

Increasing integration in the rural community mental health setting: A program evaluation
project

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Abstract

Individuals with severe mental illness (SMI) have greatly reduced life expectancies in comparison with the general population, with much of the excess mortality attributable to medical conditions. Yet evidence shows that people with SMI are less likely to receive standard care for medical conditions. Integrated care, or the process of addressing physical and mental health concerns together, has been shown to increase quality of care of patients, as well as reducing long-term health costs. As such, increasing integration has been identified as a goal for a community mental health center (CMHC) in a rural Oregon coastal county. This DNP project aimed to assess the current state of integration at this CMHC and to propose a workable program design and evaluation plan for increasing integration to best serve its highest risk members. The project followed the CDC's program evaluation and design methods, and identified a nurse care management program as the most cost-effective, feasible step to increase integration from the mental health setting. This paper details the process and evidence supporting the program design, and provides tangible tools for implementation.

Keywords: Program Evaluation, Mental Health, Community Mental Health Centers, Delivery of Health Care, Integrated

Introduction

Problem Description

The rural CMHC serves many of the county's most vulnerable individuals with SMI. The patient population is primarily low-income and many are at high risk of adverse health outcomes due to social concerns, limited health care resources, and numerous comorbid mental health, physical health, and substance use disorders (SUD). While extensive evidence shows that an integrated healthcare approach can best address these issues while improving patient health care outcomes and lowering costs of care, the CMHC did not yet have any formalized medical health integration.

Available Knowledge

One of the most jarring issues of health equity is the staggering comorbidity of physical and serious mental illness, and the increased medical morbidity and mortality experienced by this population (Bahorik et al., 2017; Maj, 2009; De Hert et al., 2011). People with SMI have significantly higher odds of being affected by 15 of the most common serious chronic illnesses (Bahorik et al., 2017). More concerning, these higher rates of illness lead to life expectancies for those with SMI being reduced by an average of 15-25 years, and 60% of excess mortality is attributable to medical conditions (De Hert et al., 2011, p.52). Evidence highlights that people with SMI are less likely to receive standard medical care for medical conditions, likely due to a multitude of factors (De Hert et al., 2011, p.52).

Barriers to appropriate medical care occur at the micro, mezzo and macro level. On the individual level, patients describe many challenges to effective engagement with medical services, including "difficulty in care coordination, affective symptomology [exhaustion, low motivation], and the inability to bond with medical providers" (Melamed et al., 2019, p. 876). At

the clinic level, patients express difficulty adjusting to the environment and described programs that don't fully recognize and appreciate clients' lived experience. Lastly, at the larger system level, geographic distance, financial barriers, and the fragmented nature of health systems also inhibits effective engagement (Melamed et al., 2019, p.877). These factors also result in differential health care utilization patterns by people with SMI – underutilization of primary care and overutilization of emergency and inpatient hospitalization – which also contributes to poor health care quality and outcomes (Ward & Druss, 2017). To improve health outcomes for those with SMI, successful interventions need to be able to address a number of these barriers.

One cross-cutting solution proposed for improving healthcare quality in this population is integrated care. Integrated care, or the coordination and cooperation between physical and mental health services, has over 20 years of research demonstrating its efficacy in improving quality of care for patients with co-morbid psychical and mental health concerns (AIMS Center, 2020). Numerous models of integration exist, ranging from care coordination (utilizing a case manager to serve as a bridge between service providers), co-location (or providing services in the same location), to full integration (a diverse team of providers with the same funding sources and clinical information systems providing BH and medical care).

Rationale

Utilizing the Model for Improvement to guide the improvement process, this project started by asking the three foundational questions: “1). What are we trying to accomplish; 2). What changes can we make as that will result in improvement; and 3). How will we know that change is an improvement?” (HRSA, 2011). At its core, this project sought to address the current health disparities experienced by people with mental illness, and to improve care outcomes through increased integration of medical and behavioral health services.

Specific Aims

This quality improvement project had one specific aim: To increase integration of behavioral health and physical health services in the county for the highest-risk clients of the CMHC by:

1). Assessing the current state of integration among the CMHC and local health partners to identify current strengths and opportunities for improvement.

