# The Shortage of Physicians Across the Country

## A National Study

DIAGNOSING
HEALTHCARE
MARKETS

3d health, inc

The 3d Health team recently completed an in-depth analysis of the supply, demand, aggregation and distribution of physicians throughout the United States. The results are both interesting and a little scary for those of us in the business of attempting to attract physicians to hospitals and health systems. We are excited to share the results and key findings with our clients and friends throughout the industry.

**Patient Base in the U.S.**

There are over 322 million residents in the U.S. today. 84% of this population lives within urban and suburban areas while only 16% of the U.S. population resides in a rural setting. The gravitational pull toward urban and suburban areas is very important when thinking about why physicians are not evenly nor well distributed across the country.

Over the next five years, the portion of the population that is 65 or older grows from 15% of the U.S. to 17%. When we look out 20 years, to 2036, the 65 and older crowd in the U.S. is projected to be 25% of the population. This is significant because the aging of the population spikes the demand for physician services. On average, patients that are 65 and older visit their physicians almost nine times per year. It's important to note that pediatric patients average four visits per year, the 18 to 44 age cohort averages three visits per year, and 45 to 64 year olds average five visits per year.

**Current Demand for Physicians in the U.S.**

In order to project the demand for 44 office-based physician specialties across the U.S., we utilized 3d Health's proprietary demand model, which is both age and gender-specific. The overall demand for physicians is highest in the South (38% of the total) and lowest in the Northeast (at 18%). The West accounted for 23% of the demand and the Midwest was 21%.

At this time, the U.S. population requires 268,001 primary care physicians, 138,435 medical sub-specialists, and 115,273 surgical sub-specialists. In total, 521,709 physicians are needed across the U.S. within the 44 office-based specialties analyzed prior to the impact of our aging population.

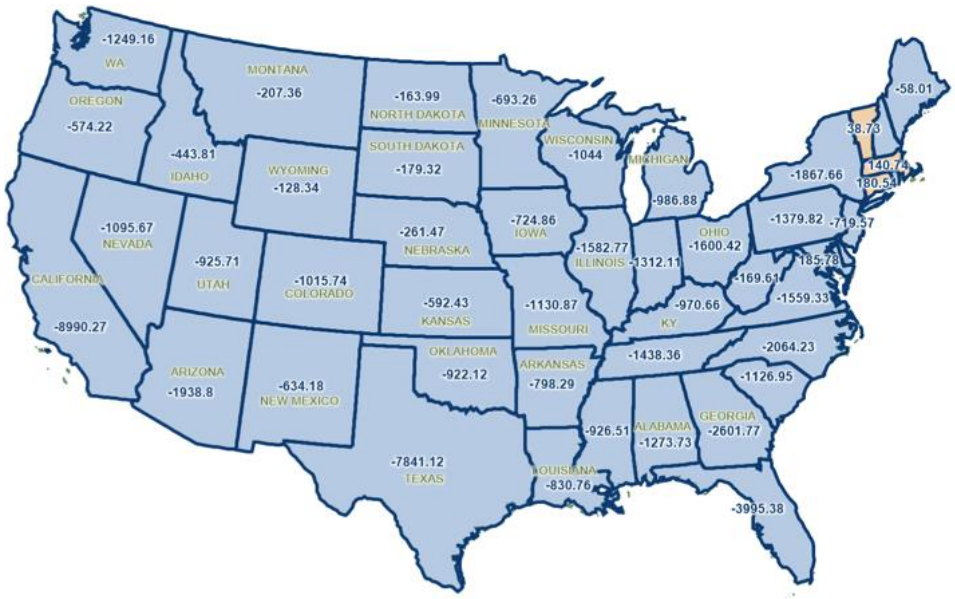
**Current Supply of Physicians in the U.S.**

Today, there are 209,569 primary care physicians (48% of the total supply), 123,932 medical sub-specialists (29% of the total supply), and 101,309 surgical sub-specialists (23% of the total supply). We have a total supply of 434,810 physicians in the aforementioned specialties.

