

Charge 5: Impact of Delayed Health Care

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Delayed and Forgone Healthcare is Common

- Before the pandemic 25% of Americans postponed medical care due to cost for serious conditions per Gallup in 2019.
 - The rates were increasing and highest for lower income people.
- Rates are higher in Black and Hispanic populations.
- Rates are much higher in those that are uninsured.
- Delayed/ forgone care is common even for those with significant life-threatening chronic diseases, such as heart failure.
- Rates of “late or no prenatal care” and “inadequate prenatal care” are much higher in Texas than in the United States as a whole.
- Delays in initially receiving mental health services are significant.



Reasons People Delay Healthcare

- Cost
- Lack of insurance
- Lack of providers
- Lack of trust or poor experience with the healthcare system
- Lack of transportation
- Difficulty taking time off work/ other obligations
- Not prioritizing the health care visit



Consequences of Delayed Healthcare

- Missed opportunities to prevent chronic disease, screen for cancer, screen for developmental delays in children, and prevent infectious disease through immunizations.
- Longer hospital stays, resulting in higher costs.
- Delayed healthcare can result in higher mortality rates.
- Inadequate prenatal care results in significant increases in prematurity rates, lower birth weights, and higher infant mortality rates.
- Delays in receiving initial mental health services result in not only poorer health but also poorer educational, social, and economic outcomes.
- Delays in cancer care result in progression of tumor stage, higher costs, poorer outcomes, and increased mortality rates.



The Impact of COVID-19 on Delayed Healthcare

- Delayed healthcare was common, especially among people of color.
 - 26-36% of adults reported that they delayed or went without care due to COVID-19.
 - Rates of delayed care were higher in Black people and those with ongoing chronic physical and mental health conditions.
- Delaying healthcare resulted in poorer health for many.
 - Approximately one third of nonelderly adults who reported delaying care reported worsening of one or more of their health conditions or limited their ability to work or perform other daily activities.
 - Approximately 18% of elderly patients that delayed healthcare reported that the delay negatively affected their health.
 - Many patients delayed cardiac EMS services, resulting in increased out-of-hospital cardiac arrests and decrease survival.
- Delayed healthcare increased cancer mortality.
 - Delayed cancer surgeries resulted in progression of disease and increased mortality.
 - Over 10 million people missed cancer screens.
- Several effective strategies emerged to address this problem.
 - Telehealth was very effective!
 - Keeping people on governmental programs was important.



Strategies to Decrease Delayed and Forgone Care in Texas

- Increase the number of Texans with private and public insurance coverage.
 - Extend Medicaid to women for a full year after delivery.
 - Provide Medicaid like coverage for uninsured individuals diagnosed with cancers detectable by screening (such as colorectal cancer) as Texas does for breast and cervical cancer.
- Support the Federal Qualified Health Centers and Local Mental Health Authorities.
- Increase and diversify the healthcare workforce in Texas.
 - Increase the number of primary care and mental health providers.
 - Expand the public health workforce including community health workers, promotoras, local health departments.
 - Increase the racial and ethnic diversity of the healthcare workforce.
- Make the healthcare environment more convenient, patient centric, and friendly.
 - Further develop telemedicine capacity in Texas.
 - Address medical transportation and other social determinates of health.
 - Use mobile technology.
- Enhance patient and public health education.
 - Continue work to destigmatize mental health services.
 - Emphasize the importance of prenatal and preventative care.
 - Primary prevention of chronic diseases by expanding health education with a focus on healthy food and exercise.



Thank you!



