

**BEHAVIORAL HEALTH NEEDS ASSESSMENT
FOR CUYAHOGA COUNTY**

EXECUTIVE SUMMARY

APRIL, 2011

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**Alcohol, Drug Addiction, and
Mental Health Services Board
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INTRODUCTION

The Alcohol, Drug Addiction and Mental Health Services (ADAMHS) Board of Cuyahoga County contracts with a network of mental health and substance abuse prevention and treatment providers to deliver a continuum of care to low-income county residents, using federal, state, and county funding. It was created with the consolidation in 2009 of the former Alcohol and Drug Addiction Services Board of Cuyahoga County (ADASBCC) and the Cuyahoga County Community Mental Health Board (CCCMHB). This consolidation made possible the ability to conduct an integrated needs assessment and strategic plan for both mental health and substance abuse prevention and treatment for the first time. Funding has been generously provided by the Cleveland Foundation, the Mt. Sinai Health Care Foundation, and the Saint Luke's Foundation.

Over the past decade, the economic and demographic profile of Cuyahoga County has changed significantly. While the population of the city of Cleveland and Cuyahoga County has decreased, the remaining population presents a need for behavioral health services at a more severe and complex level.

The overall goals of this project have been to:

- Measure and define the community's unmet needs for behavioral health services;
- Create a positive, collaborative, strength-based organizational culture as the new Board moves forward;
- Enable the ADAMHS Board to become the most efficient and cost-effective organization possible; and
- Develop a clear picture of the county's behavioral health service needs for the purpose of targeted resource allocation among all funders.

This process will ultimately enable the ADAMHS Board and other funders to invest resources in the areas of greatest consumer need, strengthen safety net services, and support the use of evidence-based practices where appropriate.

A. DEMOGRAPHIC AND RISK PROFILE

Compared to the average of comparison counties and cities:¹

- Cuyahoga had a higher proportion of African Americans and Hispanics.
- Cuyahoga had higher poverty rates for both children and seniors, and Cleveland had higher poverty rates for all age groups.
- A higher proportion of Cuyahoga and Cleveland families with children were headed by a single female.
- Although Cuyahoga had a similar proportion of adults with a college degree, Cleveland had a lower proportion than the comparison city average. Cleveland also had the lowest high school graduation rate among comparison cities.
- A higher proportion of Cuyahoga and Cleveland adults were not in the labor force, and both the county and city had higher unemployment rates among those who were in the labor force.
- Cuyahoga had a higher infant mortality rate and a higher percentage of low-weight births (under 5.5 lbs.), but a lower suicide rate.

B. ESTIMATED PREVALENCE

Mental Disorders

- Applying national prevalence rates to the Cuyahoga County population in 2006-08, an estimated 47,488 children, 123,622 adults 18 to 64, and 30,669 seniors 65 and over, or just over 200,000 persons of all ages, have moderate to serious mental disorders.
- Of the population with incomes under 200 percent of the federal poverty level (FPL), an estimated prevalence of 19,566 children, 34,271 working-age adults, and 10,497 seniors, or a total of 64,335 low-income persons in the county have mental disorders.
- Since the prevalence rates used are not gender- or race-specific, the gender and racial distributions of low-income persons with mental disorders most likely reflect the make-up of the population under 200 percent of the FPL. Low-income children in need were equally divided between males and females. Females comprised a majority of adults 18 to 64 and two-

¹ The six comparison counties are Franklin, Hamilton, Lorain, Lucas, Montgomery, and Summit. Comparison cities are Columbus, Cincinnati, Lorain, Toledo, Dayton, and Akron.

thirds of seniors in need. Racially, more than half of children in need were African American, while adults were almost equally divided between Whites and African Americans, and Whites made up a majority of seniors in need.

Substance Disorders

- In Cuyahoga County, an estimated 99,205 persons of all income levels and 29,895 persons below 200 percent of the FPL abuse or are dependent on alcohol or drugs.
- Because young adults 18 to 25 have twice the prevalence rate of alcohol and other drug (AOD) use disorders as those younger or older, they are represented disproportionately in the county prevalence estimates, 25,408 at all income levels, and 9,419 at low incomes.
- Although the AOD prevalence rate for males is almost twice that for females, the latter make up a larger proportion of the low-income population, and so only slightly more males than females are in the target population in need of Board services.
- Whites and African Americans have similar AOD prevalence rates, but since African Americans are more likely to be poor or near-poor, almost equal numbers of both races are represented among low-income persons in need.

