



Persons Served by Washington State Housing Assistance and Social Service Programs

Demographics, Use of Social Services, and Behavioral Health Risk Factors

Sharon Estee, PhD, Rebecca Yette, Chris Albrecht, James Nearing

Prepared for the Washington State Department of Commerce, Housing Division

THE WASHINGTON STATE DEPARTMENT OF COMMERCE (Commerce, formerly the Department of Community, Trade and Economic Development) developed the Homeless Management Information System (HMIS) to gather comprehensive, individual-level data about persons helped and services provided by housing assistance programs throughout the state. Many of the individuals and families served by housing assistance programs also receive a variety of social services through programs administered by the Department of Social and Health Services (DSHS). Therefore, early in 2009, Commerce and DSHS entered into an agreement to share data and to use information from both agencies to gain a better understanding of factors that may contribute to homelessness and to examine the effectiveness of housing and social service programs in improving housing stability and other outcomes.

The Commerce-DSHS collaboration was undertaken to determine the degree to which data from HMIS could be linked successfully to the DSHS Integrated Client Database (ICDB), to identify how many people appear to be served by both agencies, and to use the HMIS-ICDB linked data for performance monitoring and evaluation.

Key Findings | **HMIS records linked to DSHS Integrated Client Database**

- 74 percent of HMIS records contain sufficient identifiers to be used in linking to other databases.
- 81 percent of those who got housing assistance in 2009 are currently or have been DSHS clients.

Key Findings | **Demographics**

- Males and females were equally divided among the 3,319 homeless DSHS clients getting housing assistance, with more females in the child-bearing ages and more males among adults 40 and older.
- Homeless DSHS clients were more likely to be from a minority group, particularly African American, than DSHS clients in general.

Key Findings | **Social Services**

- Most homeless children and youth were on medical assistance in the prior year.
- Homeless DSHS clients were more likely to get food and cash assistance than DSHS clients overall.
- Homeless teenagers were more likely to receive Children's Administration services than DSHS youth.

Key Findings | **Risk Factors**

- Substance abuse and mental health problems appear to be more common among homeless DSHS clients than among DSHS clients in general, for both adolescents and adults.
- One-third of adult homeless DSHS clients had indicators of co-occurring mental health and substance abuse disorders compared to only 10 percent of adult DSHS clients overall.



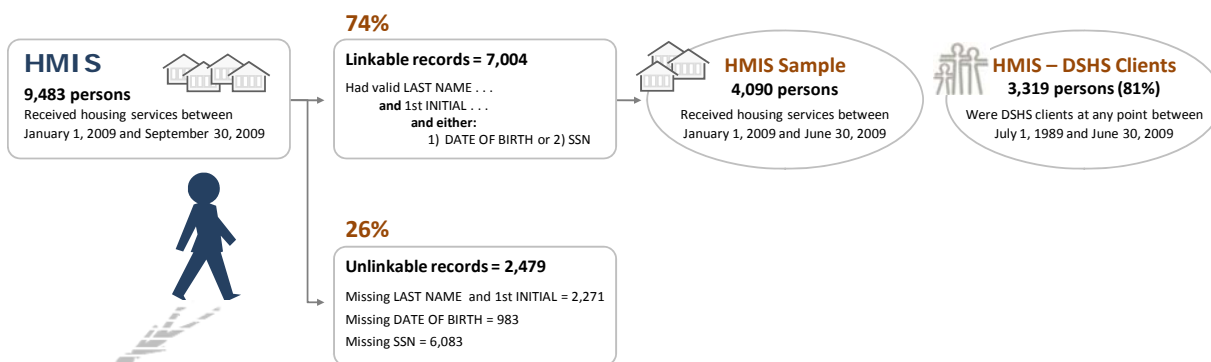
DATA QUALITY | 74% of the HMIS records have sufficient information on personal identifiers to be used in linking to DSHS administrative databases.

Commerce’s Housing Division shared records with the DSHS Research and Data Analysis Division (RDA) for people who received housing services since January 1, 2009. A total of 9,483 unique individuals were identified in the HMIS records DSHS received from Commerce in mid-October. Of the 9,483 HMIS records received in the October 2009 extract, 7,005 (74 percent) were considered linkable.