When thinking about the U.S. supply of physicians on a per capita basis, rural markets make do with substantially fewer physicians. On average, urban markets have 144 physicians per 100,000 people while rural markets have 85 physicians per 100,000 population. The following map depicts the current aggregation of physicians across the U.S.

**The Shortage of Physicians Today**

Today, there is a shortage of 86,899 office-based physicians across the United States. The primary care deficit is 58,432, the medical sub-specialist deficit is 14,503, and the surgical sub-specialist deficit is 13,964. Within primary care, Family Medicine is 69% of the PCP deficit, with Internal Medicine at 14%, Pediatrics at 10%, and OB/Gyn at 7%. California, Texas, and Florida have the largest primary care deficits in the U.S., as seen below.



Beyond primary care, the largest shortage of physicians includes:

| Specialty | Supply | Demand | Surplus/ (Deficit) | Unmet Need |
|---|---|---|---|---|
| General Surgery | 15,124 | 21,009 | (5,885) | (28%) |
| Vascular Surgery | 2,438 | 6,718 | (4,280) | (64%) |
| Gastroenterology | 12,179 | 15,866 | (3,687) | (23%) |
| Otolaryngology | 8,580 | 12,252 | (3,673) | (30%) |
| Physical Medicine & Rehab | 5,808 | 8,639 | (2,831) | (33%) |
| Ophthalmology | 15,396 | 18,035 | (2,639) | (15%) |
| Allergy & Immunology | 3,781 | 5,983 | (2,201) | (37%) |
| Urology | 8,423 | 10,571 | (2,148) | (20%) |
| Dermatology | 9,812 | 11,951 | (2,139) | (18%) |
| Pain Management | 2,452 | 4,432 | (1,981) | (45%) |
| Neurology | 11,159 | 13,023 | (1,863) | (14%) |
| Orthopedic Surgery | 22,722 | 24,365 | (1,642) | (7%) |
| Sports Medicine | 1,150 | 2,322 | (1,172) | (50%) |
| Colon & Rectal Surgery | 1,190 | 2,243 | (1,052) | (47%) |
| Psychiatry | 12,192 | 13,151 | (959) | (7%) |
| Pulmonary | 8,342 | 9,206 | (864) | (9%) |
| Sleep Medicine | 675 | 1,019 | (345) | (34%) |
| Cardiac Surgery | 2,544 | 2,825 | (281) | (10%) |
| Gynecology Oncology | 819 | 959 | (140) | (15%) |
| Infectious Disease | 3,604 | 3,623 | (19) | (1%) |

**Projected Demand for Physicians in the U.S.**

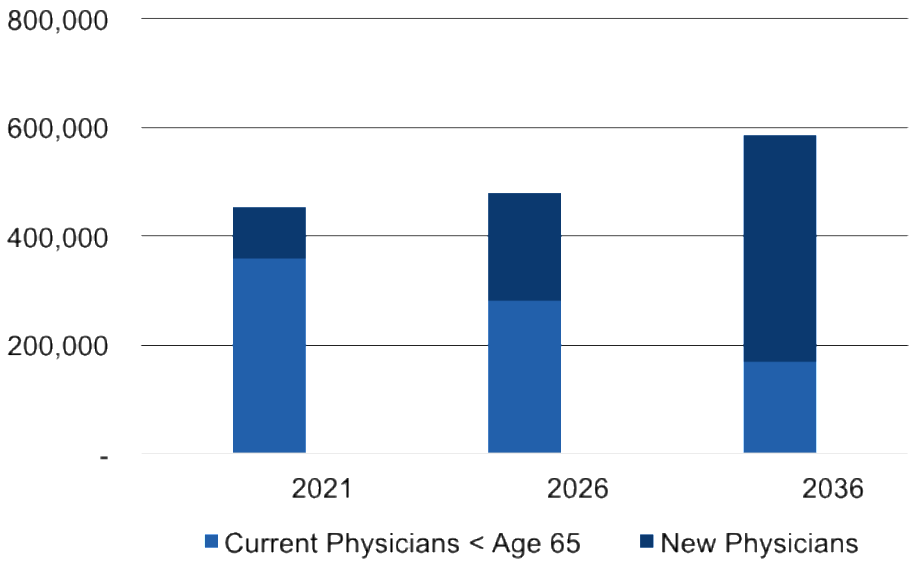
As you would expect, the projected demand curve for physicians closely matches the aging of the U.S. population. The percentage of the U.S. population that is age 65 or older grows by 2 points five years out, 4 points ten years out and 10 full points by 2036. As a result, the largest spike in demand for physicians is projected to be between ten and twenty years from now.