Co-Occurring Mental and Substance Disorders

- An estimated 27,516 persons over 18 in the county had both moderate or serious mental disorders and a co-occurring substance disorder; an estimated 7,984 of these had incomes below 200% of poverty.

C. PROFILE OF ADAMHS CONSUMERS, FY 2007 TO FY 2010

- The number of consumers receiving mental health services only from the Cuyahoga County ADAMHS Board or its predecessors rose slightly from 33,076 in FY 2007 to 37,754. Over the same period, the number of consumers receiving AOD services only declined slightly from 7,573 to 6,637. The number of consumers receiving both mental health and AOD services remained steady at about 2,500 per year.
- Fifty-nine percent of mental health consumers were between 18 and 64, 37 percent were under 18, and 4 percent were 65 or over. Although females made up a slightly larger proportion of all mental health consumers and more than two-thirds of seniors, 60 percent of consumers under 18 were male. Racially, African Americans made up slightly more than half of all mental health consumers but 62 percent of those under 18. Whites comprised 29 percent of mental health

consumers under 18, 44 percent of those 18 to 64, but 61 percent of seniors. Ten percent of mental health consumers were of Hispanic origin.

- More than 90 percent of AOD consumers were between 18 and 64; 8 percent were under 18, and less than 1 percent were 65 or over. Males made up 59 percent of all AOD consumers and almost three-fourths of those under 18. Males also comprised two-thirds of AOD consumers 65 and over. More than half of AOD consumers at each age group were African American. Eight percent of all consumers were Hispanic.

D. ESTIMATES OF UNMET NEED

Low-Income Persons with Unmet Mental Health Needs

- Overall, 57 percent of low-income persons with mental disorders were served, and about 27,500 were unserved. However, 8,800 of the unserved were age 65 and over. Many of these may have received clinical services through Medicare, which the ADAMHS Board does not track, although they may have had other non-clinical needs which could have been provided through the Board. Two-thirds of children and adolescents and working-age adults in need were served.
- Almost two-thirds (65 percent) of low-income males with mental disorders were served, compared to just over half of females (52 percent). However, there was a difference by age: 78 percent of males 6 to 17 were served, compared to 53 percent of female children and adolescents. Among adults 18 to 64, the proportions served were more similar, 67 percent of males and 65 percent of females. Sixteen percent of both male and female seniors 65 and over were served.
- Over all age groups, two-thirds (65 percent) of low-income African Americans with mental health needs were served, compared to just under half of Whites (48 percent). A greater proportion of African American children and adolescents were served (74 percent) than Whites in that age group (51 percent), although similar proportions of working-age adults in each race were served, 62 percent of Whites and 68 percent of African Americans. Fourteen percent of White seniors in need and 17 percent of African American seniors were served. Ninety-one percent of Hispanics of all ages, but only 21 percent of Hispanic seniors were served.
- For all low-income people needing mental health services, Cuyahoga's 57 percent rate of consumers served was the second lowest among the six comparison counties (Montgomery was the lowest at 54 percent), which averaged 72 percent of need met, and also lower than the statewide rate of 67 percent. These relative rankings held true for children, adolescents, and

working-age adults, but Cuyahoga had a higher rate of met need among seniors, 16 percent, than all other counties except Franklin, in which 23 percent of potential low-income seniors were served.