Personal identifiers are essential to successful linkage of records between different information systems. To consider a record as “linkable,” DSHS staff evaluated the combination of full or partial information in the HMIS record for each person’s name, date of birth, and social security number. To be classified as linkable, the client’s record had to have at least (1) a valid last name **and** a valid first initial and (2) a valid date of birth **or** a valid Social Security Number (SSN).

The HMIS name fields were considered not useable for linkage if they were blank, listed as “Unknown” or “Refused,” or contained non-alphabetical characters. The date of birth was classified as invalid for the date 1/1/1900, which was commonly used in HMIS to represent a missing or unknown date. To be considered useable for linkage purposes, the SSN had to contain all 9 digits.

Information was missing, invalid, refused, or incomplete for the following identifiers: 2,271 records (24 percent) for name, 983 (10 percent) for date of birth, and 6,083 records (64 percent) for SSN, with some of these records having insufficient information for more than one of these fields. Since most records (90 percent) had a date of birth in the correct format, the majority of the records lost to potential linkage were due to the lack of a full last name and first initial. Missing or incomplete information on the person’s name may have been an effort to provide housing services to a homeless person while protecting their privacy.



DATA QUALITY | RDA helped the Commerce Department identify data quality issues and data export procedures that could be improved.

The Commerce Housing Division staff and RDA database managers spent several months engaged in data quality and data matching initiatives that improved the quality of the HMIS data and the data export process. The following issues were identified:

- Proportion of records with missing or invalid personal identifiers (discussed above);
- Presence of duplicated records;
- Housing assistance intake dates that are out of range;
- Exceptionally high instance of unknown or missing values for some variables, such as income;
- Consistently missing or “0” values for some variables, including pregnancy status, pregnancy due date, whether a child was enrolled in school, non-cash income, FIPS codes for city of location, and military service duration and other related veterans’ status indicators; and
- Use of non-standard values other than “null” to indicate missing values.

The export of data from the vendor that manages the HMIS for Commerce posed several problems that required the assistance of Housing Division staff to resolve. Based on information learned through the partnership and collaboration, Commerce has:

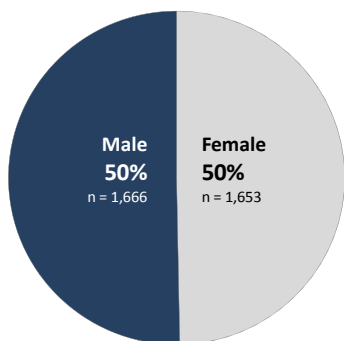
- Tested and improved the CSV export functionality of the vendor that maintains HMIS;
- Cleaned and consolidated numerous records to increase the unduplicated client record ratio; and
- Clarified several data entry processes in order to improve the quality of data being entered by users.

RECORD LINKAGE | 81% of the people with records in HMIS with sufficient identifying information were current or prior DSHS clients.

We focused analyses on HMIS intake records in the first six months of calendar year 2009 to improve the completeness of information for DSHS clients in the Integrated Client Database. There were 4,090 individuals who had at least one intake record in HMIS between January 1 and June 30, 2009 who met the criteria for “linkable” records discussed previously. Of these individuals, 3,319 (81 percent) were found in RDA’s Integrated Client Database containing records for clients served by DSHS programs at any point since July 1, 1998.

DEMOGRAPHICS | About half of the individuals who received housing assistance and DSHS services were males and about half were females.

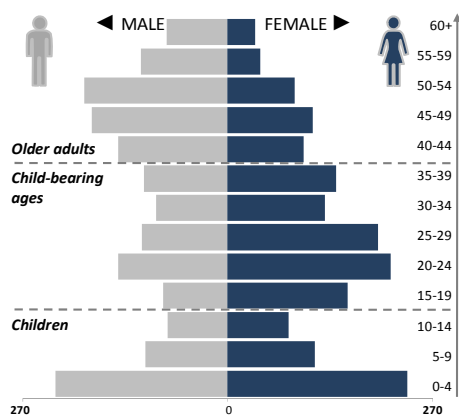
HMIS-DSHS clients by gender



Of the 3,319 people who received housing assistance in the first six months of 2009 and were found to be a DSHS client, 50 percent were males and 50 percent were females. A very similar breakdown was found for the 9,483 persons in the HMIS data that included both linkable and unlinkable records, in which 49 percent were recorded as male and 51 percent as female. However, of the 771 individuals with records in HMIS that were considered linkable but who were **not** found to be DSHS clients, more were male (56 percent).

