



Allegheny County Data Warehouse

The Allegheny County Data Warehouse brings together and integrates client and service data from a wide variety of sources both internal and external to the County. It was created by consolidating publicly-funded human services data (e.g., behavioral health, child welfare, intellectual disability, homelessness and aging) and, over time, expanded to include data from other sources (see Appendix for a list of sources). Development of the Data Warehouse was made possible with support from the Human Service Integration Fund, a flexible funding pool created by a coalition of local foundations for the purpose of supporting integration and innovation within DHS.

The Data Warehouse was designed primarily to improve services to clients, but also to improve the ability of workers to perform their jobs and to support management decision-making; it is also intended to be available as a community resource, making data and information publicly available whenever possible.

HISTORY

The Allegheny County Data Warehouse was originally conceived as a way to develop a common client management technology system across the disparate programs that were consolidated into a single Department of Human Services (DHS) in 1997. However, a group of Carnegie Mellon University students studied the problem and concluded that a fully integrated system was not possible. Instead, they — along with the Chamber of Commerce and a number of private sector stakeholders — presented a different approach: a Data Warehouse to link client-level data across systems without requiring that those individual systems share a common technology.

In 2000, the local community foundation released a Request for Proposals, and, with \$2.8 million in pooled foundation funding, signed a contract on behalf of Allegheny County with Deloitte Consulting to build the initial Data Warehouse. The Data Warehouse was operational in 2001 and able to integrate client data across DHS's program areas; in 2003, the first external source of data (from the Pennsylvania Department of Human Services) was integrated. A description of the technology involved in integrating data is provided in the Appendix.

Development of the Data Warehouse was possible because of a unique confluence of factors: leadership, supportive political climate and trust. Leadership was evidenced by (1) the political will to invest resources in the technology infrastructure and analysts to do the work and (2) willingness to put the findings into practice. The local political climate was open to the changes required to support integration of human services in Allegheny County. And the success of the initiative was also due to the time and effort spent developing trust between DHS and its data partners. Additionally, creation of the Human Services Integration Fund represented an unprecedented display of support for the newly-integrated department and its integration and innovation efforts.

The cost of maintaining and utilizing the Data Warehouse, including approximately 30 analysts, seven data leads, an analytics manager and technical support, is about \$6.5 million annually, which is fully funded by DHS. This represents less than 1% of DHS's total budget, which is considered a worthwhile investment when taking into account all the ways in which integrated data supports quality service delivery and more. Costs are mostly distributed across DHS's eligible funding streams¹ through a Random Moment Sampling process; the behavioral health analytics team is an exception to this process and is supported by Medicaid administrative funds.

¹ The majority of costs are funded by state sources; Allegheny County funds fulfill match requirements. A small amount of costs are funded by portions of discrete federal grants. Based on an analysis at the time of publication, the main state funding sources are the Office of Children, Youth and Families' Needs-Based Budget, including the IT Grant, the Human Services Block Grant and the Aging Services Block Grant.

BUILDING PARTNERSHIPS TO INTEGRATE DATA

Sharing data within DHS and with other County departments (e.g., Housing Authority, Jail, Probation Office, Health Department, Medical Examiner) was relatively simple, as each is an organizational component of Allegheny County government and operates subject to oversight by the County Executive. Therefore, no formal agreements were determined to be necessary to allow for data sharing. This is not to say that data-sharing among these entities occurs without governance. DHS implemented data governance practices that allow for interoperability and cross-agency sharing. For more information, see [Sharing of Client Information for Service Coordination](#).

Sharing data with non-Allegheny County government entities required more extensive data-sharing agreements. Establishing a Memorandum of Understanding (MOU) that outlines duties, responsibilities, compliance issues and safeguards requires careful negotiation, legal expertise and patience. The partnership with the Pittsburgh Public School district is a good example of what goes into such an agreement.

Public School/DHS Data-Sharing Agreement

After years of negotiation, a significant milestone in the use of the Data Warehouse occurred in 2009, with the creation of a data-sharing agreement with the Pittsburgh Public School (PPS) district. Since then, similar agreements have been established with 20 local school districts and education entities including charter schools and the Allegheny Intermediate Unit,² allowing for service and system activities designed to improve educational and well-being outcomes for school-aged children involved in human services. DHS and PPS attorneys focused on issues of confidentiality inherent in sharing student and client data, including the issue of how to legally obtain consent to use student records. After thinking through various options, the attorneys found a solution in a 2008 FERPA amendment that permitted the release of personally identifiable student data without consent to organizations interested in conducting research to improve student achievement as long as these organizations had a signed MOU that outlined confidentiality parameters and data use protocols. By tying the use of the data to actionable research, these attorneys found an innovative way to draft a legal agreement that met all of the requirements of FERPA and HIPAA. The agreement provides the framework for integrating student data, including confidentiality provisions, the responsibilities of each party, the type of information that can be shared and the purposes for which it can be shared. A key provision authorizes the use of the data for conducting “action research,” which means that 1) DHS will use the data to prepare analytical reports related to students in the school district who receive services from DHS and 2) DHS and the school district will create, implement and evaluate strategies developed from these statistical analyses.

² Although MOUs have been established with 20 districts, as of April 2018 only six have developed the technical capacity to share their data.

More information about these data-sharing agreements and the resulting analyses and strategies can be found [here](#).

USING INTEGRATED DATA

What makes the Allegheny County Data Warehouse unique? Unlike data warehouses that are developed for research purposes or “one-shot” analyses, Allegheny County’s Data Warehouse was designed to support integrated client service and decision-making. Its value is evident in the ways in which it has supported the development of a variety of analytic and decision-making tools that put the power of integrated data into the hands of staff and providers. But DHS didn’t stop at creating tools — it also developed ways to make information and analysis widely available in the form of datasets, publications and visualizations housed on www.AlleghenyCountyAnalytics.us.

The following table outlines the various analytic tools designed to support the use of integrated data. Each is described more fully in the section that follows.

Analytic and Decision-Making Tools

TOOL	PURPOSE	AVAILABILITY
www.AlleghenyCountyAnalytics.us	Hosts data sets, publications and visualizations	Publicly available
QuickCount	Allows for queries about participation in a wide range of services from data integrated in the DHS Data Warehouse.	Publicly available
Client View	Information about individual clients and their service involvement	Authorized DHS users, provider agencies and clients
Allegheny Family Screening Tool (AFST)	Predictive model to support child welfare call screening decision-making	Child welfare call screening staff and supervisors
Outcomes Tool	Monitor the success of various programs/ services by assessing the performance of participants	DHS staff
Alerts	Notification about clients' key life events	DHS staff
Reports Portal	Location for viewing automated reports and dashboards	DHS staff
Dashboards	Visualizations that show demographic, service and utilization information of a service or system; data can be manipulated by users to provide a custom view	DHS staff



QuickCount

[QuickCount](#) is a publicly-available resource that allows for queries about participation in a wide range of services from data integrated in the Data Warehouse. In addition to the ability to compare two programs, users can examine by time period, view participation in multiple services, and filter by counts, demographics and geography. QuickCount provides data that helps community groups, service providers, researchers and other stakeholders to understand the types and scope of services utilized and to use this information for planning.

QuickCount Search Screen – as seen below, users first select a **time period (1)** and then, using the tabs across the top or the **previous step (2)** and **next step (3)** functions, select a **primary program (4)** and, if desired, a **comparison program (5)**. **Demographics (6)**, **Geography (7)** and **Political District (8)** are all optional selections. All selections are shown under **Filters Applied (9)**. At any time, users may select **Download (10)** to be taken to a spreadsheet that defines each program category.

The screenshot shows the QuickCount search interface. At the top, there is a header for 'ALLEGHENY COUNTY' and 'Quick Count' with 'Contact Us' and 'Help' links. Below the header, there are several filter tabs: 'TIME PERIOD*' (1), 'PROGRAM*' (2), 'DEMOGRAPHICS OPTIONAL' (6), 'GEOGRAPHY OPTIONAL' (7), and 'POLITICAL DISTRICT OPTIONAL' (8). A 'Filters Applied' panel (9) is on the right, showing 'Time Period' set to 'Calendar Year 2018'. In the center, there are two tabs for 'PRIMARY PROGRAM*' (4) and 'COMPARISON PROGRAM' (5). Below these are nine program categories: Child Welfare, Homelessness and Housing, Self Sufficiency, Criminal and Juvenile Justice, Older Adults, Vital Statistics, Early Childhood and Education Services, Physical and Behavioral Health, and All Human Services. A 'Download' button (10) is located in the top right of the program grid. At the bottom, there are navigation buttons: 'Previous Step Time Period' (2), 'Reset Selection', and 'Next Step Demographics' (3).

In the example below, we are selecting all clients with an **Allegheny County Jail Booking (1)** in 2018. When selecting Primary Program and Secondary Program, users must choose either **Active (2)**, which means current involvement in the program, or **Ever Active (3)**, meaning any history of program involvement. We chose Active for this search.

