

## Introduction

Integrated behavioral health or primary care behavioral health, is “care that results from a practice team of primary care and behavioral health clinicians, working together with patients and families, using a systematic and cost-effective approach to provide patient-centered care for a defined population. This care may address mental health and substance abuse [sic] conditions, health behaviors (including their contribution to chronic medical illnesses), life stressors and crises, stress-related physical symptoms, and ineffective patterns of health care utilization.”<sup>1</sup>

HealthLandscape is developing an Integrated Behavioral Health data visualization and mapping tool to compare behavioral health need and behavioral health assets. This visualization includes data and measures from a variety of sources such as serious mental illness, substance use disorder, and mental health services utilization from the National Survey of Drug Use and Health (NSDUH),<sup>2</sup> frequent mental health distress and depression estimates from the Centers for Disease Control and Prevention (CDC) PLACES dataset,<sup>3</sup> mental health provider and primary care physician rates from the National Plan and Provider Enumeration System (NPPES),<sup>4</sup> and integrative primary care facility rates from the Substance Abuse and Mental Health Services Administration (SAMHSA).<sup>5</sup> Table 1 lists the behavioral health measures by source and includes summary statistics for all substate regions in the U.S.

Targeting geographic areas for increasing access to integrative behavioral health care requires measures related to both behavioral health need and behavioral health care capacity. Several national behavioral health data sources exist that include measures for both need and capacity (i.e., NSDUH), though few have data at a geography appropriate for exploring capacity relative to need and developing interventions. This brief discusses the rationale for the measures and geographies (NSDUH substate regions) included in the HL Integrative Behavioral Health (IBH) data visualization.

*Table 1: Measures by Data Sources*

	Mean	SD	Median	Min	Max
<b>NSDUH*</b>					
<b>Mental Health Measures</b>					
% Any Mental Illness (AMI) in the Past Year (>=18)	19.4	2.2	19.2	13.8	27.4
% Had >= 1 Major Depressive Episode (MDE) in Past Year (>=18)	7.3	0.9	7.3	4.9	10.2
% Serious Mental Illness (SMI) in the Past Year (>=18)	4.7	0.7	4.7	3.1	7.0
% Serious Thoughts of Suicide in the Past Year (>=18)	4.5	0.6	4.4	3.0	7.1
% Received Mental Health Services in the Past Year (>=18)	15.7	2.8	15.7	8.2	23.5
<b>Substance Abuse Measures</b>					
% Alcohol Use Disorder in the Past Year	5.7	1.2	5.5	3.5	11.9
% Binge Alcohol Use in the Past Month	24.9	4.1	24.7	11.5	45.7
% Cigarette Use in the Past Month	19.6	4.5	19.7	8.8	33.7
% Cocaine Use in the Past Year	2.0	0.8	1.8	0.9	5.9
% Heroin Use in the Past Year	0.4	0.2	0.3	0.1	1.2

Table 1, cont.: Measures by Data Sources

	Mean	SD	Median	Min	Max
% Illicit Drug Use Other Than Marijuana in the Past Month	3.4	0.7	3.2	2.1	7.2
% Illicit Drug Use in the Past Month	11.5	3.8	10.6	5.0	29.6
% Methamphetamine Use in the Past Year	0.7	0.3	0.6	0.1	1.7
% Pain Reliever Misuse in the Past Year	4.1	0.5	4.1	2.7	5.8
% Substance Use Disorder in the Past Year	7.7	1.4	7.4	4.9	14.5
% Illicit Drug Use Disorder in the Past Year	2.9	0.5	2.8	2.0	5.3
% Pain Reliever Use Disorder in the Past Year	0.7	0.1	0.7	0.4	1.1
% Needing But Not Receiving Treatment at Specialty Facility for Alcohol Use in the Past Year	5.4	1.1	5.3	3.4	11.1
% Needing But Not Receiving Treatment at Specialty Facility for Illicit Drug Use in the Past Year	2.6	0.5	2.5	1.7	5.4
% Needing But Not Receiving Treatment at Specialty Facility for Substance Use in the Past Year	7.0	1.3	6.8	4.6	14.0
<b>CDC PLACES</b>					
% Frequent Mental Health Distress	12.9	1.7	12.8	9.2	19.6
% Depression	20.5	3.2	20.6	9.6	26.2
<b>NPPES</b>					
Primary Care Provider Rate per 100,000	337	349	242	53.2	4,349
Mental Health Provider Rate per 100,000	1,219	1,268	771	70.9	10,998
<b>SAMHSA</b>					
Integrative Primary Care Facility per 100,000	2.3	2.1	1.7	0.0	27.6

