

Improving health for people with serious mental illness

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In 2009, Minnesota 10x10 got underway with the ambitious goal of reducing the median years of life lost for people with serious mental illnesses (SMI) by 10 years within 10 years.

A number of activities were undertaken focused on educating, engaging and activating populations, groups and agencies.

Now, nearly 10 years later, we are pausing to review the data, look for early results and reflect on what we are learning.

According to numerous studies, people with SMI are at greater risk of premature death than the general population. This is largely due to complications from untreated, preventable chronic illnesses such as obesity, diabetes, hypertension and cardiovascular disease, which are aggravated by limited health choices associated with poverty, including poor nutrition, lack of exercise and smoking. Obesity and sedentary behavior are major risk factors for cardiovascular disease, diabetes and reduced life expectancy. Over half of adults with self-reported diagnosis of schizophrenia, bipolar disorder or depression are obese, while fewer than 20 percent of people with schizophrenia engage in regular moderate exercise, and people with schizophrenia consume fewer fruits and vegetables and



more calories and saturated fats than the general population.

Minnesota responds

Following the 2006, 2007 and 2009 publication by the Substance Abuse and Mental Health Services Administration of reports highlighting the early mortality of people with SMI, a group of Minnesota psychiatric leaders felt a strong need to see if this applied to their patients. They created a broad-based public/private workgroup that includes representatives from:

- Allina Health
- HealthPartners Medical Group
- Medica
- Mental Health Minnesota
- The Minnesota Department of Health
- The Minnesota Department of Human Services
- The University of Minnesota

The earlier methodology was replicated for Minnesota. The data showed the me-

dian of years of life lost in Minnesota was 24 and the primary causes of death and the number of years lost were:

- Heart diseases (27 years of life lost)
- Unintentional injury (18)
- COPD (15)
- Cancer (15)

Based upon the Substance Abuse and Mental Health Services Administration recommendations and the Minnesota data, the workgroup created a best-practice bundle of modifiable risk factors. These risk factors were posted on the Minnesota Department of Human Services (DHS) website and then worked on by a host of advocacy groups, community mental health centers, multispecialty groups, specialty providers/societies, health plans, residential treatment centers, group homes and patients/families. The factors included:

- Annual physical with primary care
- BMI <30
- No tobacco use

- No high-risk drinking/drug use
- BP ≤ 140/90
- LDL ≤ 129
- If does not have diabetes, fasting blood sugar (FBS) ≤ 125
- If has diabetes, HGB A1C < 8.
- (These numbers have been updated as the evidence and guidelines changed over time. The initial unhealthy numbers were LDL > 100; BP ≥ 131/81; FBS ≥ 126; Hgb A1C ≥ 8.)

Based on this information, in 2010, the workgroup set a goal of reducing the median years of life lost by 10 years within 10 years by engaging patients so these risk factors return to healthy zones.

Activities

Minnesota 10x10's primary strategy consisted of educating, engaging and activating populations/groups/agencies including: consumers/families, providers (mental health and primary care), advocates, community mental health centers (and their leaders), case managers, Assertive Community Treatment (ACT) teams, health plans, Minnesota Department of Health/DHS, outpatient mental health professions, hospitals with psychiatric units and the media.

Generally, each group/entity/agency was encouraged to voluntarily work on this issue and reach out through multiple channels to engage patients/families and other stakeholders/professions in their domains. The only mandated actions involved Assertive Community Treatment (ACT) teams who participated in two separate year-long collaboratives and were required to submit resulting data to DHS' Mental Health Information Systems.

Other activities included:

- Health plans used newsletters and telephonic care managers to engage patients and families, and used claims data to measure compliance with recommended primary care physicians visits (and lab draws).
- Minnesota NAMI used web communication and embedding in classes.
- The Mental Health Association of Minnesota encouraged individuals via their

website, consumer advocates, conferences and Steps to Wellness handouts.

- Andrew's Residence, a large group home, ran a nutrition program and exercise program and tracked Minnesota 10x10 measures.
- Clinical "pearls"—summaries of the problem with recommended actions—were distributed to primary care physicians at HealthPartners (with a list of their patients with SMI).
- Minnesota Psychiatric Society promoted the initiative on websites and at conferences.
- Psychiatric units in hospitals embedded the Minnesota 10x10 approach into a best practice white paper on transitions; this approach was integrated into the work of a one-year collaborative designed to reduce re-admissions.
- Minnesota 10x10 was embedded in routine discharge bundles. This meant measuring and reporting on the best-practice bundle of modifiable risk factors at discharge.
- Minnesota participated in a Tobacco Policy Academy sponsored by SMHSA to address the issue of the high percentage of adults with SMI who smoke or use tobacco. This led to work with the American Lung Association and the Minnesota Department of Health to focus attention and customize smoking prevention work and materials for adults with SMI.
- A number of the health care delivery systems developed tools and processes to monitor provider performance as a quality improvement measure.