The screenshot displays the 'Quick Count' interface for Allegheny County. At the top, there is a navigation bar with the Allegheny County logo and the text 'ALLEGHENY COUNTY'. Below this is the 'Quick Count' header with 'Contact Us' and 'Help' links. The main interface is divided into several sections:

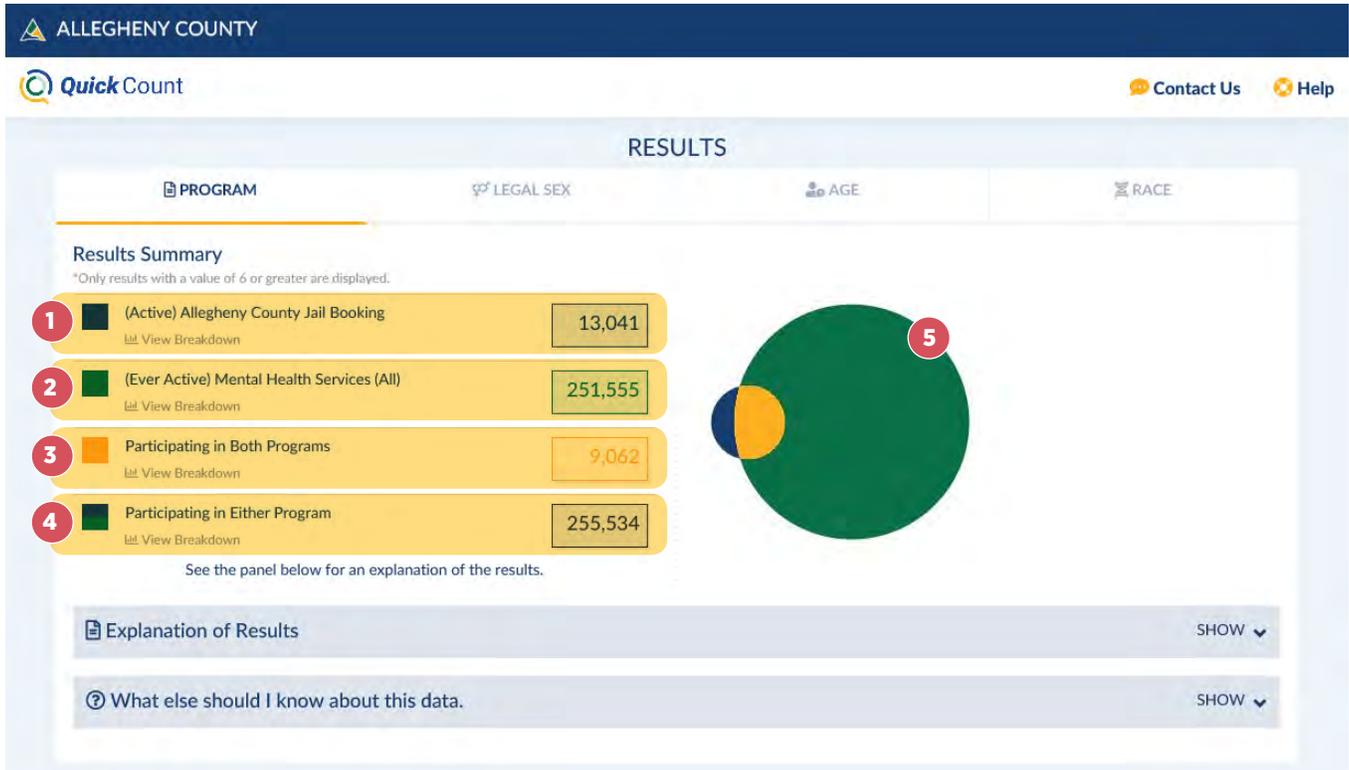
- Filters:** Includes 'TIME PERIOD*', 'PROGRAM*', 'DEMOGRAPHICS OPTIONAL', 'GEOGRAPHY OPTIONAL', and 'POLITICAL DISTRICT OPTIONAL'.
- Primary Program Selection:** Shows 'PRIMARY PROGRAM*' and 'COMPARISON PROGRAM'. Under 'PRIMARY PROGRAM*', there are radio buttons for 'Active' (labeled with a red '2') and 'Ever Active' (labeled with a red '3').
- Program List:** A list of programs is shown on the left, including 'Child Welfare', 'Criminal and Juvenile Justice', 'Early Childhood and Education Services', 'Homelessness and Housing', 'Older Adults', 'Physical and Behavioral Health', 'Self Sufficiency', 'Vital Statistics', and 'All Human Services'. The 'Criminal and Juvenile Justice' program is expanded, showing 'Allegheny County Jail Booking' (labeled with a red '1') and 'Jail Collaborative Reentry Services'.
- Filters Applied:** A sidebar on the right shows the applied filters: 'Time Period' set to 'Calendar Year 2018' and 'Primary Program' set to '(Active) Allegheny County Jail Booking'.
- Navigation:** At the bottom, there are buttons for 'Previous Step Time Period', 'Get Count', 'Reset Selection', and 'Next Step Demographics'.

For our Comparison Program, we selected **Ever Active (1)** in all **Mental Health Services (2)**. We then use the **Get Count function (3)** to take us to the Results.

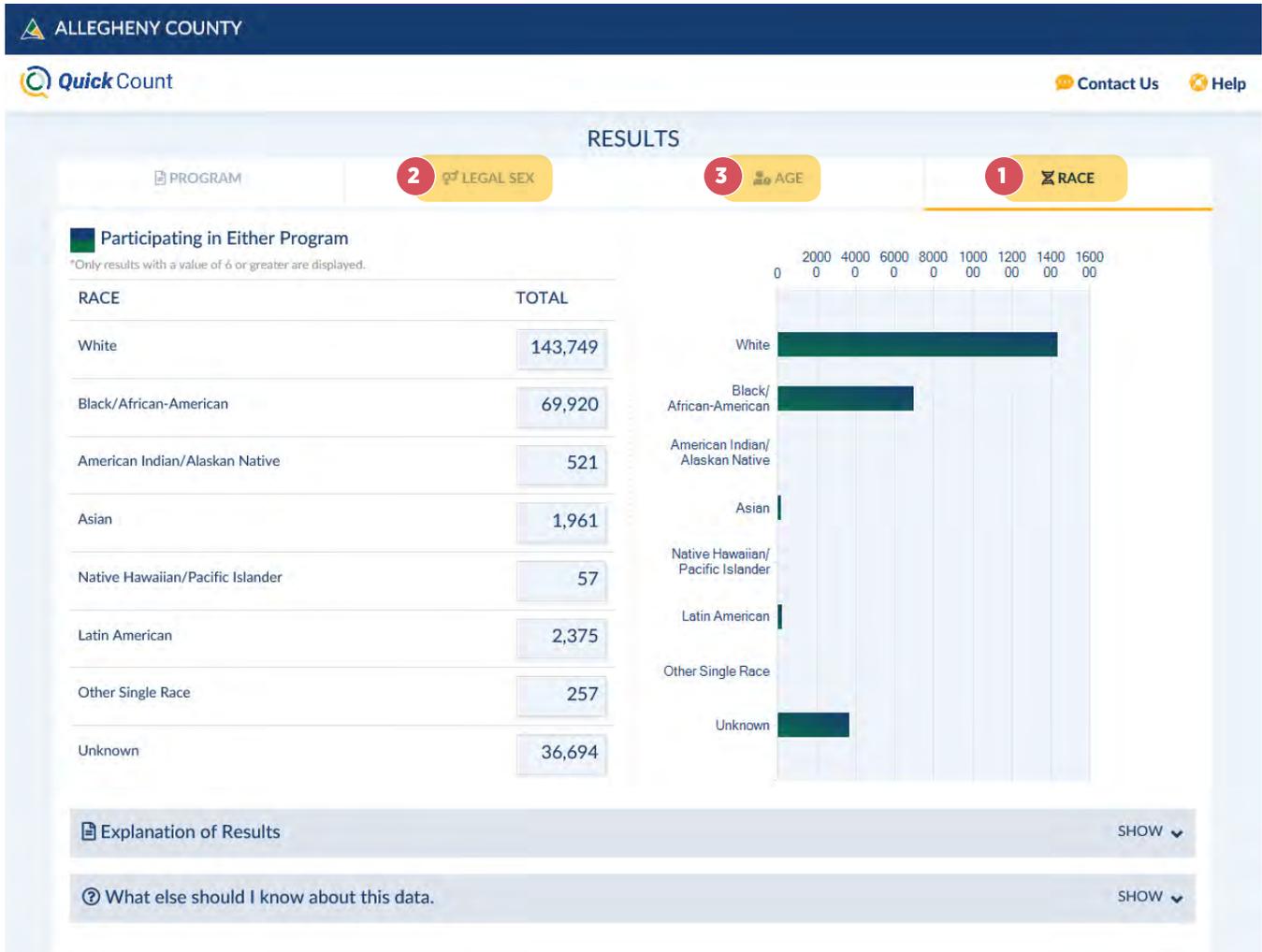
The screenshot displays the 'Quick Count' interface for Allegheny County. At the top, there are navigation options for 'Contact Us' and 'Help'. The main interface is divided into several sections:

- Filters:** Includes 'TIME PERIOD*', 'PROGRAM*', 'DEMOGRAPHICS OPTIONAL', 'GEOGRAPHY OPTIONAL', and 'POLITICAL DISTRICT OPTIONAL'.
- Filters Applied:** Shows selected filters: 'Time Period' (Calendar Year 2018), 'Primary Program' ((Active) Allegheny County Jail Booking), and 'Comparison Program' ((Ever Active) Mental Health Services (All)).
- Program Selection:** A sidebar on the left lists various service categories. 'Physical and Behavioral Health' is selected, and its sub-items are shown in a central pane. 'Mental Health Services (All)' is highlighted with a red circle '2'.
- Comparison Program Selection:** Under the 'COMPARISON PROGRAM' tab, 'Ever Active' is selected with a red circle '1'. A 'Download' button is visible.
- Navigation:** At the bottom, there are buttons for 'Previous Step' (Time Period), 'Get Count' (with a red circle '3'), 'Reset Selection', and 'Next Step' (Demographics).