Over the next twenty years, the demand for primary care physicians grows from 268,001 to 328,412 for an increase of 23%. The demand for medical specialists is projected to grow by 43% from 138,435 physicians to 198,017 and the need for surgical specialists will grow by 44% to 165,493.

**Projected Supply of Physicians in the U.S.**

The good news as it relates to the projected supply of physicians across the U.S. is that the overall supply is projected to grow by about 1% per annum over the next ten years (and not shrink) and grows to just under 2% per year from 2026 to 2036.

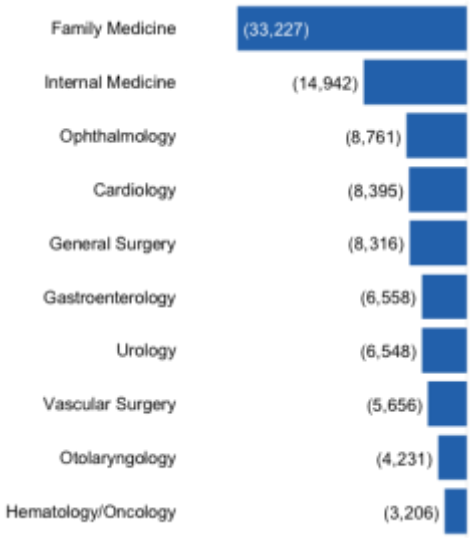
The downside of marginal growth in supply is that the demand for physicians dramatically outpaces supply moving forward and physicians tend to aggregate in urban and suburban areas. The chart below shows the overall projected growth in physician supply including new physicians entering practice.



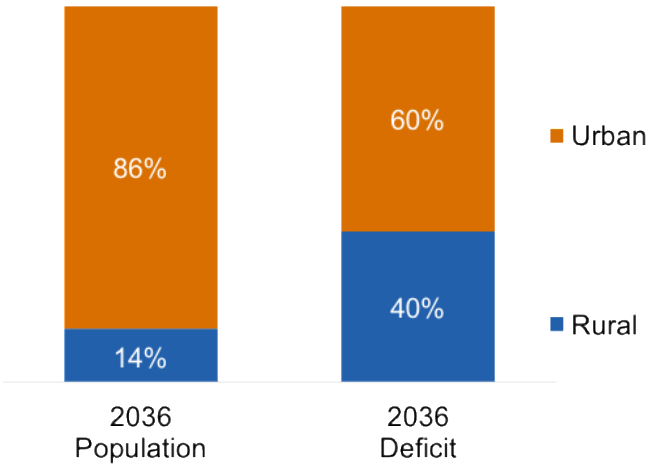

**The Projected Shortage of Physicians**

As previously stated, there is currently a shortage of 86,899 office-based physicians across the United States. The shortage is projected to grow to 99,592 in five years, to 113,612 in ten years, and to 106,926 in 20 years.

Across all office-based specialties, the largest shortage of physicians by 2036 can be seen in the diagram below:




As we look at the next 20 years, rural markets are disproportionally impacted by the projected shortage of physicians – rural America will be 14% of the population and 40% of the physician shortage.