Low-Income Persons with Unmet AOD Service Needs

- An average of 9,700 consumers received AOD services from the ADAMHS Board or its predecessors from FY 2007 to 2010, about one-third of those in need who were below 200 percent of the FPL, leaving about 20,000 potential consumers unserved each year. There was a particular unmet need among adolescents and young adults: only about one-fifth of those in need were served, compared to two-fifths of those ages 26 and over.
- A slightly higher percentage of low-income males (37 percent) in need received AOD services than did females (32 percent). Although a higher proportion of African Americans (38 percent) than Whites (27 percent) were served, there were still an estimated 10,000 Whites and 7,900 African Americans who remained unserved. An estimated 45 percent of Hispanics in need received services.
- Cuyahoga had the second-lowest percentage of low-income people in need who received AOD services (32 percent), compared to an average of 46 percent for the other six counties and 41 percent for Ohio as a whole. Hamilton had the lowest rate (31 percent). While Cuyahoga had the lowest rate for adolescents (23 percent) and for adults 25 or over (41 percent), its treatment rate of 21 percent for young adults exceeded that for Franklin, Hamilton, and Lucas counties.

Unmet Need for Treatment of Co-Occurring Mental and Substance Disorders

- As noted above, an estimated 7,984 persons in the county under 200 percent of the FPL needed treatment for co-occurring mental and substance disorders. From FY 2007 to FY 2010, ADAMHS Board agencies provided both mental health and AOD treatment to an average of 2,470 consumers per year, about 31 percent of those in need, leaving an unmet need of about 5,500 potential consumers annually, although some of these may be receiving mental health or AOD services alone.

E. ESTIMATED PREVALENCE AND CONSUMERS BY MUNICIPALITY AND NEIGHBORHOOD

- An estimated 101,255 Cleveland residents at all income levels and 54,647 below 200 percent of poverty had mental disorders in 2006-08; suburban estimates numbered 100,524 at all income levels and 9,688 below 200 percent of poverty.
- In Cleveland, three neighborhoods (Glenville, Mt. Pleasant, and Old Brooklyn) had more than 5,000 persons of any income level with mental disorders, and nine others had more than 3,000. Four suburban communities (Cleveland Heights, Euclid, Lakewood, and Parma) had more than 5,000 residents of any income level with mental disorders, and five others had more than 3,000 (East Cleveland, Garfield Heights, Maple Heights, North Olmsted, and Strongsville).
- The Cleveland neighborhoods of Detroit-Shoreway, Glenville, and Hough each had more than 3,000 persons below 200 percent of poverty with mental disorders, and five others had more than 2,000. East Cleveland had more than 1,300 residents below 200 percent of poverty with mental disorders, and Euclid, Lakewood, and Parma each had more than 500.
- In Cleveland, Detroit-Shoreway and Old Brooklyn each had more than 900 ADAMHS mental health consumers, as did the suburbs of Cleveland Heights, East Cleveland, Euclid, Lakewood, and Parma. Several other Cleveland neighborhoods on both the east and west sides, as well as the southeast suburbs of Garfield Heights and Maple Heights, had more than 600 each.
- The proportion of persons in need below 200 percent of poverty who received mental health services was below 25 percent in six Cleveland neighborhoods – Stockyards and Tremont on the west side and Glenville, Kinsman, North Broadway, and St. Clair-Superior on the east side. Several other Cleveland neighborhoods, mostly on the east side, served between 25 and 40 percent of persons in need. Although the number of low-income persons in need was lower in suburban areas, in most areas more than 60 percent were served.
- Four Cleveland neighborhoods (Central, Detroit-Shoreway, Old Brooklyn, and South Broadway) and three suburbs (East Cleveland, Euclid, and Lakewood) had more than 275 ADAMHS AOD consumers each. Six Cleveland neighborhoods, as well as Parma, had between 200 and 274 AOD consumers each.