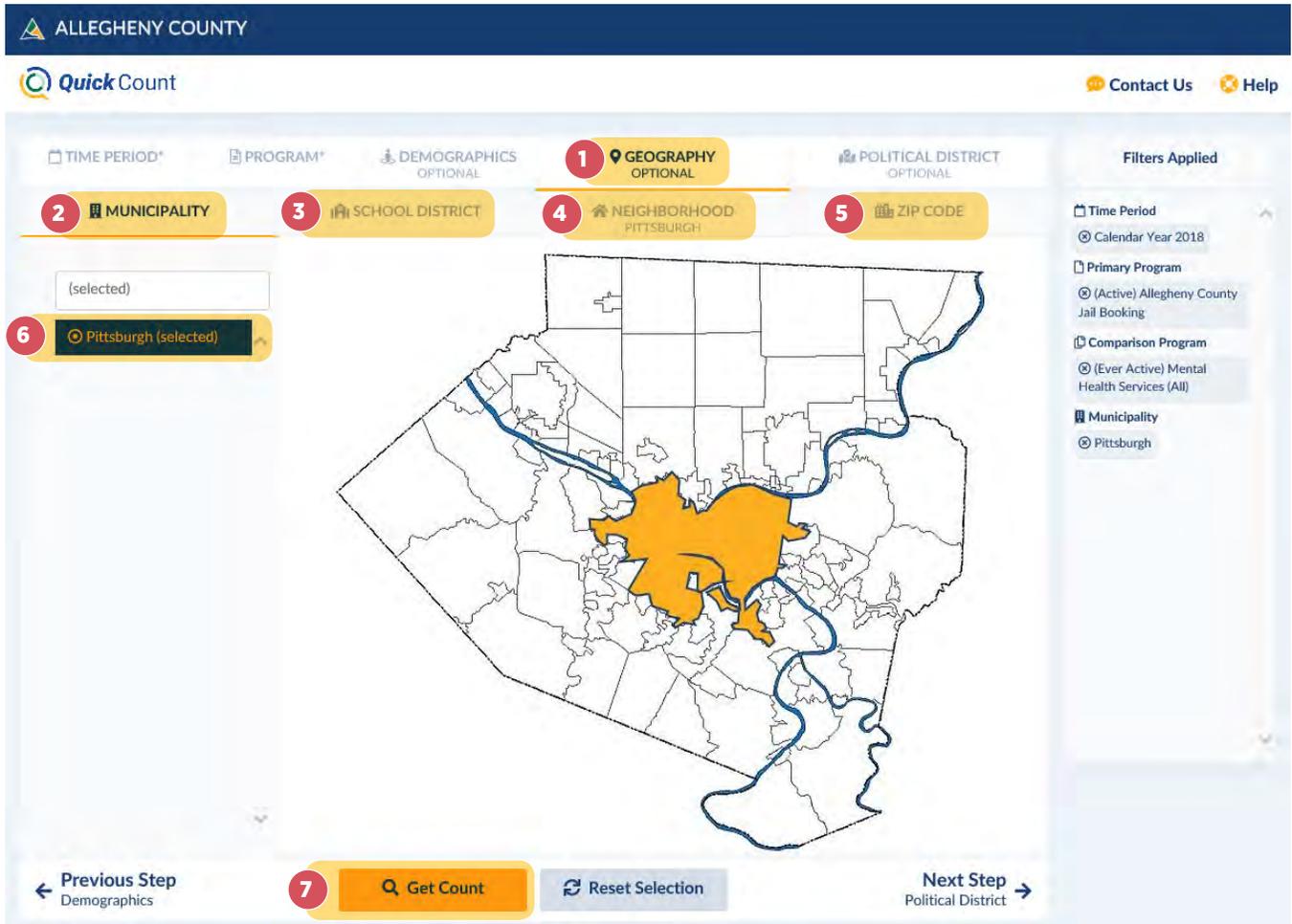
The Results Screen shows the number with an **Active Allegheny County Jail Booking (1)**, with an **Ever Active Mental Health Service (2)**, and the number participating in **both (3) or either (4)** program. The **Venn diagram (5)** provides a visual of the overlap.



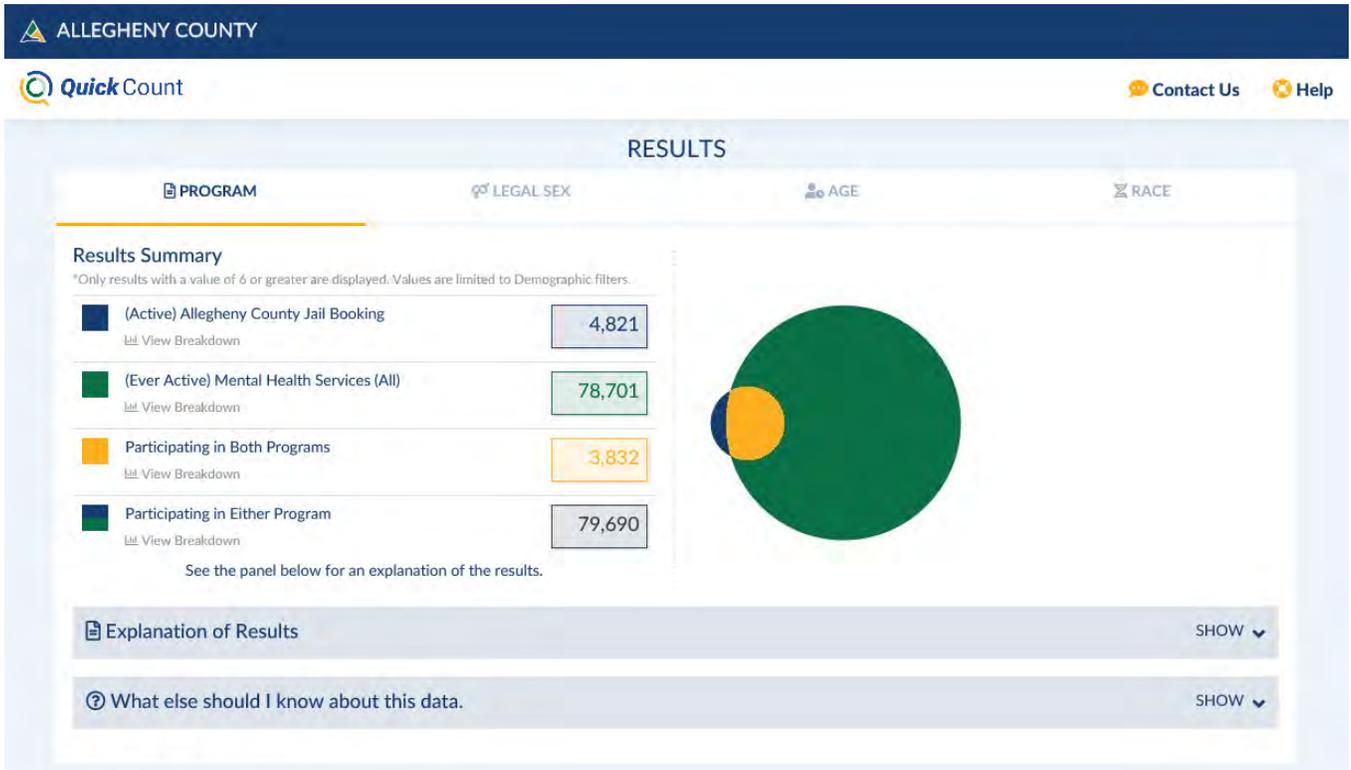
The following view shows the results by **Race (1)**; users can also view results by **Legal Sex (2)** or **Age (3)**.



In the following example, we return to the Search Screen and select the optional **Geography** filter (1), which allows us to choose either **Municipality** (2), **School District** (3), **Neighborhood** (4) or **Zip Code** (5). For demonstration purposes we selected **Municipality / Pittsburgh** (6), which displays a map of the chosen geographical area. Selecting the **Get Count** function (7) will take us to the next screen.



This screen displays counts only for clients residing in Pittsburgh.



From any Results Screen, we can also view an Explanation of the **Results (1)** or learn more about the **data (2)**.

ALLEGHENY COUNTY

Quick Count

[Contact Us](#)
[Help](#)

Results Summary

*Only results with a value of 6 or greater are displayed. Values are limited to Demographic filters.

(Active) Allegheny County Jail Booking <small>View Breakdown</small>	4,821
(Ever Active) Mental Health Services (All) <small>View Breakdown</small>	78,701
Participating in Both Programs <small>View Breakdown</small>	3,832
Participating in Either Program <small>View Breakdown</small>	79,690

See the panel below for an explanation of the results.

1
Explanation of Results HIDE ^

AS OF CALENDAR YEAR 2018:
PRIMARY PROGRAM - There are **4,821** clients who are (Active) Allegheny County Jail Booking **AND** who meet the demographic criteria.
COMPARISON PROGRAM - There are **78,701** clients who are (Ever Active) Mental Health Services (All) **AND** who meet the demographic criteria.
BOTH PROGRAMS - There are **3,832** clients who are **BOTH** (Active) Allegheny County Jail Booking **AND** (Ever Active) Mental Health Services (All) **AND** who meet the demographic criteria.
EITHER PROGRAM - There are **79,690** clients who are **EITHER** (Active) Allegheny County Jail Booking **OR** (Ever Active) Mental Health Services (All) **AND** who meet the demographic criteria.

