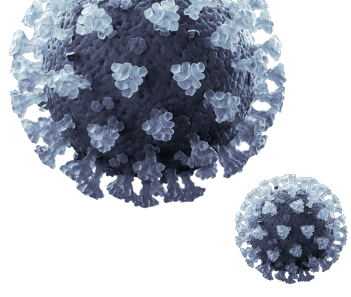
McKinsey & Company



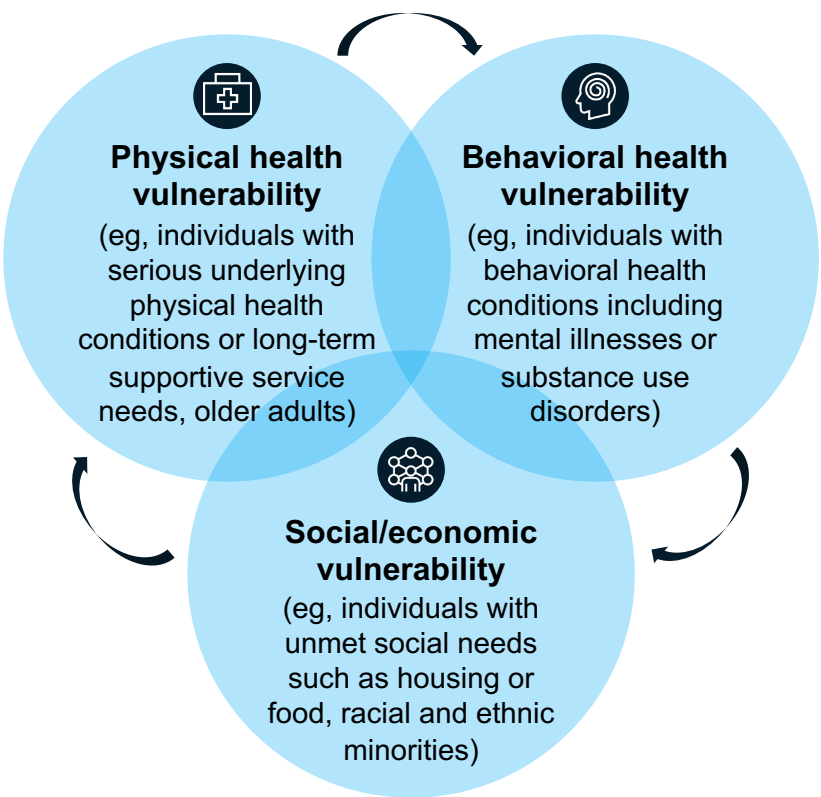
The implications of COVID-19 for vulnerable populations

Insights on physical health and behavioral health vulnerability

McKinsey analyzed a representative data sample of 15M+ insured individuals in the United States for this infographic. These data are static and do not describe the implications that COVID-19 will have for these populations. See methodology for additional details.

The COVID-19 pandemic and associated public health measures may have negative consequences for certain populations

There is an interplay between physical health, behavioral health, and social/economic risk factors



In the United States, an estimated…

1 in 3
has a chronic condition which increases risk of COVID-19 complications, or is over the age of 60[1,2]

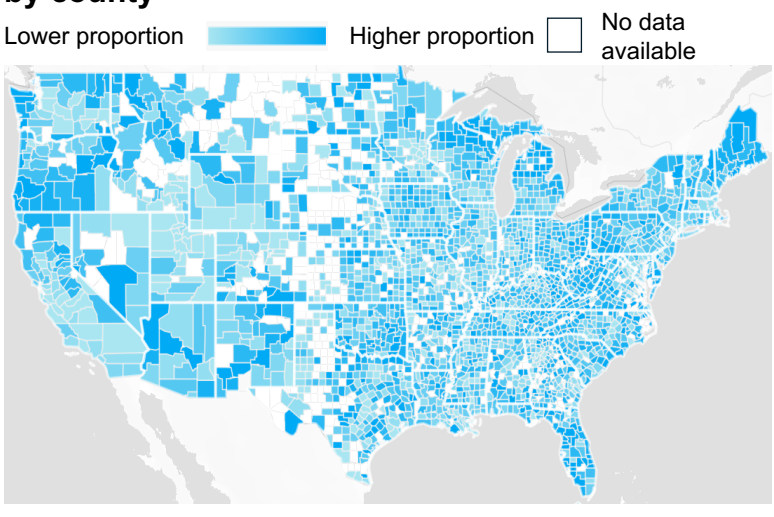
1 in 4
has a behavioral health condition[3]

1 in 7
lives in poverty[4]

Physical health vulnerability

Among populations experiencing physical health vulnerability, the county-level proportion of consumers with increased risk of developing severe COVID-19 symptoms[5] varies significantly across and within states

