NIH
HEAL
INITIATIVE

Virginia's Office of Behavioral Health Wellness Approach to Social Determinants of Health

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NIH HEAL Initiative and Helping to End Addiction Long-term are service marks of the U.S. Department of Health and Human Services.

Context of Virginia Disparities Geographically

VIRGINIA

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SHENANDOAH VALLEY

NORTHERN VIRGINIA

VIRGINIA MOUNTAINS

CENTRAL VIRGINIA

CHESAPEAKE BAY

COASTAL - EASTERN SHORE

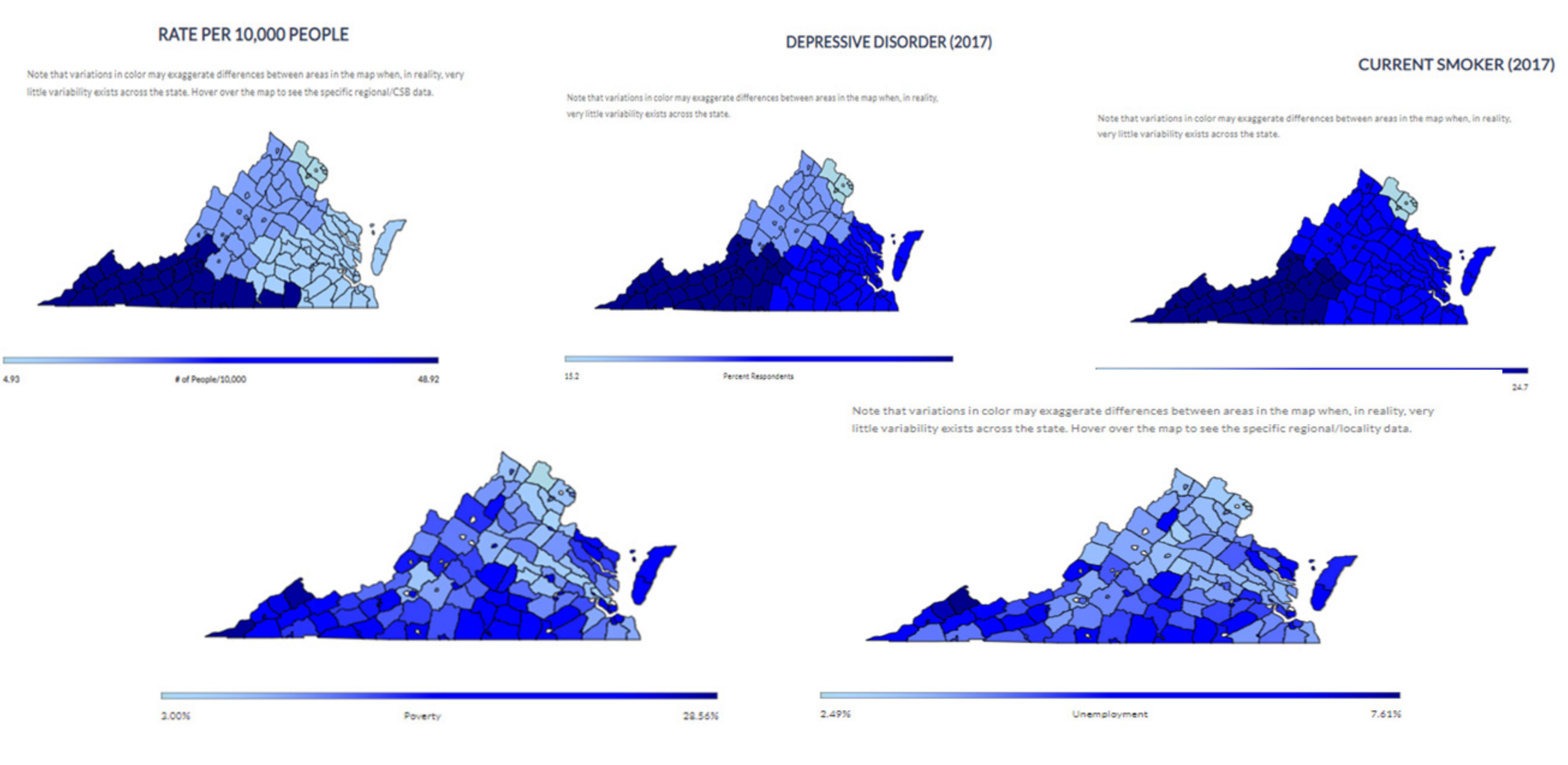
HEART OF APPALACHIA

BLUE RIDGE HIGHLANDS

SOUTHERN VIRGINIA

COASTAL - HAMPTON ROADS

Factors Influencing Policy and Practice Change - VCU Behavioral Health Index Study



Factors Influencing Policy and Practice Change - VCU Behavioral Health Index Study

