

# Creating a Mentally Healthy Community Through the Use of Behavioral Health Indicators

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**Abstract** Recent decades have seen the development of robust systems of community health indicators, but those indicator sets tend to have few indicators related to behavioral health. Gauging community behavioral health can be complex, but given the interconnectedness of health and behavioral health and the high social and financial cost of unaddressed behavioral health needs, it is essential to develop meaningful indicators. A community-based participatory research project in Austin, Texas developed behavioral health indicators based on a review of social indicators movements across the globe, existing sets of proposed key indicators of mental health and mental illness, and ongoing community initiatives in Austin relevant to behavioral health. The community behavioral health indicators have been refined through the challenging process of implementing them in the face of competing efforts and imprecise communication about their use. While indicators should always be adapted to suit local conditions, this indicator set should provide a good starting point for researchers and communities to assess and improve the behavioral health of their community.

**Keywords** Mental health · Behavioral health · Community indicator · Suicide · Jail diversion · Housing instability

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Recent decades have seen the development of robust systems of community health indicators. Wold (2008) identified 35 health indicator sets that were “created from high-quality and currently available data, relevant to important health problems, and created through the use of participatory processes and involving reputable individuals and organizations.” It is notable that many of those indicator sets contain few indicators related to behavioral health.

The Institute of Medicine’s Committee on the State of the USA Health Indicators recently recommended 20 indicators to track progress in U.S. health and healthcare (Institute of Medicine 2009). The IOM Committee reviewed Wold’s 35 indicator sets, examined current national health surveys collecting health data, and consulted with experts to develop a state-of-the-art set of community health indicators. Of those 20 indicators, three address behavioral health: “unhealthy days physical and mental,” “serious psychological distress,” and “excessive drinking.” These indicators are insufficient to assess and improve a community’s behavioral health.

The indicator development process described in this article used a behavioral health model that takes an inclusive approach to all psychiatric illnesses addressed in the Diagnostic and Statistical Manual IV-TR other than intellectual and developmental disabilities. Prior approaches to community mental health tended to exclude substance use disorders. A key advantage of the behavioral health model is that it addresses psychiatric and substance use disorders concurrently, rather than as separate and distinct disease processes. The behavioral health model also takes into account social services and supports that assist individuals with full integration into the community. In choosing indicators, it was essential to address the numerous issues that impact individuals with behavioral health needs, ranging from medication, to housing, substance use rehabilitation, primary care, and community education.

It can be complex to gauge behavioral health using quantifiable data. Stigma around certain psychiatric diagnoses and substance use patterns can make collecting accurate data a challenge. Defining positive mental health and not just mental illness is an unfamiliar exercise to many. While it is widely recognized that behavioral health is an integral part of good health overall (Institute of Medicine 2005; New Freedom Commission 2003; Hogg Foundation for Mental Health 2008), localities are at a loss to measure the impact of behavioral health in creating a healthy community. A couple of indicators appear in many indicator sets, but sufficient depth to accurately gauge the status and movement of a community’s behavioral health is lacking. A community-based collaboration in Austin, Texas adopted the task of developing behavioral health community indicators, exemplifying Minkler’s vision of community-based participatory research as a means to combine research and action to improve locally-identified health problems (Minkler 2005; Minkler et al. 2003).

Austin, Texas prides itself on being a healthy and active community. In 2004, the Mayor initiated a “Fit City” campaign to improve the wellbeing of local residents and encourage use of Austin’s many outdoor resources. This campaign echoed similar efforts in the healthy city/community movement that used a community-based approach to address problems and promote health (Flynn 1996). Yet the local planners initially failed to include behavioral health as part of its conception of a healthy community.

Austin and the rest of Texas face significant challenges in meeting the behavioral health needs of the local population. Mental health services in Texas are chronically

underfunded, thus in effect shifting an unfunded mandate to local government (Mental Health America of Texas 2005). In 2009, the National Alliance on Mental Illness gave Texas' system a grade of D, down from a C in the previous grading period (NAMI 2006, 2009). Texas received a failing grade in the subcategory of health promotion and measurement, indicating that the state neglected to quantify key information, leading to a more nebulous sense of how things worked and what could be improved.

