

## Healthcare Deserts in the United States

### What are Healthcare Deserts?

- Healthcare deserts refers to regions in our country where there are lower than ideal numbers of healthcare resources and professionals to meet the health and medical needs of the local population. (1)
- Definitions vary between experts but some desert definitions have been objectively defined by agencies within the US Department of Health and Human Service (HHS). One such agency, the Health Resources and Services Administration (HRSA), defines healthcare deserts (or Health Professional Shortage Areas) as geographic areas or populations that have a shortage of primary, dental, or mental healthcare providers.
- HRSA primarily designates “shortage” by looking at the population-to-provider ratio. For example, for primary medical care, the population-to-provider ratio must be at least 3,500 to 1 (or 3,000 to 1 if there are unusually high needs in the community). (2)
- Regardless of the exact methodology used to determine these deserts, the overall impact remains the same: individuals living in those areas experience more difficulty accessing medical care and resources. (3)
- This has a measurable negative effect on their health and well-being contributing to overall high costs and undesirable population-wide health outcomes. (4)
- Any effort to improve health in the United States and reduce inequity in healthcare access must take into account these regions of low clinical resources.
- Healthcare decision makers need to identify these deserts, quantify their deleterious effects, and put forth every effort to increase resources and professionals within these areas.
- Our goal is simple: for every American to have equal ease of access to healthcare whether they live in the Bronx or in the Great Plains.

### What Healthcare Deserts Are There?

- **Primary Care Deserts**
  - Primary Care Deserts were one of the first clinical care deserts to be identified by policy makers, who also started policies to mitigate it, correctly realizing the importance of primary care to our communities. (5)
  - In addition to the fact that there’s a national shortage of primary care professionals (6), there are vast [areas](#) of the United States where there is no meaningful access to primary care.
- **Pharmacy Deserts**
  - Community pharmacies have long been an unsung component of our healthcare system, with research showing Americans see their local community pharmacist 12 times more frequently than they do their primary care physician. (7)

- Pharmacies' outsized role in the response to the COVID-19 pandemic, with 43% of community pharmacies serving as testing centers for COVID-19 and 33.9% of all total vaccine doses administered in the U.S. coming through retail pharmacies, reflect their importance to our overall national health. (8)
- However, there are [large regions of our nation where pharmacy access is severely limited](#) which has the potential to worsen health outcomes related to medical compliance, chronic disease management, and drug and substance treatment. (9)
- **Women's Health Deserts**
  - Women's Health represents a complex combination of primary care, gynecological care, as well as reproductive and family planning care.
  - Thus, Women's Health suffers from the combination of any barriers to those clinical service lines, since a primary care desert would also by definition also be a woman's health care desert.
  - The recent decision by our Supreme Court is sure to impact the [availability of women's healthcare](#) overall, possibly in unforeseen ways, potentially worsening the problem as reproductive and family planning care goes from rare to non-existent in many states. (11)
- **Dialysis Care Deserts**
  - Chronic kidney disease (CKD) and End-Stage Renal Disease (ESRD) are a silent epidemic affecting nearly 27 million Americans. (12)
  - CKD and ESRD's combined costs have ballooned impressively in the last decades in lockstep with increases in diabetes, hypertension, and obesity prevalence. (13)
  - Beyond kidney transplants, the only meaningful treatment for ESRD is frequent and on-going dialysis, whose provider facilities are not evenly distributed in our nation creating deserts of kidney care even in the middle of some of our most populous cities. (14)
- **Mental Health Deserts**
  - Mental health care in this country continues to be underfunded, underutilized and unsupported, at a time when millions of Americans suffer from multiple mental health conditions.
  - The distribution of mental health care has never been more unbalanced and more unequal, which has severe repercussions to our quality of life. (15)
- **Dental Health Deserts**
  - Dental care, which is often not looked upon as a "real" medical need, remains neglected by our policy makers, despite being a major health problem as defined by both the [World Health Organization](#) (WHO) and the [American Medical Association](#) (AMA). (16)
  - Dental health diseases contribute to lowering quality of life in millions of Americans as well as increased morbidity and early mortality. (17)
  - Beyond shortage of dental health professionals (18) and barriers to significant coverage by third party payers (19), the uneven distribution of dental health care throughout our country, further undermines our efforts to mitigate this silent epidemic of suffering.
- **Urban Green Space Deserts**

- Urban Green spaces, defined as a portion of an urban area populated by plants and vegetation, are a vital aspect of healthy living and healthy communities as declared by the [United Nations](#). (20)
- The availability of green spaces in urban communities is negatively correlated with all-cause mortality, heart disease and violence. (21)
- This often unrecognized desert has a massive impact in nearly all of our chronic illnesses particularly our mental health and chronic conditions related to lack of exercise and activity. (22)
- **Healthy Food Deserts**
  - The ability to obtain affordable, fresh foods in a given area is at the core of maintaining health in individuals and preventing chronic diseases such as diabetes, hypertension, and high cholesterol. (23)
  - In many areas of our country, even surprisingly in the middle of our biggest cities, obtaining healthy foods is a major difficulty due to the mismatch in the recommended amount of fresh food and the amount of fresh food offered or available in commercial establishments. (24)
  - These healthy food deserts have a measurable effect on our nation’s health and are of particular importance for advancing health equity since often, the most vulnerable populations are most affected. (25)

### What is the Effect of Healthcare Deserts on Health Outcomes?

- Healthcare deserts are not abstract patterns in a map. Lower than normal concentration of healthcare resources and professionals have a palpable and measurable effect on the health outcomes of communities living in these deserts.
- Studies have found that pharmacy closures are correlated with immediate and statistically significant declines in communities’ adherence to cardiovascular medications, particularly among older adults and people of color. (26)
- Studies have also shown that individuals with serious mental health conditions living in mental health deserts are more likely to be admitted to the hospital (27) and suicide rates are higher in mental health deserts compared to areas with adequate mental health resources. (28)
- After over 80 family planning clinics were closed in Texas between 2011-2015, economists calculated teenage pregnancies went up 3.4%, or an additional 2,200 teen pregnancies, in these women’s health care deserts in contrast to the trends in similar counties with access to family planning clinics. (29)

### HSR.health’s Mapping Healthcare Deserts Initiative

- HSR.health is an innovation-first healthcare technology firm and the leading provider of health-focused geospatial data analytics.
- Our AI-enabled, geospatial platform curates data globally and provides actionable health risk data analytics to the healthcare industry, health departments, and industry broadly.

- Our Care Deserts Initiative identifies multiple locations in the United States where clinical care and medical resources are severely deficient and may constitute a significant barrier to care for millions of Americans.
- This initiative represents an important step in increasing the awareness of our policy makers to these often, under publicized problems.

With the knowledge that increased access to healthcare resources improves health posture and contributes to an improved quality life, HSR.*health* hopes to lead the way in revealing how our geography can contribute to both health problems and likewise, health solutions.

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