

State of Colorado

**Population in Need of Mental Health Services
And Public Agencies Serving The Need**

Executive Summary

January 7, 2002

A project funded by the Colorado State Legislature
Sponsored by the Mental Health Services
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This project was funded by the State Legislature and designed to improve analysis of the population in need of mental health services in Colorado and to estimate one aspect of unmet need, access, for mental health services for each service area throughout the state¹. The Office of Mental Health Services (MHS) has a history of conducting such analyses and the technology available has improved since last done. The project utilized the new technology in: 1) estimating the number of individuals in the population with serious mental disorders (*prevalence*); and 2) estimating the number of individuals who received services from the public sector in the same year (*utilization*). The difference between *prevalence* and *utilization* produced estimates of unmet need, defined as not receiving services in any system.

The population of interest was individuals who had serious disorders and would qualify for public funding of services. This included individuals in family households, and individuals in institutions (e.g., nursing homes, prisons, and state mental hospitals) and group quarters (e.g., college dormitories, homeless shelters, and military quarters).

Prevalence. The population of interest was individuals with serious disorders in families under 300% of federal poverty guidelines.* Serious disorders were defined for youths as Serious Emotional Disturbance (SED) and for adults as Serious Mental Illness (SMI). Results from national epidemiological surveys and research studies were used to generate synthetic prevalence estimates in the population of interest in accordance with federal definitions.² A model to predict prevalence of SED/SMI was constructed based on these epidemiological studies, and applied for each service area. Estimates were developed for counties and demographic groups using 2000 Census population data to the extent available. An attached map shows the mental health service areas.

Under 300% Poverty

	Popu- lation	% SED/SMI	Persons SED/SMI
Under Age 21	760,202	8.9%	67,822
Ages 21 and Above	1,320,538	7.7%	101,056
Statewide Total	2,080,740	8.1%	168,878

Mental Health Utilization. The number of unique individuals served directly by the mental health system, either in community mental health centers or clinics, in Mental Health Institutes, or by Medicaid Fee-for-Service was estimated via Probabilistic Population Estimation (PPE). PPE utilizes anonymous records for individuals served to estimate the degree of overlap in

various data sets. This new technology bypasses confidentiality issues by using only birth date, gender, and county.³

Historically Mental Health Services (MHS) has maintained databases on community and inpatient mental health services funded through Mental Health Services and Medicaid. Service utilization was analyzed by service area and age, sex, and race/ethnicity. The summary table below shows 77,138 individuals served by the mental health sector in FY1999.

New in this project was estimating the number of individuals served in mental health programs and/or served in other public sectors. This technology was applied across mental health and other public sectors. Estimates of prevalence of SED/SMI in these other sectors were determined via pilot studies within the state of Colorado, or through aggregation of earlier study results. Other sectors for children and adolescents this included Child Welfare, Youth Corrections, Special Education, and Alcohol and Drug Abuse. For adults this included Mental Retardation and Developmental Disabilities, Alcohol and Drug Abuse, and Veterans Mental Health Administration. The summary table below shows 102,425 individuals served by any sector in FY1999.

Unserved in Any System. A measure of need was obtained by subtracting the number served from prevalence estimates of individuals with serious mental disorders (SED and SMI) under 300% poverty. Approximately 66,453 individuals were identified in need of services that did not receive them. This was 39% of the individuals estimated to have a serious emotional disturbance or serious mental illness.

Under 300% Poverty

	Persons SED/SMI	Served Mental Health	Served All Sectors	Not Served in any System	% Not Served
Under Age 21	67,822	27,987	37,781	30,041	44%
Ages 21 and Above	101,056	49,151	64,644	36,412	36%
Statewide Total	168,878	77,138	102,425	66,453	39%

Estimates of unmet need are conservative (low) for several reasons. First, prevalence estimates were limited to the population of persons with SED/SMI and did not specify service needs of all populations. Second, if a person was served in a Human Service sector other than mental health, they were considered as having some form of mental health services, i.e., need is met at some level. Finally, estimates of persons with SED or SMI in sectors other than mental health were intentionally on the high side, thereby lowering estimates of need.

Use of Findings

Findings may be used for:

- Mental health planning. They may be used to help target needed services by geographic area and subpopulation (age, sex, and race/ethnicity).

- Interagency coordination. Results show overlap in service utilization between mental health and other public sectors.
- Advocacy for individuals with serious mental health disorders who are not served.
- Policy discussion. Was the population of interest defined and identified appropriately? (Is the 300% of poverty cutoff adequate to include individuals with serious disorders who are uninsured or underinsured for mental health services?)