What can hospitals and health systems do to minimize the impact of the shortage of physicians across the U.S.? We've developed four potential solutions: increase the national supply of physicians, bend the demand curve, retool the physician practice, and attract the "right" physicians.

**Solution #1: Increase the Supply of Physicians**

**H.R.2124/S.1148 - Resident Physician Shortage Reduction Act of 2015**

Since 1997, Congress has capped the number of Medicare-supported residency slots. In 2015, both the House and Senate drafted bills proposing to add 15,000 Medicare-supported residency positions over five years. Medicare is the largest public supporter of GME funding and Medicare's Direct GME payments are intended to represent Medicare's "share" of the training costs for about 80,000 residencies nationwide. While the House and Senate bills to lift the GME cap differ in a few details, both call for expanding residency positions by 3,000 slots per year from 2017 to 2021.

At least half of the additional slots must be used for residencies in physician shortage specialties, to be identified by the National Health Care Workforce Commission. The bills also require a Government Accountability Office study on ways to increase health professional workforce diversity.

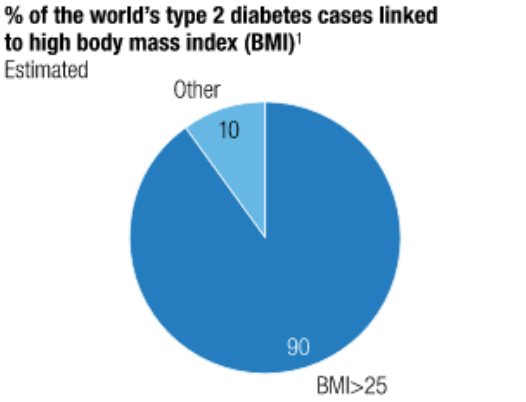
The Senate bill prioritizes hospitals that have exceeded their resident cap. The House version includes hospitals in states with the largest populations in Health Professional Shortage Areas. Both bills limit the increased number of slots a hospital may receive.

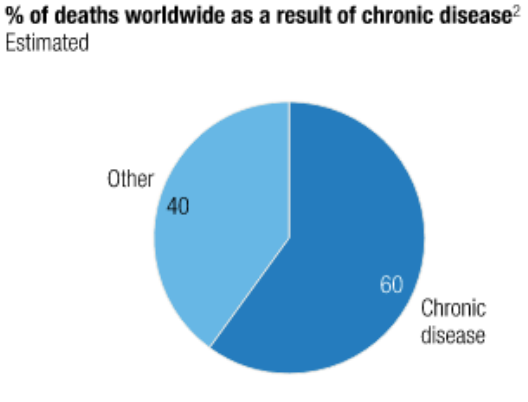
Both Bills have been sitting in Sub-Committee since 2015. Call your Representative today!

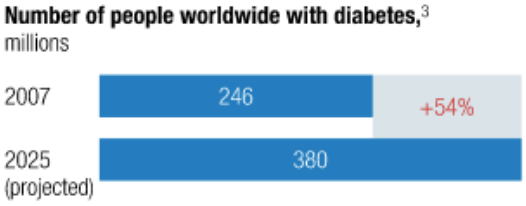
**Solution #2: Bend the Demand Curve**

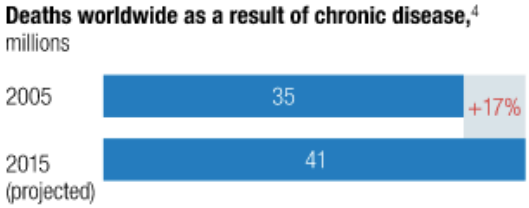
While we continue to innovate in genetics, pharmaceuticals, and medical procedures, bending the demand curve for physician services will ultimately rely on successfully engaging patients in their own care.

