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When an individual is exhibiting symptoms of mental illness that are unmanageable and that may result in danger to that individual or to others, it might be necessary to hospitalize that individual for his or her own protection. This is known as an involuntary commitment, and the process of petitioning for this involuntary, emergency evaluation and treatment is specified in Section 302 of the Mental Health Procedures Act. For this reason, an involuntary commitment is often referred to as a "302." In Allegheny County, petitions for involuntary commitment are managed and authorized by the Department of Human Services (DHS), through its Mental Health Information, Referral and Emergency Services (IRES) 24-hour phone line. A flow chart of the involuntary commitment process is provided in the Appendix on page 12.

The purpose of this report is to present an analysis of all involuntary commitment petitions received by DHS from 2002 through 2013. DATA ANALYSIS Qitang Wang, Erin Dalton, Megan Good and Eric Hulsey

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#### Allegheny County Department of Human Services

This report was prepared by the Office of Data Analysis, Research and Evaluation (DARE), an office within the Allegheny County Department of Human Services (DHS) that supports policy development, quality improvement, planning and decision-making through research, analysis and engagement. DARE reports are available for viewing and download at **www.alleghenycounty.us/Human-Services/ Resources/Research-and-Reports.aspx**. For more information about this publication or about DHS's research agenda, please email **dhs-research**@ **alleghenycounty.us**.

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# **INVOLUNTARY COMMITMENT**

An involuntary commitment is an application for emergency evaluation and treatment for a person who is considered to be a danger to himself/herself or others due to symptoms of a mental illness. Section 302 of the Mental Health Procedures Act of 1976 (as amended in 1978) describes regulations related to such an incident. An involuntary commitment is based upon the following criteria:

# **Danger to Self**

- An individual is unable to satisfy his/her need for nourishment, personal or medical care, shelter, self-protection or safety without the care, supervision and assistance of others, and, without intervention, death or serious physical harm will occur within 30 days OR
- An individual has attempted suicide or made threats to do so AND committed acts in furtherance of the threats OR
- An individual has mutilated himself/herself or made threats to do so AND committed acts in furtherance of the threats

## **Danger to Others**

Within the previous 30 days, an individual has inflicted or attempted to inflict serious bodily harm on another or has threatened serious bodily harm AND has committed acts in furtherance of the threat to commit harm to another

An application is made by a petitioner, who may be anyone with firsthand knowledge of the dangerous conduct. Authorization is required from IRES prior to initiation of a petition, and this may happen in a number of ways:

A petitioner may contact DHS for authorization prior to initiation of a petition; DHS staff will then assist the person in the next steps, which

might include contacting the police, re:solve Crisis Network or an ambulance. DHS can be reached at 412-350-4457.

- ٠ If the individual is already at a hospital or hospital emergency room, hospital staff will coordinate the process with the DHS representative.
- A police officer or doctor has the authority to • initiate a petition without prior authorization from DHS.

While anyone can file a petition, only people who fall into one of the following roles may authorize the petition: DHS authorized personnel, police officer or physician.

Once a petition is authorized, the individual will be taken to an emergency room (unless already at the emergency room) by police or ambulance for an evaluation by a physician to determine the need for involuntary psychiatric inpatient treatment. If admitted, the individual may be kept no longer than 120 hours unless a petition for a 303, Extended Emergency Involuntary Treatment, is filed by the hospital.

The petitioner is required to testify regarding the observed dangerous conduct at a 303 hearing.

A diagram illustrating the process once a petition is initiated is included in the Appendix on page 12.

### **DATA SOURCES AND LIMITATIONS**

### Sources

**IRES Data System:** When a petition is filed through DHS, data are recorded in the IRES Data System. Additionally, police- and physician-filed petitions data reported to DHS are recorded in the IRES Data System.

**DHS Data Warehouse:** Information about human service involvement was accessed through the DHS Data Warehouse, a central repository of human services data that allows DHS to track and report client demographics and service data across its program offices and beyond. The Data Warehouse contains approximately 1.25 billion records for more than one million distinct clients. It contains data from 29 data sources (internal and external to DHS); in addition to DHS services, these sources include, among others, the Allegheny County and City of Pittsburgh Housing Authorities, PA Department of Human Services, school districts and the criminal justice system.

U.S. Census: All rates were calculated using 2010 Census data.

### Limitations

Because not all petitions initiated by physicians and/or police officers were reported to DHS, this brief does not reflect the total of all petitions initiated from 2002 through 2013. The brief also does not include information about the outcome of petitions filed (overturned, upheld or converted to voluntary admissions). However, a new information system, which allows for the collection of outcome information, was implemented in 2014. DHS anticipates that the new information system will also result in increased reporting by physicians and police officers.