In Austin, this complacency over the lack of concrete data began to change as a result of events ensuing from one tragic evening in 2002. The death of Sophia King, a young African-American woman with schizophrenia shot by an Anglo police officer, galvanized the local community. Initial shock and anger focused on racial tensions in the community, but upon further reflection, concerns about gaps in local mental health services came to the fore. In the days prior to her death, King had exhibited erratic and disruptive behavior, prompting complaints to law enforcement. Community-based prevention services failed to ameliorate the situation and, at the time of her death, King was threatening the housing manager of her complex with a knife.

The original response by advocates was to focus on law enforcement policies and procedures alone. Then Mayor Will Wynn, at the urging of community leaders and the Hogg Foundation for Mental Health, appointed a task force of local influential leaders to examine concerns and issues faced by individuals with severe mental illness that span the entire service system, including schools, criminal and juvenile justice, housing, access to behavioral health services and community education and awareness.

The task force faced clear challenges. At the time of Ms. King's death, public behavioral health services in the Austin area were in crisis. The system of care was severely strained and grossly underfunded, forcing providers to make hard choices about which clients to serve and causing some consumers to be placed on waiting lists for services. The area's population was growing significantly, but funding for behavioral health services was not increasing accordingly. Texas has the highest rate in the country of people without health insurance (Task Force on Access to Health Care in Texas 2006), so many seek behavioral health services on an emergency basis only. Low levels of funding for public services have led to narrowly defined service populations, only a small percentage of whom actually receive services. Stigma and cultural barriers prevent significant segments of the local population from accessing publicly available services. Tension and misunderstanding between service recipients and providers magnified cultural differences in usage rates. And for people interested in receiving services, gaps in capacity reduced their effectiveness and made the process of qualifying for those services very complex. Many received behavioral health services for the first time only as a result of criminal or juvenile justice involvement.

The Mayor's Mental Health Task Force took on these challenges. Over 80 people, representing more than 40 organizations, participated in a community-based collaborative process detailed elsewhere (Frost and Stone 2009). Their efforts resulted in a report identifying strengths and challenges in the local service system and detailing 39 criteria which, when achieved, could define Austin (and the surrounding Travis County) as a mentally healthy community (Mayor's Mental Health Task Force Final Report 2005). The Mayor then created the Mayor's Mental Health Task Force Monitoring Committee to refine and guide implementation of the action plan contained in the report.

## Why Community Indicators?

Collecting data is key to developing and understanding health and health care delivery (Guidice and Bolduc 2004). An important question to be answered from the outset of the Monitoring Committee's activities was how to measure progress toward system change. It became apparent that, while the task force had developed 39 criteria, there was no clear baseline data about what *currently* existed in the community and that trying to focus on so many criteria could limit the effectiveness of the Monitoring Committee's efforts. Community indicators would allow the Committee to gauge where Austin stands today and chart a course toward a desired tomorrow. More colloquially, "if you don't know where you are, you won't know where you're going." Once a community settles upon certain indicators that resonate with stakeholders, it can begin to map a pathway forward. Without such indicators, efforts can become disjointed and reactive rather than creative.

The Monitoring Committee began its work with system mapping, a powerful exercise that allows stakeholders with different perspectives on issues crossing many service system boundaries to create a picture communicating across systems. The concept of cross systems mapping originated in relation to the interface between mental health and criminal justice systems (Munetz and Griffin 2006). It has been used extensively in Texas to address more expansive connections between seemingly disparate systems. In Harris County, Texas, for example, a broad based collaborative used this approach to develop a housing plan for individuals with mental illness and substance use disorders. The system mapping concept was expanded even further by the work of the Monitoring Committee. Facilitated discussions with representatives from the City of Austin, Travis County, Austin Travis County Integral Care (ATCIC, the local community mental health center), and the Travis County Healthcare District started the work by laying out a framework of currently existing behavioral health services including types and locations of services, capacity, eligibility requirements and funding streams. It was important to recognize and communicate that the vision of a mentally healthy community requires the investment of private as well as public providers. In response to this, the Monitoring Committee developed and broadly distributed a survey to both private and public behavioral health service providers in 2006. While the resulting report, titled 'Behavioral Health Service System Mapping Report 2006' provided a useful baseline, it became apparent that measuring and refining community behavioral health indicators would more accurately reflect system change (Mayor's Mental Health Task Force Monitoring Committee 2006).

