

QUALITY IMPROVEMENT PROJECT: COMORBID
EATING DISORDERS DURING PSYCHIATRIC
INPATIENT HOSPITALIZATION

by

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A scholarly project submitted in partial fulfillment
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in

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DEDICATION

Family and individuals directly affected by eating disorders and continued efforts for healthcare professionals to recognize and support these complex and elusive disorders.

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ABSTRACT

Background. Eating disorders (ED) are the second leading cause of psychiatric deaths. Children and adolescents with psychiatric disorders are at an increased risk of comorbid ED.

Local Problem. A pediatric psychiatric inpatient hospital has a reputable psychiatric inpatient program; however, the subspecialty of EDs is less established at the facility. Thirty-one percent of admissions over 12 months had positive ED screening results.

Methods. This quality improvement (QI) project identified areas to improve communication and transitions of care using the Donabedian model, which focuses on structure, process, and outcome. The QI project was implemented over a seven-week timeframe, utilizing nursing, medical, and non-nursing professionals.

Implementation. The QI project developed process modifications to increase the transition of care pathways, communication, and overall ED awareness. Four means of process changes involved the development of a community ED resource list, anticipated aftercare needs, documentation of positive ED screening results from admissions to the inpatient unit, registered dietitian referral, and anticipated discharge needs for follow-up care.

Results. Over the QI seven-week timeframe, 42.6% of the psychiatric hospital admissions had positive ED screening. The process change compliance was strongest with nursing and family nurse practitioner staff. The anticipated aftercare needs and use of ED discharge follow-up provided limited data.

Conclusion. More pathways need to be established to support comorbid ED care in the inpatient psychiatric setting and transition to outpatient care. The results identified further gaps consistent with current literature, which focuses on validated ED screening tools, barriers to implementation, routes of communication, and roles of PCPs. Comorbid EDs are complex and elusive, requiring treatment pathways to increase awareness, screening, communication, and support during transitions of care.

CHAPTER ONE

LITERATURE REVIEW OF EATING DISORDER SCREENING TOOLS

The concept of eating disorder (ED) has been around for centuries. A report of an adolescent with an ED was identified in medical records 300 years ago (Weiselberg et al., 2011, as cited in Hornberger et al., 2021). Despite the lengthy history of EDs, Hornberger acknowledges “a thorough understanding of the pathophysiology and psychobiology of eating disorders remains elusive today.” (p. e13). EDs often begin in childhood, can last a lifetime, and are the second leading cause of death for those with psychiatric mental illnesses (National Association of Anorexia Nervosa and Associated Disorders [ANAD], 2021; National Eating Disorder Association [NEDA], 2021; Reese, 2022). The lack of understanding among both the general public and primary care providers, along with the inherent complexity of EDs, often leads to delays or under-diagnoses despite the prevalence, potential long-term effects, and mortality rates.

Background

In 2013, the *Diagnostic Statistical Manual 5 (DSM-5)* expanded the ED section to include previous diagnostic criteria with a few modifications for anorexia nervosa (AN) and bulimia nervosa (BN). In addition, the committee added binge eating disorder (BED), and avoidant/restrictive food intake disorder (ARFID). Eating disorders not otherwise specified (EDNOS) were eliminated and replaced with other specified feeding or eating disorders (OSFED). These changes demonstrate a recognition that EDs present in many nuanced and complex pathologies, noting that the understanding of EDs extends beyond the familiar

diagnoses of AN and BN. The commonality of all EDs includes persistent disturbance with eating that impacts food consumption and/or absorption and significantly impairs physical and psychosocial health (DSM-5, 2013, p. 329).

EDs are increasing, starting at younger ages and are influenced by a societal obsession with thinness (Read & McComiskey, 2021). It is difficult to provide an exact prevalence statistic considering there has been limited screening, diagnosing, and research focused specifically on EDs' lifetime prevalence (US Preventive Services Task Force [USPSTF], 2022; Hornberger et al., 2021). Despite the limited prevalence statistics, the identified ED prevalence range is 0.9-22.7% (Hornberger et al., 2021; National Institute for Mental Health [NIMH], n.d.; NEDA, 2021). There is a higher prevalence in the Lesbian, Gay, Bisexual, Transgender, and Queer/Questioning (LGBTQ) population (Hornberger et al., 2021; Peat & Feltner, 2022). Both also identified individuals with an ethnicity that is non-white being overlooked or misdiagnosed frequently (Hornberger et al., 2021; Peat & Feltner, 2022). EDs affect nearly 30 million people in the US, with most disorders starting in childhood, adolescents, or young adulthood (Kutz et al., 2019; NEDA, 2021). Considering the prevalence of eating disorders, the average age of onset, and the complex pathology, ED screening is warranted in diverse settings. Peat and Feltner (2022) wrote:

Screening is intended to be implemented in patients who do not have obvious signs or symptoms in order to identify those who probably do have a condition versus those who likely do not, and provide treatment that improves outcomes for those with the condition. (p. 1204)

Screening to identify youth who are at high risk for EDs and intervening early improves healthier long-term outcomes (Bryant et al., 2022). Therefore, ED screening at annual wellness visits is recommended by the American Academy of Pediatrics (AAP) and the American

Academy of Child and Adolescent Psychiatry (AACAP). Conversely, the USPSTF (2022) review of ED screening benefits and harm found insufficient evidence to recommend screening in asymptomatic individuals ten years old through adulthood. The USPSTF recommends providers use clinical judgment, ED symptomatology, and screen high-risk individuals such as LGBTQ and individuals with psychiatric comorbidities.

Throughout the ED literature, there is a recurring theme of comorbid conditions/diagnoses associated with ED diagnoses. The most common comorbid diagnoses include major depression disorder, anxiety disorders, obsessive-compulsive disorder, and substance use disorder, as well as post-traumatic stress disorder (PTSD) along with suicidal thoughts and actions (NIMH, n.d.; NEDA, 2021; Hornberger et al., 2021). NIMH reports 50-63% of adult patients in ED treatment report emotional struggles, and NEDA statistics include 36.8% of females with eating disorders self-harm. Patients are often admitted to inpatient mental health facilities for acute psychiatric problems, such as major depressive disorder, and comorbid EDs are often present but under-recognized and, therefore, poorly addressed during the inpatient stay. Without a clear screening process, referrals to appropriate inpatient and outpatient resources are incomplete; therefore, patients with comorbid EDs are not receiving potentially lifesaving care.