\*ages >= 12 unless noted

## The Problem

Several sources provide information about population needs related to mental health and substance use. The most widely cited sources are based on surveys that have data reported at the national and state levels but lack the sample sizes appropriate for exploring at substate geographies that could allow for targeted interventions. The SAMHSA has produced substate estimates for various measures related to mental health and substance use need using NSDUH<sup>6</sup> while the CDC PLACES dataset (using data from the Behavioral Risk Factor Surveillance System [BRFSS]) has been widely used as a source of mental health prevalence at substate geographies.<sup>3</sup>

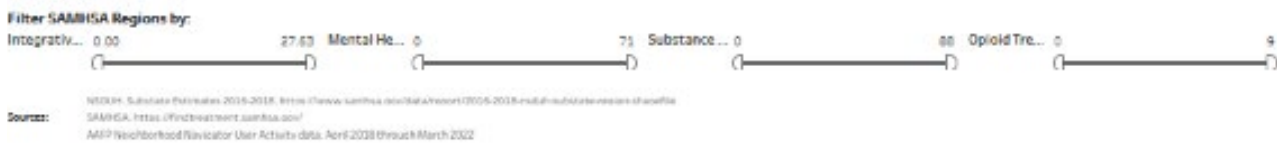
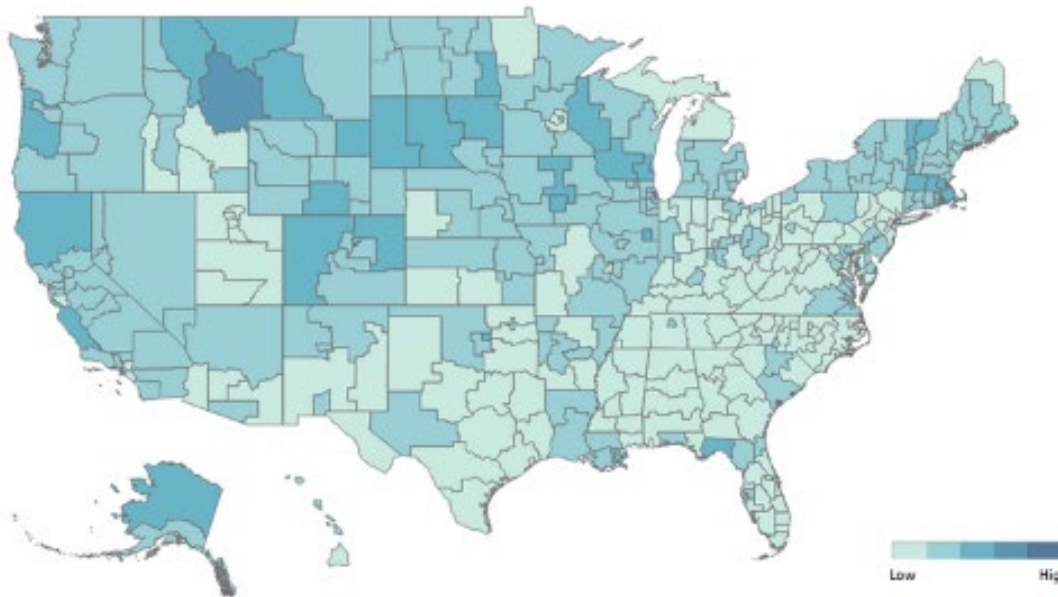
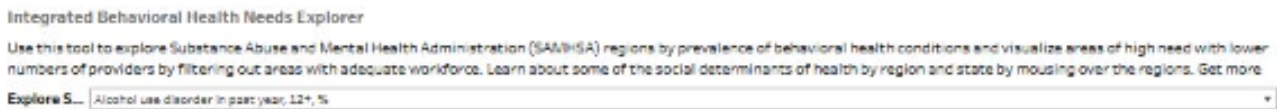
While the behavioral health need measures are based on sample surveys, integrative behavioral health care capacity measures area based on the presence of facilities in specific locations. The SAMHSA behavioral health treatment locator database includes the location of behavioral health facilities and whether they are designated as an integrative primary care facility.<sup>5</sup> Also, the NPPES has data on the location of providers by specialty, allowing users to identify the specific location of mental health, substance use treatment, and primary care providers.<sup>4</sup> However, these sources do not provide any data on the provision of integrative behavioral health care services.