## Measuring System Change: National and International Research

Developing behavioral health community indicators for Austin, Texas began with an empirical review of the social indicators movements nationally and internationally. The next step was an examination of the comparatively smaller body of research on key indicators of mental health and mental illness. The third and final phase of the study explored community initiatives in Austin relevant to behavioral health.

Recent projects attempting to develop community indicators in the European Union (STAKES 2001), Scotland (Parkinson 2004), Finland (STAKES 2005), and

Australia (Bush et al. 2005) focused on mental health specifically and provide a framework and possible indicators. Projects in the United States tended to focus on broader health issues rather than mental health, but were able to collect data more directly relevant to the local environment (Norris and Pittman 2000; United Way of San Diego 2005; National Women's Law Center 2004; Center for Mental Health Services 2004). The review of the literature identified potential indicators, data sources supporting those indicators, and means to compare the data collected with other comparable communities. This revealed three types of data collection of health indicators: those routinely collected (annually or more frequently such as utilization or socioeconomic status), those measured by health interview surveys every few years, and those rarely measured or measured only in special research studies (STAKES 2005). Researchers tend to focus on the first category of data routinely collected in order to develop indicators with a high likelihood of sustainability in the absence of significant funding. For each indicator, the aim is to develop an operational definition, a rationale for the use of the indicator, operational measures and a formula.

Scientific and community development literature inform the selection criteria for deriving the indicators. The criteria include: appropriateness to mental health, validity and reliability of local data, feasibility of obtaining data, and availability of comparison data related to set standards or communities of similar size and nature. Choice of indicators is also designed to reflect and balance access (receiving mental health services), process (what happens during services), outcome (results of services), and the presence or absence of a mental health/mental illness continuum and development (not only for children, but for adults and the elderly).

Research further suggests that a good indicator is clearly and unambiguously defined, acceptable to the community, relevant to existing behavioral health policies, linked to the aims of programs, and variable, changing over time (Bush et al. 2005; STAKES 2005). It should be specific, measurable, reliable, valid on its face, realistic, practical, cost effective, evidence based, and ethical (Bush et al. 2005; STAKES 2005).

In addition to the criteria suggested by the research, the Monitoring Committee determined that the selected indicators should be appropriate to the focus and goals of that organization, helping to quantify progress toward specific outcomes. They should address a wide range of concerns, with criteria gauging positive mental health as well as mental disorder (STAKES 2001) and elements relevant to the whole lifespan including children and elderly residents. For practical reasons, the data should be feasible to collect on an annual basis, ideally building on parallel data collection efforts such as the National Outcomes Measurement System, the local Community Action Network, a Jail Diversion Task Force, and the Central Texas Sustainability Indicator Project. The indicators should be valid and reliable and useful for comparison purposes.

Notwithstanding these stringent criteria, the review of the literature led to an initial list of 33 sample community indicators of behavioral health, drawn from various projects around the globe. Given that the research suggests going with the smallest number of indicators necessary for establishing a reliable tracking system (STAKES 2005), the initial list of 33 was reduced to 22. The Monitoring Committee further refined the list by collapsing categories and focusing on indicators that reflected the broad spectrum of a mentally healthy community. A sampling of this list can be found in the Monitoring Committee's 2008 Behavioral Health Community Indicators Report (see "Appendix"). This stage underscored the consensus process of the Monitoring Committee, which

emphasizes the interests of the larger community over individual agencies. From an evaluative standpoint, the objective was to gauge the overall system, not the effectiveness of particular programs or single agency initiatives. Through the Monitoring Committee, the community was involved in the process of developing and selecting the behavioral health indicators to maximize their use and impact.

## Implementation of Indicators

While background research and initial development had begun on the Monitoring Committee's behavioral health indicators in 2005, the community gave little attention to the ensuing data until 2007, when the term "indicator" began to take on a variety of meanings in local community jargon. This is a common problem in system change activities, as people joining in the activities come from many different disciplines and walks of life (Friedman 2001). The term "indicator" was being used interchangeably with other words with different meanings, including "measure," "target," "objective," "goal," "result," and "benchmark." There were multiple "indicator projects," taking place simultaneously reflecting similar topics and ideas, but framed in very different ways. The Community Action Network's Community Dashboard included 15 broad based community "indicators," one of which relates directly to mental health ("percentage of adults who report five or more "poor mental health days" in the last month") (Community Action Network 2009). The Ready by 21 Coalition Dashboard of Proposed Child and Youth Outcomes focused on "indicators" across outcome areas, such as "learning," "working," thriving," "connecting," and "leading/contributing" (United Way Capital Area 2009). The Travis County Community Impact Report examined behavioral health issues in terms of prevalence, waiting lists, access to services and the economic toll of insufficient capacity (Compendium to the 2008 Community Impact Report 2009).