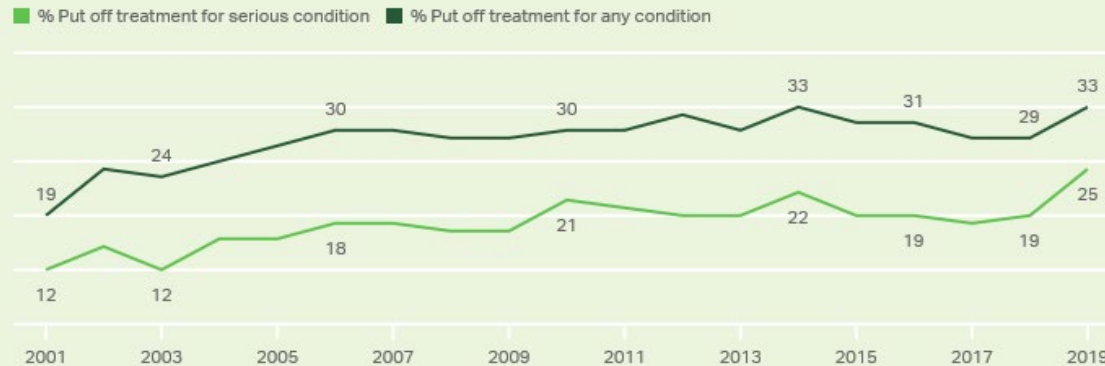
Appendix



Delayed Health Care was Increasing Before the COVID-19 Pandemic

Americans' Reports of Postponing Medical Care Due to Costs, 2001-2019

Within the last twelve months, have you or a member of your family put off any sort of medical treatment because of the cost you would have to pay? (If yes) When you put off this medical treatment, was it for a condition or illness that was very serious, somewhat serious, not very serious, or not at all serious?

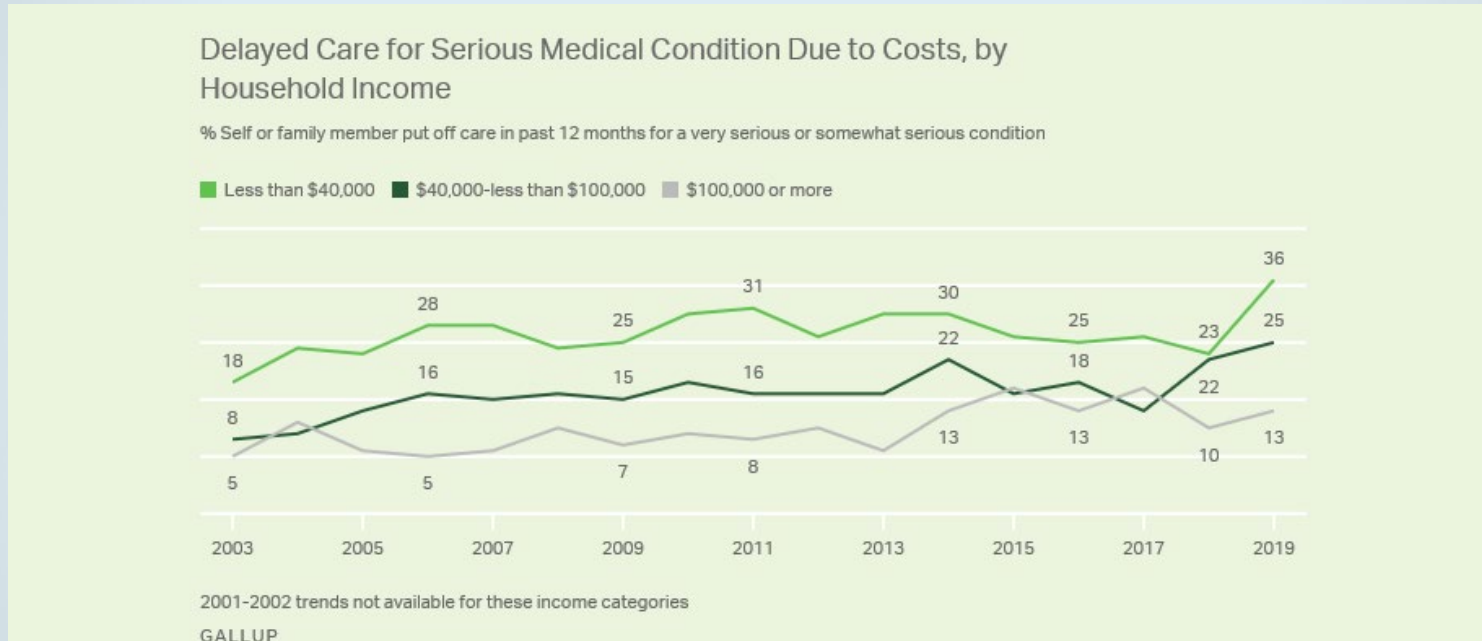


GALLUP

Lydia Saad. More Americans Delaying Medical Treatment Due to Cost. Gallup, December 9, 2019.