DEMOGRAPHICS | Women outnumbered men among HMIS-DSHS clients of prime child-bearing ages, while men were more common among adults aged 40 and over.

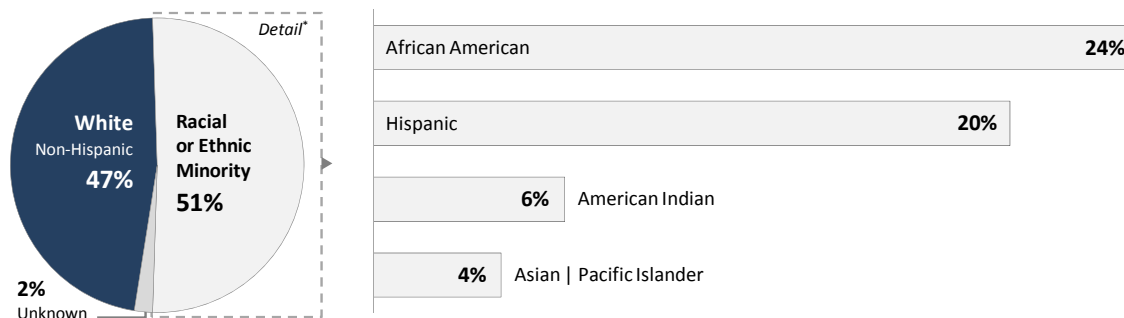
HMIS-DSHS clients by age and gender



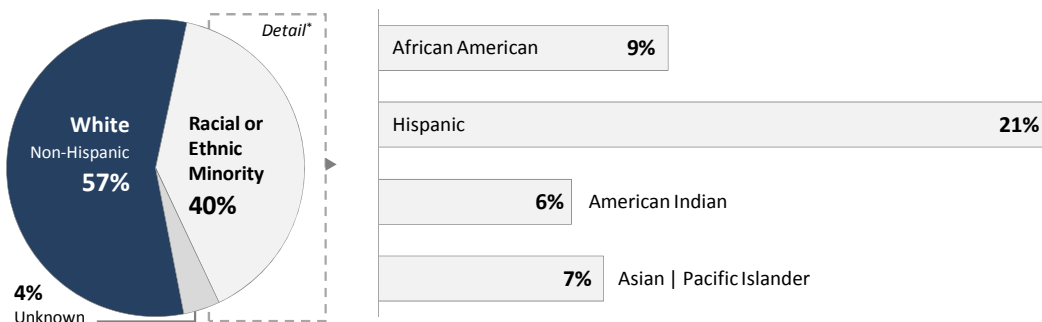
The gender distribution by age for the people receiving housing assistance who were or had been DSHS clients was quite different than the overall male-to-female ratio. In the prime child-bearing ages of 15 to 39, women tended to outnumber men among those seeking shelter or other forms of housing assistance. At age 40 and over, however, men tended to outnumber women in each age group.

DEMOGRAPHICS | 51 percent of HMIS-DSHS clients were a racial or ethnic minority compared to only 38 percent of DSHS clients in general.

Race and ethnicity
HMIS-DSHS CLIENTS



ALL DSHS CLIENTS, FY 2008**



*Persons who identify with more than one minority group are counted in each racial or ethnic category they choose.

**The category "All DSHS Clients" excludes individuals who are only subject to Child Support Enforcement activity.

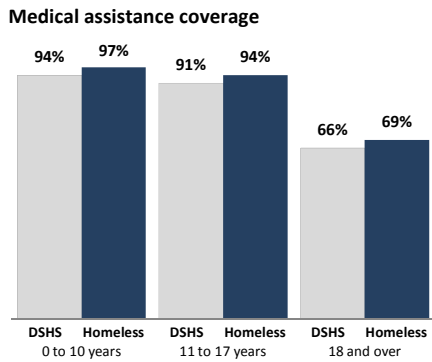
Slightly over half of the 3,319 people who were homeless or at risk of becoming homeless early in 2009 were identified as a racial or ethnic minority in DSHS records compared to only 40 percent of DSHS clients in general. African Americans were more likely to be found in the HMIS-DSHS group (24 percent) than in DSHS clients overall (9 percent). Hispanics made up roughly 20 percent of each group, making it the largest minority group among DSHS clients in general. American Indians comprised 6 percent of each group, while Asian/Pacific Islanders were less common among HMIS-DSHS clients (4 percent) than among DSHS clients overall (7 percent).