Significant efforts were made to coordinate these activities, but it eventually became clear that each process had its own momentum and particular set of investments. While many meetings were held to discuss incorporating the Monitoring Committee behavioral health indicators into other planning processes, this effort met with only limited success. As has been seen in other communities, entities participating in system change activities are often wedded to their own set of measurements. Discussions rapidly led to funders being inclined to hold individual agencies specifically accountable for changes in "indicators" when clearly behavioral health issues are complex and span across agency responsibilities. Questions rapidly evolved from, "what do we currently have," and "what do we see over time," to "what *should* we have?" and "what *should* we see?" It soon became clear that the new questions were very difficult to answer.

Through monitoring the indicators over time, some interesting trends were noted. Visits to emergency rooms for individuals who had primarily behavioral health complaints, for example, rose between 2005 and 2008. It was unclear, however, *why* that number seemed to be growing. Potentially related developments over similar time frames include:

- An increase in the waiting list for outpatient services at ATCIC from 487 in 2006, to 951 in 2008;

- An increase in cases generated by law enforcement teams specializing in working with those with mental illness from 7,576 in 2005 to 9,669 in 2008;
- An increase in the number of individuals with serious mental illness in both adult and juvenile justice systems; and
- An increase in the number of people with behavioral health needs who report high levels of housing instability.

It is not difficult to hypothesize that many of the factors influencing these indicators are related, but the community and the Monitoring Committee did not have a system in place to assess their interrelatedness. Do people go to emergency rooms because they are on the waiting list for mental health services? Do people call specialized law enforcement teams because they find their services better than routine officers? Are more people with behavioral health problems being incarcerated due to lack of capacity of the service system? Do people become homeless because their mental health needs are not met? Most of these questions can be answered empirically and the complexity of behavioral health service systems makes data-driven responses imperative.

In a first attempt to answer some of these questions with data-driven responses, the Monitoring Committee worked in conjunction with ATCIC in 2007 to conduct a Public Inpatient Service System Capacity Analysis. Even in the severely underfunded overall Texas public mental health system, it has long been acknowledged that Travis County has insufficient public inpatient hospital bed capacity. In fiscal year 2007, there were approximately 63 public psychiatric hospital beds available on any given day in Austin/Travis County. With a total population of almost one million people, this translates roughly into 6.3 beds per 100,000 people. While a recent national study suggested a minimum standard of 50 beds per 100,000 (Fuller-Torrey et al. 2008) the county did not believe that standard would be reasonable, or even needed, in the local service system. Using a retrospective analysis of public hospital utilization in FY 2007 and service delivery array, the Monitoring Committee estimated the total estimated need at 15.2 beds per 100,000.

Significant attention was given to this gap in late 2007 and early 2008, resulting in the addition of 11 additional public psychiatric hospital beds to the system, through collaborative funding between ATCIC and the Travis County Health Care District. A new analysis conducted in early 2009 reflected an improved capacity of 11.4 per 100,000, clearly moving the needle in the right direction. This whetted the Monitoring Committee's appetite for using such data to *effectuate*, not just document, system change.

## Future Directions

All of this research and study has been helpful in looking at how the system is changing, but the Monitoring Committee needs to develop strategies about how to make it change. In promoting system change, Epstein et al. (2006) recommended choosing indicators that foster community learning and capacity building. Future work will focus on translating these indicators into strategies for system change and measuring the success of those strategies.

The first question is, "What do we want?" i.e. what is the population result or end state? In this case, that result has been defined in general terms through the five-year

planning process: a mentally healthy community. It is essential, though, to operationalize that definition. What is a mentally healthy community and how would we measure it? The next, and harder, question is “who is accountable?” In systems as complex as behavioral health care, and in the current climate of assigning rather than taking responsibility, accountability cannot be attributed to any one individual agency or entity. The entire community must take full responsibility for “moving the needle” with regard to each indicator chosen. While these efforts should begin an ongoing, continuous process, it is essential first to demonstrate success in a few areas.