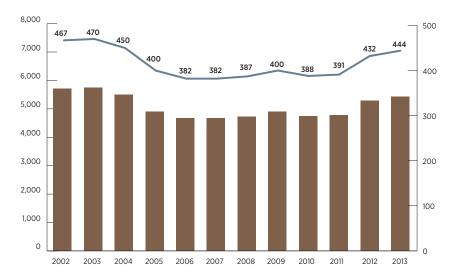
Matching client records in the Data Warehouse requires good identifiers, which are not always available. Of the 37,750 individuals for whom a petition was initiated from 2002 through 2013, 33,539 (89%) could be matched with a client record in the Data Warehouse. Thus, analysis of the utilization of human services was possible only for those 33,539 individuals. Additionally, because data on human service involvement were only available for individuals receiving publicly-funded services, clients with private insurance are not included in the analysis of human services utilization.

Finally, a valid residence address was not always available in the data. Therefore, the analysis of residence at the time of the petition was conducted only on petitions filed in 2013, a year in which 66 percent of the 5,428 petitions filed had a valid residence address at the time of petition.

### **PETITIONS FILED**

From 2002 through 2013, 61,067 petitions were filed on 37,750 individuals. Figure 1 shows the number and rate of petitions initiated each year from 2002 through 2013. Petitions declined slightly from a peak in 2003 until 2006 and remained stable until 2012, at which time they began to increase. Monthly trends for each year were different, suggesting the absence of a seasonality effect.

#### FIGURE 1: Number and Rate of Petitions Initiated, 2002 through 2013



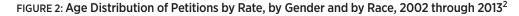
Number of Petitions — Rate Per 100,000 Population

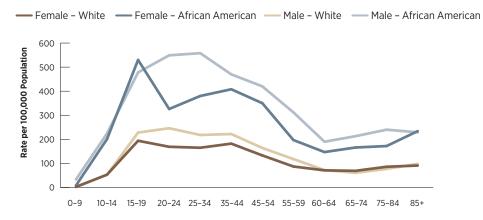
Figure 2 shows the rate trend of petitions filed per 100,000 people, by gender and age group, for African American and white Allegheny County residents. Petitions begin earlier and stay consistently at a higher rate for African Americans at every age, until age 85. With few exceptions, men have higher rates of petitions than women of the same race. In general, age distribution is consistent with the known prevalence of first psychotic episodes. According to the *Diagnostic* and Statistical Manual of Mental Disorders, the peak age at onset for the first psychotic episode is 20 through 25 for men and 26 and up for women.<sup>1</sup> Of particular note is the peak, for both white and African American girls, around age 15.

Because children under the age of 14 are typically admitted voluntarily by a parent or guardian, we would expect few petitions prior to that age. However, as seen in Figure 2, petitions are being filed on African American boys and girls at quite young ages.

<sup>1</sup> American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders (5th Edition). Washington, D.C.

 <sup>2</sup> Rate is calculated based on 2010 U.S. Census data.
Because of inconsistencies in data quality, this chart includes only white and African
American individuals. Clients above age 90 are excluded, due to the low number.

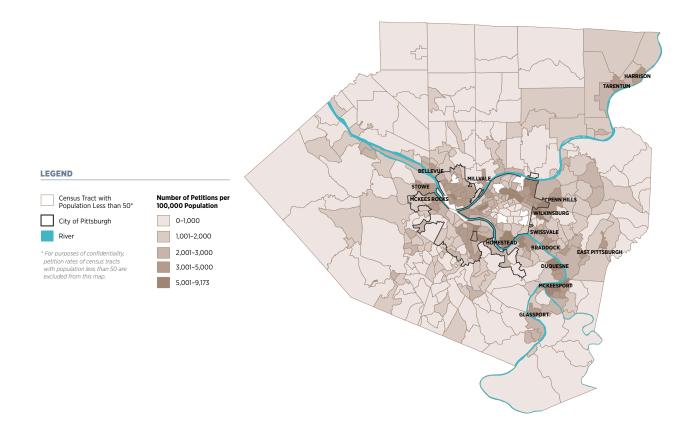


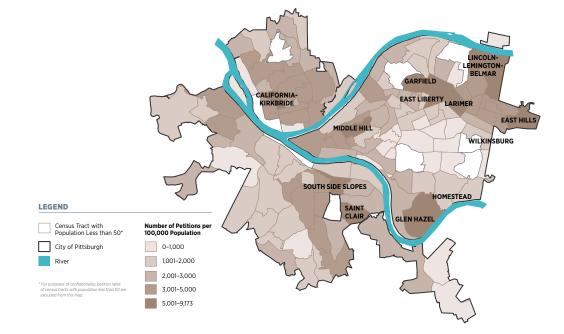


# **RESIDENCE AT TIME OF PETITION**

An analysis of petitions filed, by the individual's address at the time of the filing, was limited to the 66 percent of 2013 petitions (total of 5,428) for which residence data were available. The following map presents the petition rate per 100,000 population by residence. The highest rates were in neighborhoods highlighted in the map below.