Addressing youth EDs is imperative, considering onset is most often in this age group, early intervention improves prognosis, and the mortality rates of EDs are higher than all other psychiatric disorders, except opioid overdoses, which is a known public health issue (NEDA, 2021; ANAD, 2021). ED awareness, screening, and timely interventions are lacking and require a shift in the healthcare paradigm to address the physical, emotional, and psychological

developmental needs of today's youth, many of whom suffer from ED and other comorbid psychiatric diagnoses.

Objective

The objective of this paper is to synthesize a literature review on ED screening tools and recommendations in peer-reviewed publications from January 2015–September 2022. The aim is to provide a thorough understanding of ED care from screening through the referral process to implement practice recommendations for primary care providers (PCP)s to improve short- and long-term health outcomes associated with EDs.

Method

The systematic review of literature for ED screening incorporates the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al. 2009).

Search Strategies

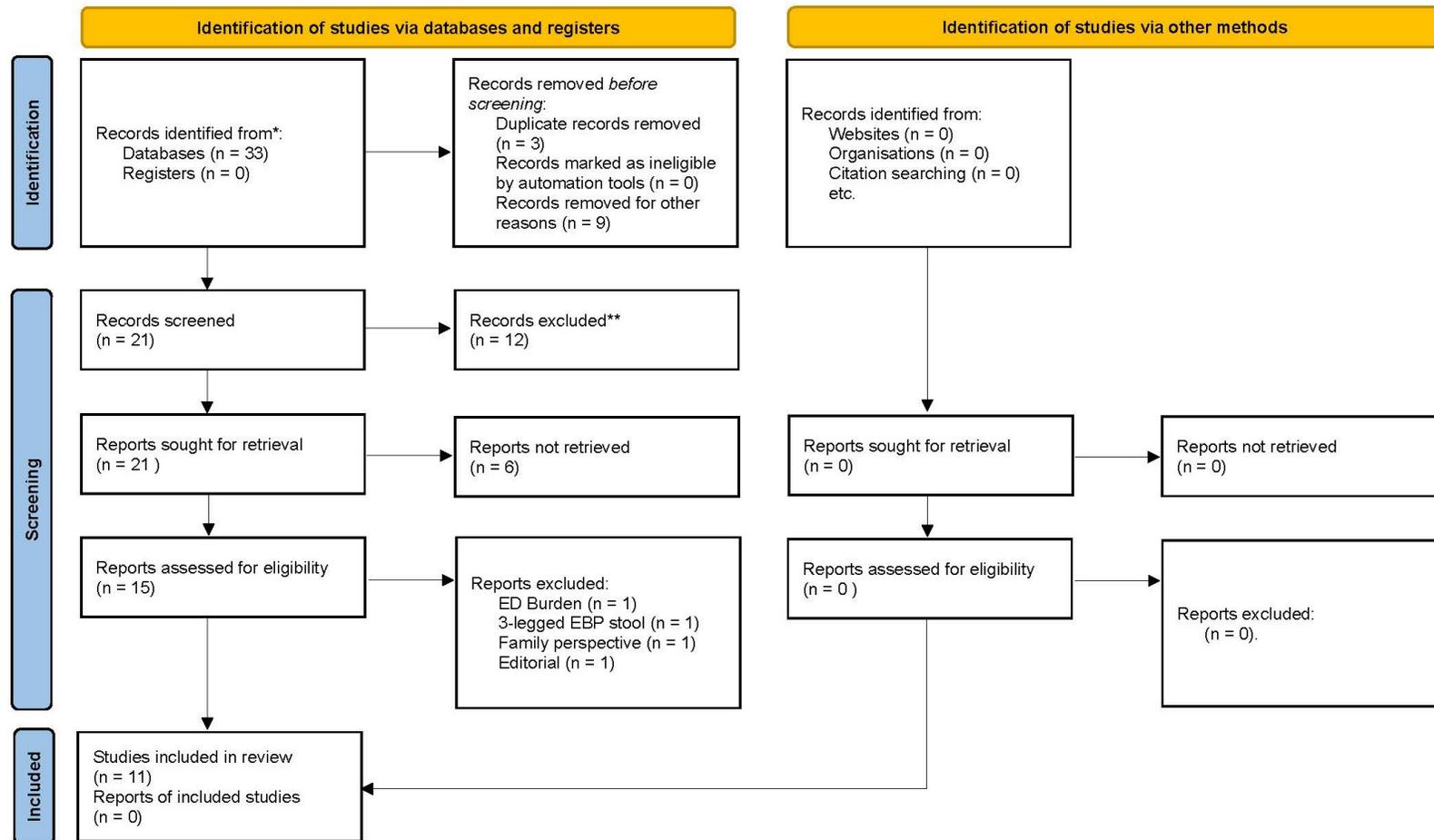
In collaboration with the research services librarian, the following databases were searched: PubMed, CINAHL, and PsycInfo for peer-reviewed journals. The keywords included “eating disorder screening tools,” “eating disorder examination (EDE),” “eating disorder examination questionnaire (EDE-Q),” “Sick, Control, One stone, Fat, Food (SCOFF),” “Eating Disorder Screening (EDS-PC),” “Screening for Disordered Eating (SDE),” and “primary care” among January 2017–September 2022 publications. The search yielded 33 articles ranging from cross-sectional research, rapid reviews, systematic reviews and meta-analyses, recommendations, and guidelines. Nine articles were excluded; six due to more recent data and newer

recommendations, lending the article minimally significant except for the historical factor, and three articles were duplicates.

Abstracts of the remaining 21 articles were reviewed, and an additional six articles were excluded because the articles only discussed treatments. Of the remaining 15 articles, the inclusion criteria required screening or screening tools, yielding 12 articles and one article on ED burden. Two articles were excluded that addressed the family perspective of EDs and the three-legged stool of evidence-based practice in ED. Figure 1 illustrates the PRISMA flowchart of the identification, screening, and included articles in the literature search.