DEMOGRAPHIC CRITERIA:
MUNICIPALITY is ANY of the following: Pittsburgh;

2
What else should I know about this data. HIDE ^

ALLEGHENY COUNTY JAIL BOOKING

- The count includes those housed at the Allegheny County Jail or in an Alternative Housing (AH) facility. The Allegheny County Jail is the holding facility for the county and also houses people sentenced to incarceration for less than 2 years. AH are secure residential facilities that provides the opportunity for treatment, work release, and other services that enhance rehabilitation and reintegration.
- Data is available from January 2006 to current.
- There is a possible data lag of 1 month for some clients.

MENTAL HEALTH SERVICES (ALL)

- The program only includes residents of Allegheny County.
- The count includes Allegheny County residents who received a mental health service paid by the County or HealthChoices (i.e. Medicaid managed care) on a fee-for-service basis during the selected time period. It does not include services that were contracted and delivered on a program-funded basis or other contractual arrangement.
- Data availability is dependent on the individual sources.
- There can be several (3 or more) months of data lag between the date of service delivery and records reflecting in the data warehouse.

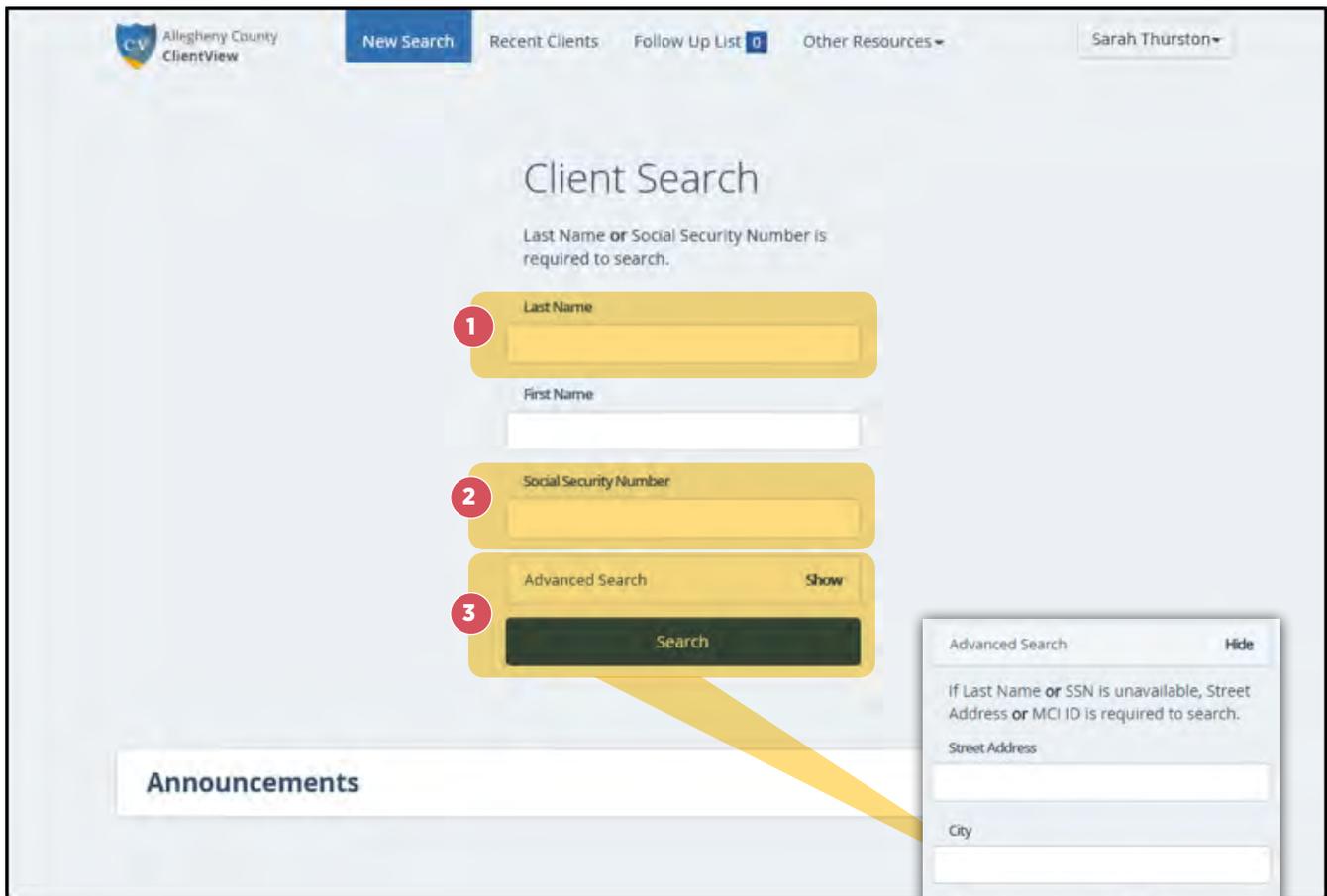
While AlleghenyCountyAnalytics.us and QuickCount are publicly available, the following tools and dashboards — for privacy and confidentiality reasons — were designed for use only by staff and contracted provider agencies.



Client View

Client View provides information about individual clients and their service involvement across all data sources in the Data Warehouse. Demographic information is also available, as well as service plans, assessments and electronic documents. Client View is available only to authorized users within DHS and contracted provider agencies, as well as to individual clients who are able to view their own service data.

Client View Search Screen — Users may search for a client by **name (1)** or **social security number (2)** or click on **advanced search (3)** to search by other criteria.



Client View Demographics and Service Info Screen – the search provides demographic information about the client as well as a list of services in which the client is involved. Users may choose to see the **service timeline view (1)** or select from tabs that will show **documents (2)** related to the client, the client's **service plans and assessments (3)**, or a listing of the **client's workers (4)**.

38 years old, Female

Add to Follow Up List

Demographics and Service Info | eDocuments (2) | Service Plans and Assessments (3) | Client's Workers (4)

Basic Information

SOCIAL SECURITY NUMBER
[Redacted]
[Click here to view full SSN](#)

DATE OF BIRTH
[Redacted]

MCI ID
[Redacted]

MA RECIPIENT NUMBER
[Redacted]

STATE MCI NUMBER
[Redacted]

Generate PIN

Address(es)

ADDRESS
[Redacted]

MUNICIPALITY
[Redacted]

[14 records available](#)

Search this Address

View 911 data

Contact

No Information Available

Other Info

RACE
Unable to Determine

ETHNICITY
No Data

MARITAL STATUS
No Data

LIVING ARRANGEMENT
No Selection

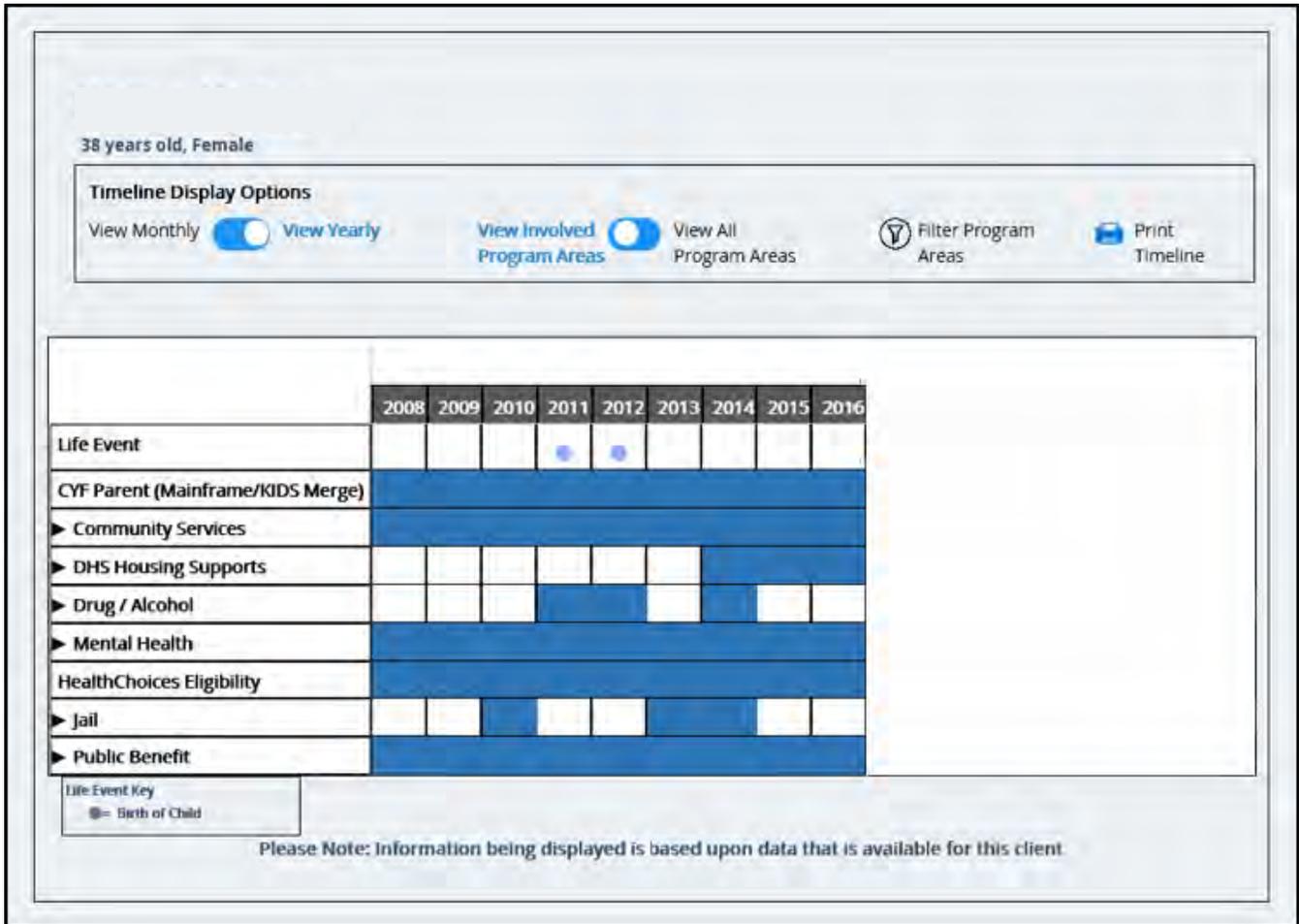
[14 records available](#)