F. DIAGNOSTIC PROFILE OF MENTAL HEALTH CONSUMERS

- From FY 2007 to FY 2010, an average of 5,100 consumers each year under the age of 18 had diagnoses of attention deficit behavior disorder; these comprised 37.3 percent of all child consumers. More than 3,000 children (24.5 percent) had adjustment disorders. Childhood disorders and conduct disorders each were diagnosed for 21 percent of child consumers; thirty-eight percent of children had miscellaneous non-psychotic diagnoses. About half of all children had more than one diagnosis.
- An annual average of 10,500 working-age adults 18 to 64 had major affective disorders; these comprised almost half (47.9 percent) of adult consumers. Almost one-third (6,600 or 30.3 percent) of adult consumers were diagnosed with schizophrenia. *The rate of schizophrenia among adult consumers was twice as large in Cuyahoga County as in the average of comparison counties (16.5 percent) and for all boards in the state (14.6 percent).* Adjustment disorders and various non-psychotic disorders each accounted for twelve percent of adult consumers. One-fourth of adult consumers had more than one diagnosis.
- An average of 800 senior consumers 65 and over per year (48.1 percent) had major affective disorders and over 400 (26.1 percent) had schizophrenia. Fourteen percent of senior consumers had organic psychoses, 22.3 percent were diagnosed with other psychoses, 13.6 percent had anxiety disorders, and 17 percent had various non-psychotic disorders. Twenty-nine percent of senior consumers had two or more diagnoses.
- The highest concentrations of child consumers with attention deficit disorder live on the east and near west east sides of Cleveland. Adult consumers with major affective disorder are also concentrated in these areas, along with East Cleveland and Lakewood, and those with schizophrenia are concentrated in Cleveland and East Cleveland.

G. SERIOUSLY MENTALLY DISABLED (SMD) ADULTS AND SERIOUSLY EMOTIONALLY DISTURBED (SED) CHILDREN

- Over the four fiscal years from 2007 to 2010, about two-thirds of adult and senior mental health consumers in the county were categorized as seriously mentally disabled (SMD), and about three-fourths of child consumers under 18 were categorized as seriously emotionally disturbed (SED). SMD adults increased 6.9 percent from 15,146 in FY 2007 to 16,198 in FY 2010, while SED children increased 20.0 percent from 9,769 in FY 2007 to 11,724 in FY 2010.
- Compared to other counties and the state as a whole, Cuyahoga County had a much higher proportion of SMD and SED consumers in its caseload. Sixty-six percent of adult and senior

consumers in the county were SMD, compared to an average of 51.5 percent in comparison counties and 44.7 percent in all boards in Ohio. Seventy-five percent of Cuyahoga's child consumers were SED, compared to an average of 62.8 percent in comparison counties and 61.2 percent in Ohio. Among comparison counties, Hamilton is a close second to Cuyahoga, with 63.1 percent of its adult and senior consumers being SMD and 73.9 percent of its child consumers being SED.

- The highest numbers of adult consumers with SMD are concentrated in neighborhoods on the east and near west sides of Cleveland, as well as in Lakewood, Euclid, East Cleveland, Cleveland Heights, Parma, and Garfield Heights. Children and adolescents with SED are also concentrated in these areas, as well as in Maple Heights.

H. SUBSTANCE USE CHARACTERISTICS OF ALCOHOL/DRUG SERVICE CONSUMERS

- Alcohol, cannabis, cocaine, and opiates were the most commonly used substances by ADAMHS AOD consumers. Almost half of consumers (49.3 percent) used alcohol, an average of 4,900 per year from FY 2007 to FY 2009.² An average of 4,100 consumers (41.3 percent) used cannabis, 3,000 (30.4 percent) used cocaine, and 1,300 (13.1 percent) used opiates. Users of alcohol and cannabis declined slightly between 2007 and 2009, while cannabis and opiate users increased.
- Although alcohol was the most frequently used substance, an annual average of only 6.6 percent used alcohol alone. Almost half of AOD service consumers (42.7 percent) used both alcohol and other drugs, while 31.9 percent used other drugs but not alcohol. Substances of use could not be determined for 18.8 percent of consumers.
- Geographically, users of alcohol and cannabis tend to be concentrated on the east and near west sides of Cleveland and in East Cleveland and Lakewood. Cocaine users are also concentrated in these areas, except to a lesser extent in Lakewood, and opiate users have their greatest concentration on the near west side of Cleveland.

² Substance use data from FY 2010 was excluded from this analysis because no substance was specified for 30 percent of AOD service consumers in that year.