Figure 1. Eating Disorder Screening Search

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>

Results

The inclusion articles varied greatly from moderate- to large-sized cross-sectional studies to systematic reviews with mega-analysis to guidelines and recommendations. The majority of the articles involved adults in a type of primary care setting. The adult population research was necessary due to the limited literature focusing on children and adolescent EDs. Reviewing the literature on ED screening tools, five interconnected themes were identified. These themes include PCP role, barriers, screening, high-risk and disenfranchised populations, along with pathways of care. An awareness of these five themes will help maximize the role of PCP in ED management as an initial point of healthcare entry.

Role of Primary Care Provider

PCPs have the potential to play a pivotal role in the detection of EDs in youth. Considering the ongoing relationship between the PCP and pediatric patient, PCPs have the opportunity to screen and normalize the topic of weight, diet, and body image during annual wellness and sports physical visits (Hornberger et al., 2021; Wade et al., 2022; Hay et al., 2022). Hornberger et al. (2021) and Reese (2022) address the usefulness of height and weight graphing and trajectories, along with parental/guardian input. In addition, the literature noted that PCPs' lack of knowledge regarding the prevalence, types of ED, and screening tools influenced the course of care, which has notable gaps, delaying detection and interventions for possible patients with EDs (Hornberger et al., 2021; Maguen et al., 2018; Wade et al., 2022).

Barriers to Care

Repeatedly, the literature identified primary care practices as a valuable access point in treatment, recognizing there are barriers to ED screening and care. The identified barriers include limited knowledge of ED symptomatology, unawareness of screening tools, limited referral options, and provider attitudes regarding EDs. PCPs have limited knowledge of ED signs and symptoms, screening tools, and referral options, creating barriers to optimal care (Hay et al., 2022; Peat & Feltner, 2022; Read & McComiskey, 2021). The unfamiliarity of the expanded DSM-5 criteria for ED diagnoses has been another identified barrier to ED detection (Kutz et al., 2019; Maguen et al., 2018). The authors recognized education and training to be very beneficial in decreasing this barrier.

Another identified barrier addressed includes limited ED specialty resources and access, which impacts the ED screening process if resources are readily known, and providers are likelier to screen for ED (Bryant et al., 2022; Hornberger et al., 2021; Peat & Feltner, 2022). An established and frequently updated resource list or provider toolkit is recommended to decrease this potential barrier to appropriate ED care (Bryant et al., 2022; Peat & Feltner, 2022; Reese, 2022).

Lastly, Bryant et al. (2022) and Kotarski and Rodgers (2022) recognized the influence of society, providers, and patients concerning ED stigma, stereotyping, shame, and attitudes as additional barriers to care. Hornberger et al. (2021) emphasized the PCP's role in ED advocacy as well as prevention using sensitive, nonjudgmental communication techniques, which lays the groundwork for ED screening.

Eating Disorder Screening

There are numerous free brief ED screening tools. The most commonly noted screening tools in the review included the SCOFF, EDS-PC, and the SDE consisting of four to five questions. The Eating Disorder Examination Questionnaire (EDE-Q) is lengthier and considered the gold standard for ED screening; therefore, it is often used in comparative studies.

The literature implementing the use of the SCOFF versus no ED screening tool resulted in drastic increases in ED risk detection and referrals. Read and McComiskey (2021), and Kotarski and Rodgers (2022) concluded that the use of the SCOFF increased the identification of ED risk from the previous year's reporting, which was less than one percent. In comparison, when using the SCOFF, the identified ED risks were 5.6% and 9%, respectively, which are more reflective of the prevalence range. All positive screens were referred to nutritional counseling or community specialists.

Maguen et al. (2018) and Wade et al. (2022) compared the SCOFF, EDS-PC, SDE, and EDE-Q with the aim of increasing generalizability and screening in PCP practices. Wade et al. (2022) also aimed to increase referrals with treatment pathways in place, which was achieved with a threefold increase in comparison to the previous number of referrals. Both researchers identified the SDE tool as having a higher sensitivity and specificity in comparison to SCOFF and EDS-PC. Maguen et al. (2018) argue that the SDE has more generalizability across different types of ED than SCOFF and EDS-PC. Kutz et al. (2019) also conclude the SCOFF has limitations with generalizability with both population demographics and expansion of DSM-5 ED diagnoses. The DSM-5 added more comprehensive symptomatology in the diagnostic criteria, which led to BED and ARFID diagnoses. The AN diagnostic criteria eliminated

amenorrhea. BN behaviors of binge and compensatory frequency were reduced to once per week instead of twice per week (American Psychiatric Association, 2014).

The USPSTF (2022) recognizes the SCOFF as an accurate screening tool for adult females but not for other demographics. Recognizing ED screening tools have limitations, Hay et al. (2022) published an article, “Beyond screening in primary care settings; Time to stop fiddling while Rome is burning,” acknowledging that older and newer tools “are equally, ‘good enough’ but inadequate for detecting a broad array of EDs that present in primary practice settings” (p. 1197). Therefore, this notes a necessary focus shift from an individual patient approach to a more systemic approach to ED care through the expansion of PCP knowledge, confidence, and identification of high-risk populations as well as increasing patient understanding and self-advocacy, allowing for more sufficient ED interventions and treatments (Hay et al., 2022).

Horneberger et al and Bryant et al. (2022) do not promote one screening tool over another, but they do promote screening all pediatric patients and providing early intervention. Both advocate for a more comprehensive assessment, including height and weight graphing, psychosocial and possible psychiatric assessment, and thorough physical exam. In contrast, the USPSTF recommendation to screen asymptomatic patients is unnecessary due to insufficient evidence. However, the USPSTF emphasizes the use of clinical judgment and screening of high-risk populations such as LGBTQ.

A notable system issue around ED screening involves easy access to screening tools and available referral options. Utilization of electronic health records (EHR) and online screening tools increased detection (Kotarski & Rodgers, 2022; Wade et al., 2022; Bryant et al., 2022). In

addition, an established treatment pathway also showed increased completion of ED screening and referrals (Wade et al., 2022; Read & McComiskey, 2021).