1 Service Involvement All Records [v] TimeLine View

Export to Excel
Showing 1 to 10 of 100 entries

First Service	Last Activity	Program Area	Provider/SCU	Service
10/22/2003		Family Support Center	East Liberty Family Support Center	Talk with FSC Staff about Problems
10/23/2003		Family Support Center	East Liberty Family Support Center	Legal Assistance

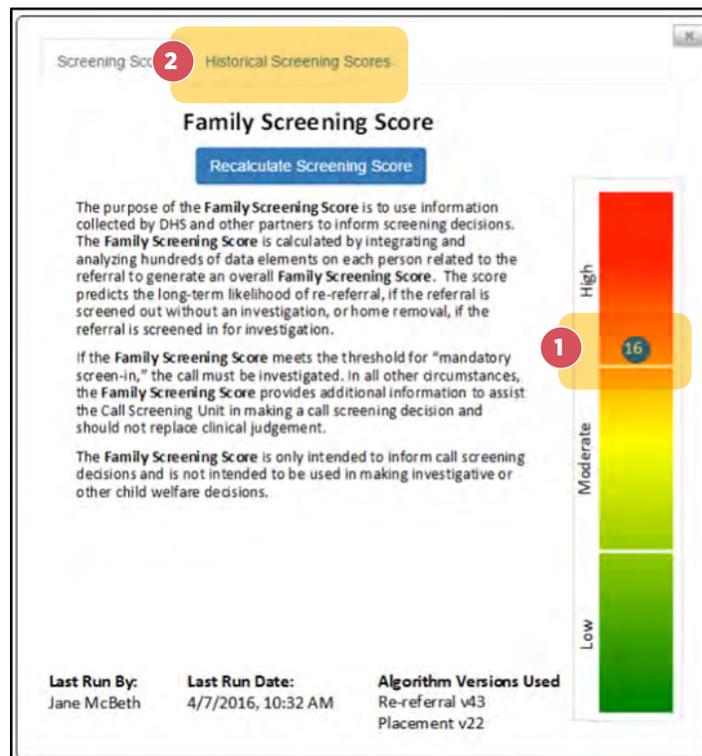
The **Client View Timeline Screen** provides a variety of viewing options. For example, the below screen provides a yearly view of life events (2 children born since 2008) and services in which the individual was involved.



Allegheny Family Screening Tool

The Allegheny Family Screening Tool (AFST) is DHS’s first predictive analytics tool and was designed to support child welfare call screening decisions. Implemented in 2016, the AFST calculates a score by integrating and analyzing hundreds of data elements; the score predicts the long-term likelihood of re-referral, if the referral is screened out without an investigation, or home removal, if the referral is screened in for investigation. The Family Screening Score is intended to provide additional information — in conjunction with clinical judgement — to assist child welfare workers in making a call screening decision. Read more about the AFST at [Developing Predictive Risk Models to Support Child Maltreatment Hotline Screening Decisions](#).

AFST Score View displays the risk score (1), locating it on the “thermometer” to indicate whether the risk is low, moderate or high. The user may also view historical screening scores (2) for a perspective over time.





Outcomes Tool

The Outcomes Tool is designed to help DHS staff monitor the outcomes of various programs or services. That information can be used to measure a program's success by assessing the performance of program participants. At the present time, the Outcomes Tool is operational in the criminal justice, education and child welfare systems.

Outcomes Tool Sign-in Screen

Outcomes Sign In

Username

Password

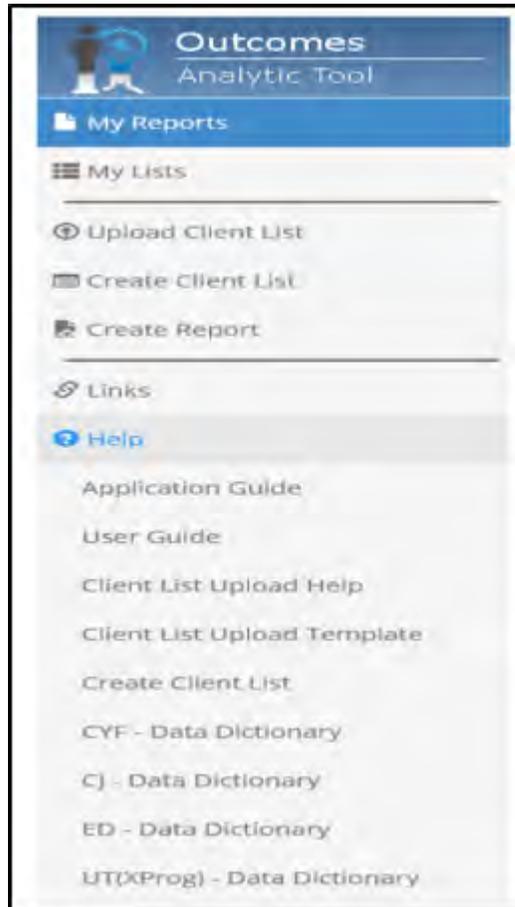
Required.

Sign In

Are you a new user? ([Request Access](#))

Disclaimer: *You are about to enter the private network of Allegheny County. All information on this site is confidential. Access is limited to persons with user identification assigned by Allegheny County. Unauthorized access to this system or unauthorized use of the information contained therein is a violation of County, State and Federal Laws, and will be punished to the full extent of the law.*

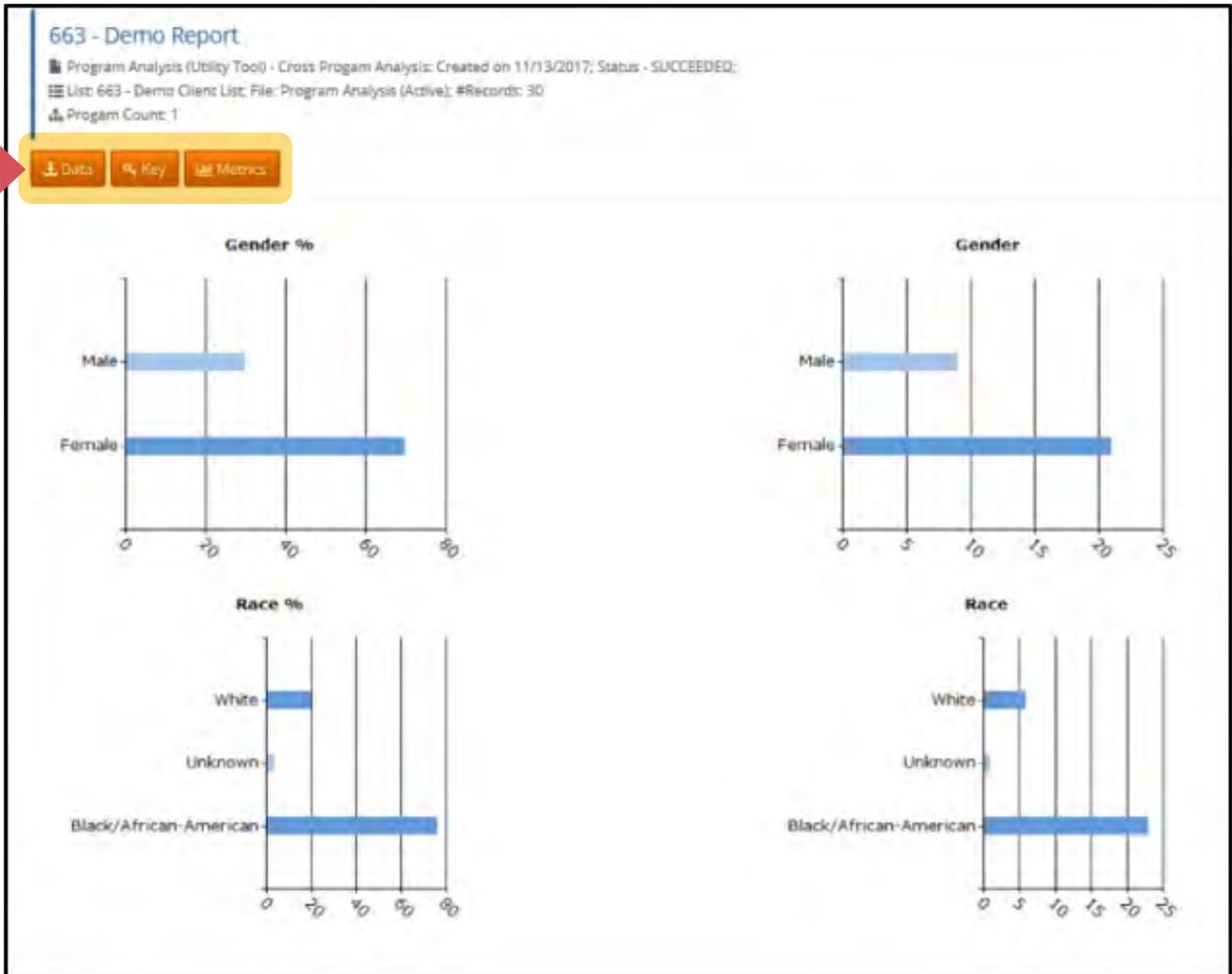
The **Outcomes Tool Navigation Menu** allows a user to choose to view reports and lists that have already been created, create/upload client lists and create new reports. There are also guides, templates and data dictionaries to assist the user.