I. UTILIZATION OF MENTAL HEALTH SERVICES

- Among all consumers of ADAMHS-funded mental health services in FY 2007 to FY 2010, community support (an average of 59.8 percent per year), medication and somatic services (56.5 percent), diagnostic assessment (44.6 percent), and counseling (37.6 percent) were the most frequent services received. Lesser-used mental health services include emergency services (9.2 percent), partial hospitalization (3.8 percent), residential (1.8 percent), and vocational and employment services (1.2 percent).
- Community support services were received by 51.9 percent of consumers under 18, but rose to 63.3 percent of consumers 18 to 64 and 73.9 percent of those 65 and over. At all ages, SMD/SED consumers were more likely to receive community support than non-SMD/SEDs. Sixty-three percent of SEDs under 18, 80.1 percent of SMDs 18 to 64 and 85.1 percent of SMDs 65 and over received community support.
- Seventy percent of all adult consumers 18 to 64 received medication/somatic services, a higher proportion than consumers under 18 (34.9 percent) or 65 and over (49.1 percent). SMD adults and SED children were more likely to receive these services than non-SMD/SEDs – 41.1 percent of SEDs under 18, and 83.9 percent of SMDs age 18 to 64. However, less than half (49.4 percent) of senior SMDs received medication/somatic services, about the same proportion as non-SMD seniors (48.3 percent).
- Two-thirds (66.1 percent) of consumers under 18 received counseling services, three times the proportion of adults (22.3 percent), and more than 10 times the proportion of seniors (5.6 percent). Three-fourths of SED children and adolescents received counseling, compared to 35.9 percent of non-SEDs. Among adults 18 to 64, however, 22 percent of both SMD and non-SMD consumers received counseling. Five percent of SMD seniors and 7 percent of non-SMD seniors received counseling.
- When compared to other major counties and the state as a whole, fewer Cuyahoga County mental health consumers of all ages received individual counseling (37.1 percent, compared to an average of 49.1 percent for comparison counties and 49.4 percent of all Ohio boards), but more received individual community support (60.2 percent, compared to 49.6 percent of comparison counties and 44.2 percent for all boards in the state). A slightly higher percentage (56.6 percent) received medication/somatic services, compared to 53.4 percent for comparison counties and 51.6 percent for all boards in Ohio.

J. UTILIZATION OF ALCOHOL AND OTHER DRUG SERVICES

- The most frequently used ADAMHS-funded AOD services from FY 2007 to FY 2010 were assessment (an average of 67.1 percent of consumers annually), case management (51.7 percent), counseling (47.2 percent), lab (33.9 percent), and intensive outpatient (23.8 percent). Lesser-used AOD services include residential (11.2 percent), detoxification (9.5 percent), medical/somatic services (8.3 percent), methadone (7.6 percent), crisis services (1.4 percent) and Medicaid Adolescent Rehabilitation Project (MARF), (8.8 percent of consumers under 18).
- A greater percentage of consumers who used both alcohol and other drugs received key services than those who used alcohol or other drugs alone. Of these multiple-substance users, 79.3 percent received assessment services, 58.4 percent case management, 48.0 percent counseling, 32.8 percent intensive outpatient, and 18.9 percent residential.
- A smaller proportion of AOD consumers of all ages in Cuyahoga County received case management services (51 percent) than the average of comparison counties (63.8 percent), but about the same proportion as statewide (52.4 percent). Likewise, a smaller proportion in Cuyahoga received group counseling (36.2 percent) and individual counseling (37.7 percent) than the comparison county averages (40.0 percent for group counseling and 44.0 percent for individual counseling), and the statewide averages of 39.3 percent for group and 48.8 percent for individual. However, a higher percentage of Cuyahoga AOD consumers received intensive outpatient services (23.7 percent) than the average for comparison counties (16.2 percent) or statewide (13.3 percent).

K. COST ANALYSIS

Total Costs

- The total board cost of mental health services in Cuyahoga County rose from \$102.8 million in FY 2007 to \$114.1 million in FY 2010. The Medicaid share of the total cost rose from \$74.5 million in FY 2007 (72.5 percent) to \$92.1 million (80.7 percent) in FY 2010. Non-Medicaid mental health costs declined from \$28.3 million in FY 2007 to \$22.0 million in FY 2010
- Total AOD service costs declined from \$27.0 million in FY 2007 to \$24.1 million in FY 2010. Compared to mental health services, Medicaid costs comprised a smaller proportion of AOD costs, \$10.9 million (40.4 percent) in FY 2007 and \$10.2 million (42.3 percent) in FY 2010