High-Risk Populations

The majority of the articles addressed high-risk or underserved populations, emphasizing the importance of ED screening. Preteens and teens were identified as a high-risk population; therefore, screening all children from as young as seven and older (Hornberger et al., 2021; Peat & Feltner, 2022; Reese, 2022). Any youth that identifies with the LGBTQ community or has a comorbid psychiatric disorder (i.e., depression, obsessive-compulsive disorder) is considered at higher risk of having an ED and needs screening (USPSTF, 2022; Bryant et al., 2022; Kotarski & Rodgers, 2022). Bryant et al. (2022) and Hornberger et al. (2021) stress the importance of screening children and adolescents with diabetes since it is an added ED risk factor. The underserved populations considered high risk include males, non-whites, and individuals with high body mass index because these groups frequently go undetected or under detected. (Bryant et al., 2022; Read & McComiskey, 2021; Peat & Feltner, 2022). Hornberger et al. (2021) suggest screening high-risk populations because implementing early interventions may potentially intercept the progression of EDs.

Pathway of Care

EDs are a specialty within psychiatry, and the reality of limited community resources is widespread, as noted in the barrier section. The literature acknowledges this fact but also repeatedly identifies how both PCPs and patients benefit from established referral and treatment pathways (Hornberger et al., 2021; Wade et al., 2022; Bryant et al., 2022). Read and

McComiskey (2021) and Kotarski and Rodgers (2022) focused on screening for EDs and had a plan for positive screens in place. Read and McComiskey referred for nutritional counseling, while Kotarski and Rodgers referred to community ED specialists. Having a treatment option in place shortens the length of referral time, which ultimately improves treatment access and recovery (Kotarski & Rodgers, Hornberger et al., 2021). Attia and Guarda (2022) promote research on early brief interventions and behavior strategies in order to intercept the possibility of treatment-resistant ED (p. 1030).

The USPSTF (2022), Hornberger et al. (2021), and Reese (2022) emphasize a treatment trio of a medical provider, psychologist/counselor, and nutritionist for the best health outcomes. It is also imperative to have parental/guardian involvement to aid in a patient's recovery. EDs are complex and require various levels of care ranging from outpatient, intensive outpatient, partial hospitalization, inpatient, and residential care, depending on the severity of symptoms, noting outpatient treatment is the first choice whenever possible (Hornberger, 2021; Reese, 2022).

Another consideration in planning optimal ED care involves the disease burden. An article by Hoeken and Hoek (2020) is the only one specifically addressing the burden of eating disorders. Financial burdens exist due to the high costs and lengthy ED treatment, reporting that patients with EDs have 48% higher healthcare costs than the general public. Parent/caregiver stress and possible loss of income due to caregiver responsibilities add to the disease burden. The physical consequences of EDs may include hospitalization for acute medical stabilization and more chronic health issues such as osteoporosis or issues with childbearing, both adding to the economic burden. EDs negatively affect the quality of life by decreasing an individual's participation and productivity in educational, occupational, and psychosocial activities (Hoeken

& Hoek, 2020). The authors report that persistent Eds worldwide are responsible for 3.3 million healthy persons' years lost to disability (p. 523). Individuals with EDs have mortality rates two to five times higher than the general public and even higher if comorbid psychiatric disorders are present, adding to the disease burden. (Hoeken & Hoek, 2020).

Discussion

EDs are multifaceted, and this literature review provided additional reminders of the complexity of ED detection and management. The initial intent was to focus on ED screening; however, it quickly became apparent that screening is just one step in the care of EDs. It is necessary to determine who should do the screening, and for the sake of this project, PCPs were the focus. The articles continually identified PCPs as integral leaders in detecting EDs through routine ED screening at wellness and sports physical visits. In theory, this is ideal; however, in practice, it is more complicated. EDs are intimidating and concerning to many providers, both PCPs and specialists, due to the physical, psychological, emotional, and social components as well as the individuality of each patient with an ED. This leads to another common theme throughout the review: barriers impacting ED care. Prominent barriers acknowledged limited awareness and understanding of ED symptomatology, especially if the ED symptoms expand behind AN or BN. Additional knowledge deficits include ED screening, referral options, and treatment management. Through education, training, and an established list of ED resources, PCPs can deliver more confident and informed decision-making in ED management. Ideally, increased knowledge and understanding will enable PCPs to modify their attitudes regarding EDs and collaborate with patients, families, and treatment team members.

ED screening tools are brief tools designed to detect an individual that may be at risk but are not diagnostic tools; therefore, it is important for providers to further assess and evaluate any positive ED screen in order to diagnose, manage, and make appropriate referrals. Individual studies endorsed one screening tool over another, primarily to increase generalizability across varying EDs in the DSM-5. Consistently in the systematic reviews, there was no preference of a screening tool but the emphasis on screening and what can be done regarding a positive screen.

In 2022, the USPSTF published the first recommendation for asymptomatic ED screening of individuals 10 years old and older, concluding there is insufficient evidence for or against routine ED screening. It is important to note that there is very limited randomized control trial research published comparing ED screening versus no screening, and this poses a limitation in the USPSTF recommendation. The USPSTF recommends providers use clinical judgment to determine whether to screen asymptomatic patients. At face value, the USPSTF's recommendation has the potential to be a bit unclear for providers who are unfamiliar with EDs and unaware of the additional recommendation from AAP and AACAP. In addition, it is imperative for providers to be familiar with high-risk ED populations because all the literature recommends that these populations be routinely screened, primarily preteens and teens, LGBTQ, comorbid psychiatric conditions males, and higher BMI. Males and non-whites are frequently disenfranchised in ED screening and care, which supports the need to increase ED awareness overall.

PCPs are responsible for numerous healthcare conditions, with many established treatment guidelines, protocols, or pathways, enabling quality care and appropriate referrals. It is noted that an established plan of action for positively screened ED patients was beneficial and

valued by providers. However, accessibility to this option of care was not always readily available, causing a gap between screening and treatment. PCPs understand the fact that ED resource availability is limited. Nevertheless, an ongoing resource list of available options of varying levels of ED treatment adds value to the PCP's assessment and plan of care as well as healthcare outcomes for patients. Despite the high prevalence of ED, gaps remain in the screening, referral, and management process, resulting in untreated ED that can potentially manifest into adulthood. PCPs, such as general family and pediatric practitioners, have the potential to play a vital role in this under or undiagnosed population with potentially long-term complications or even death.

Medical conditions have a disease burden component, and EDs are no exception. The longer an ED is undiagnosed and untreated, the more burdensome it becomes, impacting one's ability to function physically, emotionally, and socially, decreasing one's quality of life. The effects of ED permeate into family functioning as well. Parents and caregivers often experience emotional turmoil, loss of confidence, and employment. The financial burden to the patient and society includes the cost of treatment, loss of income, and individuals with comorbid psychiatric conditions increase the economic burden even more. Mortality rates in EDs are two to five times higher than the public and are the second leading psychiatric-related death. What role do PCPs play in lessening the disease burden and aiming for optimal short- and long-term health outcomes in patients with EDs?