The Behavioral Health Index

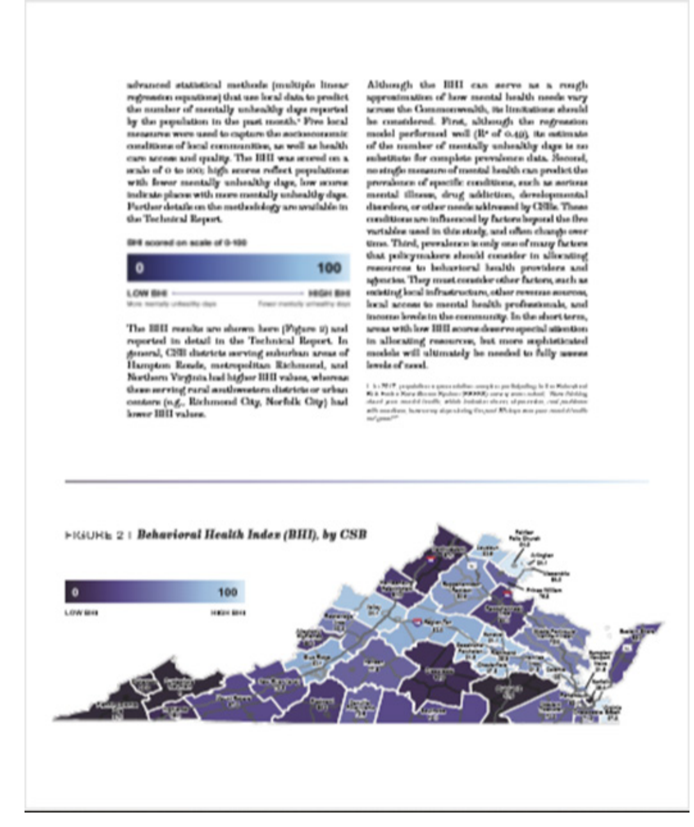
A Study by the Center on Society and Health Virginia Commonwealth University

COMMISSIONED BY THE VIRGINIA DEPARTMENT OF BEHAVIORAL HEALTH AND DEVELOPMENTAL SERVICES

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



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.

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.

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

Virginia State Epidemiological Outcomes Workgroup (SEOW)

Health Disparities: *A Summary from Virginia's Substance Use Prevention Efforts*

What are Health Disparities?

Health Disparity Defined

Health disparities negatively affect the health of people linked to social, economic, and environmental disadvantages.