2). To propose a program design for increased formal integration processes between the CMHC and local health systems.

Methods

Context

The rural CMHC is a center which serves as both a safety-net and direct service provider of behavioral health services. Approximately ~70% of clients are members of the Oregon Health Plan (OHP), which is Oregon's Medicaid plan serving low-income and/or people with disabilities. A Coordinated Care Organization (CCO) works with the CMHC to manage the Medicaid health plan benefits. This project focused on clients who are also members of the CCO, as their socio-economic status increases their vulnerability in terms of adverse health outcomes. Of the CCO clients, 9% of the ~700 clients had 4 or more chronic medical conditions. 17% of active clients had 2 or more emergency department visits in the last 6 months, and 50 clients had a 15% or greater probability of being hospitalized in the next 6 months (CCO Data Set, 2020). The CCO conducted a comprehensive Regional Health Assessment and Regional Health Improvement Plan in 2019, and one of the strategies identified for improving health outcomes was "integrating behavioral health and primary care services to provide coordinated care and a whole-person approach" (CCO, 2019, p.46), which would be measured by increased

collaboration across sectors. Without a formal integrated care program, the county could not implement the best standard of care for these high-risk clients.

Interventions

This project utilized the Center for Disease Control's (CDC) Program Evaluation Framework to both plan and design the program and steps necessary. Per the CDC (1999) the following steps were utilized:

1). *Engaging stakeholders*: Met with the CCO, local PCPs, and ER to discuss strengths and opportunities for improving healthcare integration.

2). *Describe the program*: Created a model to describe the intended program inputs and outcomes.

3). *Focus the evaluation design*: Assessed the biggest issues while using resources as efficiently as possible. Completed an estimated budget, workplan, and program logistics.

4). *Gather Credible Evidence*: Reviewed of available knowledge and evidence for proposed program.

5). *Justify Conclusions*: Linked the stakeholders standards with the available evidence through analysis/synthesis and application to the specific community.

6). *Ensure use and share lessons learned*: Ensured appropriate design, preparation, feedback and dissemination so the CMHC could use program design and evaluation to move towards their goals of increased integration (CDC, 1999).

Measures

The primary measures utilized were the CDC's four standards for assessing the quality of program evaluation activities: utility, feasibility, propriety and accuracy.

Analysis

Qualitative feedback was solicited in both formal and informal ways from patients, providers, and other stakeholders. Program evaluation is an iterative process, and the measures did and will continue to shift through the program planning and design.

Ethical considerations: Integrated care is a well-supported evidence-based practice, and thus the implementation of integrated care coordination interventions had a low risk of harm and a high potential for improved health outcomes. This project was approved by the OHSU Institutional Review Board in January 2021.

Results

To accomplish step one of engaging stakeholders, meetings were held with the local CCO as well as local primary care offices in order to discuss the current practices and states of integration. During this time, both the CMHC and a primary local clinic both experienced significant staff turnovers, including key behavioral health and administrative staff, which complicated and delayed the ability to start even preliminary conversations; this was a real-life representation of the contextual factors that can make change in smaller rural communities more difficult than larger urban centers with greater personnel resources. Upon meeting, all parties agreed that increasing integration was in the best interest of patients and providers alike and was a priority goal for the region. However, in trying to select a program design, we had to take into account the specific features of the region.

A survey of the current climate of integration was conducted with local PCPs in the county; on a scale of 1-10 with 10 being the best care coordination and 0 being the no care coordination, the CMHC received an average score of 2.8 regarding the current levels of coordination with primary care. Research on integrated care models has primarily focused on expanding detection and treatment of mild to moderate behavioral health issues in the primary care setting, and both primary care centers were currently doing this work in their setting (Ward & Druss, 2017). However, this model did not meet the specific needs of patients with severe-mental illness who were engaged with mental health services, but had difficulty connecting to primary care.