## FIGURE 3: Involuntary Petition Rate by Census Tract, Allegheny County, 2002 through 2013



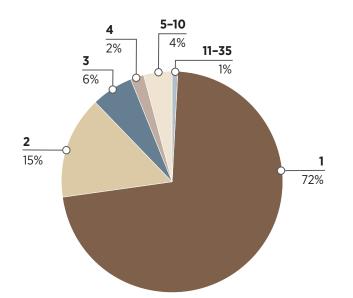


# FIGURE 4: Involuntary Petition Rate by Census Tract, City of Pittsburgh, 2002 through 2013

### **INDIVIDUALS WITH MULTIPLE PETITIONS**

**Figure 5** provides information on multiple petitions filed on the same individual. The data were analyzed to determine how many individuals had more than one petition. Over the study period, there were 37,750 distinct individuals with at least one petition filed; 72 percent (27,189) had a single petition filed, and 28 percent had multiple petitions filed. Among those with multiple petitions, most had two or three. Five percent of the study population had five or more petitions.

# FIGURE 5: Number Distribution of Petitions Filed, 2002 through 2013



- <sup>3</sup> This finding should not be interpreted to mean that younger people are more likely to have a petition filed: rather, younger members of the cohort during the time period studied had sufficient time to have multiple petitions filed.
- <sup>4</sup> Z test is applied here to test whether there is significant race and gender difference in the percentage of clients with multiple petitions.

$$Z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}(1 - \hat{p})\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

where 
$$\hat{p} = rac{n_1 \hat{p}_1 - n_2 \hat{p}_2}{n_1 + n_2}$$

<sup>5</sup> 2013 was selected as a representative year because program staff suggested that more recent data would better reflect current conditions. Additionally, a review of the time period indicated little variation between previous years.

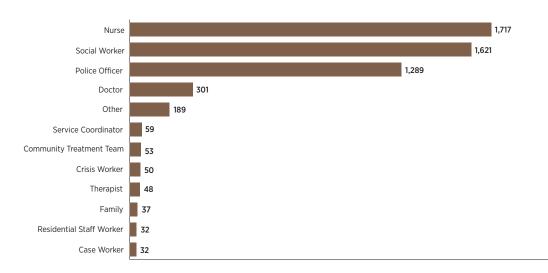
The data show that individuals with multiple petitions tended to be younger at the time of their first petition.<sup>3</sup> Among the clients associated with petitions, the percentage of African American clients with multiple petitions was significantly higher than that of white clients (37% of African American clients had more than one petition, and the percentage of white clients was 33%). while there was no significant gender difference.<sup>4</sup> An analysis was also conducted to determine whether there was a difference in service utilization among clients with different number of petitions. Clients with more petitions were more likely to receive mental health services both before and after the petition.

# **RELATIONSHIP OF PETITIONER TO SUBJECT OF PETITION**

A petitioner must have firsthand knowledge of the individual's conduct and be willing to go to an emergency room or DHS, or work with a Community Provider such as re:solve Crisis Network to sign the necessary forms. The petitioner may also be required to testify at a hearing regarding the observed conduct.

When a petition is initiated, DHS staff documents the relationship of the petitioner to the subject of the petition. Figure 6 displays this relationship by the number of petitions in 2013<sup>5</sup>: a large proportion of the petitions were initiated by nurses (32%), social workers (30%) and police officers (24%).

### FIGURE 6: Number of Petitions Filed, by Relationship of Petitioner, 2013 (N = 5,428)



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## **AUTHORIZATIONS FOLLOWING PETITION FILING**

A petition must be authorized in order for the individual to be evaluated by a physician. Based on the statement from a responsible petitioner who has personally witnessed the behavior, DHS personnel may issue a legal authorization, otherwise known as a warrant. Physicians and police officers who have witnessed the behavior may also be an authorizing agent of a petition.<sup>6</sup> Authorization decisions are based upon an evaluation of the person's danger to self or others. Upon authorization of the petition, the individual will undergo an involuntary evaluation.

