Comparing Service Area Geographies

The Wisconsin Health Service Areas were developed by Wisconsin AHEC for health workforce data analysis. The Health Service Areas also provide a useful geography for monitoring local program outcomes related to health workforce development and population health status. Each Wisconsin HSA consists of a hub city with healthcare services and surrounding municipalities. With some exceptions (in northern Wisconsin and border communities) each service area has a population of at least 10,000, with most of the service area population within 30 minutes travel time of the hub city. While most hubs include a hospital, inclusion of a municipality in a service area is determined by travel time to the hub, not actual hospital or clinic utilization data. A zip code version of the Wisconsin HSAs has also been developed. For more information on the development of the service area geography, see Introduction to Wisconsin Health Service Areas at www.ahec.wisc.edu/workforce. The website also has maps and data related to the HSAs available for download.

Service Area Urban and Rural Types

The service areas are identified by type using data on urban density from the 2010 U.S. Census. The Census defines an Urbanized Area (UA) as a densely developed territory of at least 50,000 people or more, and an Urban Cluster (UC) as a densely developed territory of at least 2,500 but less than 50,000 people. The UA and UC population data was used to classify Wisconsin Health Service Areas as “Metro” (> 50% of the population in UAs), “Urban” (<50% UA but >60% in UAs or UCs), “Mixed” (40% to 60% living in UAs and UCs), and “Rural” ( <40% UA and UC population). Areas that include a large academic/research center with high numbers of health professionals engaged in administration, research and teaching are identified for separate analysis. Metro: Green Bay, De Pere-Hobart, Sheboygan, Appleton, Kaukauna, Neenah, Oshkosh, Fond du Lac, Milwaukee* (entire region), Waunakee, Oconomowoc, Delafield, Racine, Kenosha, Madison*, Cottage Grove, De Forest, Sun Prairie, Verona, Waunakee, Stoughton, Janesville, Beloit, La Crosse, Onalaska, Eau Claire, Chippewa Falls, Superior, Wausau, Weston

Other Urban: Two Rivers, Manitowoc, Waupu, Beaver Dam, Watertown, Burlington, Elkhorn, Lake Geneva, Oregon, Mt. Horeb, Baraboo, Edgerton, Fort Atkinson, River Falls, Prescott, Stevens Point

Mixed: Oconto, Marinette, Cross Plains, Mt. Horeb, Sauk City, Reedsburg, Columbus, Monroe, Sparta, Prairie du Chien, Barron, Rice Lake, Menomonie, Hudson, Rhinelander, Merrill, Wisconsin Rapids, Marshfield*

Rural: All other service areas (*denotes an academic/research hub).
Comparing Geographies

Counties
While the service area geography is based on municipalities (minor civil divisions), the service areas do not conform to county boundaries. This county overlay map provides a comparison.

Counties are commonly used for health care data reporting and are the basis for our public health system. Important aspects of the insurance marketplace are also county-based. However, the closest health care provider for many individuals may be in the next county. Also, it is important to note that using counties as the geography for reporting on health status may obscure significant within-county disparities and variations in important aspects of service delivery.

Zipcodes
ZCTAs (ZIP Code Tabulation Areas) are aggregates of census blocks used by the Census Bureau to approximate ZIP Code areas. ZCTAs do not exactly conform to zip code area boundaries, which may change over time according to the needs of the US Postal Service. ZCTAs also do not include single-point organizational and commercial zip codes as separate ZCTAs.

In order to facilitate the use of datasets based on zip codes or ZCTAs, a service area geography using ZCTAs was developed to match boundaries and population as closely as possible to the version based on municipalities. This map superimposes the two Health Service Area geometries for comparison.

All incorporated areas and physician locations are in the same service area in both the municipality and ZCTA-based versions of the Wisconsin Health Service Areas. Service area hub cities are the same in both versions. The variation in population total between municipality and ZCTA versions of the service areas is less than 5% in 94 of the service areas, 5-10% in 28 service areas, and 10-20% in 12 service areas. Two service areas (Oconomowoc and Summit) share a zip code. Also note that zip codes 53211 and 53217 in the north suburban area of Milwaukee overlap municipal boundaries and occur in two service areas. These areas should be combined for analysis using the ZCTA version of the Health Service Areas.

HRSA/Dartmouth Atlas Primary Care Service Areas
The National Center for Health Workforce Analysis contracted with the Dartmouth Atlas to develop a Primary Care Service Area geography for the nation as a whole. This is a utilization-based approach to defining service areas, using Medicare utilization data to determine where a plurality of patients received primary care. HRSA uses the PCSAs on its Data Warehouse website. They are also used by the Bureau of Health Professions for workforce analysis. For more information see http://bhpr.hrsa.gov/healthworkforce/data/primarycareserviceareas/index.html

The original version of the PCSAs was based on zipcodes and defined 163 PCSAs in Wisconsin. The 2013 update (Version 3.1) uses census tracts and defines over 180 PCSAs for Wisconsin, some too small for purposes of our workforce analysis and projections. The PCSAs reflect current utilization patterns and availability of providers and may change over time. They do not necessarily define ideal service areas in terms of travel time and distance. This PCSA overlay map provides a comparison to the Wisconsin Health Service Areas.