Full reverse-integration, or bringing primary care services into the behavioral health setting was not feasible to adopt: it was difficult to financially sustain without the ability to scale, and recruiting providers was already notoriously difficult in this underserved region. However, in lieu of full integration, progress could still be made along a continuum of steps, starting with care-coordination practices. Reverse-integration measures in the community mental health setting typically utilizes a care manager, in order to support Wagner's six treatment guidelines for chronic conditions: supporting patient self-management, utilizing clinical information systems, redesigning system delivery, decision making support, linkage to community resources, and support from the healthcare organization (Ward & Druss, 2017, p.278).

These six measures aligned with opportunities identified in the community survey. The biggest need identified was to increase communication between provider offices and the CMHC, particularly around treatment plans, medication changes, and engagement in services. While these tasks could be accomplished with a collaborative electronic health record (EHR) system, at the time of writing, three different systems were being used between local clinics, the local

hospital, and the CMHC. While implementing a shared EHR system in the community would have greatly increased collaboration, many barriers complicated this, including specialized privacy laws around behavioral and substance abuse treatment in 42 Code of Federal Regulations, Part II as well as the enormous financial and time investments required to make a transition of this scale. In this particular community, waiting for the transition of multiple organizations to a new EHR would have been a multi-year, multi-million-dollar effort requiring significant planning.

The smaller scale solution of a designated care management program was proposed as a first, preliminary step to formally increase communication processes between the organizations. When asked if having a designated care coordinator role would be helpful, 83% of PCPs surveyed responded a resounding ‘Yes’. One provider stated, “Yes, this would be helpful! They can function as our point of contact, to get the patient who may need to be seen sooner in quicker, to help navigate the intake process which is a barrier to our patients, to help clarify medications and med changes, and to coordinate to help keep out of ER”. With this proposal, a logic model identifying the goals, inputs, outputs, and projected short and long-term outcomes of this program was created to accomplish Step 2 of the CDC’s model; see Appendix 1.

Step three of program planning was to identify focus on the evaluation and design. Out of the stakeholder conversations was born the idea of a “Nurse Care Manager” position embedded within the CMHC. The program was designed with input from key stakeholders, including the CCO, local providers, and other key informants (the director of behavioral health at a rural coastal county FQHC). Utilizing the feedback, a role and job description was created, adapting from the AIMS (Advancing Integrated Mental Health Solutions) Center’s job description and role (2020); see Appendix 2. In addition, a comprehensive budget and

financing plan was also created; see Appendix 3. We achieved support from the CCO to move forward with requesting grant funding for the program, which would sustain the project for a 2-year pilot period. With this in place, a workplan was also created detailing a time-frame roll out for the task associated with putting the program in place (Appendix 4).

With the planning completed, the CDC's fourth step required the gathering of credible evidence to support a program of this nature. A further literature review of similar program designs was conducted to see if there was supporting evidence for this type of program. One of the first studies to demonstrate the effectiveness of the nurse care manager in the community health setting was the Primary Care Access, Referral, and Evaluation (PCARE) study, conducted by Druss et al., 2010. In an RCT (n=407), behavioral health patients were randomized into either treatment as usual, or support of a nurse care manager who provided communication and advocacy with medical providers, health education, and support in overcoming barriers to primary care (Druss et al, 2010, p.151). The results showed significant improvements among those working with a case manager; at a 12-month follow up, those in the CM group received an "average of 58.7% of the recommended preventative services, versus only 21.8% in the control group, and they were also significantly more likely to received treatment for cardiometabolic conditions (34.9% versus 27.70)" (Druss et al, 2010, p.151). Surprisingly, the intervention not only affected physical health outcomes, but patients in the CM group also reported significant improvement on the mental health components of the SF-36, which measures patient-reported quality of life (Druss et al, 2010). Two other RCTs have gone on to effectively show the use similar models of reverse-integration case management to address medical comorbidities in the community health setting (Fehily et al, 2020, McKenna et al, 2014), suggesting that this can be a highly effective model for this population. This information was synthesized and presented to the

CCO during a meeting in May 2021, completing step five of the framework. Step six, or the final lessons learned, was left in the hands of the CMHC for future implementation.