Map of proportion of consumers with increased risk of developing severe COVID-19 symptoms, by county



Variation in the county-level proportion of consumers with increased risk

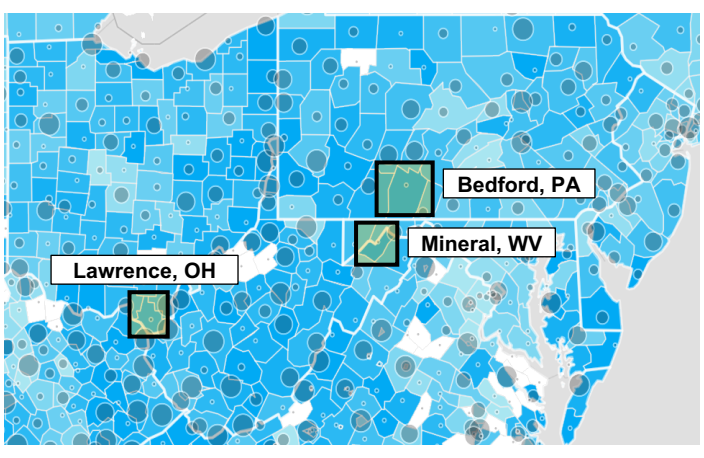
Up to 6x variation across the United States

Up to 4.5x variation within a state

Explore this insight through the dashboard here

There are areas with a high proportion of consumers with increased risk of developing severe COVID-19 symptoms and low supply of acute hospital beds for the population

Examples of counties with increased risk and low supply compared to national average



Compared to non-rural counties, **rural counties** have a higher proportion of consumers with increased risk of developing severe COVID-19 symptoms and fewer acute hospital beds per capita

↑ **15%** **higher** proportion of consumers with increased risk of developing severe COVID-19 symptoms[6]

↓ **10%** **fewer** acute hospital beds per 100k population[7]

Explore this insight through the dashboard here

Behavioral health vulnerability

Individuals with increased risk of developing severe COVID-19 symptoms have higher behavioral health (BH) vulnerability

Individuals with increased risk of developing severe COVID-19 symptoms are

↑ **1.9x**

more likely to have a **BH condition**[8]

The COVID-19 pandemic is likely to exacerbate BH needs

- Fear from the virus itself
- Collective grief
- Financial hardships
- Elevated levels of uncertainty and stress
- Prolonged physical distancing and associated social isolation

BH care capacity is already strained across many counties, particularly in psychiatry

~63% of all counties in the United States have a shortage of psychiatrists[9]

Explore this insight through the dashboard here

In addition, counties with a high[10] proportion of consumers with increased risk of developing severe COVID-19 symptoms have lower BH care capacity than counties with a low proportion

↓ **~37%** **fewer** mental health providers per 100k population in the county

↓ **~59%** **fewer** psychiatrists per 100k population in the county

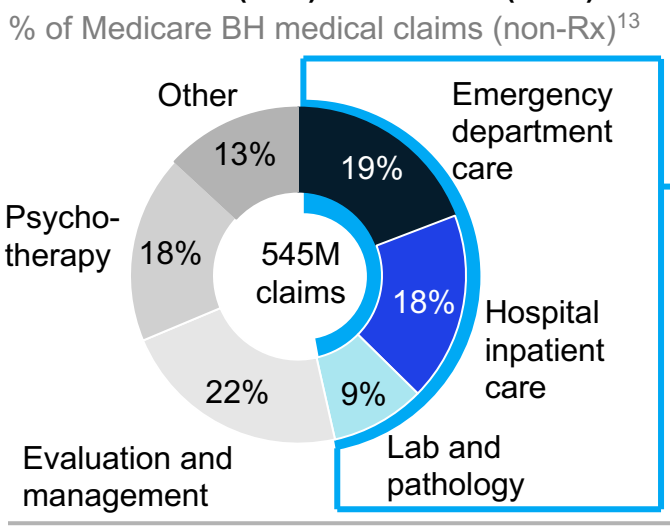
COVID-19 and its associated mitigation measures may further limit in-person BH care capacity

Examples of COVID-19-related mitigation measures that may reduce access to in-person treatment and services for BH

- Quarantines
- Stay-at-home mandates
- BH provider layoffs or furloughs[11]

Breakdown of BH services for Medicare fee-for-service (FFS) individuals (2017)[12]

% of Medicare BH medical claims (non-Rx)[13]



BH services[14] may continue to be disrupted by COVID-19-related mitigation measures

~46% of services may be **at risk of bed or physician supply gaps, or may be unable to shift to telehealth**

Remaining services are **rapidly transitioning to telehealth** but may face **technology challenges or regulatory constraints**

Methodology

McKinsey analyzed a representative data sample of 15M+ insured individuals in the United States with Medicaid, Medicare, or Commercial insurance for this infographic. The underlying data is aggregated across publicly and commercially available sources, including administrative claims provided by Decision Resources Group (DRG) and Centers for Medicare & Medicaid Services' (CMS) Limited Data Set. To supplement this clinical information, the data also draws from publicly and commercially available sources, including the Robert Wood Johnson Foundation, the National Provider Identifier Registry, Centers for Medicare & Medicaid Services' Nursing Home Compare database, The American Community Survey, and more.