Delayed Health Care was Increasing Before the COVID-19 Pandemic (cont.)



Lydia Saad. More Americans Delaying Medical Treatment Due to Cost. Gallup, December 9, 2019.



The 2020 National Health Interview Survey

- 1 in 11 adults report delaying or going without medical care due to costs.
- 26% of adults reported that they delayed or did not get care because of COVID-19.
- Hispanic(13%) and Non-Hispanic Black (10%) adults had higher rates than average (9%) of delaying and / or going without medical care due to costs.
- Adults who are in worse health(16%) are twice as likely than those with better health (8%) to delay or go without care due to cost reasons.
- 30% of uninsured adults delayed or went without medical care due to cost, compared to 6% of insured adults.
- Adults reported delaying or going without dental care (23%), prescription drugs (11%), medical (9%), and Mental Health (5%) due to cost reasons.
- 32% of uninsured adults did not have a usual place of care, compared to 10% of all adults and 7% of the insured adults.
- Uninsured adults are more likely to use urgent care (12% vs 6%) and emergency room (5% vs 1%) as their usual place of care.

Ortaliza J, Fox L, Claxton G, Amin K. How does cost affect access to care?, Peterson-KFF Health system Tracker, Jan 14, 2022.



Healthy People 2020 Data: Missed Opportunities to Prevent Disease

- Colon Cancer screening
 - Only 65% of adults 50-75 years received screening
 - HP2020 Target: 70.5%
 - Among persons 50-64 years, the rate for screening
 - Private health insurance → 64%
 - Uninsured population → 30%
- Hypertension Control (< 140 mm Hg systolic and < 90 mmHg diastolic)
 - Only 48% of adults older than 18 years with HTN were under control
 - HP2020 Target: 61.2%
 - In 2013-2016 adults aged 18–64 years with controlled hypertension
 - Public health insurance → 55% (age adjusted)
 - Private insurance → 50%
 - No health insurance → 31%

<https://wayback.archive-it.org/5774/20220413182825/https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Clinical-Preventive-Services/data>



Healthy People 2020 Data: Missed Opportunities to Prevent Disease (cont.)

- Poor Glycemic Control (HBA1C > 9%)
 - 19% with poor control among adults 18 years and older with diagnosis of diabetes
 - HP2020 Target: 16.2%
 - Poor glycemic control among adults aged 18–64 years with diagnosed diabetes
 - Health insurance → 17%
 - No health insurance → 35%
- Immunization
 - Only 73% of children 19-35 months received recommended doses of DTaP, polio, MMR, Hib, Hep B, varicella, and PCV vaccines
 - The rate for those with private health insurance was 47% higher than the rate for those without health insurance.

<https://wayback.archive-it.org/5774/20220413182825/https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Clinical-Preventive-Services/data>



Delayed Health Care Results in Longer Hospital Stays

1991 Harvard Medical School Patient Survey

- 12,068 patients of 17,231 consecutive hospitalized adult (excluding obstetrics and psychiatry) patients in 1987.
- Delays in care found in 16% of patients.
- Delays more common (40 to 80%) in black, poor, uninsured, and those without a regular physician.
- Reasons for delay in seeking healthcare included “thought the problem would go away or was not serious enough”, “lack of time or conflicts with other priorities”, “difficulty in getting an appointment”, and “costs too much”.
- Cost was important reason for delaying care especially in lower socioeconomic populations.
- Odds of delaying care was 12 times greater for those both poor and uninsured.

After controlling for DRG and severity, patients who reported delays had 9% longer hospital stays.

Weissman JS, Stern R, Fielding SL, Epstein AM. Delayed Access to Health Care: Risk Factors, Reasons, and Consequences, *Annals of Internal Medicine* 1991;114:325-331.