Discussion

This program planning and evaluation study accomplished its intended goals, in identifying the current state of coordination between the CMHC and local health partners, and identifying strategies to increase integration in the county. The standards by which we measured success were the four pillars of program planning: utility, feasibility, propriety, and accuracy. Through the engagement of the stakeholders and their enthusiastic support of such a program, this project demonstrated utility in serving the identified needs of the community. While the project intended to make only modest gains towards overall healthcare system integration, by keeping expectations reasonable, the program met the standard of feasibility, presenting a program design that was realistic, prudent, and frugal, with intended long-term cost-savings through improved healthcare management of high-cost, high-risk patients. Propriety standards ensured that the program design and evaluation was ethical and protected the welfare of those involved; while any direct patient care has risk for harm, the evidence strongly endorsed the potential rewards at the micro and macro level in terms of improved quality of care. The last standard, accuracy, was accomplished through the selection of outcome measures, which were identified with attempts to convey the merits of the program. This was perhaps the biggest limitation, as while we could identify specific outcome measures, larger systematic change can take time, and the measures selected may not show improvement in the shorter term. The impacts of direct human service can be difficult to see reflected in aggregated health risk scores, and are instead seen in patients lived experiences. By planning to evaluate this program with both quantitative data as well as qualitative experiences of providers and patients alike, we

hopefully achieved the standard of accuracy in this project, and accounted for some of the limitations described.

Conclusion

As quality improvement is an ongoing process, this DNP project left the project in the hands of the CMHC for the ongoing refinement and implementation of the identified program design and evaluation. At the time of writing, the CMHC was preparing to submit the nurse care manager program for grant funding from the CCO in the next few months, with potential implementation by the end of 2021. If the initial program was able to show success with the identified evaluation measures, there was interest in finding a longer-term sustainable fiscal model, such as implementing a per member per month (PMPM) payment structure from the CCO for these high-risk, high-cost members. The implications of this project may have farther reach, as there is currently very limited scholarship around reverse-integration programs in rural community health settings. The piloting of this program and role could serve as a model for other rural Oregon counties who are seeking feasible ways to increase healthcare integration within the constraints of their current systems.

