Background

In 2010, suicide was the leading cause of death in young ages 12-17 in Colorado (Colorado Health Foundation, 2016).

- While the U.S. national average of suicide rates for adolescents was 4.6 per 100,000, Montezuma county, CO had 13 suicides in a population of 25,525 residents in 2016 (Colorado Health Foundation, 2016).

- Forty-five percent of patients dying by suicide saw their primary care provider in the month before their death, yet only 20% of these patients saw a mental health professional in the preceding month (Luoma, 2002).

- Lack of behavioral health services has become particularly pronounced in the state of Colorado, where 22 counties have neither a psychiatrist nor a psychologist (Auge, K., 2011).

- 62.8% of adolescents and 58.6% of adults diagnosed with major depression in Colorado did not receive treatment after diagnosis (Robert Wood Johnson Foundation [RWJF], 2015).

- Amongst those patients identified as having a substance use disorder in Colorado, 88% did not receive treatment after diagnosis (RWJF, 2015).

- Nearly half of all primary care visits in the U.S. involve the effects of mental health conditions and 62% of all antidepressant prescriptions are written by primary care providers (Kronick, Bella, & Gilmer, 2009; Mark, Levit, & Buck, 2009).

Aim

The purpose of this project was to examine a model of care that fully integrates mental health services into the primary care milieu. The integrated model of care was analyzed in relation to the IHI Triple Aim: to improve patient satisfaction, to improve the health of the community, and to decrease per capita costs of care deliver over the course of one month (Institute for Healthcare Improvement [IHI], 2016).

Project Design

During the implementation process, the Plan-Do-Study-Act (PDSA) framework was utilized to charter the course of the project (IHI, 2016).

**Integrated Mental Health Model of Care**

<table>
<thead>
<tr>
<th>Reasses</th>
<th>Preparing</th>
<th>Exploring Options</th>
<th>Making a Decision</th>
<th>Building a Partnership</th>
</tr>
</thead>
</table>

**Improved Patient Satisfaction.** The three question CollaboRATE tool was used as the primary assessment tool of both patient satisfaction as well as shared decision-making within the integrated model of care (ICSI, 2012). Data from the CollaboRATE tool was analyzed using the IHI Improvement Tracker.

**Improved overall health of the Population.** This cycle was measured by the number of calls received by the mental health crisis hotline. Patients were seen by a crisis worker within 24 hrs, in the primary care clinic within 48 hours, and by a psychiatric nurse practitioner within 1 month.

**Reduction in Per Capita Cost of Care.** A total of 44 patients were treated through the integrated model of care over the course of three weeks. A projected cost savings was calculated based upon the reported cost of emergency room visits for psychiatric care in Montezuma County, CO. (Colorado Hospital Association, 2016).

*The Failure Modes and Effects Analysis (FMEA) tool was used to further identify contextual elements that may have contributed to the success or failure of the project (IHI, 2016).*

Outcomes

**Patient Satisfaction:**

Aim: To collect a minimum of five surveys per day over 15 working days and to obtain a patient satisfaction rating of over 80% using the IHI Improvement Tracker.

**Conclusions**

Extensive research has demonstrated the benefits of the integration of mental health services into the primary care setting, particularly in medically underserved areas (Association of Clinicians for the Underserved [ACU], 2015). The integrated model of care that has been examined through this project served as a cost efficient and evidenced-based means of providing mental health services in the primary care setting (Mauer & Jarvis, 2010). In relation to the IHI triple aim, the integrated model of care successfully demonstrated improved patient satisfaction, improved health of the community, and decreased per capita cost of care.

**Implications for Practice**

This model of care is flexible and may be modified to meet the needs of a wide variety of clinical settings. While this model utilized computer technology throughout the implementation phases, it could be scaled down to meet the needs of any budget or environment. In the future, this model of care could be utilized to address the needs of international relief organizations working around the globe, underserved rural communities in need of behavioral health services, or community based clinics in the urban setting.

**Special Thanks:**

The leadership and staff of Axis Health, Inc in Cortez, CO. Without your support, this project would not have been possible.

**References**


Colorado Hospital Association. (2016). Cost Analysis of Emergency Room Care in the Local Hospital. (Colorado Hospital Association, 2016)

IHI, (2016). The Failure Modes and Effects Analysis (FMEA) tool was used to further identify contextual elements that may have contributed to the success or failure of the project (IHI, 2016).