Factors that Influence Disparities

Common Social Determinants of Health

- Health & Healthcare
  - Access to healthcare
  - Health literacy
- Neighborhood & Built Environment
  - Access to healthy foods
  - Crime & violence
  - Environmental conditions
- Social & Community Context
  - Incarceration
  - Discrimination
- Economic Stability
  - Employment
  - Housing instability
  - Poverty
- Education
  - Early childhood education & development
  - Language & literacy

Example Impact of a Social Determinant of Health

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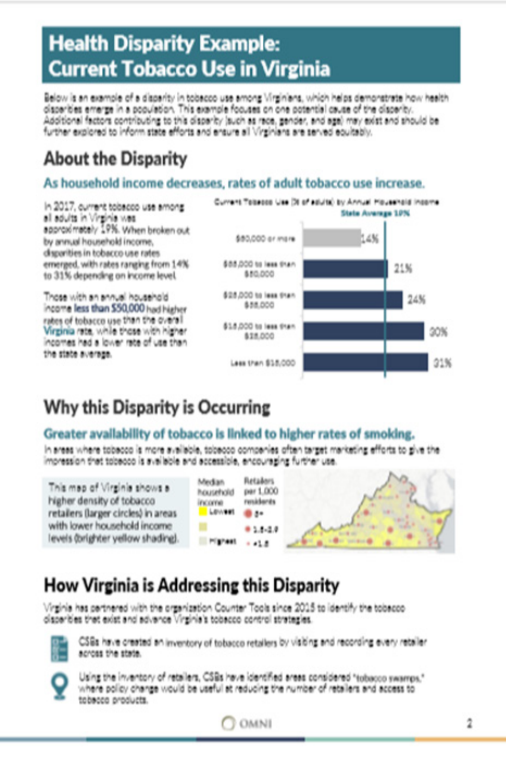


Health Disparity Example: Current Tobacco Use in Virginia

About the Disparity

As household income decreases, rates of adult tobacco use increase.

State Average 19%

Annual Household Income	Current Tobacco Use
$50,000 or more	14%
$35,000 to less than $50,000	21%
$25,000 to less than $35,000	24%
$15,000 to less than $25,000	30%
Less than $15,000	31%

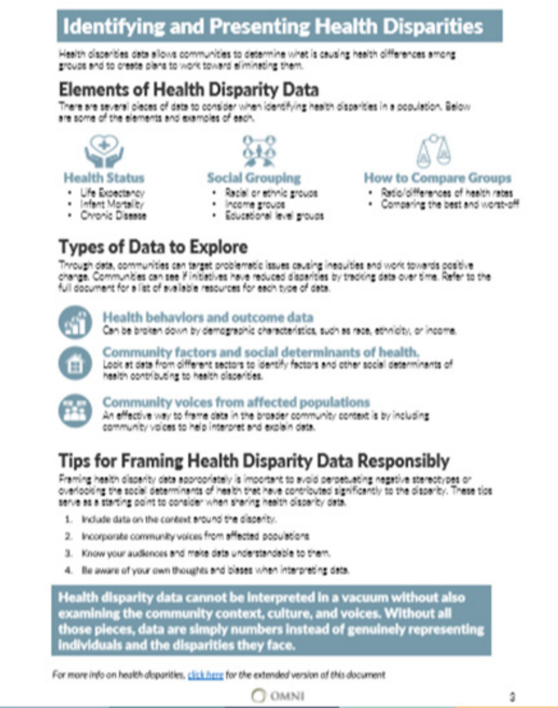
Why this Disparity is Occurring

Greater availability of tobacco is linked to higher rates of smoking.

This map of Virginia shows a higher density of tobacco retailers (larger circles) in areas with lower household income levels (brighter yellow shading).

How Virginia is Addressing this Disparity

OMNI 2



Identifying and Presenting Health Disparities

Elements of Health Disparity Data

- Health Status
  - Life Expectancy
  - Infant Mortality
  - Chronic Disease
- Social Grouping
  - Racial or ethnic groups
  - Income groups
  - Educational level groups
- How to Compare Groups
  - Ratio/differences of health rates
  - Comparing the best and worst-off

Types of Data to Explore

- Health behaviors and outcome data
- Community factors and social determinants of health
- Community voices from affected populations

Tips for Framing Health Disparity Data Responsibly

Health disparity data cannot be interpreted in a vacuum without also examining the community context, culture, and voices. Without all those pieces, data are simply numbers instead of genuinely representing individuals and the disparities they face.