Clinical data ("COVID-19-Relevant Direct Clinical Factors" and "Behavioral Health/Substance Use") are based on 2017 anonymized US payer claims data from 10M+ individuals. Claims are taken from the CMS Medicare Limited Data Set (LDS) (a 5% sample of all US Medicare Part A/B members) and DRG 835/837 data (a convenience sample of claims from five clearinghouses that includes 200M US members, but it does not necessarily include every claim for those members). Only Medicare Advantage, Medicaid, and Commercial members were sampled from DRG.

People who do not have insurance through Medicare, Medicaid, or Commercial plans are not included in the sample (ie, uninsured and TRICARE).

Member location is not provided in DRG. For members in this data set (Medicare Advantage, Medicaid, and Commercial), county location is interpolated based on their most frequent location of service during the year.

Enrollment data is not provided in DRG. All members in DRG (Medicare Advantage, Medicaid, and Commercial) were claimants in 2017. This means that people with Medicare Advantage, Medicaid, or Commercial plans who did not have a medical claim in 2017 are not captured in this data set.

People who may have COVID-19-relevant chronic conditions or behavioral health conditions but who cannot be identified as treated or diagnosed with this condition based on the 2017 data sets are not captured in the analysis.

Clinical information for counties with insufficient data (fewer than 100 members) in our claims sample were removed from the analysis (~14% of counties).

1. Chronic conditions include asthma, cancer, chronic liver disease, chronic kidney disease, COPD, coronary heart disease, diabetes, heart failure, hepatitis, HIV, hypertension, and stroke.
2. Based on a representative claims data sample of 15M+ individuals in the United States with Medicaid, Medicare, or Commercial insurance. People without insurance, with insurance through TRICARE, or with undiagnosed/untreated conditions are not captured in this analysis.
3. Based on a representative claims data sample of 15M+ individuals in the United States with Medicaid, Medicare, or Commercial insurance. People without insurance, with insurance through TRICARE, or with undiagnosed/untreated conditions are not captured in this analysis. Given that data sample only includes individuals with insurance who were treated or diagnosed for a mental illness in a hospital setting, estimates may understate population size for mental illness.
4. Sourced from American Community Survey, 5-year estimates (2018).
5. "Increased risk of developing severe COVID-19 symptoms" is based on age and/or prevalence of COVID-19 direct clinical factors. Factors were selected based on conditions indicated by the CDC as conditions that may put people at high risk of COVID-19 complications and from two clinical studies published in the *Lancet* and *NEJM* respectively on the profiles of patients with COVID-19. See "People who are at higher risk for severe illness," Centers for Disease Control and Prevention, last reviewed: May 14, 2020, cdc.gov; Huang C et al., "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China," *Lancet,* February 15, 2020, Volume 395, Number 10223, pp. 497–506; Guan W et al., "Clinical characteristics of Coronavirus disease 2019 in China," *NEJM*, 2020, Volume 382, pp. 1708–20.
6. National average of proportion of consumers with increased risk of developing severe COVID-19 symptoms for non-rural counties is 34%, compared to 39% for rural counties.
7. National average of acute hospital beds per 100k population for non-rural counties is 206 beds, compared to 186 beds for rural counties.
8. Based on a representative claims data sample of 15M+ individuals in the United States with Medicaid, Medicare, or Commercial insurance. Only includes diagnosed BH conditions.
9. Using the Vulnerable Populations Dashboard link, the threshold for shortage of psychiatrists is set at 5 per 100,000 individuals and coordinates with "Shortage designation scoring criteria," Bureau of Health Workforce, last reviewed May 2020, bhw.hrsa.gov.
10. "High" defined as top quintile (above 80th percentile) of proportion of consumers with increased risk of developing severe COVID-19 symptoms; compared to bottom quintile (below 20th percentile).
11. Sourced from "Behavioral health crisis in America getting worse as COVID-19 forces community behavioral health care organizations to cut back," National Council on Behavioral Health, April 16, 2020, thenationalcouncil.org.
12. Sourced from Medicare FFS Claims Limited Data Set (includes Medicare Parts A and B, excludes Parts C and D).
13. All claims with a primary diagnosis of a BH condition, as well as all BH-specific procedure codes. Figures may not sum to 100%, because of rounding.
14. Medicare BH medical claims used as a proxy to show potential disruption of COVID-19-related mitigation measures across BH services.