Results

An early and important success is that HealthPartners Medical Group (HPMG) embedded Minnesota 10x10 in routine discharge bundles with promising results. The optimal bundle was:

- Annual exam by PCP
- BMI < 30
- No tobacco use
- BP < 130/80
- LDL < 100
- Fasting blood sugar < 125 or
- Hg A1C < 8

- No high-risk drinking/drug use

The percentage of people with SMI achieving the optimal bundle went from 5.7 percent to 15.2 percent in June 2015.

However, HPMG's efforts have not been widely duplicated in other clinical systems.

A new look at the data

While it is too soon to measure the work of 10x10, the new data does reinforce the urgency of the problem and offers us some new directions.

A fresh analysis of the data for 2008–2012, when compared to 2003–2007, found that the median age of death for people with serious mental illness and over 18 enrolled in Minnesota Health Care Programs showed no change.

- 2008–2012 median age of death for people with SMI: 58 years old.
- Years of life lost, people with SMI compared to people without SMI: 25 years.

For both sampling periods, patients with bipolar affective disorders die the youngest (30 median years of life lost) with schizoaffective disorders being intermediate (24 median years of life lost) and schizophrenia having the least years of life lost (17 years). Generally, causes of death parallel that of the general population; however, people with SMI are succumbing sooner. Suicide and accidental deaths were higher, especially for those with bipolar disorder.

The top six causes of death for people with SMI were:

- Heart disease
- Cancer
- Unintentional injury
- COPD
- Suicide
- Diabetes

The 2008–2012 data also looked at results by specific diagnosis. The most frequent causes of death for people with bipolar affective disorders were consistent and continue to be unintentional injuries, tobacco usage, substance use disorders and possibly obesity. People with schizophrenia not only die later than those with bipolar disorders, their deaths are more related to typical chronic diseases that lead to the death of non-SMI population (although 15 years earlier) including cardiovascular

disease, cancer and COPD. People with schizoaffective disorders had causes more consistent with schizophrenia. These findings suggest that different tactics and interventions are required for different conditions and their health impact.

Conclusion

Given the data and our experience implementing the program:

- While we made less progress than we hoped, these condition-specific findings may lead to more targeted (and hopefully successful) interventions.
- One startling finding from the Minnesota 10x10 collaborative was how frequently readmissions were for medical reasons, and how inpatient psychiatric units need to take responsibility for treating routine medical problems and more reliably communicating and handing off issues to primary care.
- Our initial intent was to reduce median age of death for the SMI population by 10 years within 10 years (10x10). We were confident in the strategies to effect mortality health measures, but were certainly naïve about the potential rate of change with such short timelines.
- We assumed incorrectly that we could treat those with serious mental illnesses as one homogeneous group and then focus on stratifying causes of heart disease, accidents, injuries, etc. and utilizing interventions for each of them based upon evidence and literature. In reality, people

who have bipolar affective disorder are dying considerably younger and the leading cause of death is unintentional injuries. This suggests that interventions may need to focus on preventing or nipping manic episodes—including impulsivity and substance abuse comorbidities—in the bud, while we focus on preventing and ameliorating chronic medical diseases for those with schizophrenia.

- Two additional opportunities were identified, the first being to build on the promising work with ACT teams as well as the large multispecialty groups.
- The development of Behavioral Health Homes and Certified Behavioral Health Clinics in the past few years offers the potential to improve outcomes, but there are only a few of these integrated care delivery systems available in Minnesota.
- We naively anticipated that the MDs (primary care physicians, psychiatrist, ACT teams) would routinely commit to measuring and reporting the bundle data (similar to the Diamond/Minnesota Community Measurement). This was not the reality.
- We hoped that between Substance Abuse and Mental Health Services Administration, National Quality Forum and the Centers for Medicare and Medicaid Services there would be a standard unifying national quality bundle in this area, but the reality is that this will not happen in the foreseeable future.

It is up to us in Minnesota to engage our community to intensify our actions and pursue funding and support to get the bundle measurement outcomes broadly and publicly displayed in Minnesota via Minnesota Community Measurement.

Countless articles end with the concept, “further research is needed.” However, it is now well established that the population with SMI is dying early. We need urgency in building on these early efforts— during our data collection period, 2,326 Minnesotans died prematurely. Delays in developing successful tactic have palpable implications. **MM**

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To see the full report, visit the Minnesota 10x10 web page at <https://mn.gov/dhs/partners-and-providers/policies-procedures/adult-mental-health/minnesota-10x10/>

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