Implications for Practice

The prevalence of ED is increasing with a younger age of onset. The trajectory of these current trends marks a serious health concern and a need for better solutions to optimize the care

of youth with ED, especially those at high risk. PCPs have opportunities to intervene early. The literature reviewed recognizes interventions that promote better screening, such as a screening tool embedded into the EHR and established resource referrals for treatment. In addition to screening, educating PCP to increase knowledge and awareness of the broad range of symptomatology and overlapping diagnostic criteria benefits patients. This also increases providers' confidence, and comfort with screening and caring for ED. Another practice implication includes resource information for ED patients, such as local nutritionists, therapists, support groups, other specialists, national support organizations, and reputable online resources. Refining ED detection and care will ultimately allow for better patient outcomes, which will positively affect the disease burden. PCPs are the first point of entry for health care, and given the appropriate tools, PCPs has the potential to modify the trajectory of EDs while enhancing ED care and research opportunities.

Conclusion

The literature review establishes there are gaps in screening for and managing ED. More research is necessary to better navigate patient care and create appropriate plans of action for screening and treatment. Providing PCPs with resources that simplify screening and maximize referral paths and treatment allows for an initial step to change the current ED care paradigm. Considering EDs are the second leading cause of death in psychiatric patients, have potential long-term physical and emotional issues, and frequently are carried into adulthood, they impact the individual, societal disease burden, and healthcare resources.

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CHAPTER TWO

PATHWAY FOR COMORBID EATING DISORDER:
TRANSITIONS OF CARE DURING PSYCHIATRIC INPATIENT HOSPITALIZATION

Children and adolescents with psychiatric disorders are at an increased risk of comorbid EDs. These disorders are the second leading cause of psychiatric deaths, followed closely by opioid overdoses (ANAD, 2021; Reese, 2022). In addition to the lethality of EDs, there are short- and long-term adverse health outcomes that can occur, impacting physical, psychological, and social well-being in the present and the future (USPSTF, 2022). It is difficult to provide an exact lifetime prevalence; however, the estimated ED prevalence ranges from 0.9–22.7%. (Hornberger et al., 2021; NEDA, 2021). ED affects nearly 30 million people in the US, with most disorders starting in childhood, adolescents, or young adulthood (Kutz et al., 2019; NEDA, 2021).

Children and adolescents with severe psychiatric symptoms may require inpatient treatment for stabilization. Upon admission for an acute psychiatric issue, some children and adolescents are diagnosed with an ED for the first time. The presence of admitting diagnoses does not indicate EDs; however, 50% mood disorders and 35% anxiety disorders also have a comorbid ED diagnosis (Datta et al., 2022). It is important to note that ED in youth can cause developmental issues such as growth retardation, delayed or interrupted puberty, decreased bone mass, and psychosocial problems (Hornberger et al., 2022). There is an emphasis on the importance of early intervention in order to decrease progression, intercept the development of chronic or treatment-resistant ED forms, and increase recovery rates (Robinson et al., 2013; Datta et al., 2022). Children and adolescent inpatient psychiatric admissions provide an ideal

opportunity to screen, initiate treatment, and establish a discharge pathway for comorbid ED, promoting a comprehensive transition of care at discharge.

Problem Statement

A Rocky Mountain child and adolescent psychiatric inpatient hospital's discharge planning for psychiatric issues is a well-established process; however, the process is less established for positively screened and/or diagnosed comorbid EDs. This leads to gaps in the comorbid diagnosis treatment after discharge. Creating a process to close this gap will improve the scheduling of appropriate discharge appointments and resources, enhancing short- and long-term prognoses of the comorbid ED condition. To address the discharge gap, it is necessary to establish a structure that delineates the responsibility of the treatment team members and improves team communication. As a patient experiences hospitalization, an interdisciplinary team collaborates to identify the patient's priority needs. The identified patient needs determine the transition of care at discharge, which aims to support the most positive health outcomes of the comorbid diagnosis.

Currently, ED screening is completed at admission on all patients, regardless of the admitting diagnosis. The three-question screening is in the EHR, and a score of two or greater signifies a positive screen. This first step was consistently done. The family nurse practitioner (FNP) reviews the EHR identifying a positive ED screen. After a complete history and physical examination, the FNP orders a registered dietitian consult and possibly additional diagnostic tests. All patients must be cleared medically for admission to a unit.

The psychiatric provider (PP) and therapist complete an initial assessment, which elaborates on the positive ED screen to identify a potentially comorbid ED diagnosis. There is

sometimes overlap between the PP and FNP orders for the registered dietitian (RD) consult. Unit activities and care are based on the type of ED behaviors (i.e., a patient with identified purging has bathroom restrictions after meals), and all patients with positive ED screen meet with RD. However, most patient activities do not differentiate between positively and negatively screened patients (i.e., school, meals, groups). The unit care of patients with disordered eating types has room for improvement and is currently being addressed by a nurse residency project. Psychiatric providers, therapists, and patient care coordinators (PCCs) begin discharge plans early in treatment and often experience limited ED follow-up options.

Organizational Microsystem Assessment

The Rocky Mountain child and adolescent psychiatric inpatient hospital is not an eating disorder-specific facility, but rather an inpatient pediatric behavioral health hospital treating psychiatric disorders, and sometimes these include medically stable EDs. The child and adolescent psychiatric inpatient hospital is a voluntary non-profit 85-bed inpatient facility that also provides outpatient care. Ninety-nine percent of patients are from their home state, showing a commitment to the rural population's health. The Rocky Mountain child and adolescent psychiatric inpatient hospital's vision is to be the state's leading resource in children's mental health and family well-being. Aiming to provide optimal care and commitment to children and families of the state, this psychiatric inpatient hospital lends itself to a doctor of nursing practice (DNP) quality improvement project. The primary area that can be improved upon is the discharge process in order to make the transition of care as flawless as possible.

