



A Decade of Progress
1997 - 2007

Allegheny County Department of Human Services

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What is the Data Warehouse?

The Allegheny County Department of Human Services (DHS) Data Warehouse (DW) is a central repository of human services data to support decision-making. The data is organized in a relational framework so that information about DHS programs and clients can be retrieved and analyzed. The DHS DW contains more than 15 million client records, currently supplied from more than 10 independent operating applications, both internal and external to DHS. Authorized DHS staff uses a suite of analytical tools to connect to, extract and analyze the data.

What is the Scope of the Data?

The data in the DW identifies (by SSN) and describes DHS clients. The DW matches this information with DHS-contracted providers and DHS programs serving these individuals, to ascertain to whom and where services are provided. Further, by incorporating data from sources external to DHS, a multi-dimensional picture of its clients and their cultural surroundings is created. These external sources consist of county and state corrections agencies, city and county housing authorities and the Pennsylvania Department of Public Welfare (including TANF, general assistance, food stamps, Medical Assistance, energy assistance, employment and training and child care support through DPW). This compilation of data allows DHS to identify involvement and relationships between DHS and external populations, as well as to compare alternative services available to them.

History of the Data Warehouse

Laying the Foundation

Prior to 1996, Allegheny County delivered human services to its citizens through independent county departments. There was no coordination of services and no tracking of who was receiving services from multiple departments. In 1996, a special blue ribbon panel

recommended that the individual human service departments be integrated into a single department. The Allegheny County Commissioners responded by creating DHS.

Faced with the awesome task of reorganization, the public and private sectors were called upon to apply their expertise to the process. The goal was to achieve efficiencies by consolidating duplicated functions while preserving and enhancing program service and maintaining compliance with state requirements within a fiscally responsible environment. It was recognized early on that integration posed very significant challenges for the new department's information technology systems since the formerly independent departments stored information on clients, providers, and services in more than 80 disparate databases and systems.

Answering the Challenges

Representing the private sector, the Greater Pittsburgh Chamber of Commerce (CoC) accepted a leadership role in recruiting, organizing and summarizing input from committees, work groups and task forces consisting of a wide array of esteemed community stakeholders about how to proceed with the integration in an efficient and responsible way.

A synthesis project conducted by Carnegie Mellon University (CMU) recommended that DHS develop two separate information systems, one to accommodate the programmatic data of the department and the other to track the fiscal or financial processes of DHS.

A CoC Information Systems Task Force reviewed the complexities of integration and formulated a plan of action. In November of 1998, the CoC presented its resultant Restructuring Report. One major recommendation was to focus on creating a data warehouse application to allow shared client information throughout the department.

In 1997, a coalition of 12 local foundations created the Human Services Integration Fund (HSIF) to assist with the development of the newly created DHS and fund DHS projects that fell outside rigid government funding streams. In 1999, with the backing of HSIF, DHS announced an RFP to develop a computing architecture to support the business process of an integrated DHS that would include eCAPS, the common client identifier operating application

and the DW, to integrate information from the separate program offices. Deloitte Consulting was selected as the contractor to work with DHS on the Information Integration Project. The contract was executed by the Pittsburgh Foundation on behalf of DHS to streamline the process.

DHS soon recognized that the data stored in the DW would be valuable as a resource tool for research, strategic planning, needs assessment and program evaluation not only to DHS but to the broader community as well. An advisory committee, consisting of community leaders, conducted focus groups of all likely stakeholders and identified potential users as university-based researchers; health and human service agencies; policy and planning organizations including foundations and civic agencies; and consumers of human services, their family members and advocates. Their research also determined categories of business questions important to community stakeholders as being: tracking consumers and aggregate demand for services; monitoring quality, cost and aggregate outcomes; agency management and planning; tracking linkages within and between service delivery systems; and consumer choice and advocacy. The advisory committee also explored data integrity and confidentiality; marketing, education and technical support for users; and oversight and governance of the DW.

How the DW is Used

The analytic tools used by DHS retrieve and display the DW data in several formats. The user can request aggregate unduplicated counts; client-specific, provider-specific or program specific reports and displays; and data by geographic location.

Internally, staff can request a report indicating the number of DHS clients who are concurrently receiving services through a specific combination of program offices. This request can then be fine-tuned to reflect the specific records for the individuals identified in the broad search. Further, a single individual's records can be explored to determine what "feeder" systems supplied his or her information. And using its Geographical Information System (GIS), DHS can examine the spatial relationships between clients, contracted service providers and the demographics of the geographic region in question.

The DW has become a significant community resource as well, encouraging partnerships and research projects with RAND, the Center for Disease Control, Carnegie Mellon University, the University of Pittsburgh, the Funders in Criminal Justice and the U.S. Department of Justice.

Most recently, with community supports, DHS has designed, developed and implemented a public-facing web site that contains up-to-date information on DHS-provided services as well as other community resources.

In the future, the DHS will rollout a common, department-wide client registration system that will make possible immediate updates and real time reporting from the Data Warehouse.