Thus, the problem is integrating the various behavioral health need and capacity measures at geographies that allow for targeted interventions.

## Our Innovation

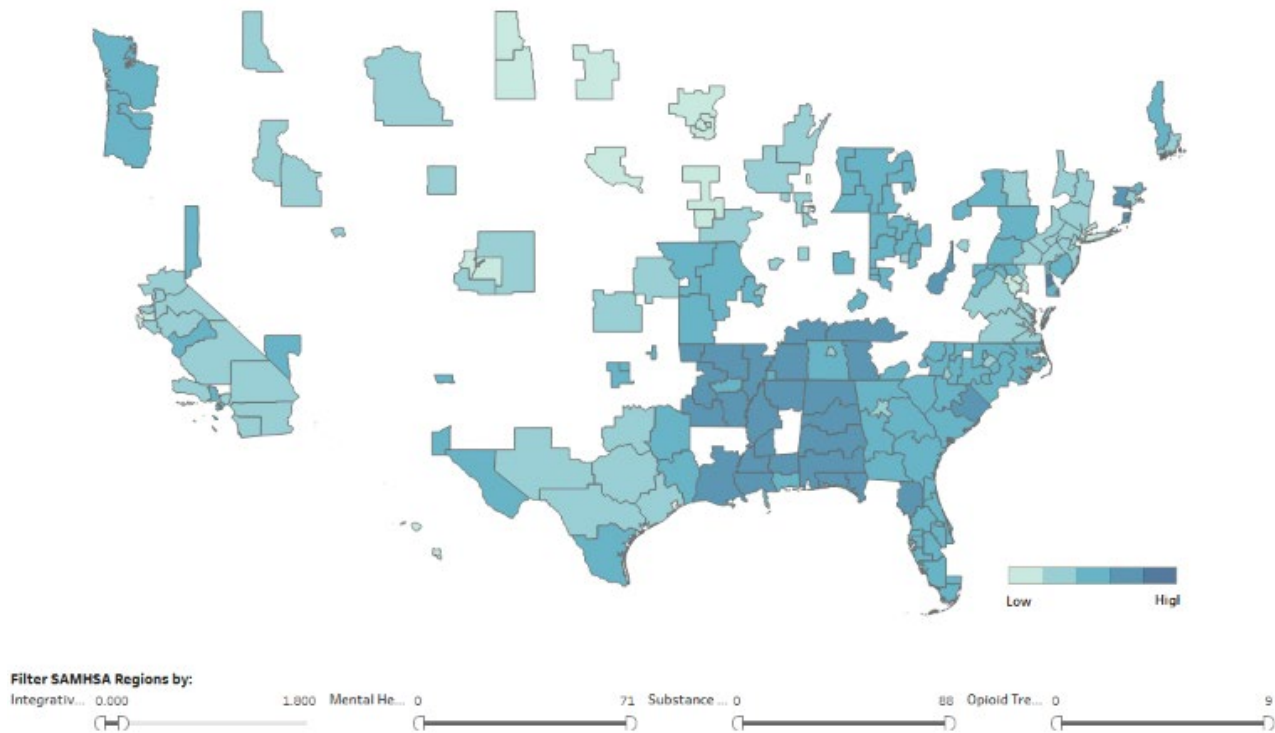
We created the Integrated Behavioral Health (IBH) Needs Explorer, which includes several measures focused on behavioral health need and health care capacity at the NSDUH substate region level (see Figure 1). This mapping tool integrates data from the NSDUH, BRFSS, NPPES, and the SAMHSA behavioral health facility locator to allow users to explore behavioral health need and capacity simultaneously at the NSDUH substate region level. Further, we include the location of IBH facilities, which are co-located primary care and behavioral health providers<sup>7</sup> that can be treated as a proxy measure for IBH capacity. Last, we provide social determinants of health data for the region and the state.<sup>8</sup> Demographic data are provided for each region<sup>9</sup> and person-level social risk data are presented aggregated to the state level based on requests to find services such as food or housing.<sup>10</sup>