Delays in Acute Medical Treatment During the Pandemic have been Associated with Increased Total Cost of Care

- Analysis of 1,750,850 patients with data in the California Public Patient Discharge database.
- “Delay” defined as the number of days between a patient's initial diagnosis or hospital admission until treatment.
- On average an additional day of delay resulted in an 11.2% increase in total cost.
- Compared to Day zero (no delay, average costs \$35,596.4).
 - One day increased total cost by 14.1% (\$40,619.3),
 - Two-day increased total cost by 14.1% (\$40,619.3),
 - Three-day delay increased cost by 46.5% (\$52,156.3),
 - Four-day delay increased costs by 62.9% (\$57,988.5),
 - Five-day delay increased costs by 78.4% (\$63,513.0),and
 - Six-day delay increased total cost of 95% (\$69,424.8).

Haque L. The effect of delays in acute medical treatment on total cost and potential ramifications due to the coronavirus pandemic. *Harvard Public Health Review*. 2021; 26.



Delayed and Forgone Health Care for Nonelderly Adults During the Pandemic

- Survey supported by the RWJF, performed by the Urban Institute from September 11-28, 2020.
- 36% adults reported delaying or forgoing health care because of COVID.
- Black adults were more likely than white or Hispanic/ Latinx adults to report delaying or forgoing care (39.7% vs 34.3% vs 35.5%).
- 40.7% of adults with one or more chronic health condition and 56.3% of adults with both physical and mental health conditions reported delaying or forgoing health care because of the pandemic.
- 52% of adults with mental health conditions delayed or forgone care.
- Dental care (25%) was the most common care delayed, followed by seeing a general or specialist doctor (20.6%).
- Among adults who delayed or forgone health care, 32.6% reported doing so worsened one or more of their health conditions or limited their abilities to work or perform other daily activities.

Gonzalez D, Karpman M, Kenny GM, Zuckerman S. Delayed and Forgone Health Care for Nonelderly Adults during the COVID-19 Pandemic. February 2021, Urban Institute.



Delayed Care and the Elderly

- Pre-Pandemic

- Delayed Access to Health Care is Associated with increased Mortality in the VA System
 - Veterans who visited a VA medical Center with a facility-level wait time of 31 days or more had a 20% increase in mortality compared with veterans who visited a VA medical Center with a facility-level wait time of < 31 days
 - Study population was VA patients 65 and older who visited at least one of three geriatric outpatient clinics in 2001
 - Sample size 37,489 people, mostly elderly (mean age 78) males (97%) with multiple medical problems

Prentice JC, Pizer, SD. Delay Access to Health Care and Mortality, Health Serv Res. 2007 Apr; 42(2):644-662.

- Pandemic

- Survey data shows 33% of older adults reported delayed medical care during the pandemic.
- Among those with delayed care, 18 % reported that delayed care negatively affected their health.

Zhong S, Huisinigh-Scheetz, Huang ES. Delayed medical care and its perceived health impact among US older adults during the COVID-19 pandemic, J Am Geriatr Soc. 2022; 70:1620-1628.



Impact of Delayed Health Care on Cardiac Disease

- Pre-Pandemic Data

- 16% of United States patients with heart failure from 2004-2015 reported forgone/delayed care.
- Compared to those who did not delay care, these patient's annual health care expenses was \$8,027 higher.
- Elderly patients (> 65 years) who delayed healthcare had more Emergency Room visits (58% vs 43%), higher annual inpatient costs (+ \$7,548), and total higher healthcare costs (+ \$10,581)
- 60% of nonelderly and 46% of elderly patients with heart failure reported delaying care due to financial barriers.

Thomas A, Valero-Elizondo J, Khera R, Warraich HJ, Reinhardt SW, Ali HJ, Nasir K, Desai NR. Forgone Medical Care Associated with Increased Health Care Costs Among the US Heart Failure Population, J Am College of Cardiol HF. 2021 Oct, 9 (10) 710-719.

- Pandemic Data

- Delays in seeking cardiac related EMS services (27% decrease) in Boston resulted in 35% increase in non-nursing home out-of-hospital cardiac arrests and decreased prehospital survival compared to historical background (22% to 30%).

Sun C, Cyer S, Salvia J, Segal L, Levi R. Worse Cardiac Arrest Outcomes During the COVID-19 Pandemic in Boston Can be Attributable to Patients Reluctance to Seek Care, *Health Affairs*, June 2021.



