



## 2018 INNOVATION AWARD SUBMISSION

### QUESTIONS

**1. Describe the problem or issue that prompted this work.**

An estimated 43.4 million adults in the United States have a mental, behavioral, or emotional disorder. The prevalence of serious mental illness is higher among uninsured adults.<sup>i</sup> In addition, 13% of patients report foregoing mental health care because they could not afford the cost. Furthermore, almost 1 in 7 patients hospitalized for psychiatric reasons are readmitted within 30 days.<sup>ii</sup>

In 2012, a formal transitions of care process was implemented across the Fairview health system. Patients discharged from 6 hospitals were referred to outpatient services provided by MTM pharmacists and care coordinators. Patients were able to receive two visits with an MTM pharmacist at no charge regardless of insurance coverage status. However, patients discharged from inpatient behavioral units were not included in this program. In reviewing our current MTM transitions of care program, and determining that the impact results in a 33% reduction in readmissions, we made the decision to expand this program to our behavioral health units.

**2. What is the usual way this topic is managed in the community?**

While many state and local services are available for patients with mental health, transitions of care programs are not readily available.<sup>iii</sup> In the absence of hospital specific transitions of care programs for patients with psychiatric conditions, patients are required to manage their care, including new medications and medication regimens, on their own. We could not find examples of incorporating an MTM pharmacist into the transitions of care process to ensure the patient was on the most appropriate medications and that their medications were optimized.

**3. Describe your innovation with the goal or vision of how it would solve the problem or issue. (e.g. how has your innovation resulted in significant change from business as usual in the market place.)**

Patients with mental health conditions are at higher risk of readmission and could benefit from additional transitions of care support.<sup>iv</sup> This innovative transitions of care program established a process to identify, resolve, and prevent medication therapy problems which may contribute to avoidable hospital readmissions of complex, high risk patients discharged from inpatient behavioral health units. In addition, this service is offered regardless of insurance coverage, allowing access to uninsured patients, who have a higher prevalence of serious mental health conditions.

**4. How is this truly an innovation (i.e. different from the usual approach)?**

This transitions of care program includes two MTM pharmacists who specifically support patients receiving care at the psychiatry clinic. Their services include comprehensive medication management, an adherence program, and a clozapine monitoring program. This transitions of care program expands their impact and services to patients who may not be connected to care at the psychiatric clinic but could still benefit from medication management post-discharge. This type of transition of care service has not been described in the literature specific to the mental health patient population.

**5. Outline the evidence or theory used which formed the basis for your design of the innovation.**



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Previously, the system has defined and implemented a process of integration of MTM services with discharge coordination in patients identified as at-risk of avoidable readmissions. These efforts have been primarily directed to discharge from medical units in patients experiencing chronic illnesses such as diabetes, heart failure, asthma, COPD, etc. Analysis of this intervention provided to medical patients demonstrated that patients with an MTM visit experienced a 33% decrease in hospital readmission rates.<sup>v</sup>

In addition, prior transitions of care programs have demonstrated a significant impact on readmission rates among patients with mental illness.<sup>iv</sup>

### **6. Describe how the innovation changed your business and clinical practice.**

This program has created a new referral process for inpatient pharmacists working on the behavioral health units, expanded transitions of care visits to this population, and provides a new service for patients. We developed referral criteria to focus in on this specific population, working with a physician, pharmacist and care coordination team. In this criteria patients must have at least one of the following:

1. Prescription for two or more antipsychotics
2. Prescription for three or more antidepressants
3. Prescription for clozapine, lithium, carbamazepine, divalproex sodium, and/or phenytoin
4. Documented medication non-adherence

These referral criteria were built into the electronic health record so that an alert is displayed when a patient admitted to the behavioral health unit meets the criteria. The alert prompts an inpatient pharmacist to place an order for an MTM visit and to educate the patient about the plan for their upcoming MTM visit. Inpatient care includes clinical evaluation by an inpatient pharmacist, medication-related care plan development for outpatient therapy, and preparing the patient for their outpatient CMM visit.