In planning future work, community consensus arrived at four indicators for future study that objectify and encompass the essential criteria identified in the research. Using the concepts of Results Based Accountability (Friedman 2001), there are three important factors in choosing indicators. The first is community resonance. If local service and policy organizations do not find the potential for day-to-day operational change, they will be lackluster partners. Chosen indicators must also be seen as important to the desired end result: a mentally healthy community. Finally, and perhaps most importantly, the availability of reliable and valid data is critical to quick results.

The first chosen indicator is the *rate of readmission to public psychiatric hospitals within 30 days of recent discharge*. It has commanding resonance in the local service system, and significant data has been developed with regard to its impact over recent years. An interagency Crisis Implementation Committee (local political and health care delivery organizations) serves as the steering committee to implement strategies to address this important indicator. Researchers have begun to develop root cause analyses about why these readmissions occur. As a comparison group, researchers will also look at a sample of individuals discharged from publicly funded hospital beds who are not readmitted within a year of discharge. The differences between these two groups will lead to hypotheses about strategies for change.

The second indicator is the *number of emergency department visits with primary substance use diagnoses*, which was also chosen for communication and data power. Austin is a college town, and rated fourth in the top ten list of highest alcohol-drinking cities, with 8.8% of individuals surveyed reported to drink “heavily” (Johnson 2008). Fortuitously, a database tracks individual patient utilization of the publicly funded service system, including those accessing emergency rooms because of substance use issues. Studying the negative consequences of alcohol consumption fosters community dialogue across a variety of service sectors, including law enforcement, the judiciary, corrections, medical personnel, and private sector entities such as alcohol retailers.

The third indicator, *percent of individuals with severe mental illness incarcerated in the Travis County Jail*, is important because, despite significant progress in mental health jail diversion efforts in recent years in Austin and Travis County, the community has not documented change in this indicator. Mental health jail diversion refers to a set of strategies across the spectrum of criminal justice system involvement to avoid or reduce criminal charges when mental health issues constitute a significant component of the offense. In Austin, there are jail diversion activities across organizational silos, but no coordinated attempt to determine community-wide strategies to address the issue. In 2006, Travis County implemented a specialized public defender’s office for individuals with mental illness, the first freestanding mental health public defender office in the nation. Travis County has specialized defense attorneys, prosecutors, judges and dockets. In 2007, Austin

and Travis County were chosen as a testing site for a Human Services Research Institute and the TAPA Center for Jail Diversion computerized model to assess the overall cost effectiveness of jail diversion efforts in the community. In 2007 and 2008, Austin was designated as a Mental Health Learning Site by the National Institute of Corrections to assist in studying policies and procedures as individuals with mental illness work through the court system. Despite all of these interventions, the numbers of individuals with severe mental illness in the Travis County Jail continues to rise. What will it take as a community to actually impact the numbers?

The fourth indicator is perhaps the most complicated, but also the most important: the *percent of individuals with behavioral health needs who self-report housing instability*. Without adequate housing, people with behavioral health needs often fall through the cracks between service delivery organizations despite all other interventions. In this endeavor, Travis County has the distinct advantage that the same functional assessment tool that is used at the “front door” of the mental health system is also used at booking into the Travis County Jail. One dimension on this functional assessment relates to self-reported housing instability. Other behavioral health service providers, including the Veteran’s Administration and private psychiatric hospitals, have agreed to implement this question at the entry point of their systems to support the efforts in data development. While many hypotheses can be proposed about the linkage between access to mental health services and housing stability nationwide, solutions have not been fully realized in Austin and Travis County. There are numerous planning efforts taking place with regard to local housing, but this vulnerable population is not adequately represented.

For each of these four indicators, the community must answer the final question: “What will it take to get there?” For each indicator, the Monitoring Committee has begun to engage planning partners and identify those with both content expertise and power to commit to changing parts of the service system. Significant research will be required to design strategies to move the service system around each of the indicators, and criteria must be developed for selection and prioritization of strategies.