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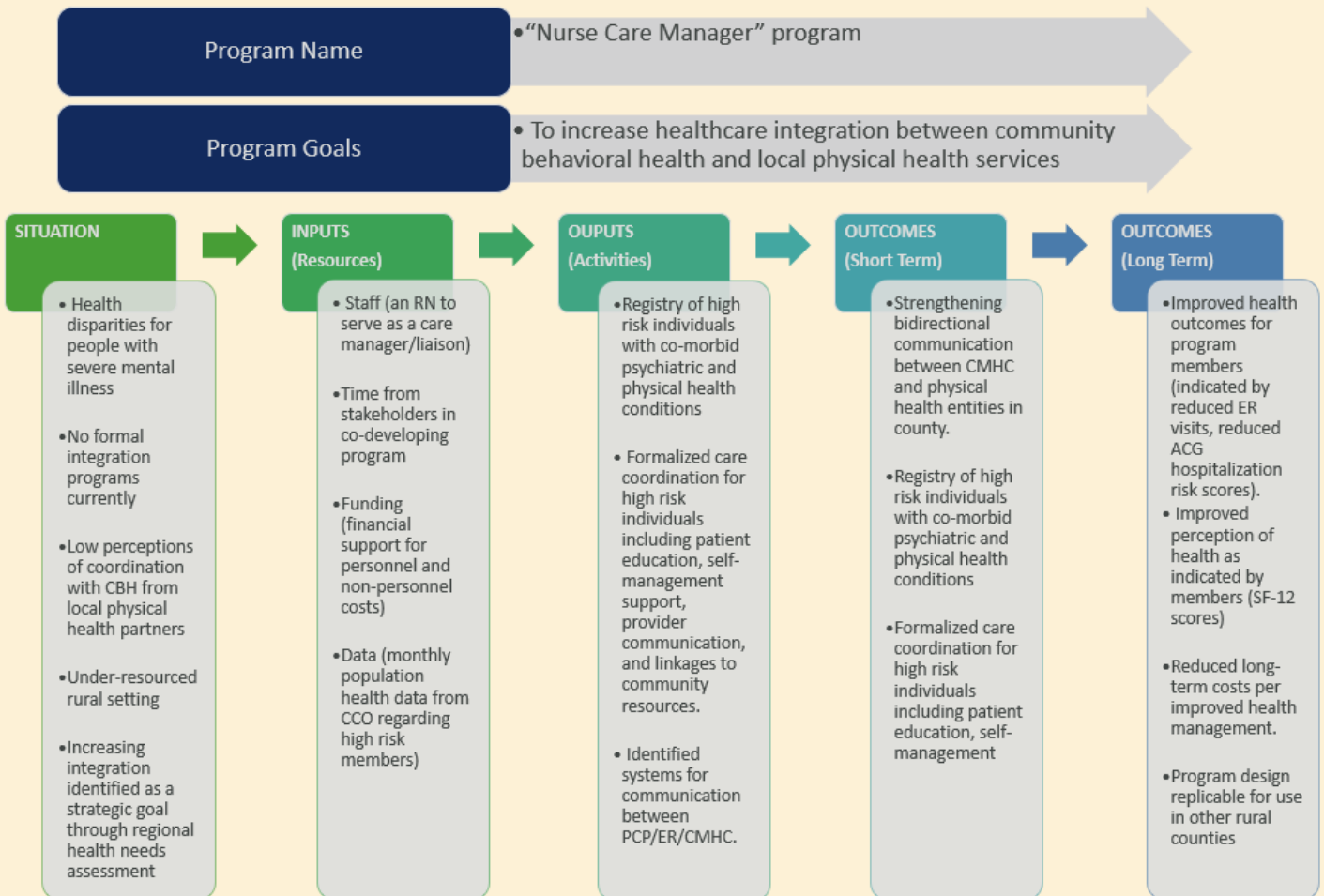
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Appendix 1: Logic Model for Nurse Case Management Program

Logic Model: Nurse Care Manager Program



Appendix 2: NURSE CARE MANAGER JOB DESCRIPTION

Job Description: The nurse case manager is a core member of the collaborative care team, including the patient's counselor and psychiatrist, and serves as a liaison with other medical providers. The nurse case manager is responsible for outreaching, supporting and coordinating the mental and physical health care of patients on an assigned patient caseload.

DUTIES AND RESPONSIBILITIES

1. Support the mental and physical health care of patients on caseload through close care coordination between the patient, their support system, and the patients' medical, mental health, and social services providers.
2. Provide outreach and initial health assessments to patients assigned to caseload, resulting in the development of a patient-centered Health Action Plan.
3. Reinforce patients Health Action Plan by advocating, educating and assisting the beneficiary and natural supports to attain improved self-management skills.
4. Systematically track and document outreach attempts and treatment response, monitoring patients (in person or by telephone) for changes in clinical symptoms, side effects, or complications.
5. Support medication management as prescribed by medical and psychiatric providers, focusing on treatment adherence monitoring, side effects, and effectiveness of treatment
6. Provide brief behavioral interventions using evidence-based techniques such as behavioral activation, problem-solving treatment, motivational interviewing, or other treatments as appropriate.
7. Facilitate referrals for clinically indicated services outside of the organization (e.g., social services such as housing assistance, vocational rehabilitation) to address social determinants of health.
8. Serve as a liaison for ED and local Primary Care Providers regarding clients who may need additional health monitoring and support.
9. Review ED visits daily, encourage and educate patients around appropriate use of medical service and ensure needs are appropriately met in the right setting.
10. Facilitate successful transition of care from inpatient to outpatient settings for patients that are hospitalized. Supporting discharge instructions, coordinating with specialty and primary providers, reviewing care environments, ensuring medication is understood and used appropriately.
11. Participate in regularly scheduled caseload consultation with the care team, communicating resulting treatment recommendations to the patient's medical and psychiatric provider. Consultations will focus on patients new to the caseload and those who are not improving as expected under the current treatment plan. Case reviews may be conducted by telephone, video, or in person.
12. Develop and complete self-management plan with patients who have achieved their treatment goals and are soon to be discharged from the caseload.