Cost per Consumer

- The average annual cost per mental health consumer declined slightly from \$2,954 in FY 2007 to \$2,902 in FY 2010. The average cost per AOD consumer declined from \$2,729 in FY 2007 to \$2,568 in FY 2008, then rose again to \$2,783 in FY 2010.
- Averaging over the four fiscal years 2007 to 2010, Cuyahoga County had higher per-consumer costs (\$2,913 for mental health and \$2,708 for AOD) than the average of comparison counties (\$2,411 for mental health and \$1,955 for AOD), or the state as a whole (\$2,081 for mental health and \$1,749 for AOD).
- Children and adolescents under 18 had higher per-consumer costs than did adults or seniors. For mental health services, consumers under 18 had an average annual cost of \$3,355, compared to \$2,550 for adults 18 to 64 and \$2,997 for seniors 65 and over. Similarly, average AOD costs were \$4,683 for consumers under 18, compared to \$2,492 for adults and \$2,732 for seniors.

Mental Health Costs by Age, SMD/SED Status and Medicaid

- At all age levels, mental health consumers with SMD or SED had average costs far higher than those who did not. A higher percentage of SMD/SED consumers received Medicaid-funded services, 82.0 percent for all ages, compared to 72.9 percent for non-SMD/SEDs.
- For all ages together, the percentage of total costs paid by Medicaid was higher for SMD/SED consumers (76.5 percent) than for non-SMD/SEDs (67.8 percent). This difference held for child and senior age groups individually, with the percentage of Medicaid-paid costs reaching 92.6 percent for SED children. However, the percentage of total costs paid by Medicaid was *lower* for SMD adults 18 to 64 (61.6 percent) than non-SMD adults (67.4 percent).
- Combining the SMD and non-SMD groups, a higher percentage of Cuyahoga County mental health consumers received Medicaid-paid services and a higher proportion of total costs were paid by Medicaid than the average for comparison counties and the state.

AOD Costs by Age and Medicaid

- For Cuyahoga, comparison counties, and the state as a whole, the percentage of child and adolescent AOD consumers receiving Medicaid-paid services was more than twice the percentage of adults and almost twice the percentage of seniors. In Cuyahoga County, 83.6 percent of AOD consumers under 18 received Medicaid-paid services, compared to 38.9 percent of adults and 47.3 percent of seniors. At each age level, a higher percentage of Cuyahoga AOD consumers received Medicaid-paid services than the average of comparison counties and the state as a whole.

Trends in Costs per Mental Health Consumer, FY 2007 to FY 2010

- For mental health consumers, there was little change in total cost per consumer in nominal dollars between FY 2007 and FY 2010. The cost in Cuyahoga County fell slightly from \$2,954 in FY 2007 to \$2,902 in FY 2010, an average annual decline of 0.6 percent. The average total cost fell an average of 0.3 percent per year in the comparison counties, but rose an average of 0.6 percent per year in the state as a whole.
- The average Medicaid cost per consumer receiving Medicaid-paid mental health services rose slightly over this same period in all geographic areas, while average non-Medicaid costs for consumers receiving services paid by funds other than Medicaid declined.

Trends in Costs per Alcohol/Drug Consumer, FY 2007 to FY 2010

- The average total cost in nominal dollars per AOD consumer in Cuyahoga County declined from \$2,729 in FY 2007 to \$2,568 in FY 2008, and then rose again to \$2,783 in FY 2010 – an average increase of 0.8 percent per year over the whole period. The cost increased 1.1 percent annually in comparison counties and 2.6 percent annually in the state.
- Average Medicaid costs per AOD consumer receiving Medicaid-paid services in Cuyahoga County declined an average of 2.3 percent per year, from \$2,730 in FY 2007 to \$2,504 in FY 2010, while the cost rose an average of 1.0 percent per year in the comparison counties and 1.7 percent per year in Ohio. On the other hand, non-Medicaid costs per AOD consumer receiving non-Medicaid services rose in Cuyahoga County an average of 3.1 percent annually, by 0.5 percent in comparison counties, and 2.1 percent in the state.