The initial contact with the facility was established with the FNP, which introduced the ED topic as a relevant area for improvement to further investigate. The FNP reported ED care is

limited; this information led to a review of literature ranging from ED prevalence to screening to management. The literature review led to the conclusion that screening is imperative in youth. The consensus of stakeholders supported the concept of screening all admissions for EDs in order to detect a possible comorbid diagnosis. The informatics staff provided the admission data from September 2021 to September 2022, which resulted in 66 of 214 (31%) admissions with an ED diagnosis. Despite the well-established screening at the facility, ED treatment knowledge gaps, breaks in communication, and limitations with discharge planning were reported. The following comments were provided: “screening and in-house management of disordered eating is in place but could be better,” “internal resources could be used better,” and “discharge planning is difficult.” The gap regarding discharge was repeatedly reported, primarily due to the perception of minimally available resources and limited knowledge of available resources.

The Institute for Healthcare Improvement’s (IHI) ten characteristics of a microsystem were applied to assess the facility's organizational features. See Table 1. The facility has numerous strengths within the system, as noted by the number of characteristics with full support. Two of the ten characteristics have partial support: process improvement and informatics. As a result of the current staffing shortage, units are closed, and staff is distributed to other areas. These adaptive strategies may impact consistencies and processes within the workplace. The organization shares the EHR with another healthcare agency that manages the primary informatics technology (IT) system, which limits the autonomy of the Rocky Mountain child and adolescent psychiatric inpatient hospital. These are areas to consider in planning the interventions and implementation.

Table 1. Institute for Healthcare Improvement Microsystem Characteristics

Microsystem Characteristics	Limited Support	Partial Support	Full Support
Leadership			X
Organizational support			X
Staff Focus			X
Education and Training			X
Interdependence			X
Patient-Focused			X
Community and Market Focus			X
Performance Results	Unable to rate	Unable to rate	Unable to rate
Process Improvement		X	
Information & Information Technology		X	

Modification of IHI Clinical Microsystem Tool (2022)

The project lead identifies the facility's greatest strengths as the interdisciplinary teams' respect, a common purpose of safety, and patient-centered care. The hospital's mission is to heal, help, and inspire hope, which aligns with the Sanctuary Model of care. The seven Sanctuary Commitments include nonviolence, emotional intelligence, social learning, democracy, open communication, social responsibility, and growth and change. The Sanctuary Model is the treatment model of the facility, which embodies the commitments as an organization as well.

These strong organizational resources allow for the support of this project and the best outcome for pediatric patients.

The majority of the stakeholders showed great interest in and enthusiasm for ED management improvement. Some members of the interdisciplinary team will be more directly involved in the planning and implementation process. These stakeholders include the admission registered nurse (RN), FNP, psychiatric providers, RD, therapist, unit nursing staff, informatics, and PCC. Stakeholders that will be more loosely involved are the nurse educator and director of nursing. The potential quick adapters are admission nurses, RD, FNP, psychiatric providers, PCCs, and informatics team since they demonstrated the most excitement during the topic discussions.

Rationale

To provide quality care, it is necessary to address inpatient comorbid psychiatric and ED conditions throughout the treatment process, including the transition of care at discharge. The needs assessment identified that patients with comorbid diagnoses are underserved regarding ED follow-up care, welcoming the need for quality improvement.

The Donabedian model will be used for this quality improvement project, focusing on the structure, process, and outcome (Benes, 2021). The structure involves the facility services and infrastructure—the where and who. The process encompasses interactions associated with the services provided—the how. The outcome affects the results of care—the what. This conceptual framework maps the necessary categories to address in the quality improvement (QI) project.

The facility structure provides inpatient child and adolescent psychiatric care with a diverse interdisciplinary team and a shared purpose of safety and patient-centered care. The

hospital staff resources include admission nurse, FNP, psychiatric providers, therapists, nursing staff (RN, mental health technician [MHT]), RD, allied therapists, teachers, nurse educator, director of nursing, and informatics technician. The existing manpower has the interdisciplinary structure and skillset to impact the process for improvement. The leadership team provides a safe, respectful environment that is staff- and patient-focused with a clear purpose and goals. Despite the staffing shortage, the hospital maintains a stable, focused structure.

The process of comorbid ED within the inpatient setting identifies a few areas to improve communication and care for this population. The current process is as follows: the admission process includes ED screening via EHR, which is completed consistently at the facility. Next, the patient is transferred from admissions to the inpatient unit, where the nursing staff provides an orientation to the unit, obtains blood for routine labs, and monitors behaviors within the milieu. Within the first 24 hours, the FNP reads ED screening results in EHR, completes a thorough history and physical, and orders a RD consult for all positive ED screens. Both the PP and therapist complete their initial assessment in the first 24 hours of admission as well. The PP further assesses for ED and may order an RD consult. The inpatient treatment team consists of a psychiatrist or psychiatric nurse practitioner, therapist, allied therapy, and unit nursing staff. The treatment team provides care throughout the hospitalization and primarily the therapist, PP, and PCC collaborate on discharge needs. The team acknowledged discharge planning as a gap in care, suggesting a more streamlined communication and earlier inclusion of PCC in the treatment of positive ED screens.

The two areas to improve the process include communication and transition of care for patients with a positive ED screen. The first step involves listing positive screens on the patient's

nursing assessment and screening sheet upon admission. Both the RN and FNP review this paper form and acknowledge it with signatures. This step would be a paper reminder for the FNP to consult RD and prevent overlap as well as provide an immediate awareness of the ED risk for unit staff. Another early step is to collaborate with IT to add an EHR communication alerting a positive ED screen from admission to discharge. An additional IT process change will be adding a dotphrase in discharge planning as a reminder of the secondary ED diagnosis discharge options. Both EHR process changes will be integrated decision tools communicating reminders of ED needs during the hospitalization process. The structures currently exist; however, there is a process to enhance communication and maximize outpatient resources for the optimal transition of care, closing the gap. In addition, a compilation of identified ED and/or comorbid resources for psychiatric providers, therapists, and PCC will be imperative to assure the most comprehensive outcome for the transition of care at discharge.

Table 2 provides a representation of the organization's patient flow from admission to discharge and the staff roles and responsibilities. Texts in red are indicative of actions taken with a positive ED screen that differ from negative screens. The green represents the location and action of the recommended process changes for the quality improvement project.