How do policy makers interpret the finding that individuals are receiving mental health services while in multiple systems? (Is there appropriate division of services?) (Would the expectation be that only 3% of consumers under age 21 in mental health programs need services from the alcohol and drug abuse sector? And 6% of adults ages 21 plus?)

- Penetration Rates. In addition to estimating need, data from the project may be used to develop penetration rates for geographic areas and demographic groups (generated by dividing the number of individuals served by prevalence estimates). Penetration rates may be used as a performance indicator of access to the services.

Findings should be integrated with other knowledge gained by stakeholders to inform decision-making. Consider an example of the need for understanding service utilization data. A count of individuals served relates to only a part of the capability of the system. Results do not address the appropriateness or amount of services provided.

Proposed Action Steps.

Findings of this project provide a larger picture than has been available ever before in Colorado regarding need for mental health services in all of the service areas throughout the State. Several steps have been planned for implementation. Two issues have been identified and are being considered for relevance and feasibility.

Planned for Implementation

The project has funded an update of prevalence estimates with Census 2000 data. Policy discussion could further inform this update.

Counts of individuals served in the public mental health sector could be augmented with information about the amount and nature of services received, particularly for the most severe and persistent population of consumers served. For example, a report of the number of individuals with severe and persistent mental illness, and their median level of services could be generated for demographic groups and service areas. This would provide more information to stakeholders discussing targeting of services for the most disabled population.

Indicators of the quality and appropriateness of services provided to clients with serious mental disorders could be developed. The national Mental Health Statistics Improvement Program for instance, has developed indicators of access, appropriateness, and outcome.

A stakeholder group could analyze the findings and suggest potential modifications in Mental Health Services goals. For example, stakeholders could assess whether consumers in certain minority or age groups are underserved. Do findings suggest the need for more integration of services between mental health and alcohol and drug abuse programs? Or more integration between mental health and corrections programs?

Under Consideration.

Estimates of individuals with serious disorders in sectors other than mental health could be improved with a common screening method across sectors. Results from this project help show the importance of the work in progress in this area, particularly for children and adolescents: 37% of the youths seen in child welfare were also served in mental health. For adults, inclusion of the adult corrections system population would be valuable. Developing and utilizing a common screening method across sectors can help strengthen intersystem coordination of services for a vulnerable population.

In addition to screening for serious mental disorder in other sectors, it would be useful to have information on the amount and type of mental health services provided to clients by the other sectors. This project planned to gather information on both individuals identified with serious disorders as well as the nature of mental health services received, however, the information was not available from most other sectors.

FUTURE DIRECTIONS. The project was unique among states in utilizing the most current technology in both estimating prevalence and service utilization across public sectors. As such, longitudinal experience with these findings and how they vary over time subject to internal and external influences will inform us as to the required frequency of repeating the project.

In the meantime, permanent, binding arrangements to track clients and services across sectors should be pursued. It may not be feasible across all sectors. However when possible, it would provide not only an unduplicated count of individuals but also the amount of services provided. There appeared to be considerable support in several sectors for such an approach.

The project has supported intersystem coordination and much has been learned. Planned uses of knowledge gained through the project will improve services to consumers with serious mental disorders.

*The Population in Need (PIN) numbers are based on individuals whose incomes fall below 300% Federal Poverty Level (FPL). The FPL's by demographic breakouts for the current prevalence estimates are based on Census 1990 distributions. Number of persons falling in each income category was estimated with Census 2000 population counts, and Census 1990 FPL distributions. See Table 1 below for 1990 poverty level cut-offs.

We must keep in mind the state of the economy in each of the Census periods to estimate how the number in need who are below 300% FPL will change when the numbers are updated with Census 2000 FPL distribution. Since the economy in Colorado in 1990 was just beginning to rebound from the oil bust, and the economy in the state in 2000 was in a boom, the current numbers, in all likelihood, overestimate the number of persons to be less than 300% FPL than was actually the case in 2000. There is no way to arrive at any reasonable number to use prior to the actual income distributions becoming public, which should be in early 2002.

It is also of note that the 2000 Census distributions will ultimately err on the other side, underestimating the number of persons below 300% FPL, as the economy in Colorado has taken a significant downturn recently, with predictions that it will take some time to recover.