USE OF SOCIAL SERVICES | **How do DSHS clients who are receiving housing assistance compare to DSHS clients in general?**

The types of social services received by HMIS-DSHS clients in the 12 months prior to receiving housing assistance between January and June 2009 were compared to the services received by individuals who were DSHS clients in State Fiscal Year (FY) 2008. These comparisons allow one to determine whether DSHS clients who are most likely to experience homelessness or the risk of homelessness tend to receive different kinds of social services than DSHS clients in general.

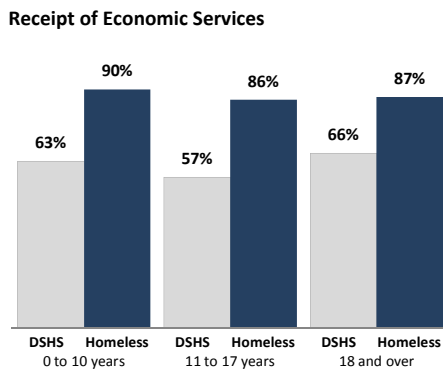
These analyses do not take into account whether or not some of the DSHS clients who received housing assistance in the first half of 2009, as recorded in the Commerce Department's HMIS, might have also been homeless at some point in the prior 12 months examined here. More in-depth analyses would be needed to examine the interaction between the paths to homelessness and the use of social services over time.

USE OF SOCIAL SERVICES | Publicly funded medical coverage rates were slightly higher for HMIS-DSHS clients in each age group.



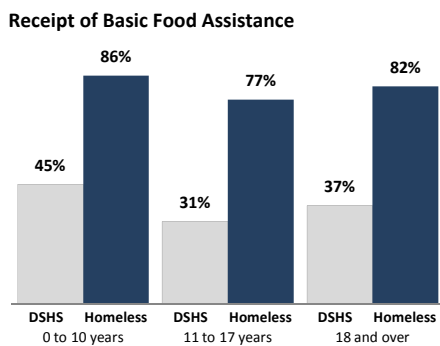
Roughly two-thirds of DSHS adults are covered by publicly funded medical assistance. Among children (aged 0 to 10 years) and youth (aged 10 to 17 years), however, at least 90 percent of each group have medical coverage. In each age group, HMIS-DSHS clients appear to have higher rates of publicly funded medical coverage than DSHS clients, in general, in each age group.

USE OF SOCIAL SERVICES | HMIS-DSHS clients at all ages were more likely to receive economic services than DSHS clients in general.



Economic services provided through DSHS include cash assistance through such programs as Temporary Aid to Needy Families (TANF) and the state-funded General Assistance Program, refugee services, WorkFirst, and Basic Food (formerly called Food Stamps). Within every age category, HMIS-DSHS clients were much more likely to have received some form of economic service through DSHS programs in the prior 12 months than DSHS clients overall in FY 2008.

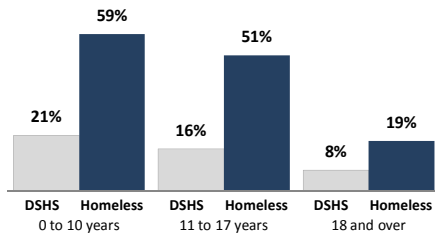
USE OF SOCIAL SERVICES | HMIS-DSHS clients at all ages were more likely to receive food assistance than DSHS clients in general.



The federally funded Basic Food program (formerly Food Stamps) is intended to ensure that low-income families do not go hungry. HMIS-DSHS children, youth, and adults were about twice as likely to have received assistance from the Basic Food program in the prior 12 months as DSHS clients overall in FY 2008.

USE OF SOCIAL SERVICES | HMIS-DSHS clients at all ages were more likely to receive Temporary Aid to Needy Families (TANF) than DSHS clients in general.