TRAINING & LICENSURE REQUIREMENTS

- Registered Nurse (BSN preferred)
- Other QMHP with relevant health system experience will be considered (MSW)

OTHER REQUIREMENTS TO CONSIDER IN JOB DESCRIPTIONS

- Demonstrated ability to collaborate and communicate effectively in a team setting.
- Experience working within health systems and with patients with psychiatric needs.
- Ability to maintain effective and professional relationships with patients and other members of the care team.
- Experience with assessment, treatment and self-management strategies for common chronic diseases, mental health, and/or substance use disorders.
- Proficiency in Microsoft Office and technological literacy with EHR systems.
- Ability to work with patients by telephone, video, and in-person.
- Experience with assessment and treatment planning for physical, mental health /or substance use disorders.
- Experience with evidence-based counseling techniques (e.g., motivational interviewing, problem-solving treatment, behavioral activation).
- Ability to work independently, use clinical judgement, and drive innovation to continually improve program design.

Appendix 3: Budget Year 1

Nurse Case Manager Year 1

	Request
Personnel	
1 FTE RN Salary (12 mths @ \$33/hr)	\$ 69,000
Fringe / Benefits (30%)	\$21,000
Total Personnel	\$ 90,000
Non-Personnel (Other Direct Costs)	
Training	
Training (Suicide, MI, FACT, ongoing CEU)	\$2,500
CPR/First Aid Training and BLS training	\$75
Total Training	\$2,575
Office Supplies	
Computer Monitor & Docking station	\$250
Laptop	\$800
Cell phone (\$600) and monthly phone line (\$50*12)	\$1200
Office Furniture	\$1,000
Misc. Office Supplies (including printing)	\$500.00
Total Office Supplies	\$3750
Medical and Client Supplies	
Blood pressure cuffs	\$100
Stethoscope	\$100
Glucose Meter	\$100
Oxygen Saturation Monitoring Equipment	\$35
Misc. Medical Supplies	\$500
Total Medical Supplies	\$835

Travel	
Mileage for meeting with Clients (2500 mi @ .56/mi)	\$1,400
<i>Total Travel</i>	\$ 1400.00
Total Non-Personnel	\$7,160
Total Personnel	\$90,000
Total Requested	\$97,160

Budget Justification – Year One

Personnel- All permanent salaries are calculated with base salary and a 30% fringe benefit rate.

Program Manager (1 FTE) – One individual with bachelor degrees in Nursing, and/or Masters degree in social science related field (MSW, etc). with experience in healthcare, case management, community engagement, and program implementation and evaluation will be hired to serve as the Case Manager to work directly with clients and local health systems to increase care coordination and improve healthy quality outcomes. The NCM will be full-time, primarily based within the CMHC, and will require work in the community to engage stakeholders. The Program Managers will ensure the adherence to a trauma-informed, patient-centered model of care.

Non-Personnel (Other Direct) Costs

Training - This category includes the following 1) Costs associated with training and continuing education needs for the NCM. The type of training required may vary based on personnel experience, but at minimum will include CPR/BLS, Suicide Assessment, and Motivational Interviewing. This will provide NCM with evidence-based skills to be effective in their position.

Office Supplies – This category covers the following expenses: 1) Office furniture, including desk, chair, monitor, and light, 2) a laptop for client tracking, referrals, and general communication 3) a cellphone for communication with clients 4) miscellaneous office supplies.

Medical Supplies – This category includes equipment necessary to equip a NCM to briefly triage, assess, and monitor minor medical conditions if the need arises while in the field, including a stethoscope, blood pressure cuff, O2 sat monitor, blood glucose monitor, and miscellaneous medical supplies, including gloves, disinfectant, and first aid supplies

Travel – This category includes 1) Travel for NCM to travel to locations in order to engage clients and assist with barriers to accessing medical care.

Rent/Utilities – Not included in budget, as space funded by the CMHC general budget will be utilized to house the position.