Mental Health Costs by Primary Diagnosis

- Among child and adolescent mental health consumers in Cuyahoga County, the highest aggregate costs were for those whose primary diagnosis was non-psychotic disorders, including attention deficit disorders, \$16.3 million per year, \$15.4 million of which were paid by Medicaid. Childhood disorders and conduct disorders accounted for \$7.8 million and \$7.2 million (\$7.3 million and \$6.8 million as Medicaid), respectively. On a per-consumer basis, those with childhood disorders or major affective disorders had annual costs over \$3,000 each; children with non-psychotic disorders, the most common primary diagnosis, had annual costs just under \$3,000 per year.
- Adult mental health consumers 18 to 64 whose primary diagnosis was schizophrenia accounted for almost half of annual aggregate costs for this age group, \$26 million, \$15.4 million of which was Medicaid. The aggregate cost for adults with major affective disorders was \$18.4 million

annually, \$12 million of which was Medicaid. Annual costs per consumer 18 to 64 were highest for those with schizophrenia (over \$4,000) and personality disorder (over \$2,000, although fewer than 200 adult consumers had this diagnosis annually). The annual per-consumer cost for adults with major affective disorders was over \$1,800, and other psychoses, over \$1,700.

- Aggregate annual costs for mental health consumers 65 or over totaled \$1.6 million for those with schizophrenia, \$1.5 million for those with major affective disorders, and \$1.1 million for those with other psychoses. The annual per-consumer costs for seniors with these disorders were \$3,400 for schizophrenia, \$2,500 for major affective disorder, and \$3,200 for other psychoses.

Alcohol / Drug Treatment Costs by TEDS Diagnosis

- Analyzing AOD costs by primary substance used according to the Treatment Episode Data Set (TEDS) shows that users of cannabis had the highest aggregate annual cost (\$6.6 million, \$4.2 million from Medicaid), followed by opiates (\$5.8 million, \$1.2 million from Medicaid), cocaine (\$5.0 million, \$1.6 million from Medicaid), and alcohol (\$2.0 million, \$547,000 from Medicaid). Annual costs per AOD consumer were \$3,400 for opiate users, \$2,600 for cocaine, \$2,400 for cannabis, and \$1,600 for alcohol.

Aggregate Costs by Procedure

- Individual Community Support (CSP) had the highest annual cost of all mental health procedures -- \$38.6 million (35.8 percent of all mental health costs), \$31.6 million of which was paid by Medicaid. Medical/Somatic services were the second most costly procedure (\$16.2 million, \$12.4 million Medicaid), followed by Individual Counseling (\$15.3 million, \$13.9 million Medicaid) and Partial Hospitalization (\$14.3 million, \$13.5 million Medicaid). These four procedures make up 78 percent of all mental health costs, 87 percent of all Medicaid mental health costs, and 80 percent of all costs attributed to SMD/SED consumers.
- Intensive Outpatient services (IOP) was the most costly AOD service, \$4.8 million annually, with \$2.6 million paid by Medicaid; IOP made up 19 percent of all AOD costs. Group Counseling was the second most costly service (\$4.1 million, \$2.5 million Medicaid), followed by Non Medical Residential –Non-Acute (\$3.9 million, all non-Medicaid), and Individual Counseling (\$2.0 million, \$1.2 million Medicaid). These four procedures made up 58 percent of all AOD costs, and 62 percent of all Medicaid AOD costs.

Estimated Total Costs to Serve Populations with Unmet Needs

- To estimate the total cost for the unserved low-income population with mental health needs, assumptions were made using SMD/SED levels of 25, 50, and 75 percent of the population in need, and average costs per consumer were assumed by age and SMD/SED status. There were an estimated 27,512 unserved individuals with moderate to severe mental disorders in Cuyahoga County who were living under 200 percent of the federal poverty level. If 25 percent of them were SMD or SED, it would cost an estimated \$42.8 million per year to serve them; the estimated costs at the 50 and 75 percent levels are \$64.8 million and \$86.7 million, respectively.
- There were an estimated 19,775 unserved individuals age 12 and over with substance abuse or dependency disorders and under 200 percent of poverty in Cuyahoga County. Assuming average per-consumer costs by age group, the estimated total cost of their treatment is \$54.9 million annually.