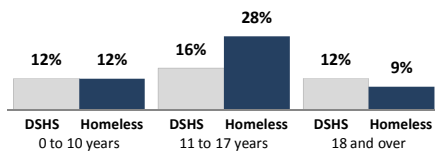
Use of Temporary Aid to Needy Families



The major source of cash assistance for low-income families is the federally funded TANF program. Among all three age groups, HMIS-DSHS clients were about three to four times as likely to have been on TANF at some point in the prior 12 months, as DSHS clients in general. This finding tends to underscore the economic needs of families who experience bouts of homelessness, even when compared to a generally low-income population such as those served by most DSHS programs.

USE OF SOCIAL SERVICES | HMIS-DSHS clients were more likely to receive services from Children’s Administration than DSHS clients in general only if they were in the adolescent age group.

Use of Children’s Administration services



The DSHS Children’s Administration administers a variety of programs that provide services to protect vulnerable children who may be at risk for abuse or neglect including, Child Protective Services, foster care placements, support services, and family reconciliation. HMIS-DSHS clients aged 10 or less were as likely (12 percent) as DSHS clients of the same age to receive Children’s Administration services over a 12-month period. HMIS-DSHS youth aged 11 to 17 years, however, were more likely (28 percent) to receive services from Children’s Administration than DSHS youth overall (16 percent). HMIS-DSHS adult clients appeared somewhat less likely to receive services from Children’s Administration (9 percent) than adult DSHS clients in general (12 percent).

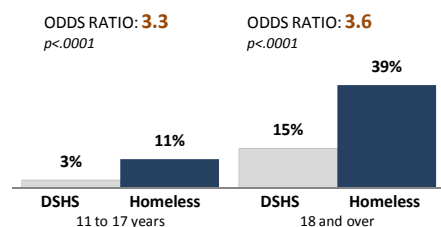
RISK FACTORS | Do HMIS-DSHS clients have greater behavioral health needs than DSHS clients in general?

RDA has developed several indicators of behavioral health problems, including the risk for substance abuse problems, mental health problems, and co-occurring disorders. These risk indicators are based on information extracted by RDA from the DSHS Health and Recovery Services Administration's medical claims data, medical care encounter data, and behavioral health service records as well as from the Washington State Patrol arrest database. The substance abuse problem risk indicator, for example, includes diagnoses for alcohol or drug abuse or psychosis, detoxification, treatment for chemical dependency, or an arrest for an alcohol- or drug-related offense. Similarly, the mental health risk indicator includes diagnoses for mental health disorders, prescriptions used to treat such illnesses, and records of inpatient or outpatient mental health treatment or services.

We chose to focus our analyses of behavioral health indicators on DSHS clients who were eligible for publicly funded medical assistance in at least one month in the 24 months before they received housing assistance. We found 209 adolescents aged 11 to 17 years and 1,677 adults who met this criterion out of the 3,319 DSHS clients who linked with records in HMIS in the first half of 2009. For a base of comparison, we used 246,830 youth and 678,719 adult DSHS clients who were on medical assistance in January 2009 and who were eligible for medical coverage in at least one of the prior 24 months. We based these analyses on the prior 24 months to adequately measure the incidence of these risk factors given the relative frequency of diagnoses and treatment events used to represent the specific problem behavior.

RISK FACTORS | Substance abuse problems are more likely among HMIS-DSHS clients.

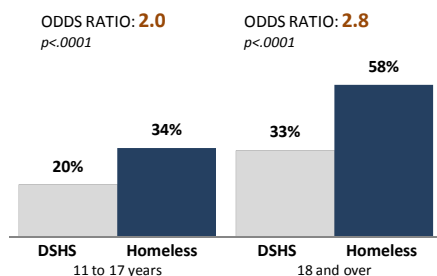
Risk of substance abuse problems



Of the adult DSHS clients who were received services recorded in HMIS in the first half of 2009, 39 percent had a possible risk for substance abuse problems or chemical dependency based on available clinical and administrative information. In comparison, only 15 percent of adults with similar public medical coverage had indications of substance abuse problems, resulting in an odds ratio of 3.6 to 1. Among youth, 11 percent of the homeless and only 3 percent of the general DSHS comparison group appeared to have substance abuse or chemical dependency problems, such that the odds of having these problems were 3.3 to 1 for homeless adolescents.

