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# Over the next decade, doctors and nurses will be in short supply.

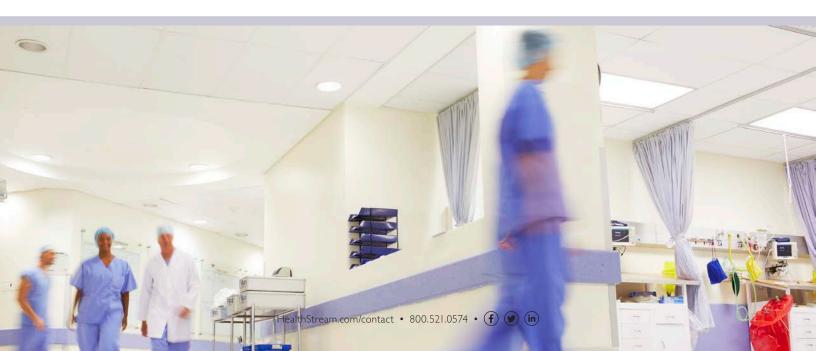
The existing shortage of nurses and physicians will continue and become an even larger problem across many areas of healthcare. According to the Association of American Medical Colleges (AAMC), the United States will see a shortage of up to nearly 122,000 physicians by 2032 as demand for physicians continues to grow faster than supply. The high end of the number of doctors we could lack includes more than 55,000 primary care physicians, nearly 66,000 specialists, and more than 23,000 surgical specialists. Two factors are contributing to this problem—the U.S. "population is estimated to grow by more than 10% by 2032, with those over age 65 increasing by 48%. Additionally, the aging population will similarly affect the physician supply, since one-third of all currently active doctors will be older than 65 at some time during the next decade. When these physicians decide to retire could have the greatest impact on supply" (AAMC, 2019). Rural and inner-city areas will feel the shortage most acutely, as those are places physicians are less likely to want to practice. It is probable that the industry will see states and hospitals going to great lengths to retain the doctors they have trained and hired. There are already examples of financial incentives, such as loan forgiveness and bonuses, being used in some areas to hold on to physicians.

A similar problem looms within the nursing profession. By 2025, according to the Georgetown University School of Nursing & Health Studies, "states on the east and west

coasts will likely have nursing shortages, while states in the middle of the country will have a surplus of nurses" (Becker's, 2017). Retaining new nurses is going to become even more important; the turnover rate for new nurses is 25% to as high as 60% during the first year and replacement costs can run as high as \$60,000 per nurse. Even if more of them choose to stay, a workforce with lots of novice nurses has its own challenges—treating high-acuity patients requires confidence that may be in short supply and practice errors are more common during a nurse's first six months on the floor.

### U.S. Demographics Are Shifting

The entire healthcare industry is going to feel the growing impact of a demographic change unlike any the United States has ever seen. The aging of our population, which some have called a "silver tsunami," will only keep accelerating. We are not that far away from 2034, the date when older adults are first expected to outnumber children in the population. Even before then, all baby boomers will be older than 65 by 2030, such that the older adult population will comprise 21% of the population, up from 15% today. One result of these changes is the anticipated rise in national health expenditures—the \$4 trillion estimated for 2020 will increase to \$5 trillion by 2025. In 2019, CMS projected that the national health expenditure growth is expected to average 5.5 percent annually from 2018-2027, reaching nearly \$6.0 trillion by 2027 (CMS, 2019). In addition to the staggering growth in aggregated cost, the workforce needed to treat the growth in healthcare demand will be astounding. Beyond



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the shortage of clinicians, Mercer Consulting predicts that by 2025 U.S. providers also will face a collective shortage of about 500,000 home health aides, 100,000 nursing assistants, and 29,000 nurse practitioners (Mercer, 2019). Specific areas of the physician shortage also will be related to this shift in need. The current need for geriatricians far outstrips our supply of them, especially when you realize that about 30% of the population 65 and older requires some type of geriatric care. That equates to more than 15 million people in need. Since each certified geriatrician can effectively treat up to 700 patients, we would need about 21,500 certified geriatricians to care for the Silver Tsunami—four times the current supply! Dishearteningly, there was a 21% decrease in the number of first-year geriatric residents from 2010 to 2015. This means that the pool of certified doctors is now shrinking at the same rate the need for them is growing. Future issues surrounding geriatric care are alarming, from the increasing population with chronic conditions and decline in family caregiving options to the very sustainability and structure of federal healthcare programs.

