

## DSHS Integrated Client Database

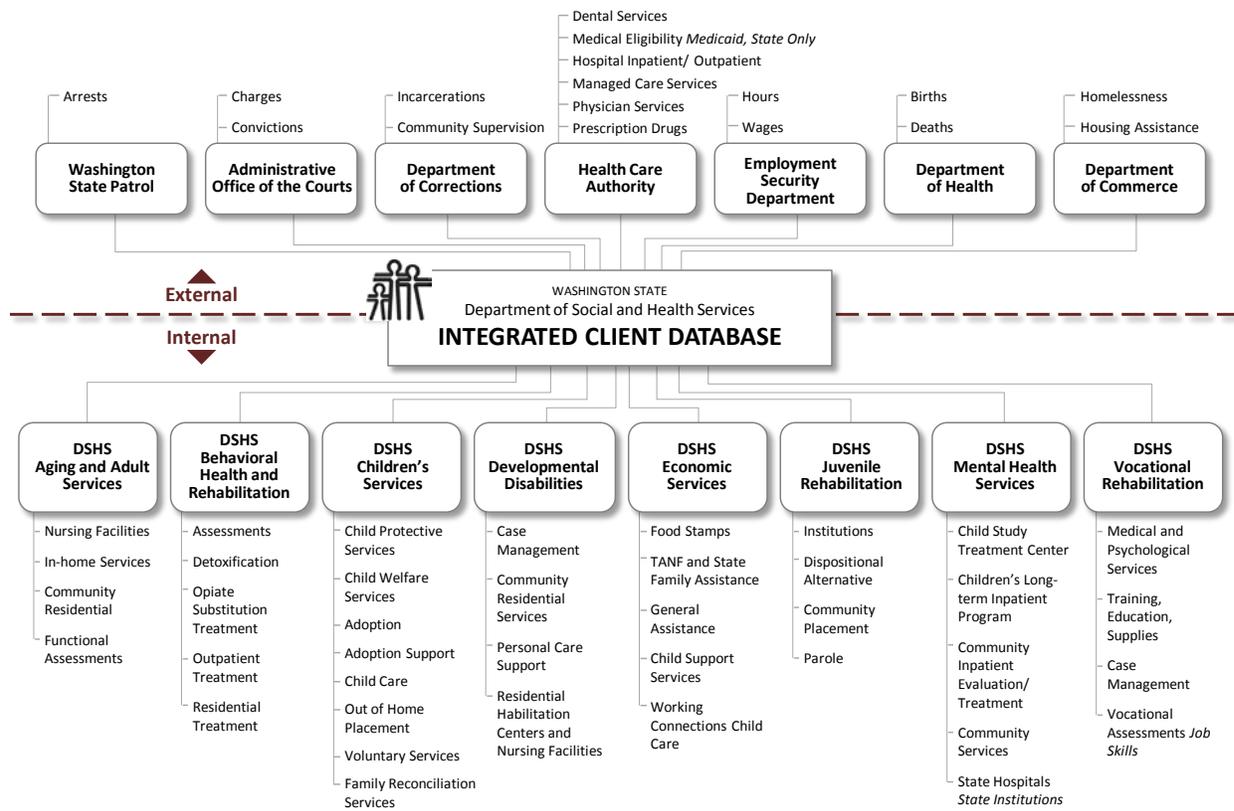
**DSHS' INTEGRATED CLIENT DATABASE (ICDB)** is a longitudinal client database containing over a decade of detailed service risks, history, costs, and outcomes. ICDB is used to support cost-benefit and cost offset analyses, program evaluations, operational program decisions, geographical analyses and in-depth research. DSHS serves almost 2.4 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
- 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 for any of ICDB's standard geographic areas, such as counties, cities, legislative districts, school districts, and zip codes. ICDB also has geospatial boundary data for each of these geographic areas, which are used to determine the precise location of each client's residence. The population and geospatial data make flexible reporting of client services, expenditures, and outcomes possible. The information can be used to generate counts and use rates by age, race, gender, and poverty levels for any geographic area, enhancing our ability to make regional and local comparisons for policy purposes.

**Technology behind the system.** ICDB obtains interface files from source systems and processes these files on a weekly or monthly basis. Each month ICDB receives an average of 90 files. Every quarter, ICDB creates special files for reporting. The process involves resolution and unduplication of client and residential address information, which includes adding new clients, and assigning unique client identifiers where appropriate. Internal to the system are about 89 thousand lines of pl/sql code. The SAS processes consist of 50 main program files and 303 supporting code files containing about 40,000 lines of code. These have produced over 204 gigabytes of data files including 487 SAS data sets and 325 Excel spreadsheets, which are available on request. The RDBMS is Oracle (version 11.2), with partitioning and spatial options. The system includes a design repository, a testing environment, an enterprise management repository, a backup catalog, and the production database. Oracle forms provide interface for running batch jobs and metadata administration. The current size of the production database, measured by the amount of allocated space, is about 900 gigabytes. The system has over 800 hundred tables. The largest table, containing client services, is about 40 GB.

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