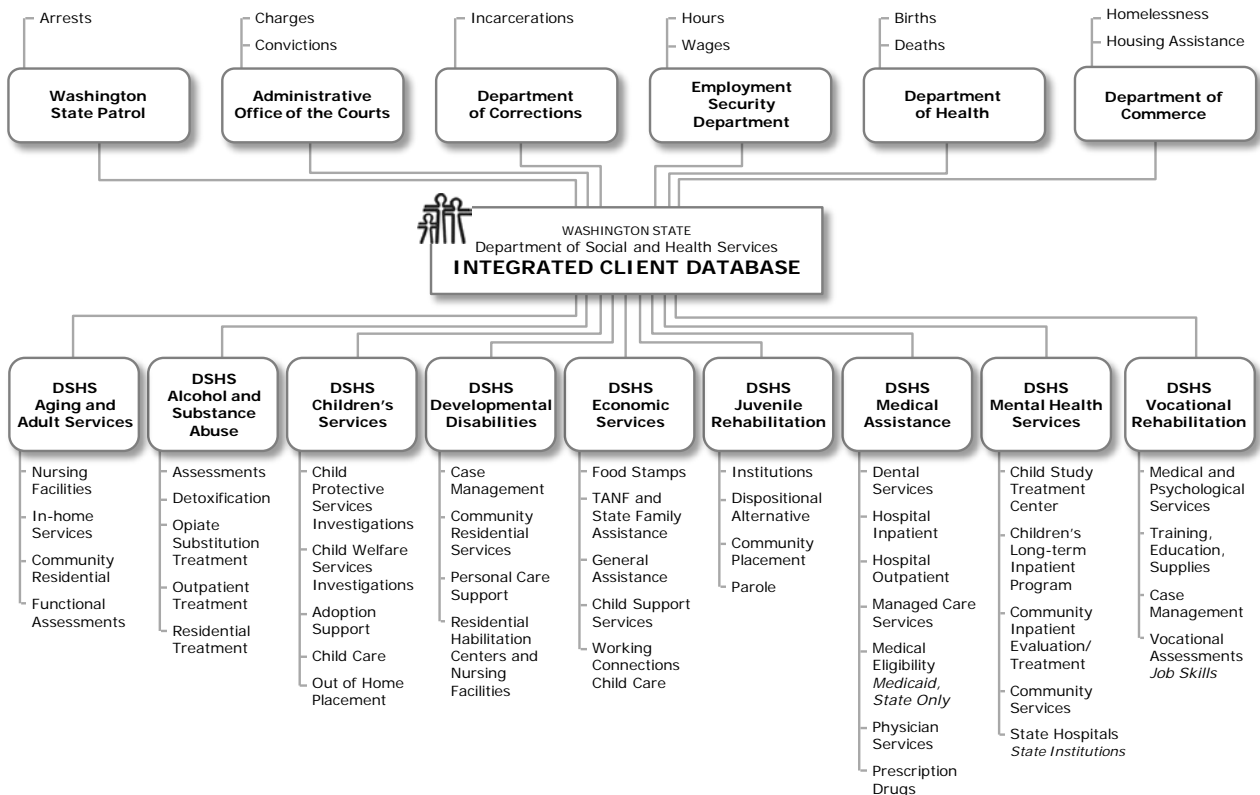# DSHS Integrated Client Database

DSHS' INTEGRATED CLIENT DATABASE (ICDB) is a longitudinal client database containing 10 or more years of detailed service risks, history, costs, and outcomes. ICDB is used to support cost-benefit and cost offset analyses, program evaluations, operational program decisions, geographical analyses and in-depth research. DSHS serves over 2.2 million clients a year. *The ICDB is the only place where all the client information comes together.* From this central DSHS client database, we get a current and historical look into the life experiences of residents and families who encounter the state's social service system.

The ICDB draws information from over 30 data systems across and outside of DSHS. It is created by extracting and matching client records for DSHS clients from administrative data collected by DSHS and other state agencies in their ongoing work with Washington residents. The ICDB includes the following for each client, by date: identifiers, service history and service cost across DSHS, demography, geography of residence and service, risk indicators, outcomes, birth and death records, medical diagnoses, medical costs, prescription drug use, alcohol and drug problems, mental illness indicators, homelessness, functional disability status, chronic health conditions, criminal justice encounters, incarcerations, employment status, and wages. ICDB information is monitored for consistency and accuracy.

Strict client confidentiality. Strict confidentiality standards are in place to ensure protection of personal client information. Strict adherence to human subjects review applies to all research conducted from this central client database. Data management is HIPAA compliant.

Washington State Social and Health Services Integrated Client Database
Established and Maintained by the DSHS Research and Data Analysis Division

In detail. Service histories, life events, risks and outcomes include:

- Service spans and costs
- Residential history
- Sex, race/ethnicity and citizenship
- Births to Washington residents and parent/child links through Support Enforcement
- Length and type of social services received and their costs
- Medical coverage
- Health status, medical encounters and prescriptions
- Mental health status and services
- Alcohol and drug problems and treatment
- Developmental disability services
- Severity of health problems, functional health status
- Economic services and child support enforcement
- Family problems, household members, child abuse and neglect case progression
- Out-of-home placement episodes and events
- Adult and juvenile criminal justice events (arrests, convictions, and incarcerations)
- Juvenile rehabilitation services
- Employment information (wages, hours and industry type)
- Vocational rehabilitation services
- Disabling health conditions and long-term care services
- Status and spells of homelessness
- Death and its causes

Population estimates and geography. Population estimates are available at many different levels of geography, including state, county, cities, legislative districts, school districts, and census tracts. Our integrated database includes boundary files for each of these geographic areas and assigns geographic parameters to each client's service, cost, and outcome data. As a result, we are able to use this information to generate use rates by age, race, gender, and poverty levels for multiple geographic areas, enhancing our ability to make regional and local comparisons for policy purposes.

Technology behind the system. Internal to ICDB are more than 80 pl/sql packages containing more than 80 thousand lines of pl/sql code. SAS processes consist of more than 100 main program files and several hundred supporting code files containing more than 60,000 lines of code. These have produced about a terabyte of data files including more than 500 SAS data sets and 325 Excel spreadsheets. The Relational DataBase Management System uses Oracle, with partitioning and spatial options. The system includes a design repository, a testing environment, an enterprise management repository, a backup catalog, and production databases. Also maintained are documented records of changing service definitions as they evolve over time in response to changes in policy, budget, and law. This makes the system useful for longitudinal analysis and comparisons over time as policies, costs, and issues change. Updated quarterly, ICDB is both invaluable and robust.

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