit as a 99214 and add a charge for an EKG. Find the appropriate diagnosis for each charge in other segments of my dictated note. Copy everything to Dr. Richard Jones and her home health care nurse."

Current EHRs are built to meet the needs of fee-for-service medicine and are billing centric. Future EHRs will need to be more care centric. The Medicare and CHIP Reauthorization Act of 2015 (MACRA) is encouraging and assisting medical

providers who bill Medicare for services to move from fee-for-service care to value-based care. The quality and cost of care provided will affect Medicare payments. EHRs produce a lot of data. Data will need to be presented to providers, patients, and payer in a manner which facilitates high-quality, coordinated, cost-effective care.

Robots and artificial intelligence (AI) will play an important role in the future of primary care for seniors (http://www.altfutures.org/pubs/pc2025/IAF-PrimaryCare2025Scenarios.pdf). Human contact with a healthcare provider will always be an important part of healthcare delivery. But given the projected shortage of primary care providers and the increasing medical costs associated with an aging population, this human contact will need to be supplemented by robotic assistants who have built in AI. A robotic medical assistant who witnesses a healthcare provider's interaction with a patient will eventually be able to generate a summary of the visit and determine a list of orders such as those listed above without requiring specific instructions from the provider. They will be able to collect preliminary information from the patient before a visit, respond to patient enquiries by phone, text or email the patient or their caregiver, and room the patients when they arrive at the office. Robotic assistants will also be able to manage many of the chronic care management (CCM) tasks which are so important for the care of older patients. Reimbursement for CCM, currently based on time human members of the office team spend on CCM, will need to adjust to this new reality.

Non-face-to-face care will become more and more common as providers and their patients are linked to each other remotely. Telemedicine, e-consults, and robotic assistants will all provide care and monitor medical conditions which currently require a face-to-face visit with the provider. These technologic innovations can improve access, lower costs, and facilitate the provision of geriatrics care by non-geriatrics providers. They can also compensate in part for the fact that many rural parts of the United States have difficulty attracting healthcare providers, including geriatrics providers to live and work there. Acute Care for the Elderly (ACE) Tracker and the provision of e-geriatrics consults has been demonstrated to be an effective way of providing geriatrics expertise remotely for rural hospitals who do not have a geriatrics provider on staff [8]. The ability to routinely search not just hospital records but also nursing home, home care, and outpatient records and identify patients who could benefit from an e-geriatrics consult will increase.

Patients will increasing rely on AI to help diagnose and treat their illnesses and medical concerns. There will be pressure to broaden the patient's independent ability, based on the recommendations of AI, to order tests and treatments. Disease prevention and health promotion recommendations will also be provided by AI. The patient will be able to go to their local pharmacy for a broad range of immunizations and present themselves for a mammogram or screening blood work based on AI recommendations. The PCP will be able to monitor many of these interactions and may be asked to provide assessments, guidance, and recommendations. Even though many patients will have difficulty finding a primary care provider who is willing and available to coordinate their care, primary care providers will be concerned about laws and regulations which broaden the scope of practice and the delegation of responsibilities which previously required a medical license.

Funding

Most medical cares for older patients, including primary care services, are paid for by federal and or state agencies, including Medicare, Medicaid, and the Veterans Administration. These publicly funded government agencies will have difficulty meeting the increasing costs of providing services for a growing number of seniors. Though costs per Medicare beneficiary have increased in recent years at a slower rate than the rate of inflation, overall Medicare expenditures will increase in the future as the number of beneficiaries increase. Medicare beneficiaries will increase by one-third from 54 million to 72 million between 2014 and 2124 [9]. There will be a permanent sense of crisis regarding the fiscal viability of publicly funded healthcare. There will be increasing pressure to shift Medicare costs onto the beneficiary and or to insist that beneficiaries enroll in a Medicare Advantage plan or a similar capitated plan, where the payer's exposure to increasing costs is limited.

Primary care expenditures are a relatively small percentage of overall healthcare expenditures, somewhere between 6 and 8% [10]. There is good evidence that overall healthcare costs are reduced and the quality of care provided is improved when there is a higher percentage of primary care providers providing care [11].

Because of such evidence, Medicare and Medicare Advantage plans in particular will promote the use of PCPs to manage the patient's care across the spectrum of care. This will be at odds with the workforce concerns noted above, but with better reimbursement for PCPs, more physicians, nurses, and PAs will choose to follow a career in primary care. Funders will look to PCPs and their AI and data analytics tools to manage the healthcare needs of the most complex and most costly patients.

Medicare has been clear that it wants to move toward a value-based payment system and away from fee-for-service care [12]. The success of this effort remains to be seen, and both providers and patients will need to be convinced that these changes are in their best interests if it is to succeed. Bundled payments for specific conditions and interventions will become more commons. This will drive disparate healthcare providers to join together and coordinate care in a quality-sensitive, cost-sensitive manner. There will be a continued consolidation of healthcare systems, and these healthcare systems will compete with each other to recruit well-qualified primary care providers. They will increasingly recognize the need to hire geriatrics specialists to help them design, operate, and educate providers in systems of care which promote high-quality services for older patients and their family members.

Primary care providers will become increasingly aware of their worth in this value-based payment (VBP) world. More of them will create primary care groups who will seek to manage care within capitated contracts and bundled payments. This will pose both opportunity and risk. These groups will either work closely with or purchase their own home healthcare agencies. They will consider opening PACE programs. They will provide post-acute care services and direct patients from the emergency department to a post-acute care facility where they manage the patients rather than admit the patient to the hospital, where they have little control over the care provided. In this VBP environment, the primary care providers will insist on access to

information and test results so that expensive tests and interventions are not unnecessarily being repeated. VBP is designed to shift financial risk from the payer to the provider, and generally speaking, maximum financial return for the provider is balanced by high risk. In healthcare, value is maintaining the quality of care while lowering the cost of care. There are risks for both the patient and the provider if the payments being received do not adequately reflect the projected care needs. Developing quality metrics for discrete medical services such as surgical procedures or hospitalization is difficult, but developing metrics which represent high-quality care for frail older patients with complex medical needs is particularly difficult. Developing risk adjustment measures that are a true reflection of the patient's comorbidities and disability will be important. Mortality following an elective surgical procedure on a healthy 50-year-old is more likely to represent poor quality than the death of a 99-year-old with advanced heart failure, who has been unable to walk for more than 2 years or feed himself for the past 6 months. Geriatricians can assist with the design of programs that incorporate risk adjustment into payment calculations.

All primary care providers will see an increasing number of older patients in the future. Their ability to provide access and high-quality geriatrics care will depend on their education, the way their practices are organized, and the way they are paid. Though the demand will be significant, with sufficient foresight and planning, the needs can be met.

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