Prenatal Care in Texas (2020)

- 10% of Texas women received late or no prenatal care.
 - US national average is 6%
- 70% of Texas live births were to women receiving adequate/adequate plus prenatal care, 9% were to women receiving intermediate care, and 21% were to women receiving inadequate care.
 - US national average for inadequate prenatal care is 15%
 - Inadequate prenatal care is pregnancy-related care beginning in the fifth month of pregnancy or later or fewer than 50% of the appropriate number of visits for an infant's gestational age.

<https://www.marchofdimes.org/peristats/data?top=5&lev=1&stop=34®=99&obj=1&slev=1>

March of Dimes data is based on the National Center for Health Statistics. Retrieved Sept. 26, 2022.



Consequences of Inadequate Prenatal Care

- Women who receive no prenatal care experience a 7-fold higher risk of preterm birth

Debiec KE, Paul KJ, Mitchel CM, Hitti JE. Inadequate prenatal care and risk of preterm delivery among adolescents: a retrospective study over 10 years. *American Journal of Obstetrics and Gynecology*, 203(2), 122.e1–122.e6.

- Inadequate prenatal care was strongly associated with very preterm (32 weeks) delivery vs. moderately preterm (32-36 weeks)

- Women who do not receive prenatal care deliver babies with lower weight and have increased infant mortality rates

Roman, L., Raffo, J. E., Zhu, Q., & Meghea, C. I. (2014). A statewide Medicaid enhanced prenatal care program. *JAMA Pediatrics*, 168(3), 220–227.

- Reasons for inadequate prenatal care include lack of insurance coverage, financial constraints, inability to recognize the pregnancy, inability to get an initial appointment, lack of transportation, undesired pregnancy, and characteristics of the clinic.

Shah JS, Revere FL, Toy EG. Improving rate of early entry prenatal care in an underserved population. *Maternal and Child Health Journal* (2018) 22, 1738-1742.



Delays in Mental Health Services

- Delays in initiation of mental health services are significant
 - Median number of years between onset of first mental disorder and first treatment contact was 10 years for a general medical doctor and 11 years until first contact with a psychiatrist.
 - Delays for the most severe disorder was shorter, but still 5 years.
- Predictors of delay include older age, early age onset, absence of severity indicators (suicidal plans or attempts, depression disorder, panic disorders, and substance disorders) and not being married.
- Consequences of delayed care include disease progression, school failure, teenage childbearing, failure to establish stable employment, early marriage and marital violence, marital instability, and development of comorbid conditions.

Wang PS, Berglund PA, Olfson M, Kessler RC. Delays in initial treatment contact after first onset of a mental disorder. *Health Serv Res.* 2004 Apr; 39(2): 393-416.



The 2019 National Health Interview Survey and Mental Health

- Symptoms of anxiety or depression are very common.
 - Prevalent in 23% of total adults 18 years and above population.
 - 14% reported mild symptoms, 5% moderate, and 4% severe symptoms.
- Many (39%) adults with moderate to severe mental health conditions do not receive care.
 - 45% of those with moderate symptoms and 32% with severe symptoms did not receive care.
 - Reasons included cost (23%) and not knowing where to obtain care (25%).
 - Other postulated barriers include provider shortages and low rates of insurance acceptance.
- Moderate to severe symptoms are also prevalent in young adults (ages 18-26 years).
 - 10% of young adults reported moderate to severe symptoms of anxiety and/or depressive disorders.
 - 55% of these young adults reported not receiving mental health treatment in the past year.
- Although rates of moderate to severe anxiety and depression were similar between racial/ethnic groups, receipt of treatment varies considerably.
 - 36% of Whites did not receive treatment vs. 53% of Blacks. Hispanics rates were similar to Whites.
- Uninsured adults with moderate to severe symptoms of anxiety and/or depression were significantly more likely to not receive mental health care compared to their insured counterparts (62% vs 36%).
- Insured adults without a usual source of care (57%) were less likely to receive care than those with a usual source of care (34%).

Panchal N, Rae M, Sounders H, Cox C, Rudowitz R. How does use of mental health care vary by demographics and health insurance coverage. Health Reform, KFF Mar 24, 2022.