OMNI 3

Intervention & Practice

Theoretical Framework and Strategy

Pair of Aces- Adverse Childhood Experiences & Social Determinants of Health-

The Pair of ACEs

Adverse Childhood Experiences

Maternal Depression

Physical & Emotional Neglect

Emotional & Sexual Abuse

Divorce

Mental Illness

Substance Abuse

Incarceration

Domestic Violence

Homelessness

Adverse Community Environments

Poverty

Violence

Discrimination

Poor Housing Quality & Affordability

Community Disruption

Lack of Opportunity, Economic Mobility & Social Capital

Ellis, W., Dietz, W. (2017) A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience (BCR) Model. Academic Pediatrics. 17 (2017) pp. S86-S93. DOI information: 10.1016/j.acap.2016.12.011

Linkages to Outcomes

Diseases of Disconnection and Despair

- OBESITY • HOMICIDES • CAR CRASHES • PTSD
- ANXIETY • DEPRESSION • DEMENTIA • STDS
- SUICIDE • HIV • HEPTITIS C • CIRRHOSIS
- UNWANTED PREGNANCY • ADDICTION (E.G. GAMBLING, SEX, FOOD) • SUBSTANCE USE DISORDER

Adverse Childhood Experiences

- EXPERIENCING NEGLECT OR PHYSICAL OR SEXUAL ABUSE
- WITNESSING VIOLENCE IN THE HOME • HOUSEHOLD EXPOSURE TO MENTAL HEALTH PROBLEMS, SUBSTANCE USE, DIVORCE, INCARCERATION

Adverse Societal Conditions

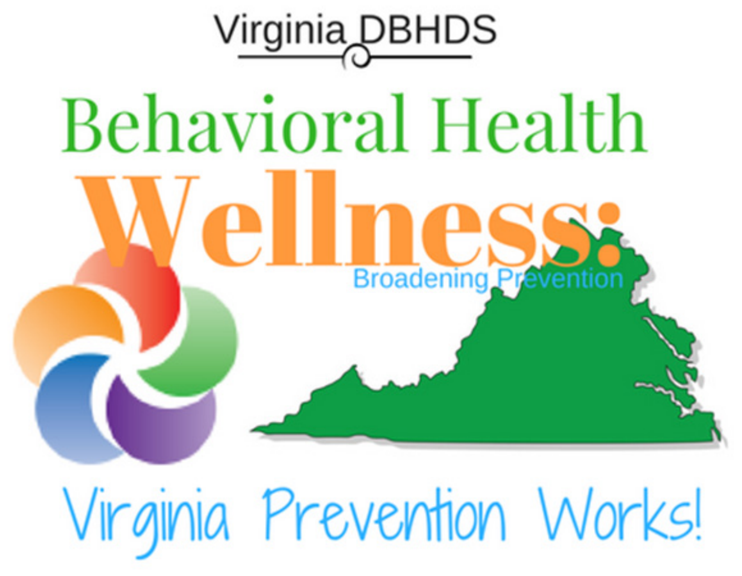
- INEFFECTIVE SCHOOLS • INCOME INEQUALITY
- CRIME • POVERTY • SOCIAL EXCLUSION
- RACISM • SEXISM • UNEMPLOYMENT
- HOMOPHOBIA • FOOD INSECURITY
- HOPELESSNESS • LIMITED HEALTH CARE ACCESS
- HOUSING INSECURITY • ENVIRONMENTAL HAZARDS

Conclusions

Data and Evidence Based Practices

Gap: Data Linkages and EBPs for Change

- Easily accessible data for and that links adverse societal conditions to adverse childhood experiences to diseases of despair
- Data at the community/neighborhood level to identify the clusters of poverty within affluent counties
- “People” magazine style research and evaluation that offers evidence based environmental strategies to include policy and implementation practices to address SDOH



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