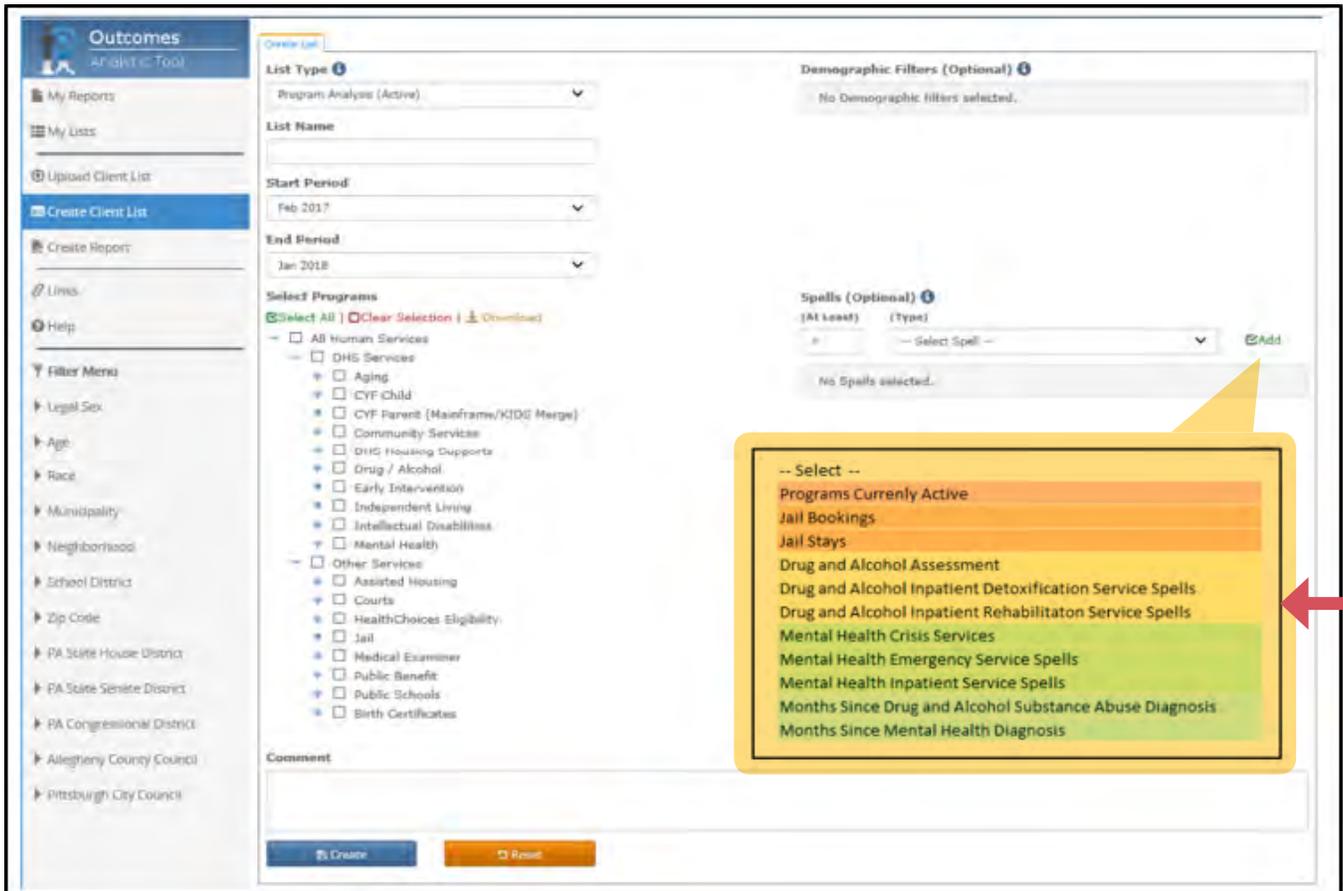
The **Outcomes Tool My Reports Screen** lists all of the user's existing reports and allows for **editing the name of the report, creating charts from the data and deleting the report.**



Below is an example of an **Outcomes Tool Report**, showing the percentage and number of clients involved in a specific program by gender and race. While this screen displays participation information, scrolling down will display additional metrics about program outcomes. By clicking on the orange buttons, users can **view the actual data and additional metrics or download the data into an Excel file.**



The **Outcomes Tool Create List Screen** allows the user to define the parameters of a new list and to use additional **custom filters** to select on multiple criteria. For example, a user may select a cohort of offenders in the Allegheny County Jail for a specific time period and then use custom filters to narrow down that list to members of the cohort who also had an episode of homelessness and an episode of mental health treatment within six months prior to their Jail stay.



Alerts

Recognizing that there are a number of key events in a family's life that may have an impact on the safety of the home environment, we designed an approach, leveraging the Data Warehouse, to alert DHS staff and providers when any one of these key events occurs. The alerts show up when a user logs into a case management or workflow management application; they may also be texted or emailed to the user. Examples of events that may trigger an alert are birth of a child, charges filed against a parent or client, and school truancy. Alerts are categorized as immediate, urgent, or informational and, whenever available, links are provided to documents that contain more information about the alert.

Reports Portal

The reports portal provides one convenient location for viewing automated reports and dashboards in areas such as Basic Needs, Children and Families, Disabilities, Individual and Community Health, Older Adults, Safe Measures and Administration.

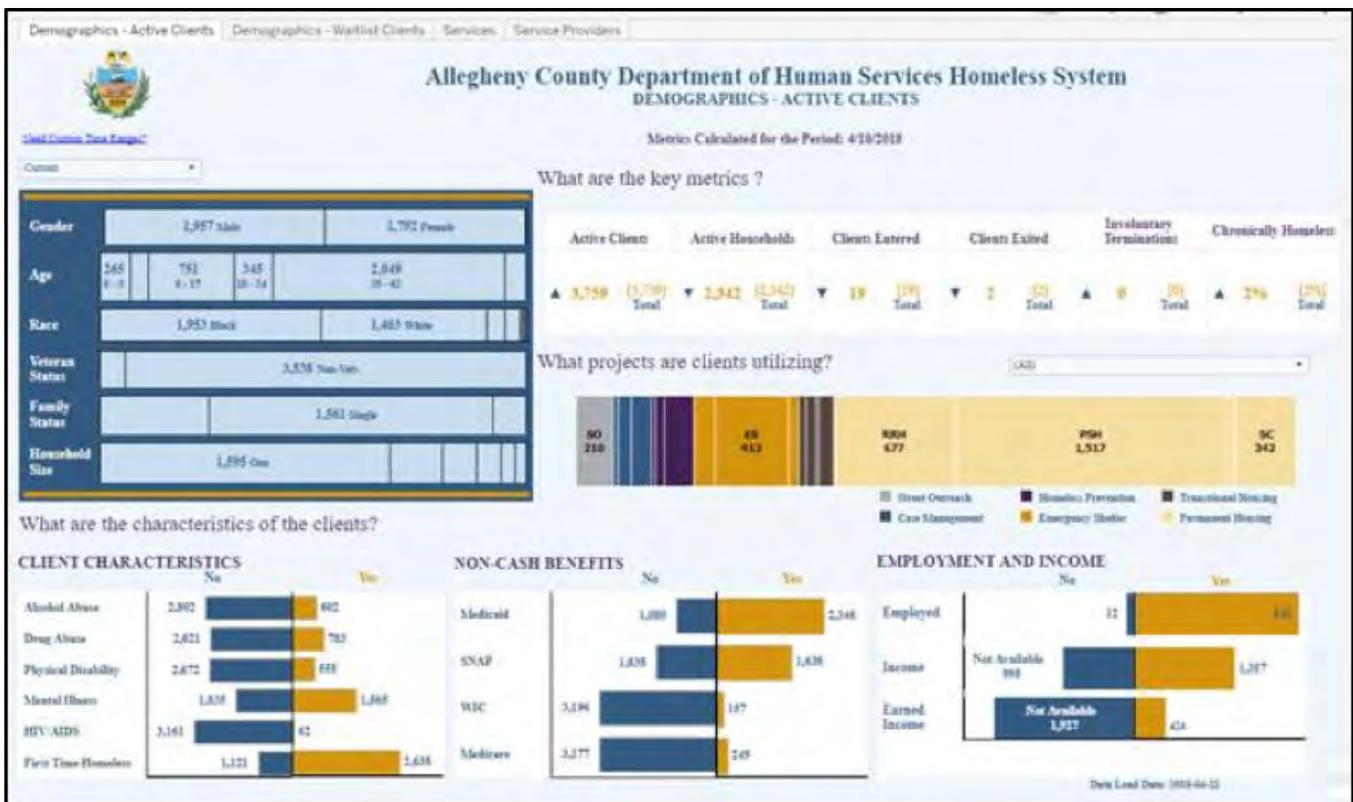
Reports Portal Landing Page — in the screen below, the user has selected **Child Welfare (2)** under **Children and Families (1)** and a report about **referrals by allegation (3)**.