Community and national support for this initiative has been abundant. The Hogg Foundation for Mental Health has provided a graduate research assistant to support these research and development needs. The Monitoring Committee has been awarded a 3 year grant from the Bazelon Center for Mental Health Law to fund data development and effect change around the third indicator, percent of individuals with severe mental illness incarcerated in the Travis County Jail. The City of Austin, ATCIC (the local community mental health center), Travis County and the St. David’s Foundation have all agreed to provide funding sufficient to sustain this project for at least another 2 years. For each of the four indicators, the Monitoring Committee has formed steering committees composed of content and service delivery experts who are able to represent and make decisions for their organizations. End products will include specific community action plans and agency related accountability measures to document system change.

## **Conclusion**

As localities develop and implement indicator sets for community health, it is essential to include behavioral health indicators in the process. The experience of the

Monitoring Committee during its first 5 years was that, while data development is critical, at some point the community begins to ask about the results of so much data development and collection. Simply monitoring data without making community changes in response is potentially futile. Furthermore, change must come from the community at large, not necessarily specific agencies within the overall service system. The next step is to narrow the broad scope of community indicators, choosing a manageable number with strong resonance in the community. Resonance and data are key factors in promoting willingness to consider system change to improve the behavioral health of a community. If major partners do not have significant investment in the impact of these indicators on their organizations, there will be little energy devoted to change. These community indicators also have readily available data sources which are recognized in the community as accurate and reliable.

Refining indicators is challenging due to the complexities of gathering and analyzing behavioral health data, but necessary to system change. Any truly healthy community must include behavioral health in its conception and focus. Developing robust behavioral health community indicators and implementing them in a way to effect system change is a significant step in that process. This community-based participatory research project in Austin, Texas developed behavioral health indicators based on a review of social indicators movements across the globe, existing sets of proposed key indicators of mental health and mental illness, and ongoing community initiatives in Austin relevant to behavioral health. The community behavioral health indicators have been refined through the challenging process of implementing them in the face of competing efforts and imprecise communication about their use. While indicators should always be adapted to suit local conditions, this indicator set should provide a good starting point for researchers and communities to assess and improve the behavioral health of their community.

## Appendix



### 2008 Community behavioral health indicators report March 3, 2009

<i>Domain</i>	<i>Measure</i>	<i>Indicator derived from</i>	<i>Local data</i>
<i>Access/capacity</i>	<i># persons served by age, gender, race and ethnicity</i>	<i>SAMSHA National Outcome Measures (NOMS)</i>	<i>ATCIC: 2008: 17,045 Male: 55.6%; Female: 44.4% African American: 23.4% Hispanic: 26.7% White: 44.5% Other: 5.4% Age: 0–19: 24.6%</i>

			20–30: 21.9%
			31–40: 17.7%
			41–50: 20%
			51+: 15.9%
<i>Behavioral health services waiting list information</i>	<i>Boston indicators project</i>	<i>ATCIC:</i>	
	<i>Accountability and performance indicators for mental health services and supports</i>	2006: 487	
		2007: 555	
		2008: 951	
<i>DD interest list</i>	<i>Boston indicators project</i>	2008: 1467	
	<i>Accountability and performance indicators for mental health services and supports</i>		
<i>Readmission to public psychiatric hospital beds within 30 days and 180 days</i>	<i>SAMSHA National Outcome Measures (NOMS)</i>	2008: Within 30 days: 182	
		Within 180 days: 323	
<i>Behavioral health related ED Visits</i>	<i>Healthy people 2010 (derived)</i>	2006: 17,639	
		2007: 21,107	
		2008: 24,493	
<i># of individuals presenting to Psychiatric Emergency Services</i>	<i>Healthy People 2010 (derived)</i>	2008: 6,076	
<i># of individuals referred to EDs from PES</i>	<i>Boston Indicators Project</i>	May–December, 2008:	
	<i>Accountability and Performance Indicators for Mental Health Services and Supports</i>	71	
<i>Number of new/first contact at inpatient setting</i>		2008: 16	
<i>Substance abuse</i>	<i>Alcohol related car crashes</i>	<i>Drug early warning system substance abuse indicators project</i>	<i>Rate: % of overall car crashes/injuries</i>
			2006: 8.6%
			2007: 9.5%
			2008: 10%
	<i>Substance related ED visits</i>	<i>Drug abuse warning network</i>	2008: 19,473
	<i>Drug related arrests</i>	<i>Drug early warning system substance abuse indicators project</i>	<i>Tracking System in Development</i>
<i>Schools/youth</i>	<i>Confirmed allegations of abuse/neglect</i>		2006: 1543
	<i>Graduation rates</i>	<i>Kids Count (Annie E. Casey Foundation)</i>	2007: 1441
	<i>Placement in alternative education settings</i>		
<i>Criminal/juvenile justice</i>	<i># individuals (adult and juvenile) incarcerated/detained identified with BH needs</i>	<i>Criminal justice/mental health consensus project</i>	2008: Adults: 4,932: 15.2%
			2008: Juveniles in detention: 67.2% Juveniles sent to secure
			Placement: 85.2%
	<i># of cases generated by CIT Teams</i>	<i>Criminal justice/mental health consensus project</i>	2005: 7576
			2006: 8275
			2007: 8945
			2008: 9669