#### **The Millennials Have Arrived**

Much has been made of the growing impact of the millennial generation on healthcare and especially the healthcare workforce. The 73 million millennials in the U.S are part of a larger group that now makes up a quarter of the global population. This cohort, born between 1981 and 1996, already became the largest generation in the workforce in 2016. They will make up a dominant 75% of the workforce by 2030. As members of a digitally focused generation that is the most urbanized in history, these



employees are already inspiring new efforts among healthcare providers to attract and retain them. Organizations are making people-focused investments in better communications, competitive salaries, more advanced technology and programs for mentoring, work flexibility, and career development to be more attractive as employers. There are lots of opportunities for healthcare learning and workforce development to innovate to meet the needs of these staffers. Common negative stereotypes about millennials in the workforce have proliferated, but a 2013 PWC study revealed the extent to which these are inaccurate or should be examined more closely (Finn et al, 2013). A better way to look at the situation is that millennials feel much the same about their work environment as other generations, desiring more flexibility, greater work/life balance, and especially meaning. It's just that they may be more likely to act on the need for a better situation, leaving "if their needs for support, appreciation and flexibility are not met, while non-Millennials are more likely to leave if they feel they are not being paid competitively, or due to a perceived lack of development opportunities" (Finn et al, 2013).

# **Provider Credentialing Will Change** Significantly

With their constant attention on patient safety, Medical

Services Professionals (MSPs) are taking on more complex roles as the healthcare industry continues to shift to value-based care from the traditional volume-based model. As the healthcare industry and its payers embrace the use of telehealth, especially for rural patients and small clinics, credentialing will play an important role in making this service finally viable. The National Association Medical Staff Services (NAMSS) says in its 2018 State of the Medical Services Profession Report that standardization, consolidation, and the increasing importance of quality metrics will redefine the role MSPs play in organizations in the coming years (Barajas, 2018). Electronic and software solutions for credentialing and related services are growing rapidly as the industry moves to digitize records and operations to support automation. The volume for credentialing functions is predicted to increase as more nurse practitioners (NPs) and physician assistants (PAs) begin working in a hospital environment.

Artificial Intelligence Will Transform Healthcare

Artificial intelligence (AI) research and application within medicine is growing rapidly. In 2016, healthcare Al projects attracted more investment than AI projects within any other sector of the global economy. According to the

British Journal of General Practice (2018), investment banking giant Morgan Stanley estimates that

> the global market for AI in healthcare could surge from \$1.3 billion today to \$10 billion by 2024, growing at an annual compound rate of 40% (Buch et al, 2018). Harvard University tells us why—advances in computational power paired with massive amounts of data generated in healthcare systems make many clinical problems ripe for Al applications. In Forbes, Accenture

reports that the ten most promising Al applications for healthcare, led by robot-assisted surgery, virtual nursing assistants, and administrative workflow assistance, could create up to \$150 billion in annual savings for U.S. healthcare by 2026. Just a few examples show that Al-informed healthcare can significantly improve outcomes, from outperforming physicians' ability to detect cancer (Harvard, 2019) and increasing the time that doctors can spend with patients to screening medications for effectiveness against the Ebola virus (Amisha, 2019).

## New Healthcare Roles Are Emerging

As medicine evolves, new types of doctors and nurses are emerging to meet our system's changing needs. In some cases, these clinicians are in new specialties that didn't exist until recently, and demand for some of these physicians is already high. The Association of American Medical Colleges (2019) identified these five new physician specialties that match where healthcare is headed:

- Cancer immunologist This doctor will be adept at harnessing a patient's individual immune system to fight cancer while avoiding or treating immune system overreactions and treatment-triggered diseases.
- Nocturnist Increasingly medically complex patients need the care continuity of doctors who practice hospital medicine primarily at night, a key addition to the level of safety and service offered.
- Lifestyle medicine physician 80% of healthcare costs are connected to care for chronic diseases, and 80% of chronic disease is related to lifestyle choice. A lifestyle medicine specialist oversees a patient's food choices, exercise, sleep, stress levels, and ability to connect with others, whether in a primary care environment, lifestyle medicine clinic, or residential care facility. Demand to sit for this certification exam is exploding.
- Clinical informatics This specialist collects and analyzes patients' health information and applies those insights to improve patient health. Growth in this area is related to provisions of the Affordable Care Act (ACA) and the proliferation of electronic health records (EHRs). The goal is to use the volumes of





medical data now being generated to make better clinical decisions and guide research efforts.

• Medical Virtualist – This physician provides telehealth services, a sector of healthcare delivery that is expected to rise 30% each year between 2017 and 2022. Early uses include second-opinion consults, as well as telepsychiatry and telestroke services. Health systems are just beginning to add telehealth to their service mix, for primary care triage, specialty consults, and virtual rounding. The ability to create a successful telehealth experience for patients will be a key competency for this specialty (AAMC, 2019).