The screenshot displays the Reports Portal interface for the Department of Human Services, Allegheny County, Pennsylvania. The header includes the department name and a welcome message for user Sunil Pal. The navigation menu is highlighted with a red circle 1, showing 'Children and Families' selected. Below the menu, a grid of icons represents various service areas. A red circle 2 highlights the 'Child Welfare' icon. A 'Select Report' dropdown menu is open, showing a list of reports. A red circle 3 highlights the 'Referral by Allegation' report under the 'WORKLOAD' category. The interface also includes a search bar, a help/logout link, and a footer with social media icons.

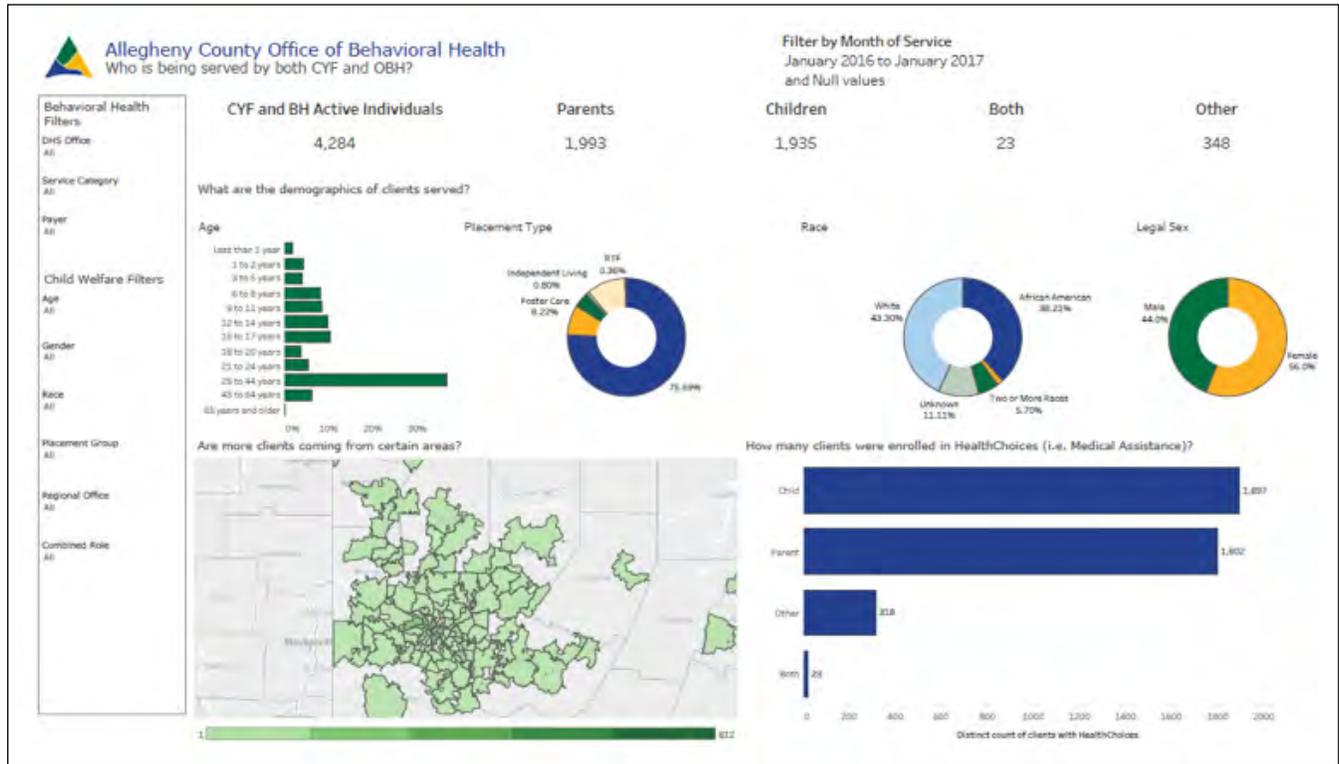
Dashboards

More than 30 dashboards are available on the Reports Portal and on AlleghenyCountyAnalytics.us. Dashboards are designed to support internal and external planning and decision-making, and allow the viewer to view demographic, service and utilization information. Dashboards can be manipulated to specify client demographics, service/diagnosis, year and cost as well as comparisons and trends over time. Following are two examples of dashboards: Allegheny County Department of Human Services' Homeless System and Behavioral Health/Child Welfare.

The Homeless System dashboard provides detailed information about one system. Users can view current or historical information about active clients, clients on the waiting list, services and/or service providers.



The Behavioral Health/Child Welfare dashboard provides integrated information about two systems: behavioral health and child welfare. It allows the user to see who is receiving services from both systems, by month/year, payer, service category and demographics.



WHAT'S NEXT?

We are building predictive risk models and interventions designed to prevent child abuse and neglect as well as models to triage calls for homeless services and to prevent homelessness. We are also pioneering the mining and use of unstructured administrative data to support case work and quality assurance and advancing “next generation” nudging projects.

TO LEARN MORE ABOUT THE DATA WAREHOUSE

The DHS Data Warehouse has been studied extensively, written about in a number of publications and recognized for its innovation in information technology. A selection of articles that appeared in national publications, as well as a podcast and a DHS-presented paper about the Data Warehouse, are available below.

[Software for the Social Good: One County's Model Warehouse](#)

Government Technology, December 1, 2017

[How Allegheny County's Data Warehouse is improving human services through integrated data](#)

GovInnovator podcast, February 17, 2016

[Data Warehouses: Using New Technology to Improve Human Services Administration](#)

Re-issue of June 11 article below

Government Technology, June 12, 2014

[Allegheny County, Pennsylvania: Department of Human Services' Data Warehouse](#)

Data-Smart City Solutions, Harvard University, June 11, 2014

[Gaining Ground: A Guide to Facilitating Technology Innovation in Human Services](#)

Data-Smart City Solutions, Harvard University, May 28, 2014

[Allegheny County's Data Warehouse: Leveraging Data to Enhance Human Service Programs and Policies](#)

University of Pennsylvania, May 2014

[Human Services: Sustained and Coordinated Efforts Could Facilitate Data-Sharing While Protecting Privacy](#)

U.S. Government Accountability Office, February 2013.

APPENDIX: DATA WAREHOUSE SOURCES

1. **Aging** — publicly-funded services and supports provided to individuals age 60 and above
2. **Substance Use** — publicly-funded services and supports designed to treat substance use disorders
3. **Mental Health** — publicly-funded services and supports for individuals with a mental health diagnosis
4. **Family Support Centers** — publicly-funded services provided to children (age 3 and under) and their families through any of Allegheny County's family support centers
5. **Homeless and Housing Supports** — individuals or families receiving housing and supportive services provided by DHS and DHS-contracted providers due to a housing crisis. Services include housing assistance, case management, prevention and outreach.
6. **Allegheny County Jail Collaborative** — data on services and supports for offenders, including the Reentry program, designed to prevent recidivism and improve community safety, developed through a partnership of County agencies, the Courts and community organizations
7. **Child Welfare** — children and youth 18 years old or younger, and their families, associated with a child welfare allegation, investigation, or case
8. **Public Housing** — low-income individuals receiving housing assistance through the Housing Authority of the City of Pittsburgh and the Allegheny County Housing Authority
9. **Allegheny County Jail** — individuals who are admitted to the Allegheny County Jail and assigned a jail bed.
10. **Public Schools** — children and youth enrolled in kindergarten through twelfth grade in one of the DHS data-sharing partner school districts:
 - a. Pittsburgh Public School District
 - b. Clairton City School District
 - c. Duquesne School District
 - d. Penn Hills School District
 - e. Woodland Hills School District
 - f. Propel Charter Schools
11. **Adult Probation** — data on cases, charges, sentences, violations and detainers for adults supervised by Allegheny County Adult Probation
12. **Birth records** — birth certificate records of births that occurred among mothers who resided in Allegheny County at the time of delivery
13. **Courts** — information on court cases — such as filings, charges, dispositions, and sentences — collected by Magisterial District Courts and the Court of Common Pleas in Allegheny County.