Within 7 days of being discharged, the patient participates in a visit (typically 60 minutes) with an MTM pharmacist. During that visit, the pharmacist will go through all of the steps of the MTM patient care process. This includes working with the patient to review all of their medications to ensure that for each medication (1) the patient is taking it for the right reason (i.e., it is indicated), (2) it is effective for their given condition, (3) it is safe and the patient is not experiencing undesirable adverse effects, and (4) that the patient is taking the medication as intended (i.e. they are adherent). Through this process, the MTM pharmacist assesses the patient and their medications to identify, prevent, and resolve any medication therapy problems. When medication therapy problems are identified, the pharmacist works with the patient and the rest of the care team to develop an individualized care plan to resolve the problem(s) and then follows up with the patient to monitor that status and resolution of the problem(s).

By offering this new service, the number of MTM visits has also expanded not only in number but also in expansion to more patients with mental illness across the health system.

### **7. What is the size of the patient population impacted by your innovation? Please provide relevant numbers and/or data.**

Since the program was implemented in April 2018, 440 patients have been referred to MTM services post-discharge from a psychiatric unit. This number has increased each month since initiation (figure 1).

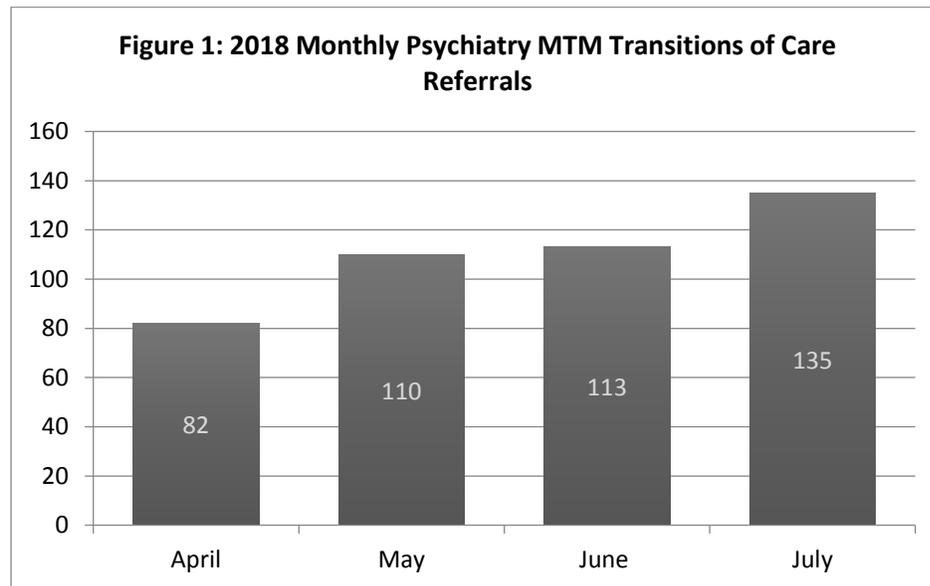
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This population is expected to grow as the service becomes more widely known and the referral process further refined. Thus far, patient ages range from 16 to 70 years old, with 60% being female. The average number of medical conditions per patient were 6.6 with an average of 10.6 medications.

**8. Describe the challenges (e.g. barriers, unexpected and/or unintentional consequences) you encountered.**

A number of challenges have been encountered since we started this work. The first challenge was identifying the appropriate patients for medication therapy management services. Once we worked with the team to determine who should be referred and the program was implemented, the next biggest barrier has been our coordinators not being able to reach people to schedule the transitions of care visit after their discharge. This resulted in low rate of completed visits versus referrals. We are in the process of piloting a process to have the inpatient care coordinator teams assist the patient in scheduling an appointment before the patient is discharged. When we are able reach the patient and schedule the visit, the no-show rate has been low.

**9. Did your organization succeed and overcome the challenges described above?**

Early in the process we worked with colleagues on both inpatient and outpatient teams to develop criteria for referrals, provided education on the service so staff could speak to the patients about the service, and worked with IT to build best practice alerts in the medical record to make the process efficient. To help improve the scheduling process, we recently created a pilot to have our MTM coordinators work with inpatient coordinators to schedule a transitions of care visit before the patient is discharged. This has led to a 100% scheduling rate for the pilot unit patients referred to MTM services. We are currently working to expand this process to other units.