Table 2. Current Organization Workflow

Patient arrives → **Admission RN** completes intake, including eating disorder screening via EHR, prepares patient and paper forms for transfer to admitting unit including a 'nursing assessment and screening' form, escorts patient to unit, hand-off patient to unit RN.
Process changes 2 & 3 will be initiated here for early identification and communication of positive ED screen to unit and discharge

→ **Unit RN and/or mental health technicians** complete safety check, orient patient to the unit, complete routine orders, such as, vital signs, labs, and provide welcome packet with schedule, milieu guidelines, etc.
Process changes 3 will be initiated here for early identification and communication of positive ED screen to

Within first 24 hours of admission, the following occur:

→ **Family Nurse Practitioner** reviews EHR identifies + ED screen, completes thorough history and physical assessment, assures medical stability of all patients, **orders registered dietitian for all positive ED screens.**
Process change 3 will be initiated here for easy identification and communication of positive ED screen in anticipation of registered dietitian consult

→ **Psychiatric provider** (psychiatrist or psychiatric nurse practitioner) complete thorough psychiatric evaluation and **further assessment for ED specific criteria and diagnosis**; may make referral for registered dietitian, manages patient care with treatment team throughout hospitalization

→ **Assigned therapist** evaluates patient, makes recommendations, plan and works with patient and treatment team throughout hospitalization

→ **Daily Unit Life**
Nursing staff manage milieu and work with patients and treatment team to determine treatment plan: programming, group, and recreational therapy, individual, and family therapy, school, and mealtime. Much of the unit life is the same between positive and negative ED screen results; however, **a patient with positive ED screen has intake and output monitoring and may have bathroom limited privileges for the first 60 minutes post meal, depending on ED behaviors, additional modifications on individual bases.**

→ **Discharge planner** (patient care coordinator) builds the discharge plan based on provider and therapist orders and recommendations for available outpatient treatment by scheduling follow-up appointments and additional resources. Also, discharge includes seven days of medication. Unit RN reviews discharge instructions with patient and parent/guardian at time of departure.
Process changes 1 & 4 project lead will provide knowledge of available resources in the state to arrange follow-up appointments after discharge & allow for early contact to potential ED discharge for continuity and comprehensive care

→ Patient departs with follow-up care scheduled

Specific Aim

Youth admitted to inpatient psychiatric hospitals are at increased risk for ED. The comorbid ED is often undetected and identified for the first time during inpatient admission ED

screening. The goal of this quality improvement project is to promote quality ED care throughout treatment, with the greatest focus on discharge planning for the inclusive transition of care, to maximize follow-up and minimize ED morbidity and mortality. The Logic Model reveals the process of the relationship identifying the input, activity, output, and outcome of the QI project. See Appendix A.

Specific Aim 1: Comprehensive patient-centered transition of care for comorbid ED at discharge from inpatient psychiatric hospital.

Specific Aim 2: Improve morbidity and mortality rates of pediatric EDs.

In order to support the specific aims, five SMART goals, accompanying actions, and data collection strategies are included in Table 3.

Table 3. SMART Goals

SMART Goal #1 Project lead will develop a resource sheet for RDs, eating disorder therapists, eating disorder facilities throughout the state in order to assist transition of care at discharge prior to implementation start date 12/19/2022 STG		
Description of strategies to be utilized to accomplish goal including any needed resources.		
<ul style="list-style-type: none"> • Project lead will research community ED resources via websites, email, and telephone calls to identify the available discharge management options, both in-person and virtual. • A spread sheet of services offered and contact information will be created for distribution to providers and discharge planners. 		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
ED treatment/management programs in the state	Project lead will provide a compilation the ED information in a list	Identified number of RD, ED therapist, other ED specialist
Use of ED resource for discharge with comorbid diagnoses	Electronic and hard copy list of resources will be provided to PCC	Resources received yes/no

Table 3 Continued

Number of times ED resources included at discharge in comparison to total number ED diagnosis	Project lead will review discharge summaries biweekly	Identify number of discharge diagnosis and follow-up plan included ED Relationship graph-possible scatter plot
SMART Goal #2: All (100%) of positive eating disorder screens will be communicated from admission staff to discharge staff via EHR over 6 week period December 2022-January 2023 STG		
Description of strategies to be utilized to accomplish goal including any needed resources. <ul style="list-style-type: none"> • A team of stakeholders will develop standardized terminology to be communicated from admissions RN to discharge planners supporting the use of IT to manage and record clinical information to inform decision-making in clinical practice • Project lead will work with IT department to assess feasibility and time commitment • Identify responsible party for IT expenditure needs approval • Teaching session for admission staff to implement use of new EHR data set to support the initiation of discharge planning decisions • Allow for database query of positive ED screening on admission and discharge 		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Total number of admissions	Admission nurse is responsible for screening and project lead will receive data from IT	Biweekly admissions and positive ED screen will be evaluated to obtain more accurate data set. The information will be presented as a bar graph or pie chart
Communication of positive screen to discharge team in preparation of discharge	Admission nurse will communicate positive screen to discharge staff via EHR. Project lead will receive EHR data from IT of all positive ED screens via email	Biweekly review of positive screen and communication to discharge will be assessed if EHR communication is completed and identified benefits of data in planning discharge. Possible relationship scatter plot or line graph

Table 3 Continued

<p>SMART Goal #3 At admission minimum of 100% of “nursing assessment and screening paper form” will include the result of positive ED screen for unit staff and FNP signature upon admission to hospital unit and RD consult order in six-week period December 2022–January 2023 ITG</p>		
<p>Description of strategies to be utilized to accomplish goal including any needed resources.</p> <ul style="list-style-type: none"> • Admissions nurse will document the positive ED screen on the nursing assessment and screening paper form in preparation for transfer to the unit. 		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of positive assessments documented on nursing assessment and screening paper form compared to number positive screens in EHR upon admission	Project lead will review nursing assessment and screening paper form to determine if positive ED screen was documented and compare to admission screen	It is present on nursing assessment and screening form or not. Bar graph or pie chart possibly
Referral for RD order	Review of RD consult and identify referral source FNP vs. Psychiatric provider	FNP makes referral, identify if overlap is present Pie chart
<p>SMART Goal #4 A minimum of 100% of comorbid ED and psychiatric disorder will identify future ED treatment/management for transition of care for discharge via a dotphrase in six-week period in December 2022-January 2023 ITG</p>		
<p>Description of strategies to be utilized to accomplish goal including any needed resources.</p> <ul style="list-style-type: none"> • Collaborate with providers and IT staff to identify number of comorbid ED diagnoses at discharge • Schedule ED outpatient services and follow-up appointments accordingly 		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of inpatient with ED diagnosis at discharge	EHR discharge diagnoses query	Identify comorbid ED prevalence Pie chart
Number of outpatient ED services scheduled at discharge	Data set from dotphrase query	Identify number of ED scheduled for follow-up care with RD, ED therapist or other ED specialist Pie chart