Figure 1: Integrated Behavioral Health Needs Explorer



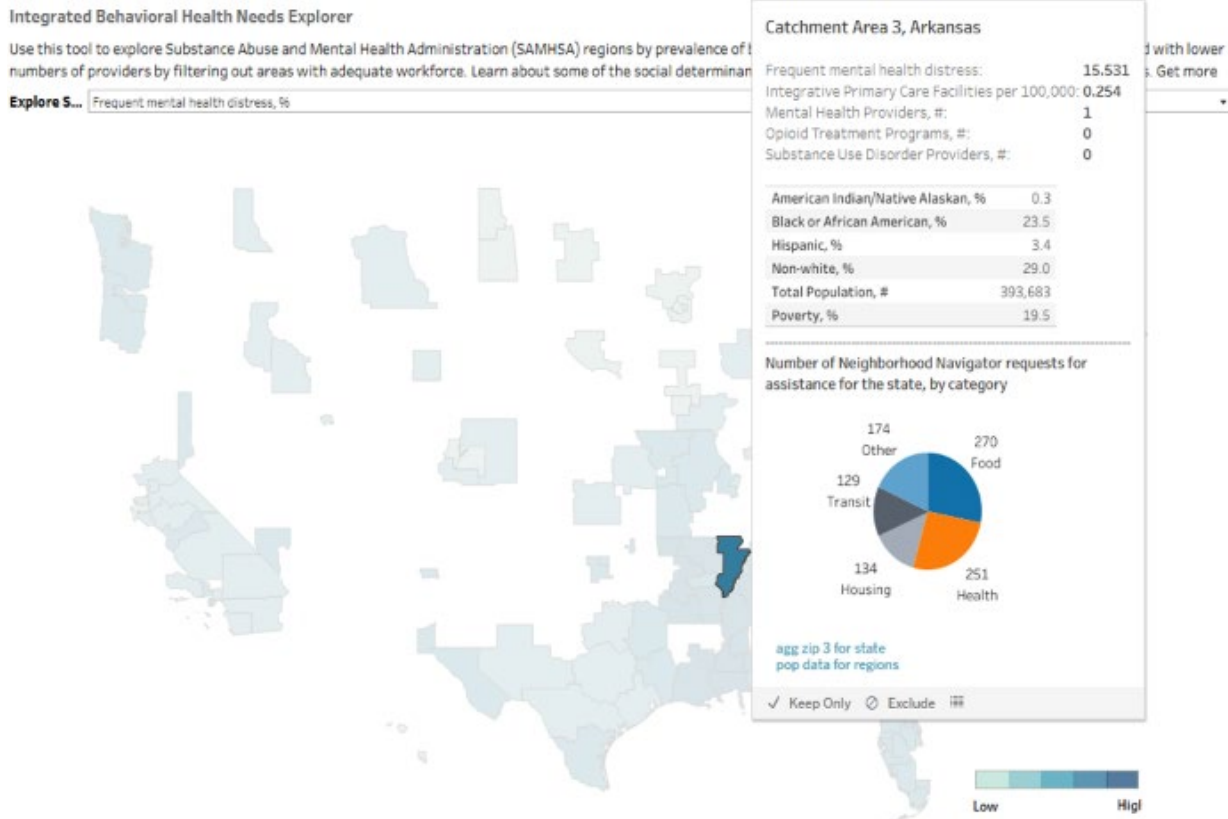
For example, we can focus on mental health need measures relative to current IBH service capacity. Figure 2 displays the geographic patterns of high rates of frequent mental distress, filtered based on SAMHSA integrative primary care facilities to get a sense of current IBH capacity in these high-need areas. This map displays high-need areas with low IBH capacity concentrated in the southern United States and highlights potential gaps in care.