For all petitions filed from 2002 through 2013, 90 percent were authorized, of which 99 percent have documentation about who authorized them. DHS personnel authorized the majority of evaluations (72%), followed by police officers (14%) and physicians (13%).<sup>7</sup>

## **EVALUATIONS BY FACILITY**

Once a petition is authorized, the individual will be evaluated by a physician to determine the need for involuntary commitment for inpatient psychiatric treatment (if not already at the hospital, the individual will typically be transported by either police or ambulance). An involuntary commitment is limited to 120 hours unless a petition for Extended Emergency Involuntary Treatment (303) is filed by the hospital.

While the total number of petitions has remained fairly stable, the proportion of evaluations completed at each facility has fluctuated over time. **Table 2** lists the number of people evaluated at each facility by year, for facilities which completed more than 50 evaluations from 2002 through 2013. Western Psychiatric Institute and Clinic consistently completed the most evaluations, with an increase in volume over time. Other facilities where evaluations increased include Allegheny Valley and Mercy hospitals. Much of the increase in these facilities is due to additional demand resulting from closure of facilities and/or facilities that no longer conduct evaluations.<sup>8</sup>

<sup>6</sup> The number of petitions authorized by hospitals and police officers may be underreported because the data is from the county database. In order for those authorizations to have been documented, the hospitals and police officers must have notified DHS that a petition was authorized. Although this has become regular practice, it is expected that some authorizations were not reported/recorded.

<sup>7</sup> Note that petitions authorized by police officers and physicians are underrepresented in this chart because of the missing data.

<sup>8</sup> Chart is limited to facilities evaluating over 50 individuals for involuntary commitment from 2002 through 2013. Children's Hospital, Mayview Forensic Center, Mayview State Hospital, Southwood, State Correctional Institute and Torrence State Hospital evaluated fewer than 50 individuals each from 2002 to 2013. A number of hospitals closed or stopped conducting evaluations during the study period, including Allegheny General Hospital, Braddock Medical Center, Mercy North Shore Hospital, Presbyterian University Hospital, Southside Hospital, St. Francis Hospital and West Penn Hospital.

FACILITY	TOTAL	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TREND
WPIC	17,654	1,382	1,563	1,492	1,389	1,346	1,402	1,391	1,345	1,473	1,457	1,659	1,755	$\sim$
Mercy Hospital	4,053	126	122	129	129	268	350	297	391	468	455	596	722	
Forbes Regional Health Center	4,049	370	396	405	325	357	361	371	328	298	257	299	282	$\mathcal{V}$
UPMC McKeesport Hospital	3,673	325	344	339	298	329	331	245	239	295	241	319	368	$\sim$
St. Clair Hospital	3,654	398	362	396	378	323	283	238	256	241	244	274	261	$\sim$
Sewickley Valley Hospital	3,616	383	371	355	329	304	288	280	251	254	261	267	273	$\mathbf{r}$
Allegheny Valley Hospital	2,735	165	200	205	201	205	212	248	243	233	236	291	296	$\sim$
Allegheny General Hospital	2,501	211	243	280	251	333	291	328	333	85	62	53	31	$\mathcal{M}$
Braddock Medical Center	2,432	321	393	397	284	292	266	258	219	2	0	0	0	$\sim$
Other	2,287	185	202	188	146	161	154	193	190	164	172	258	274	$\sim$
Jefferson Hospital	1,755	189	167	177	135	161	134	108	119	110	126	169	160	$\sim$
Mercy Hospital North Shore	1,717	452	510	355	337	53	3	2	0	3	2	0	0	
LifeCare	1,588	117	134	112	121	107	119	120	161	185	133	140	139	~~~
Presbyterian	1,293	123	143	156	148	136	137	114	97	104	120	15	0	$\sim $
Southside Hospital	621	160	161	132	47	29	34	44	8	2	3	1	0	$\sum$
West Penn Hospital	516	107	133	91	64	29	26	22	20	15	9	0	0	
St. Francis Hospital	452	440	1	2	0	2	1	2	3	1	0	0	0	
Ohio Valley	234	25	25	21	22	18	15	6	4	4	14	40	40	$\sim \int$
Montefiore	177	30	45	15	8	18	8	19	9	11	12	2	0	Im
Magee-Womens Hospital	65	5	11	8	10	5	6	6	2	7	4	1	0	~~~~
Children's Hospital	54	6	9	8	5	7	4	5	3	1	6	0	0	$\sim$
Grand Total	55,126	5,520	5,535	5,263	4,627	4,483	4,425	4,297	4,221	3,956	3,814	4,384	4,601	

www.alleghenycounty.us/human-services/index.aspx

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- <sup>9</sup> Given the fluctuation in facilities conducting evaluations. 2013 was selected because it most closely approximates the current situation.
- <sup>10</sup>The table includes only the primary facilities that provided services in 2013; petition records missing facility information are excluded from this table.