In a complementary development, nursing roles that are emerging include care coordinators, virtual care nurses, legal nurse consultants, nurse researchers, forensic nurses, and a full array of nursing roles related to informatics and the outcome-focused use of healthcare data.

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# **Cool Technology Is on the Horizon**

As in recent years, technology promises to transform more areas of healthcare, in both the near and more distant future. A 2019 Forbes article offers multiple examples where great changes and advances are expected. A starting point is robotics, whose potential extends far beyond the application for surgery, which is already well-known. Tremendous growth is expected in the use of robotics for healthcare, from a telepresence in rural areas where doctors are scarce and for the transport of medical supplies within an organization to disinfecting hospital rooms, to helping patients with rehabilitation and micro-bots involving specific patient therapies. Another example, the wearable device, has potential uses that go far beyond the fitness tracking and counting steps that we all know. Wearables can be put into service to monitor heart rhythm, ECG, blood pressure, temperature, etc. Technology is driving the rise of genomic medicine, where a person's genomic info is used to determine personalized treatment plans and clinical care. Computer analysis of genes and gene mutations will facilitate personalized medical treatment for such situations as organ transplant rejection, cystic fibrosis, and especially cancer. Some of the uses that healthcare will find for 3D printing will include patient-specific practice organs to be used by surgeons, on-demand device and tool manufacturing, customized prostheses, and transplantable tissues and organs. Look for enormous growth in virtual and augmented reality for healthcare—Forbes estimates its market will be \$5.1 billion by 2025. Not only is this technology extremely beneficial for training and surgery simulation, but it's also playing an important part in patient care and treatment, from treating patients with visual impairment, depression, cancer, and autism, to an augmented reality environment that supports healthcare practitioners during brain surgery and reconnecting blood vessels. Two other developments with promise are the development of digital twins to enable doctors to explore outcomes, as well as the 5G wireless network that will allow better data transfer, telemedicine advances, and remote monitoring, among many other benefits (Marr, 2019).

# **Retail Competition Is Heating Up**

Expectations about the convenience of healthcare are changing, exemplified by the embrace of healthcare within a retail environment. The New York Times reported in 2018 that people are now flocking to clinics and urgent care centers located in strip malls or shopping centers. Some 12,000 are already scattered across the country in these kinds of more accessible locations. At the same time, office visits to primary care doctors declined 18 percent from 2012 to 2016, even as visits to specialists increased (Abelson & Creswell, 2018). Patients are more interested in appointment hours that work better with a working schedule, including evenings and weekends. Another development with larger implications involves the merger of retail drugstore chains like CVS with insurance providers like Aetna. The impact on provider networks, advertising, etc. could be significant. In addition, much of healthcare is waiting to see what Amazon and other big players in the digital economy may do to disrupt the traditional ways that healthcare is provided, supplied, and scheduled.

#### The Year of the Mom

The United States healthcare industry is long overdue in its need to be more focused on improving care during

pregnancy and childbirth. According to Health Affairs, "reports finding that the U.S. has the worst maternal health outcomes in the developed world" (Devore, 2020), have led to greater attention from the government, politicians, and healthcare providers to improve the overall cost and quality of maternal health care. Not only has the maternal mortality rate doubled from 1991 to 2014, but "700 women die of complications related to pregnancy each year in the United States, and two-thirds of those deaths are preventable" (Delbanco et al, 2019). The same Harvard Business Review article adds that "American women have the greatest risk of dying from pregnancy complications among II high-income countries" (Delbanco et al, 2019). New care models must be developed to overcome the huge disparities in care given across groups distinguished by their age, race, and payer status, and more attention has to be paid to complicating factors that are becoming more common, like advanced maternal age and comorbidities such as hypertension, obesity, and diabetes. Not only are commercial insurers and state Medicaid programs testing maternal health bundles, but there will be efforts on the national level to enhance this area of care. Learning and workforce development programs will play an important part in improving pregnancy and childbirth outcomes.