<i>Outcomes of cases generated by CIT Teams</i>	<i>Criminal justice/mental health consensus project</i>	<i>Data tracking system in development</i>	
<i># of cases addressed by specialist attorneys/courts</i>		<u>Felonies:</u> 2006: 14% 2007: 15% 2008: 18% <u>Misdemeanors:</u> 2006: 10.5% 2007: 12% 2008: 14%	
<i>Community awareness/ social supports</i>	<i>Suicide completion rate</i>	<i>Healthy people 2010</i>	<i>Tracking system in development</i>
	<i>Serious suicide attempts</i>	<i>Healthy people 2010</i>	<i>Tracking system in development</i>
	<i>Changes in housing stability (% of ATCIC intakes reporting moderate, significant or high housing instability)</i>	<i>SAMSHA National Outcome Measures (NOMS)</i>	<i>ATCIC</i> 2006: 42% 2007: 45% 2008: 44%
	<i>Unduplicated count of individuals entered into HMIS</i>	<i>SAMSHA National Outcome Measures (NOMS)</i>	<i>In the calendar year 2008, 6,407 individuals were housed, 594 individuals were provided with transitional housing, and 64,826 were placed in Emergency Shelters though the Austin Homeless Information Management System</i>

## References

- Bush, R., Donald, M., & Dower, J. (2005). Working locally with national outcomes and indicators for mental health: making evaluation realistic and reliable. Available at: <http://www.sph.uq.edu.au/cphc/research/indicators.html>.
- Center for Mental Health Services. (2004). Mental Health United States (Chp. 10). Available at: <http://mentalhealth.samsha.gov/publications/allpubs/SMA06-4195/>.
- Community Action Network. (2009). Check Austin 2010: Gauging our progress together. Available at: <http://www.caction.org/initiatives/RetreatDashboardPresentation30Sept2009.pdf>.
- Compendium to the 2008 Community Impact Report. (2009). Travis County health and human services and veterans research and planning division. Available at: [http://www.co.travis.tx.us/health\\_human\\_services/research\\_planning/documents/2008\\_CIR\\_Community\\_Conditions\\_Compndium.pdf](http://www.co.travis.tx.us/health_human_services/research_planning/documents/2008_CIR_Community_Conditions_Compndium.pdf).
- Epstein, P., Coates, P., Wray, L., & Swain, D. (2006). *Results that matter: Improving communities by engaging citizens, measuring performance, and getting things done*. San Francisco: Jossey-Bass.
- Flynn, B. C. (1996). Healthy cities: toward worldwide health promotion. *Annual Review of Public Health*, 17, 299–309.
- Forum for Youth Ready by 21 Coalition Dashboard. (2009). Proposed child and youth outcomes. Available at: <http://forumfyi.org/files/Community%20Outcomes%20for%20Children%20and%20Youth%20-%20RB21%20Dashboard%20-%20all%20outcomes%20-%202.pdf>.
- Friedman, M. (2001). The results and accountability implementation guide. Available at: <http://www.raguide.org/PDF%20and%20document%20files/RapaComplete.pdf>.
- Frost, L., & Stone, S. (2009). Community-based collaboration: a philanthropic model for positive social change. *The Foundation Review*, 1, 55–68.
- Fuller-Torrey, E., Entsminger, K., Geller, J., Stanley, J., & Jaffe, D. (2008). The shortage of public hospital beds for mentally ill persons. *Treatment Advocacy Center*, March, 2008. Available at: [http://www.treatmentadvocacycenter.org/storage/tac/documents/the\\_shortage\\_of\\_publichospital\\_beds.pdf](http://www.treatmentadvocacycenter.org/storage/tac/documents/the_shortage_of_publichospital_beds.pdf).