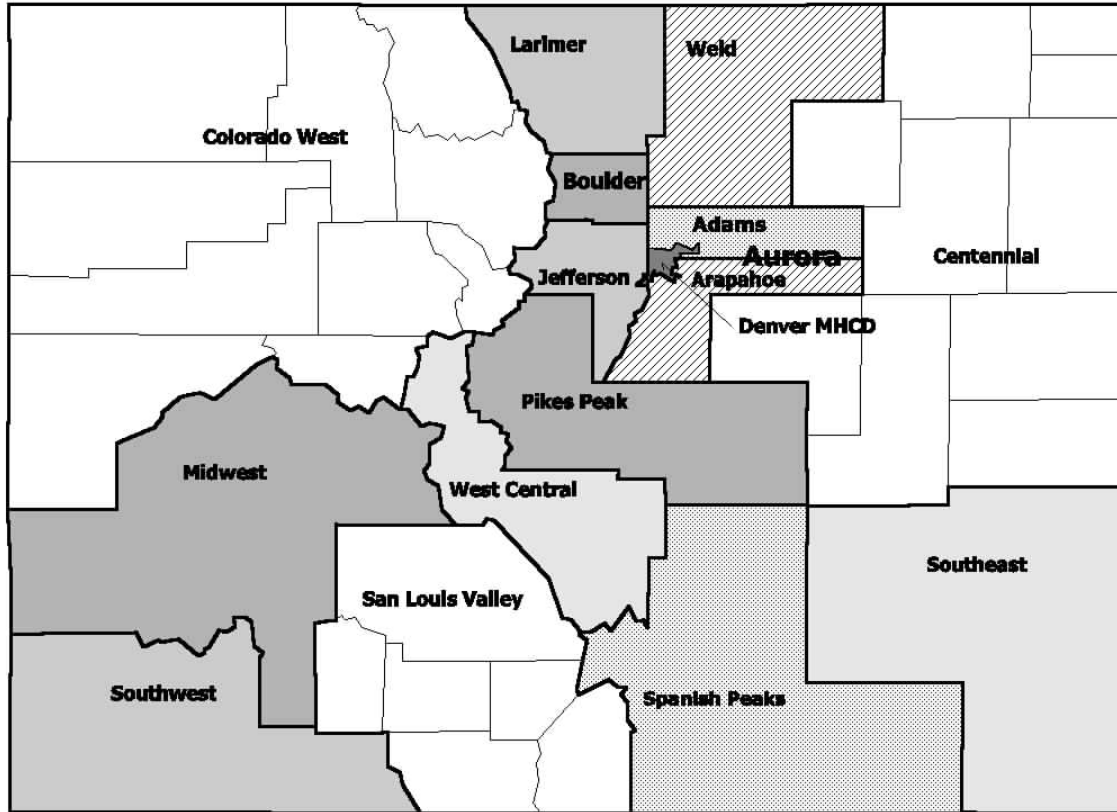
Table 1. Poverty Thresholds: 1990

Source: U.S. Census Bureau, Current Population Survey

Size of Family Unit	Average Poverty Thresholds
One person (unrelated individual)	\$6,652
Under 65 years	\$6,800
65 years and over	\$6,268
Two persons	\$8,509
Householder under 65 years	\$8,794
Householder 65 years and over	\$7,905
Three persons	\$10,419
Four persons	\$13,359
Five persons	\$15,792
Six persons	\$17,839
Seven persons	\$20,241
Eight persons	\$22,582
Nine persons or more	\$26,848

Note: 300% Federal Poverty Level cut-offs are these figures multiplied by three.

17 Mental Health Service Areas



1. The project was funded by the Colorado State Legislature as part of a larger initiative that addresses cost-effectiveness, electronic monitoring, and improvement in documenting the delivery of mental health. The ultimate goal is for Mental Health Services to be able to estimate the number of people who are in need of mental health services, where they may already be receiving services, implications for cost and funding of services, and development of a performance indicator of access to care.

2. Dr. Charles Holzer, University of Texas Medical Branch worked on the national Epidemiological Catchment Area survey and has continued to work on epidemiology. He has developed 1990 prevalence estimates for all 50 states and more recent needs assessments with Washington State, Nebraska, and the District of Columbia. Some of his work may be seen at <http://129.109.4.19/estimation/estimation.htm>.

3. Probabilistic Population Estimation. Pandiani, John, Ph.D. and Banks, Steve, Ph.D. Bristol Associates. The technology for estimating service utilization across multiple organizations has been used in several states and is documented in the literature.