Consequences of Delayed Cancer Care

- Survival rates are very dependent on the stage of the cancer when diagnosed and treated.
 - Lung Cancer: (estimated 236,740 and 130,180 deaths in 2022)
 - Percent of Cases by Stage: Localized (19%), Regional (22%), Distant (55%), Unknown (4%)
 - 5-year Relative Survival: Localized (61%), Regional (34%), Distant (7%), Unknown (10%)
 - Colorectal Cancer: (estimated 151,030 cases and 53,580 deaths in 2022)
 - Percent of Cases by Stage: Localized (37%), Regional (36%), Distant (22%), Unknown (5%)
 - 5-year Relative Survival: Localized (91%), Regional (73%), Distant (15%), Unknown (41%)
 - Female Breast: (estimated 287,850 cases and 43,250 deaths in 2022)
 - Percent of Cases by Stage: Localized (64%), Regional (29%), Distant (6%), Unknown (2%)
 - 5-year Relative Survival: Localized (99%), Regional (89%), Distant (30%), Unknown (60%)

<https://seer.cancer.gov/statfacts/>



The Impact of COVID Pandemic Related Delays on Cancer is Still Being Determined

- Modeling for the impact on breast and colorectal cancer
 - Almost 10,000 excess deaths from these two diseases expected over the next decade due to delayed screening, diagnosis, and treatment. This is a conservative estimate based on a 1% increase in deaths.

Sharpless NE. COVID-19 and Cancer. Science, June 19, 2020

- The pandemic resulted in nearly 10 million missed cancer screenings from Jan 2020 to July 2020.
 - Decreased screening: Breast cancer (87%), Colorectal cancer (80%), Cervical Cancer (84%), and Prostate(36%)
 - Most of the missed cancer screening recovered by late 2020
 - From March to December 2020 the number of patients with inoperable or metastatic cancer increased by 11% as compared to same time period in 2019.
 - 64-87% of patients with cancer reported delays in planned surgery during height of COVID pandemic.

American Association for Cancer Research. AACR Report on the Impact of COVID-19 on Cancer Research and Patient Care. <https://www.AACR.org/COVIDReport>. Published February 9, 2022. Accessed 9/26/2022.

- Data from England during COVID demonstrated significant increased mortality with delayed Surgery.
 - “The greatest rates of deaths arise following even modest delays to surgery in aggressive cancers, with >30% reduction in survival at 6 months and >17% reduction in survival at 3 months for patients with stage 2 or 3 cancers of the bladder, lung, oesophagus, ovary, liver, pancreas and stomach.”

Sud, et al. Collateral damage: the impact on outcomes from cancer surgery of COVID-19 pandemic. Ann Oncology. Aug 2020 pages 1065-1074.



Social Determinants of Health

SDOH are conditions in the environments where people are born, live, learn, work, play, relate, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

1. **Economic resources:** Access to resources such as income and wealth over the life-course and transmitted across generations.
2. **Education access and quality:** Access to high quality educational opportunities.
3. **Employment and job characteristics:** Access to stable and fulfilling work with equitable pay.
4. **Health care access and quality:** Access to timely, high quality, and appropriate healthcare.
5. **Neighborhood physical environments:** Access to physical features of areas where individuals live, work, study, or play.
6. **Social and community context:** Exposure to area- or population-level social and community characteristics and relationships.

<https://www.thecommunityguide.org/content/advancing-health-equity>



Health Professional Shortage Areas in Texas

- HPSA are designated by the federal Health Resources and Service Administration
- Primary care HPSA
 - 224 of the 254 Texas counties are a HPSA
 - 11 additional counties are partial HPSA
- Mental Health HPSA
 - 248 of the 254 Texas counties are a HPSA
 - 3 additional counties are partial HPSA
- Dental HPSA
 - 140 of the 254 Texas counties are a HPSA
 - 3 additional counties are partial HPSA