- <sup>11</sup> While petitions may be filed on anyone, service data are available only for individuals receiving publicly-funded services. These services are funded either by Medicaid through Community Care Behavioral Health (HealthChoices) or by DHS for uninsured clients.
- <sup>12</sup>Assuming that whether a client will receive some behavioral health services before and after follows binomial distribution, the Z test is applied here to test whether the change of percentage of clients receiving behavioral health services is significant.

Z= 
$$\frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}(1 - \hat{p})(\frac{1}{n_1} + \frac{1}{n_2})}}$$

where 
$$\hat{p} = rac{n_1 \hat{p}_1 - n_2 \hat{p}_2}{n_1 + n_2}$$

13 Includes funding by Community Care Behavioral Health Organization (HealthChoices) and DHS.

Table 3 lists the number of evaluations conducted by regional facilities in 2013,<sup>9</sup> as well as averages over the time period. Western Psychiatric Institute and Clinic conducted the largest percentage of evaluations, at 38 percent.

## TABLE 3: Evaluations by Facility<sup>10</sup>

FACILITY	EVALUATIONS IN 2013	HISTORICAL AVERAGE (2002 THROUGH 2012)	PERCENTAGE OF ALL EVALUATIONS IN 2013
Western Psychiatric Institute and Clinic	1,755	1,472	38%
Mercy Hospital	722	342	16%
McKeesport Hospital	368	306	8%
Allegheny Valley Hospital	296	226	6%
Forbes Regional Health Center	282	340	6%
Sewickley Valley Hospital	273	302	6%
St. Clair Hospital	261	310	6%
Jefferson Hospital	160	148	3%
LifeCare	139	130	3%
Ohio Valley	40	21	1%
Allegheny General Hospital	31	203	1%
Other	286	200	6%
TOTAL	4,613	4,000	100%

# BEHAVIORAL HEALTH SERVICE INVOLVEMENT BEFORE AND AFTER PETITION

From 2002 through 2013, petitions were filed on 37,750 distinct individuals, and service data were available for 33,539.<sup>11</sup> This section will compare their behavioral health service involvement one year before and one year after the petition to examine whether these clients received more behavioral health services (mental health and substance use disorder) after the petition. By looking at the service history of these matched clients by service, it can be concluded that both Medicaid-insured and uninsured clients (funded by DHS) did receive more behavioral health services after the petition.<sup>12</sup>

TABLE 4: Behavioral Health Service Involvement Before and After Petition

	1 YEAR PRIOR	1 YEAR AFTER
Publicly-funded <sup>13</sup> Substance Use Disorder Services	10%	13%
Publicly-funded Mental Health Services	51%	61%

A similar analysis was conducted at the service level to make sure that the increase shown in Table 4 was not just the result of the increase in assessment/physician evaluation following petitions. There are 556 different mental health services available. For 34 percent of these

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services (including psychotherapy, inpatient treatment and mobile outpatient), the percentage of clients receiving these services was significantly higher one year after the petition compared to one year prior to the petition. There are 147 available substance abuse services; an increase in post-petition involvement was significantly higher for 38 percent of those services (e.g., outpatient, psychotherapy and non-hospital rehabilitation).

## OUTCOMES

Following the evaluation, the physician may uphold, convert or overturn the petition for an involuntary commitment. If a petition is upheld, the individual will be involuntarily committed to treatment. To convert a petition means that the individual chooses to be voluntarily admitted into treatment.<sup>14</sup>

Data on the number of people whose petitions were upheld or converted are not presented here because these data are incomplete in the database used for this analysis. Historically, the information system was used only by DHS personnel, and therefore, information about the outcomes of the petitions is incomplete. This information is expected to be more reliable in the future since hospitals and delegates are now sharing an information system to better capture this full process.

### CONCLUSION

Petitions are most commonly made for individuals in their teens through young adulthood, with African Americans experiencing higher rates at almost every age and men experiencing higher rates than women of the same race. About one in every four individuals with a petition had multiple petitions filed over the 12-year period examined. Ninety percent of all petitions were authorized for an evaluation.

Since the outcomes of previous petitions were not reliably documented in the information system used for this analysis, the historical view of involuntary commitments presented here is somewhat incomplete. Planned enhancements to information systems, including the integration of tracking by county delegates and hospitals, will allow for more complete reporting that will shed light on the rates at which individuals who are evaluated enter treatment, and how these patterns differ by facility.

<sup>14</sup> In practice, individuals should always be offered the opportunity for voluntary admission, unless contraindicated by the physician.

