Notes for Spatial Metrics for Primary Care Access v1

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I. Objective

To map metrics that relate to the allocation of primary care resources.

II. Data

This dashboard incorporates multiple data sources.

1. The 2019 Rural Health Services Taskforce defined primary care to include FQHCs, PCPs, PCPs at hospitals, rural health clinics, VA clinics and the White River VA Hospital, PPNNE locations, and free clinics. The Vermont Department of Health (VDH) furnished a spreadsheet of primary care practice locations and characteristics on July 8, 2020. The data—including broadband access—were compiled by VDH and the Department of Public Service in May 2020.

2. Primary care addresses were geocoded in ArcGIS Online. The latitude-longitude coordinates were used to map "Broadband Access by Primary Care Practice." The latitude-longitude coordinates were also used to calculate drive time catchment areas in ArcGIS Online.

3. "Broadband Access by Town" data come from the Vermont Department of Public Service. It was collected in September 2019. The data were joined with a shapefile of Vermont town boundaries from the Vermont Open Geodata Portal to create the map.

4. The "Select Socioeconomic Metrics" page draws metrics from the CDC Social Vulnerability Index (SVI). The metrics were selected for their ability to predict health and health access outcomes in the peer-reviewed literature, as well as their ability to concisely represent the spatial patterns of other variables (known as "dimension reduction"). Additional metrics will be added in future versions.

   a. SVI metrics were collected at Census tract resolution. They are American Community Survey 5-Year Population Estimates (2014-2018) collected by the US Census Bureau. The data were joined to a shapefile of Census tracts for the map.

   b. Census tract data were converted to zip codes, and then the zip codes were converted to Vermont hospital service areas (HSAs) using a crosswalk in the VHCURES database. The HSA data were joined to a shapefile of Vermont from the Vermont Open Geodata Portal to create the HSA map.

   c. Please note that the HSA statistics are approximations, as Census tracts, zip code areas, and HSAs do not perfectly align.

This is a working document, and it will continue to be updated at the request of the Board.