Figure 2: Frequent Mental Health Distress and IBH Capacity



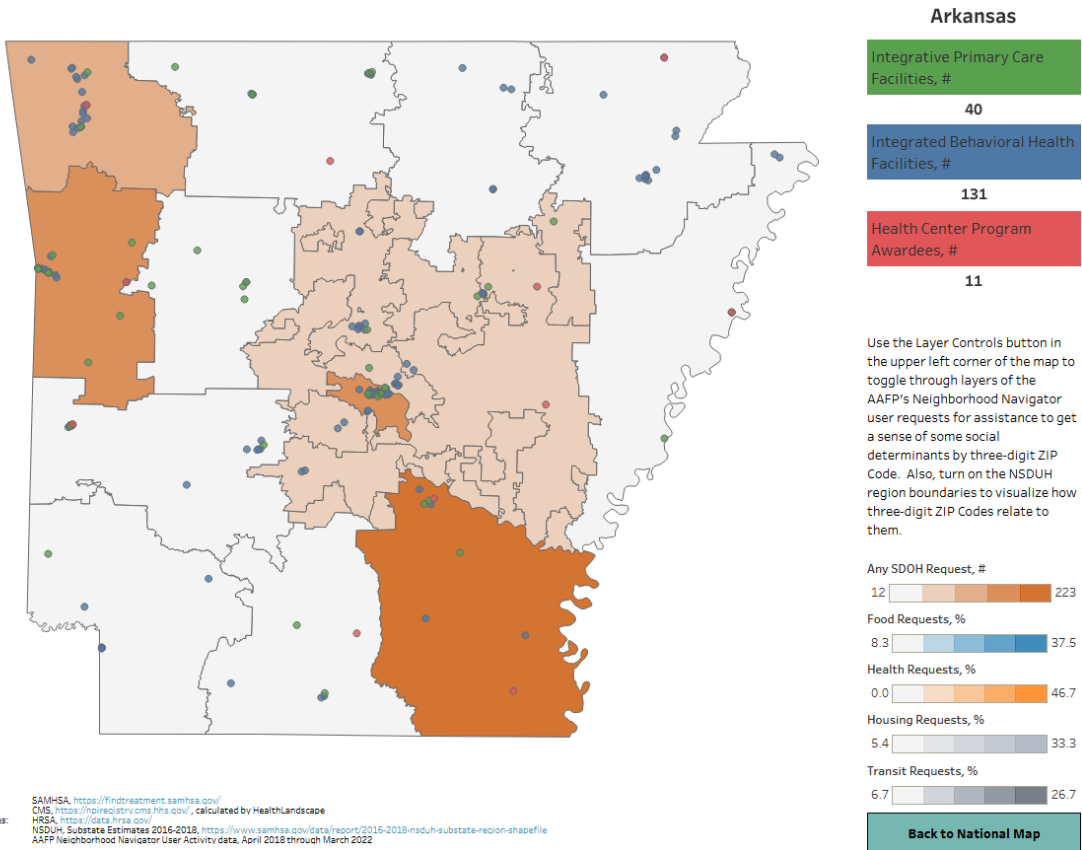
The above example provides insights into current IBH capacity in high-need areas. Figure 3 shows how we can drill down to specific subregions to examine IBH capacity while also exploring other social determinants of health data. Where available, users can see the IBH score to indicate how integrated behavioral health care is with primary care. These maps help to identify areas that may have IBH capacity or the potential to expand IBH capacity.

**Figure 3: IBH Capacity and Characteristics of Subregions**



In Figure 4, we can see more detail for the state when we click on any NSDUH substate region. Rather than seeing data for those regions, we see data at the three-digit ZIP Code level for user requests for social assistance through the American Academy of Family Physicians’ Neighborhood Navigator. This tool is a publicly available resource used primarily by family physicians and their teams to identify social service agencies to support patients in various domains. The data presented in the tool are for the May 2018 - March 2022 time period. Available map layers include total number of requests or the percentage of requests for food resources, health resources, housing resources or transportation resources. Additionally, we see information about the facilities that may be positioned to address behavioral health needs via IBH models.

Figure 4: State View



## Limitations

There are some limitations to the IBH mapping tool. The first limitation is related to the need measures. Both the NSDUH and CDC PLACES data are estimates – heavily weighted from data coming directly from states, thus cross-state comparisons may not be useful or appropriate, particularly when looking at two regions in bordering states. Second, the capacity measures lack details on facilities and practices doing IBH. The SAMHSA facilities are designated as integrative primary care facilities and the IBH practices have co-located behavioral health and primary care providers, but data for exploring the actual utilization of integrative behavioral health services are not available for these facilities and providers.

## Next Steps

We plan to continue to refine and improve the mapping tool with new need and capacity measures based on data availability and user feedback.

### Authors and Acknowledgements

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