Studies have shown that the combination of healthy eating, not smoking, and regular exercise can reduce the risk of heart disease by 80 percent and of stroke and some cancers by 70 percent. Yet, implementing this into daily lifestyle remains elusive for the majority of the population. Despite widespread messaging about the dangers of smoking, excessive alcohol consumption, poor diet, and lack of exercise, many consumers continue to engage in risky behaviors. The implications include an increase in diabetes and other chronic diseases, with corresponding increases in premature deaths (see below).




**Solution #3: Retool the Physician Practice**

Most physician practices operate today similar to how they did in the 1950s and 60s – customers must convince a gatekeeper (receptionist) that they need to be seen, the customer is offered options that best suit the business, time in the waiting room is only exceeded by time in the exam room, and new, paying customers must go to the back of the line!

Ultimately, physician practices will need to do more with less. This requires customizing the practice model in order to increase the patient panel size of each provider and transition the role of the physician to team and intellectual leader. The modern-day practice will have a combination of the following offerings:

- Team-Based Care
- Caring Providers and Staff
- Real-Time Patient Access/Greater Convenience
- Online Scheduling
- After Hours Availability
- E-Visits
- Minimal Wait Times
- Empowered Non-Physician Providers
- Clear Cost of Service
- Access to Medical Records and Digital Service

**Solution #4: Attract the "Right" Physicians**

As if the macro shortage of physicians is not daunting enough, attracting physicians that can thrive in the post-reform environment is critical for hospitals and health systems. CMS has been clear on their three-part aim of "better care for individuals, better health for populations, and lower growth in expenditures."

Evidence-based medicine (EBM) or evidence-based practice (EBP) aims to apply the best available evidence gained from the scientific method to clinical decision making. It seeks to assess the strength of the evidence of risks and benefits of treatments (including lack of treatment) and diagnostic tests. If evidence-based medicine is the key in the transformation of today's delivery system, what percentage of your physicians believes in EBM? Practices it? Is willing to practice it?

It is certainly understandable that the shortage of and difficulty in recruiting physicians influences how hospitals and health systems think about attracting physicians. The historic physician recruitment approach and criteria tend to be "soft" and geared toward the traditional model of care. Physicians are evaluated mostly on high-level background and overall fit:

- Why are you looking for a new practice opportunity?
- What is your training and background?
- What is your current practice like?
- What are you seeking in a new practice opportunity?
- How will this move affect your spouse and family?

In today's reality, this is a very risky approach and strategy. Shared savings models do not work very well when there is no savings, and meeting the value-based purchasing and quality outcomes criteria will be next to impossible.
The ideal physician candidate profile, today, is very different than the past. Physicians will need to be asked more pointed questions about their clinical philosophy and acumen. Suggested questions to use when evaluating physicians include:

- Do you understand and believe in evidence-based medicine?
- What type of clinical outcomes do you expect of yourself?
- What is your experience in managing patient populations?
- What size patient panel is most comfortable to you?
- What are your top criteria in evaluating practice opportunities?

As a result, the potential pool of attractive physician candidates is even smaller than projected. So, how do you attract the right physicians? First, superior physicians are attracted to organizations with a clear commitment to quality. Embrace evidence-based medicine, set outcome goals, pursue them, and do not compromise. A "warm body" will not help you meet your goals and a collection of warm bodies can set your organization back for a generation.

Second, be willing to invest. You might have to pay more for better performing physicians. Finally, differentiate around the patient experience. Create a positive, different, and memorable experience for patients and the best physicians will get excited about working with you.

We appreciate your interest and are here to help, answer questions, and entertain comments. Please contact Shane Foreman at sforeman@3dhealthinc.com / 312-423-2671 or Brittany Foreman at bforeman@3dhealthinc.com / 254-750-5614.

Sources: AAMC Reporter: June 2015, "Engaging Consumers to Manage Health Care Demand"
By Sundiatu Dixon-Fyle, PhD; and Thomas Kowallik, PhD