**10. Is the innovation sustainable? Describe why.**

This innovation builds on previously established processes, which include referral criteria and alerts being built into the patient medical record so medical staff are automatically alerted to patients who qualify for the service. Referral criteria were built into the electronic health record so that an alert is

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displayed when a patient admitted to the behavioral health unit meets the criteria. The alert prompts an inpatient pharmacist to place an order for an MTM visit and to educate the patient about the plan for their upcoming CMM visit. Inpatient care includes clinical evaluation by an inpatient pharmacist, medication-related care plan development for outpatient therapy, and preparing the patient for their outpatient CMM visit. In addition, the program includes coordination between the inpatient behavioral health pharmacists and MTM pharmacists, ensuring continuity of pharmacy care and continuous feedback for program enhancements moving forward.

### **11. Describe the measure you developed for tracking the extent and outcomes from your innovation.**

Currently, the following monthly metrics are utilized to understand the patient population and outcomes of the MTM providers:

- 1) number of referrals placed by inpatient providers
- 2) number of patients who completed a visit with the MTM pharmacist
- 3) number and type of medication therapy problems identified during the transition of care visit

A planned analysis will evaluate the readmission rates for patients discharged from inpatient behavioral health unit once the patient population is sufficient for a robust analysis. To date, on average, the MTM pharmacists are finding 1.2 medication therapy problems, that when resolved will help optimize their medication use. Forty-one percent of the time, they were able to resolve those issues directly with the patient.

### **12. What evidence do you have that the innovation was an improvement?**

Based on the initial visit descriptions, medication therapy problems identified in this population differ from both the traditional MTM population as well as the general transitions of care patient population. For example, the most frequent drug therapy problems for patients discharged from psychiatry units include dose too high and convenience followed by dose too low. Patients in the general MTM and transitions of care populations most frequently have dose too low and needs additional therapy followed by convenience. This initial data suggests that patients discharged with psychiatric conditions differ from the general population receiving MTM services and could greatly benefit from services post-discharge to avoid taking unnecessary medications and reduce adverse medication effects.

### **13. Based on these measures, describe your results in terms of each part of the Triple Aim.**

#### **a. Population Health – describe results and size of impact**

During the first four months, 440 patients have been referred to MTM services and over 80 patients have received an MTM visit. The difference in referrals and the number completing a visit can be accounted for by patients outside of our health system who returned to their primary provider, those who went into a transitional care unit or those we could not reach. In July alone, we received 135 referrals and among the patients within our health system who were discharged to home, nearly 50% (N=34) completed an MTM visit. The most common medication therapy problems identified included dose too high, convenience, and unnecessary drug therapy. These initial results highlight potentially important complexities of patients with mental health conditions when transitioning in and out of inpatient care, primarily the need for medication discontinuation and dose reductions as patients return to treatment maintenance.



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### **b. Patient Experience – describe results and size of impact**

In the short period of time the program has been operational, we have experienced some substantial circumstances where we were able to impact the patient experience. One example involves a 62 year old female who was discharged after a 60 day psychiatric hospitalization. Several medication changes took place including initiating lithium, changing antipsychotic medications, and discontinuing several other medications. When she was admitted, she was taking 4 blood pressure medications, all of which had been consistently held during hospitalization due to low pressures but several were restarted at discharge. During the MTM visit, errors were noted in her discharge medication list and drug interactions were noted that were not addressed during hospitalization, specifically lithium and valsartan interaction and duplicate antipsychotic therapy of clozapine and olanzapine. The patient was not scheduled to be seen by her psychiatrist for 3 weeks nor her new primary care provider for 2 more weeks. The MTM provider was able to coordinate with her psychiatrist to obtain a lithium level to monitor for safety given the drug interaction. Several messages were sent to the new primary care provider to address the concern regarding hypotension. The MTM provider also contacted patient's outpatient pharmacy to discontinue medications that were unintentionally restarted on discharge.

### **c. Affordability – describe results and size of impact**

Ultimately, this program is intended to decrease all-cause readmissions which has the potential to have a substantial impact on patient and system cost of care. In addition to reduction in medical costs, the initial results also suggest a decrease in medication costs through dose reduction and discontinuation of unnecessary medications.