#### Issues across the Care Continuum

As America ages at an increased pace, the impact will be felt across the care continuum. Senior living will be especially affected as it works to adopt a medical model that also blends aspects of the hospitality and healthcare industries. Concurrently, older adults' expectations about their accommodations continue to rise, even as their medical needs increase. Residential care environments will soon need to be able to track medication management electronically. When you take into account that the typical person over age 65 averages six maintenance medications daily, it's not hard to predict that more care will also be required. With 10,000 people reaching age 65 every day, it is projected that we will need more than 3 million additional senior housing units by 2040. Where separate levels of residential and supportive care have been the rule, the care continuum will blur into one where all services can be provided, culminating in an environment that is patient-centric rather than care setting-specific (PointClickCare.com, 2015). At the same time, one area of the continuum is on the threshold of serious turmoil. For the home

health sector, the Payment-Driven Groupings Model (PDGM) took effect January 1, 2020. This massive CMS reimbursement overhaul is another patientand reimbursement-focused wave of change, where therapy will now be tied to patient characteristics, rather than being reliant on a predetermined number of visits. Predictions about the impact include cash flow issues for some home health care providers, more than 30% of whom are expected to close. Consolidations among agencies may take place rapidly, and some experts fear the development of home health care deserts, which CMS plans to monitor closely. As part of this transformation, telehealth is expected to begin to play a sizeable role, for remote monitoring of conditions and data collection linked to reducing readmissions. Nearly 30% of home health care agencies have said they plan to launch telehealth services by 2021. A final worry for home health and boon for compliance professionals is the official CMS commitment to hunt more aggressively for fraud (Holly, 2020).

#### References

AAMC, "New Findings Confirm Predictions on Physician Shortage," Press Release, April 23, 2019, Retrieved at https://www.aamc.org/news-insights/ press-releases/new-findings-confirm-predictions-physician-shortage.

AAMC, "Five emerging medical specialties you've never heard of — until now," Association of American Medical Colleges, N.D., Retrieved at https:// www.aamc.org/news-insights/five-emerging-medical-specialties-you-ve-never-heard-until-now.

Abelson, R., and Creswell, J,"The Disappearing Doctor: How Mega-Mergers Are Changing the Business of Medical Care," April 7, 2018, The New York Times, Retrieved at https://www.nytimes.com/2018/04/07/health/health-care-mergers-doctors.html.

Amisha et al, "Overview of artificial intelligence in medicine," Journal of Family Medicine and Primary Care, 2019 Jul; 8(7): 2328–2331, Retrieved at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6691444/.

Barajas, B., "Medical Staff Services Trends for 2019 and Beyond," precheck.com, Nov. 7, 2018, Retrieved at https://www.precheck.com/blog/medicalstaff-services-trends-2019-and-beyond.

Becker's Hospital Review, "Which states will have the biggest nursing shortages by 2025?," February 13, 2017, Retrieved at https://www.beckershospitalreview.com/human-resources/which-states-will-have-the-biggest-nursing-shortages-by-2025.html.

Buch, V., Ahmed, I., and Maruthappu, M., "Artificial intelligence in medicine: current trends and future possibilities," British Journal of General Practice 2018; 68 (668): 143-144, Retrieved at https://bjgp.org/content/68/668/143.

CMS, "CMS Office of the Actuary Releases 2018-2027 Projections of National Health Expenditures," February 20, 2019, Retrieved at https://www. cms.gov/newsroom/press-releases/cms-office-actuary-releases-2018-2027-projections-national-health-expenditures.

Delbanco, S. et al, "The Rising U.S. Maternal Mortality Rate Demands Action from Employers," Harvard Business Review, June 29, 2019, Retrieved at https://hbr.org/2019/06/the-rising-u-s-maternal-mortality-rate-demands-action-from-employers.

Devore, S., "Five Health Care Trends For 2020," Health Affairs, January 13, 2020, Retrieved at https://www.healthaffairs.org/do/10.1377/ hblog20200 | 10.65292/full/.

Finn, D. and Donovan, A., "PwC's NextGen: A global generational study," PwC, 2013, Retrieved at https://www.pwc.com/gx/en/hr-management-services/pdf/pwc-nextgen-study-2013.pdf.

Holly, R., "The Top Home Health Trends of 2020," Home Health Care News, January 6, 2020, Retrieved at https://homehealthcarenews.com/2020/01/ the-top-home-health-trends-of-2020%EF%BB%BF/Hol.

Marr, B., "The 9 Biggest Technology Trends That Will Transform Medicine And Healthcare In 2020," November 1, 2019, Forbes, Retrieved at https:// www.forbes.com/sites/bernardmarr/2019/11/01/the-9-biggest-technology-trends-that-will-transform-medicine-and-healthcare-in-2020/#38771a4d-

Mercer, "Defining Healthcare's Workforce for the Future," 30 May, 2019, Retrieved at https://www.mercer.com/our-thinking/career/voice-on-talent/ defining-healthcares-workforce-for-the-future.html

PointClickCare.com, "2020 Vision: The Future of Senior Living," 2016, Retrieved at https://blog.pointclickcare.com/2020-vision-future-senior-living/.



