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## State Data Spotlight: Washington State County-Level Population Estimation Model



The Office of Financial Management (OFM) in Washington State has developed an estimation and projection model that can be used to predict county-level population estimates for 2010 through 2020. Using data from the American Community Survey and the 2000 Census, as well as state-level data from OFM and the state's Department of Social and Human Services, the model generates population estimates by demographics (age, gender, race, ethnicity), income by specific poverty level, and health insurance status.

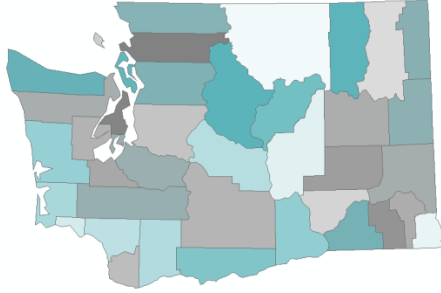
The model was created through funding by the State Health Access Program (SHAP), which began in October 2009. SHAP is a grant program offered by the Health Resources and Services Administration (HRSA) at the Department of Health and Human Services (DHHS). Washington is one of thirteen states chosen for the program that aims to support the expansion of health coverage to uninsured populations. For more information about Washington's SHAP initiatives, see the SHAP Grant Summary on the SHADAC website at [http://www.shadac.org/files/shadac/SHAP\\_GrantSummary\\_WA.pdf](http://www.shadac.org/files/shadac/SHAP_GrantSummary_WA.pdf).

The development of this model was motivated by the need for data to support the required planning and policy development of the Patient Protection and Affordable Care Act (ACA) implementation. The model goes beyond OFM's typical county-level demographic data by providing estimates for populations likely to be covered by the low-income Medicaid expansion and the healthcare exchange. This sub-state information is critical for understanding how to best approach key regional issues. For example, by identifying areas of the state with large numbers of uninsured residents, resources may be better targeted to meet their demand for medical services when health care coverage becomes available under the ACA. The county-level projections from the model are also available for years through 2020.

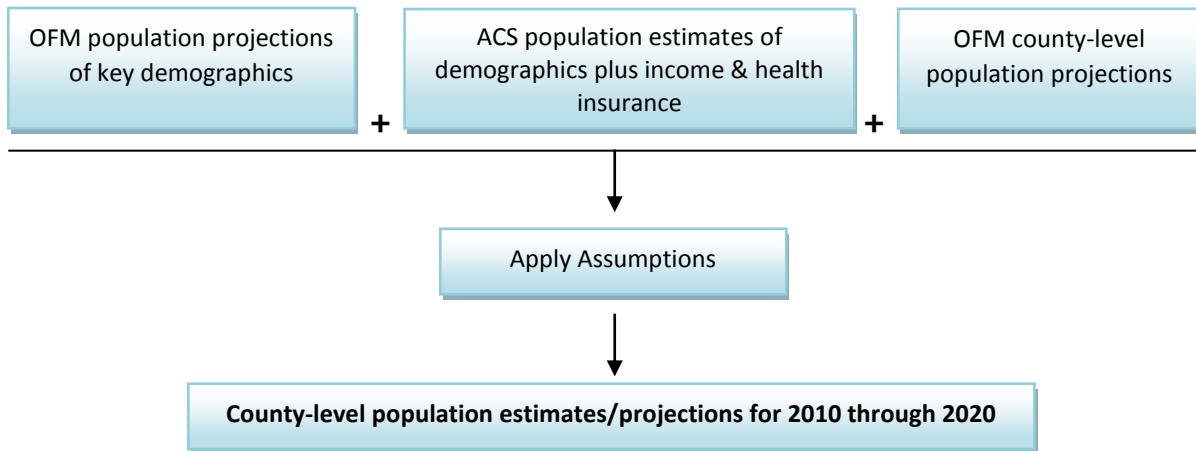
### ***Generating County-Level Estimates***

Washington's county-level model involves three key data streams to calculate projections. The estimation model utilizes 2009 American Community Survey (ACS) data as a base. The smallest geographic unit available for one-year estimates using ACS is the Public Use Microdata Area (PUMA), which encompasses a population size of roughly 100,000. PUMAs are typically groups of counties, or portions of counties in highly populated areas.

For the model's initial year county-level information, OFM uses ACS data and its own population estimates to either aggregate up to or allocate to the county level. For future years, the model utilizes the OFM population projections.



There are also two assumptions applied to the model: income distribution adjustment factors and health insurance distribution. The income distribution adjustment factors modify the size of population at specified income levels over time. The health insurance distribution allocates the population within demographic cells across coverage types for each year.



The model allows for changes to the income distribution adjustment factors and health insurance distribution assumptions, which provides the opportunity to evaluate alternative scenarios.

States looking to develop similar models can utilize this model as an example for how to incorporate state-level demographic data with estimates from a Census survey like the American Community Survey.

***Federal Reform Implications***

Washington’s projection model has advantages as the state moves towards implementation of federal health reform. Instead of the previous biennial estimates, the new model is able to generate annual estimates. OFM utilizes data sources that are currently available, increasing the fiscal sustainability of the model by negating additional costs for data collection. The projection model can also accommodate alternative scenarios depending on the state’s economic forecast.

***Source***

Washington State Non-Competing Continuation Progress Report [H2PHS 16400]. (2011). Attachment 7- Population Estimation Model Project Summary - OFM Forecasting Division.

***About the Data Spotlight Series***

**State Data Spotlight** is a SHADAC series highlighting states’ unique data tools, datasets, and uses of existing data systems. The series aims to provide information and insight on innovations that can be applied in other states. States pursuing similar strategies can contact SHADAC for technical assistance and support in developing these types of innovations.