RISK FACTORS | Mental health problems are more likely among HMIS-DSHS clients.

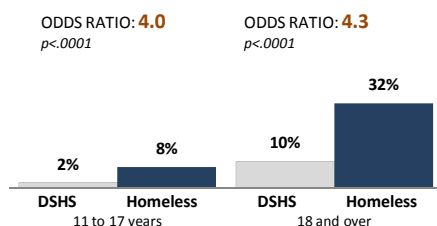
Risk of mental health problems



Over half of the adult DSHS clients who received housing assistance early in 2009 had indications of mental health disorders based on their clinical records and services received in the prior 2 years. Only one third of DSHS clients with publicly funded medical assistance had similar indicators in their clinical and treatment records. Among adolescents, homeless youth were also more likely than their counterparts to have indications of mental health need or treatment (34 percent compared to 20 percent). Odds ratios for both of these age groups showed a statistically significant higher chance for mental health problems among those who became homeless or who received assistance to avoid homelessness.

RISK FACTORS | Co-occurring substance abuse and mental health problems are more likely among HMIS-DSHS clients.

Risk of co-occurring mental health and substance use disorders



About one-third of homeless DSHS adults may have co-occurring disorders compared to only 10 percent of those in the comparison group. These differences represent an odds ratio of 4.3 to 1 for possible co-occurring mental health and substance abuse disorders among those at risk of becoming homeless. Among youth, 8 percent of the homeless but only 2 percent of those with public medical coverage appear likely to have co-occurring disorders.

FUTURE DIRECTIONS | Commerce and DSHS should continue to collaborate on the development of performance measures and outcome analyses using HMIS data linked to the DSHS Integrated Client Database.

Our preliminary investigation has demonstrated that HMIS data can be linked to administrative records in the DSHS Integrated Client Database. Therefore, Commerce and DSHS should continue their collaboration over time to link data and develop performance measures and outcome analyses. Such analyses are likely to be very useful to both Commerce and DSHS.

This investigation revealed that HMIS records contain sufficient identifying information to be readily linked to other administrative databases, with about three-fourths of HMIS records meeting minimum criteria for potential linkage. Further investigation into the records with missing or incomplete names appears warranted to improve this reporting in the future.

This report contains a number of preliminary findings about the recent history of the DSHS clients who received housing assistance early in 2009. As expected, many of the people who obtain assistance for housing needs also receive help from other publicly funded programs. Homeless, or potentially homeless, DSHS clients tended to have higher rates of medical coverage and receipt of economic services such as cash or food assistance. DSHS services to protect vulnerable children at risk of abuse or neglect or in need of foster care placement or case management were more likely to be provided to homeless teenagers but not to children or adults. Homeless DSHS clients had higher rates of potential behavioral health problems.

The major activities to be undertaken in the coming year are:

- Refinement of protocol for delivery of quarterly HMIS data updates to RDA;
- Continued investigation into data quality issues such as the comparability of information contained in HMIS and similar indicators in DSHS data (e.g., homelessness flags, use of public assistance);
- Development of measures of spells and duration of homelessness;
- Further development of measures to track performance associated with housing assistance programs over time;
- Refinement in the identification of a standard of comparison for performance measurement;
- Analysis of whether housing instability is an outcome for persons going through major transitions such as release from state hospitals; release from jails or other correctional institutions, and maturing out of foster care; and
- Analysis of the incidence of death, cause of death, and demographics of decedents for persons who receive housing assistance.

The current collaboration between Commerce and DSHS focuses on the development of a standard set of performance measures that can be used to track the impact of housing assistance programs over time. It is clear, however, that this collaboration could extend into a much more comprehensive set of analyses given the complexity of factors that contribute to homelessness and the challenges of publicly funded programs in addressing these complex needs. At present, DSHS and Commerce are discussing the possibility of conducting a more comprehensive research project if funding is available. This research would examine the paths to homelessness including risk and protective factors and the role of housing and other public assistance programs in mitigating the effects of homelessness.

RDA CONTACT
Sharon Estee, PhD
360.902.7655

Copies of this paper may be obtained at www.dshs.wa.gov/rda/
or by calling DSHS' Research and Data Analysis Division at 360.902.0701.
Please request REPORT NUMBER 11.147