<https://www.dshs.state.tx.us/tpco/HPSADesignation/>



Importance of Primary Care Physician Supply

- Per capita supply of primary care physicians decreased in the U.S. Between 2005 and 2015:
 - The total number of PCP increased during this time period from 196,014 to 204,419
 - However, the mean density of PCP relative to population decreased from 46.6 to 41.4 per 100,000
 - The loss was greater in rural areas
- Greater primary care and subspecialty physician supply is associated with lower mortality
 - Every 10 additional PCP per 100,000 was associated with:
 - 51.5 day increase in life expectancy
 - Reduced cardiovascular, cancer, and respiratory mortality by 0.9 to 1.4%
 - Every 10 additional specialist physicians per 100,000 was associated with:
 - 19.2 day increase in life expectancy
 - Increases in cardiologists and pulmonologist are associated with decreases cause specific mortality for cardiovascular disease and respiratory disease, respectively.
- The associate increase in life expectancy for additional PCP was more than 2.5 times that associated with a similar increase in non–primary care physicians.
- The association of PCP density and life expectancy was approximately two-thirds the magnitude of the association between tobacco and life expectancy.

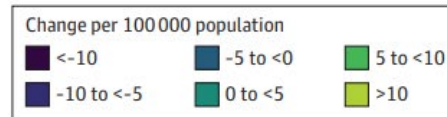
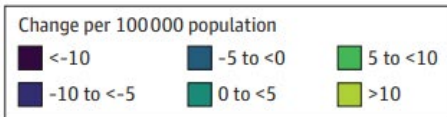
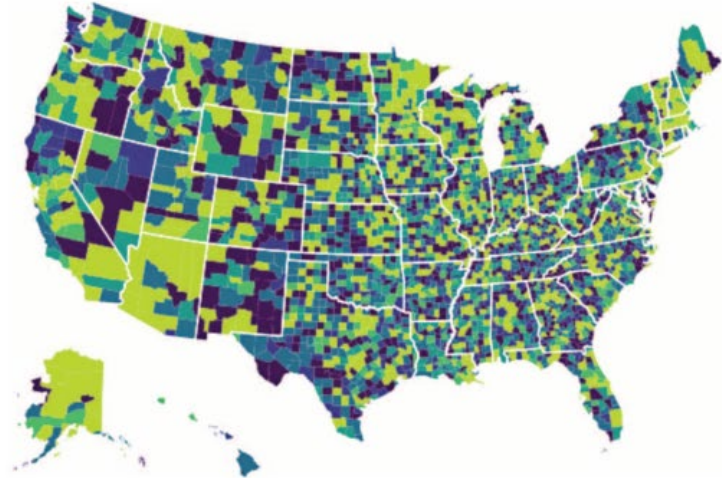
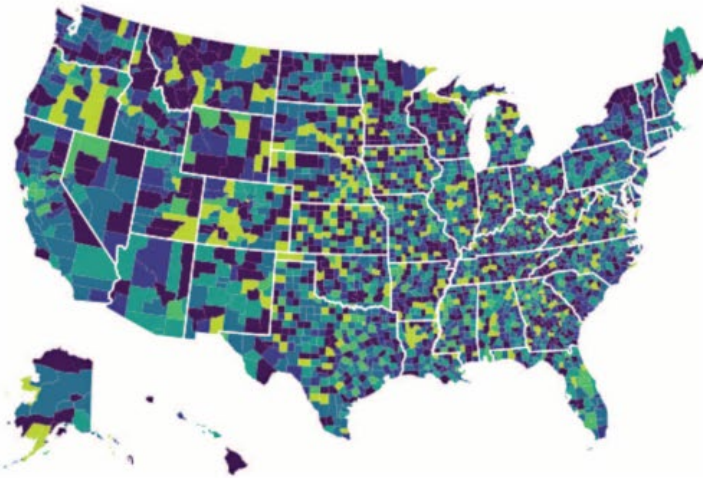
Basu S, Berkowitz SA, Phillips, RL, Bitton A, Landon BE, Phillips RS. Association of Primary Care Physician Supply with Population Mortality in the United States 2005-2015, JAMA Internal Med. 2019;179(4): 506-514.



Figure 1. Changes in Density of Primary Care and Specialist Physicians in 3142 US Counties, 2005-2015

A Primary care physician density

B Specialty physician density



Basu S, Berkowitz SA, Phillips, RL, Bitton A, Landon BE, Phillips RS. Association of Primary Care Physician Supply with Population Mortality in the United States 2005-2015, JAMA Internal Med. 2019;179(4): 506-514.