14. **Public Benefits** — individuals who have received services from Allegheny County DHS and who are also receiving public benefits from the Pennsylvania Department of Human Services (PA DHS). PA DHS public benefits include cash assistance, the Supplemental Nutrition Assistance Program (SNAP), help with childcare, health care coverage, home heating assistance (LIHEAP), school meals, Select Plan for Women, and long-term living services.
15. **Intellectual Disability** — publicly-funded services provided to individuals over the age of 18 with intellectual disabilities
16. **Early Childhood** — infants, toddlers and young children up to three years of age who are receiving Early Intervention (EI) services. EI provides developmental and social emotional screenings, supports and services for young children who have a developmental delay or are at risk for developmental delay.
17. **Juvenile Justice** — data on allegations, charges, disposition and placements, as well as assessments, for youth under the age of 18 who are supervised by Allegheny County Juvenile Probation
18. **Autopsied Deaths** — individuals who died in the County and whose deaths were recorded in autopsy reports by the Allegheny County Medical Examiner's Office. The Medical Examiner investigates cases of homicide, suicide, overdose, accidental deaths and natural deaths that are sudden, unexpected or medically unattended.
19. **Independent Living** — youth ages 14 to 24 who had at least 30 days of placement services with child welfare on or after their 14th birthday and are receiving publicly-funded services designed to prepare them for living independently as adults
20. **Labor and Industry** — employment, earnings and unemployment insurance benefits information
21. **Workforce Training Programs** — Partner4Work (formerly known as the 3 Rivers Workforce Investment Board) shares job search assistance, career counseling and vocational training data from Pennsylvania's Commonwealth Workforce Development System

APPENDIX: INTEGRATING DATA

Each new data source added to the Data Warehouse involves a process that requires the development of trust and a shared vision as well as coordinating details such as the form in which data will be provided. Most partners send information weekly, and it is loaded into the Data Warehouse through an Extract, Transform and Load (ETL) Platform. The ETL is set up to accept data in different formats and load them into the central data area. At DHS, a team of programmers use IBM DataStage to create each ETL, and Oracle database management software to store it. Setting up the ETL is the most complex function involved; it accounts for about 80 percent of the technological work of the Data Warehouse.

Once client data are loaded into the Data Warehouse, each client is assigned a unique identifying number. In this way, all client-specific information can be pulled together to provide a comprehensive picture of client needs. It also ensures that individuals are not counted more than once.

The Data Warehouse requires ongoing data quality management. This is accomplished by an administrator who coordinates data, a support team that loads information, and an operational team that does weekly maintenance and performs data archiving.

Data Warehouse Composition

CLIENT DEMOGRAPHICS	PROVIDER INFORMATION	SERVICE INFORMATION	FISCAL INFORMATION
<ul style="list-style-type: none"> • Name • SSN • Gender • DOB • Address • Race • Marital Status • Education/Employment • Living Arrangement 	<ul style="list-style-type: none"> • Services and Specialized Services Offered • Location of Services 	<ul style="list-style-type: none"> • Service Type • Service Location • Clients Served 	<ul style="list-style-type: none"> • Units of Service • Cost of Services

COUNTY OF



ALLEGHENY

RICH FITZGERALD
COUNTY EXECUTIVE

From: Marc Cherna, Director, Department of Human Services

Date: January 27, 2015

To: Allegheny County Department of Human Services (DHS)-Contracted Service Providers

Subject: Sharing of Client Information for Service Coordination and Quality Improvement Activities

For some time now, the Allegheny County Department of Human Services (DHS) has been a vocal proponent of data and information sharing to support the quality and coordination of services provided to Allegheny County residents. In pursuit of this goal, DHS undertook several initiatives during 2014 to make the information that DHS collects available to both service providers and clients.

This memo is designed to inform you of these initiatives, our efforts to better understand the regulations governing the sharing of client information, and how that understanding has informed the development of our approach to data sharing.

Background

As an oversight and coordination entity, DHS takes the care and confidentiality of its clients seriously.

Thus, our goal is to achieve an appropriate and respectful balance that ensures quality care and services through collaboration and coordination, supported by appropriate use and sharing of client data. Under the federal Health Insurance Portability and Accountability Act (HIPAA), DHS is a covered component of Allegheny County, which means that we must comply with HIPAA's privacy and security rules with respect to any client information we receive.

As part of our due diligence concerning data confidentiality, DHS hired an independent expert, John Petrila, to examine how our use of data complies with federal and state laws on the privacy and security of individually identifiable health information. Mr. Petrila is an attorney, a professor and the Chair of the Department of Mental Health Law & Policy at the Florida Mental Health Institute, University of South Florida. With his assistance, we were able to develop a data-sharing approach that is in keeping with the letter and the spirit of the applicable laws.

Philosophy and Legal Approach

- **DHS believes fundamentally that sharing protected information is critical to the provision of care.** The appropriate sharing of client information promotes good care, and is essential to the continuity and overall quality of care provided to DHS clients.

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- **DHS defines itself as a covered component under the privacy rule and security rule of HIPAA.** DHS defines itself as a covered component for all program areas and business operations, requiring that all of those areas comply with the HIPAA privacy and security regulations. Similarly, all providers are required to comply with HIPAA regulations (and other applicable state and federal regulations) either directly or under the terms of their contract as a DHS-contracted provider of services.
- **DHS has a right to clients' protected information in its role as contracting entity.** By virtue of its role as a government service coordination and oversight entity – one that contracts and pays for services and must ensure the quality, coordination, and continuity of those services – DHS has a right to request and receive protected data about the clients served by contracted service providers. This includes (as relevant to the contracted service) information about a client's physical health, mental health, and substance abuse treatment.
- **As a government service coordination and oversight entity, DHS may re-disclose protected information for the purposes of treatment and treatment coordination.** Both the Pennsylvania Mental Health (MH) Procedures Act and HIPAA allow for the unconsented release of protected client information for purposes of treatment and treatment coordination (state and federal substance abuse laws are excluded in this discussion about sharing for treatment purposes).
- **It is not always feasible to obtain consent for re-disclosure of client information in a way that facilitates expedient treatment and coordination of care.** Although DHS supports and prefers obtaining direct client consent for the sharing of protected client information for these purposes, when possible, obtaining timely direct consent is not always reasonable and may create a barrier to DHS's standards for quality client care and service coordination. Neither HIPAA nor the MH Procedures Act requires consent for the sharing of information for treatment purposes. However, both permit the practice, so consents may be used. DHS encourages as a minimum standard the use of Privacy Notices as a mechanism for contracted providers to inform clients about the ways in which their information may be shared for the purposes of treatment.
- **DHS interprets the law to mean that DHS is responsible for maintaining the privacy and confidentiality of protected client information once the data is entered, transmitted or otherwise stored in our system.** The service provider maintains responsibility for the security and confidentiality of any paper or electronic data stored or retained in their files and information systems, as well as protecting from misuse any DHS system logins and security access privileges granted to them. However, the provider is not liable for any subsequent sharing or use of the data by DHS, once the data is in DHS's possession.

We believe that the above-described approach promotes quality client care while respecting each client's privacy and confidentiality; we further believe that this approach complies with the legal requirements of federal and state laws. It is important to note that these laws were not designed to prohibit appropriate sharing of data. In fact, they recognize the crucial role that appropriate sharing of information plays in providing quality care. HIPAA specifically authorizes the release of protected health

information (PHI) without consent, for the purposes of treatment, payment and operations. This authorization takes into account the reality that an attempt to obtain a separate, individual consent for each of these purposes is a barrier to providing effective care.

The MH Procedures Act also allows for the sharing of protected information in the interest of providing clients with the best care possible. The section of the act regarding the nonconsensual release of client information (55 Pa. Code § 5100.32) specifically authorizes the release of information “to those actively involved in treating the individual.” Furthermore, protected client information may be shared with “the administrator” under this section. In Pennsylvania, administrator duties are shared between the PA Department of Human Services (formerly the Department of Public Welfare) at the Commonwealth level and the agency responsible for mental health services in each county.

Psychotherapy notes are excluded from this discussion. Such information is outside the scope of what DHS needs to ensure the effective provision, coordination and continuity of quality care, and neither HIPAA nor the MH Procedures Act authorizes the sharing of these notes.

Client View and the Data Warehouse

In keeping with the philosophy and legal approach explained above, and as part of DHS’s ongoing effort to improve care for Allegheny County residents by supporting the collection and provision of a more comprehensive human service client record, Allegheny County has begun developing a secure, externally-accessible tool, Client View, to give contracted providers access to client data available in the DHS Data Warehouse.

This **Data Warehouse**, created and maintained by DHS, contains person-specific information from internal and external data sources. The Data Warehouse provides information regarding the service activity of any of these individuals across the multiple programmatic service areas administered by DHS (e.g., child welfare, mental health, drug and alcohol, homelessness, aging, intellectual disability and other community services) as well as additional individual client-level information provided to DHS by external sources (e.g., Public Housing Authorities, the Pennsylvania Department of Human Services and the Allegheny County Jail).

Client View will allow users to view data in the Data Warehouse on a client-by-client basis for those individuals whom they currently serve. Users can search by client demographics such as first name, last name, social security number, date of birth, Master Client Index ID, and address. The application will be able to retrieve basic demographic information, service coordination and services rendered activity, child welfare and juvenile probation out-of-home placement information, services plans, and assessments.

This capability was developed, in part, to address feedback from participating providers who indicated that this kind of information, which was not always readily available to them, would greatly improve their ability to serve clients if made available. Of course, access to some information (e.g., drug and alcohol data) must be limited, but DHS believes that most information can be shared and that appropriate sharing of that information is the core intent of laws such as HIPAA.

DHS also believes that clients should be able to view and access their own personal information collected by DHS, so in the third phase of Client View development, we will create a client accessible portal. Through this portal, clients and select family members will be able to view their own service information and use it for their own self-directed case management.

Conclusion

DHS takes its role as a government coordination and oversight agency seriously. Requesting and receiving information about the clients served by contracted providers is a critical part of our mission. It is not only our right, but our responsibility, to collect protected client information for this purpose, and to share it in ways that support quality, transparency, and coordination of care.

We are readily available to address any specific questions about this document or the described data requests. Thank you for your ongoing cooperation and commitment to providing excellent human services to the residents of Allegheny County.