The Behavioral Health Index

A Study by the Center on Society and Health
Virginia Commonwealth University

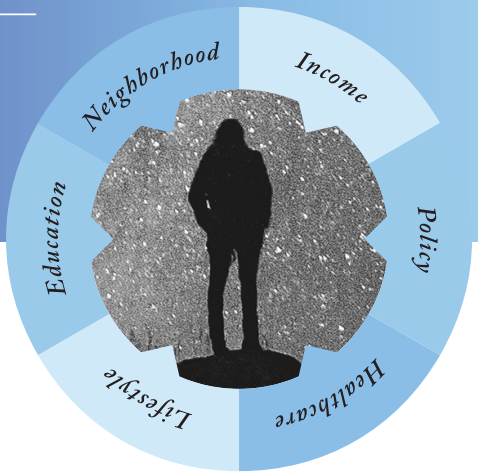

Figure 1.

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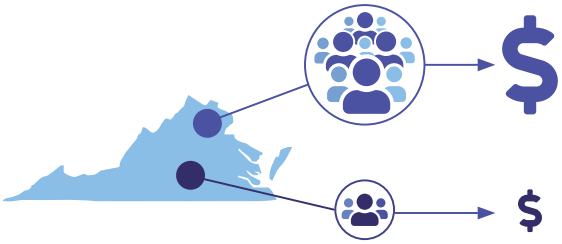
Health and wellbeing are influenced by social factors and our environment — our education, income, living conditions, and life history — and this applies not only for physical health but also emotional and psychological wellbeing. While we know that the risk of mental illness is shaped by family history, genetics, and unidentified factors that scientists have yet to discover, we also know that the risk of chronic stress, anxiety, depression, and substance abuse are affected by exposure to trauma, unemployment, poverty, unstable housing, and other social determinants of health (Figure 1).

Such local factors contribute to geographic variations in behavioral health needs across Virginia — and in the demands placed on local providers and service agencies. The prevalence rate — the percentage of a population with mental illnesses or substance abuse disorders — is often higher in socioeconomically distressed areas. Unfortunately, reliable data on the true prevalence of mental health conditions are unavailable in Virginia and much of the nation. A tool for estimating prevalence would be a useful alternative, not only for clinicians but also for policymakers responsible for funding the 40 Community Services Boards (CSBs) that provide behavioral health services across the Commonwealth. For some years, CSB funding has been dictated by historical allocations, but other states have derived more sophisticated methods that consider other important factors.



In 2019, the Virginia Department of Behavioral Health and Developmental Services funded the Center on Society and Health at Virginia Commonwealth University to produce an index that could estimate the prevalence of mental health needs in the local populations served by the 40 CSB districts. The researchers developed the Behavioral Health Index (BHI), which they derived by applying

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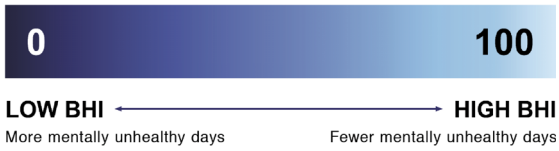
advanced statistical methods (multiple linear regression equations) that use local data to predict the number of mentally unhealthy days reported by the population in the past month.[1] Five local measures were used to capture the socioeconomic conditions of local communities, as well as health care access and quality. The BHI was scored on a scale of 0 to 100; high scores reflect populations with fewer mentally unhealthy days, low scores indicate places with more mentally unhealthy days. Further details on the methodology are available in the Technical Report.

BHI scored on scale of 0-100



The BHI results are shown here (Figure 2) and reported in detail in the Technical Report. In general, CSB districts serving suburban areas of Hampton Roads, metropolitan Richmond, and Northern Virginia had higher BHI values, whereas those serving rural southwestern districts or urban centers (e.g., Richmond City, Norfolk City) had lower BHI values.

Although the BHI can serve as a rough approximation of how mental health needs vary across the Commonwealth, its limitations should be considered. First, although the regression model performed well (R^2 of 0.49), its estimate of the number of mentally unhealthy days is no substitute for complete prevalence data. Second, no single measure of mental health can predict the prevalence of specific conditions, such as serious mental illness, drug addiction, developmental disorders, or other needs addressed by CSBs. These conditions are influenced by factors beyond the five variables used in this study, and often change over time. Third, prevalence is only one of many factors that policymakers should consider in allocating resources to behavioral health providers and agencies. They must consider other factors, such as existing local infrastructure, other revenue sources, local access to mental health professionals, and income levels in the community. In the short term, areas with low BHI scores deserve special attention in allocating resources, but more sophisticated models will ultimately be needed to fully assess levels of need.

1. In 2017, population-representative samples participating in the Behavioral Risk Factor Surveillance System (BRFSS) survey were asked, *"Now thinking about your mental health, which includes stress, depression, and problems with emotions, how many days during the past 30 days was your mental health not good?"*

FIGURE 2 | ***Behavioral Health Index (BHI), by CSB***