- Guidice, P., & Bolduc, K. (2004). *Assessing performance at the Robert Wood Johnson Foundation: A case study*. Cambridge: Center for Effective Philanthropy.
- Hogg Foundation for Mental Health. (2008). *Connecting body and mind: A resource guide to integrated health care in Texas and the United States*. Austin: Hogg Foundation for Mental Health.
- Institute of Medicine. (2005). *Improving the quality of health care for mental and substance-use conditions*. Washington: The National Academies.
- Institute of Medicine. (2009). *State of the USA health indicators: Letter report*. Washington: The National Academies.
- Johnson, M. (2008). America's top 10 alcohol-drinking cities—and 10 most sober cities, too. *U.S. News and World Report, Health News*, December 17, 2008. Available at: <http://health.usnews.com/articles/health/2008/12/17/americas-top-10-alcohol-drinking-cities-and-10-most-sober-cities-too.html>.
- Mayor's Mental Health Task Force Monitoring Committee. (2006). Behavioral health service system mapping report. Austin, TX. Available at: [http://www.mmhtfmc.org/ama/orig/annual\\_reports/MHMappingReport.pdf](http://www.mmhtfmc.org/ama/orig/annual_reports/MHMappingReport.pdf).
- Mayor's Mental Health Task Force. (2005). Final report. Austin, TX. Available at <http://www.mmhtfmc.org/publications/MHTaskforce.pdf>.
- Mental Health America of Texas. (2005). Turning the corner: toward balance and reform in Texas mental health services.
- Minkler, M. (2005). Community-based research partnerships: challenges and opportunities. *Journal of Urban Health*, 82(2) Supplement 2), ii3–ii12.
- Minkler, M., Blackwell, A. G., Thompson, M., & Tamir, H. (2003). Community-based participatory research: implications for public health funding. *American Journal of Public Health*, 93(8), 1210–1213.
- Munetz, M., & Griffin, P. (2006). Use of sequential intercept model as an approach to decriminalization of people with serious mental illness. *Psychiatric Services*, 57, 544–549.
- National Alliance on Mental Illness. (2009). Grading the States 2009: A report on America's health care system for adults with serious mental illness.
- National Alliance on Mental Illness. (2006). Grading the States 2006: A report on America's health care system for serious mental illness.
- National Women's Law Center. (2004). Making the grade on women's health: A national state by state report card. Available at: <http://wwwnwlc.org>.
- New Freedom Commission on Mental Health. (2003). Achieving the promise: Transforming mental health in America. Final Report. Rockville, MD: DHHS Pub. No. SMA-03-3832.
- Norris, T., & Pittman, M. (2000). The healthy communities movement and the coalition for cities and communities. *Public Health Reports* (115), May/June.
- Parkinson, J. (2004). Indicators of mental health and well-being—background paper. Available at: [http://www.healthscotland.com/uploads/documents/3016-Copy\\_Mental\\_Health\\_background\\_paper\\_revised2.pdf](http://www.healthscotland.com/uploads/documents/3016-Copy_Mental_Health_background_paper_revised2.pdf).
- STAKES. (2001). Minimum data set of European mental health indicators. Proposed set of mental health indicators; Definitions, description and sources. Helsinki: National Research and Development Centre for Welfare and Health (STAKES). Available at: <http://groups.stakes.fi/NR/rdonlyres/6FB78EA1-C444-4396-90F5-3672754700F5/0/minimum.pdf>.
- STAKES. (2005). Development of mental health indicators. *Scandinavian Journal of Public Health*, 3(6), 451–459.
- Task Force on Access to Health Care in Texas. (2006). Code red: The critical condition of health in Texas. Available at <http://www.coderedtexas.org/#completeReport>.
- United Way Capital Area (2009). Ready by 21 continuum of youth development. Available at: [http://www.unitedwaycapitalarea.org/our\\_work/\\_education/documents/UWCA\\_RB21\\_booklet\\_pdf](http://www.unitedwaycapitalarea.org/our_work/_education/documents/UWCA_RB21_booklet_pdf).
- United Way of San Diego County. (2005). Community impact progress report. Available at: <http://www.uwsd.org>.
- Wold, C. (2008). *Health indicators: A review of reports currently in use* (pp. 13–21). Pasadena: Wold & Associates.