Table 3 Continued

SMART Goal #5 Facilitating pediatric comorbid ED transition of care from inpatient psychiatric to outpatient
Description of strategies to be utilized to accomplish goal including any needed resources. <ul style="list-style-type: none"> Fewer pediatric patients with comorbid psychiatric and eating disorders will suffer long-term morbidity or mortality due to ED complications. LTG

Context

The presenting concern regarding ED management is threefold: identification and communication of ED risk factors or diagnosis, transition of care through psychiatric inpatient hospitalization, and discharge. The inpatient interdisciplinary team works in conjunction with the patient daily. The key players in the quality improvement are IT, admissions and discharge staff, and the medical providers. Factors for consideration include capturing pertinent assessment data, communicating via universal language, querying data sets (measurements and interrelatedness), and engaging the information to deliver optimal patient-centered care. This process is transferable because similar facilities would have access to the same staff resources and the financial commitment is nominal. The main objective is to detect ED, and provide patients with support, knowledge, and resources upon discharge. The desired outcome is to lower ED morbidity and mortality.

Process Change and Implementation

The pediatric psychiatric inpatient hospital has a reputable psychiatric inpatient program; however, the subspecialty of EDs is less established at the facility. In alignment with the hospital's mission and values to be the state's leading resource in children's mental health and family well-being, the facility acknowledges improvement is necessary for increasing comorbid

eating disorder diagnoses. Therefore, a quality improvement project to convey screening data and facilitate discharge planning was developed, with a few small modifications to the current process.

The first step is generating a document with outpatient eating disorder resources in preparation for discharge planning. The implementation of this document addresses the perception of or reality of the lack of accessible resources for the transition of care for patients with comorbid diagnoses, enabling PCC to design a comprehensive discharge plan. The project lead will utilize the internet, word of mouth, and telephone calls to explore outpatient eating disorder treatments throughout the state, including RD, eating disorder specialists, and providers. This initial implementation is to provide the treatment team with available ED discharge resource options and will be completed December 19, 2022.

During the admission process, the RN screens for eating disorders via EHR. The next two process changes involve the communication of the positive screen. The first action includes relaying the positive screen via EHR to discharge team in preparation for discharge planning. Part of the admission process includes a paper form labeled “nursing assessment and screening,” which travels with the patient to the admitting inpatient unit. The form includes a section for referral for further treatment. Documenting the patient’s positive screen on this form allows for immediate transfer of communication regarding ED screening results at hand-off. The unit RN documents additional assessment screening and findings that are then reviewed by the FNP, who is responsible for ordering the RD consult. The implementation of these two interventions will be monitored over a six-week period from December 2022 to January 2023.

The last process change focuses the most on the discharge process to safeguard the transition of care to outpatient treatment with the use of EHR dotphrases. This allows providers to communicate their needs for comprehensive patient-centered discharge care through the identification of the necessary ED outpatient treatment. The discharge planner can routinely base discharge follow-up on appropriate resources. The implementation of this process change will be twofold: development of dotphrase by December 19, 2022, and implementation of the dotphrase procedure will occur for six weeks between December 19, 2022 and January 30, 2023. See Table 4 for the project timeline. Ideally, this intervention is a start to all-inclusive care of comorbid ED and psychiatric disorders, decreasing the morbidity and mortality of the pediatric population.

In considering potential barriers in the QI project, it is important to reflect on the impact of the staffing shortage, unit closures, EHR capability, and manpower to create process changes, organizational resistance to change, and the number of admissions in the time period.

Table 4 Project Timeline

Date	Nov 17-30/22	Dec 1-10/22	Dec 11-20/22	Dec 21-31/22	Jan 1-10/2023	Jan 11-20/23	Jan 21-31/23	Feb 1-10/23
Action								
Compilation of resource list	X							
Delivery of resource list		X	X					
IT EHR modifications		X	X					
Communication through nursing screening & assessment form			X	X	X	X	X	X
Implementation dotphrase			X	X	X	X	X	X
Data collection								X

Evaluation

Upon completion of the QI project, the following data points will be measured to determine whether the intended process changes were effective. As the project lead, the initial goal is to compile a list of ED resources available in the state to support the discharge team's plans for patient transition of care. Once the resource list is complete, the next step includes an alert from admissions to discharge flagging all positive ED screens. This promotes timeliness and efficiency in discharge planning. The documentation includes a positive screen on the agency's nursing assessment and screening paper form to communicate ED risk upon transfer to the inpatient unit. This communication ensures that the patient is at risk and may need monitoring, which closes a gap in communication during the transition to the unit. In addition, continuity of care at discharge through the utilization of a dotphrase in the EHR will give PCC

access to discharge resources. Discharge planners will be instrumental in scheduling necessary appointments and follow-up care. The goal would be a decrease in the prevalence of morbidity and mortality due to ED.

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CHAPTER THREE

QUALITY IMPROVEMENT PROJECT: COMORBID EATING DISORDER

Children and adolescents with psychiatric disorders are at increased risk of comorbid disordered eating. EDs are the second leading cause of psychiatric deaths (ANAD, 2021; Reese, 2022). In addition to the lethality of eating disorders, there are short- and long-term adverse health outcomes that can occur, impacting physical, psychological, and social well-being in both the present and the future (USPSTF, 2022). It is difficult to provide an exact lifetime prevalence; however, the estimated ED prevalence ranges from 0.9–22.7%, demonstrating the elusiveness of EDs (Hornberger et al., 2021; NEDA, 2021). EDs affect nearly 30 million people in the US, with most disorders starting in childhood, adolescents, or young adulthood (Kutz et al., 2019; NEDA, 2021).

Background

Children and adolescents with severe psychiatric symptoms may require inpatient treatment for stabilization. Upon admission for an acute psychiatric issue, some children and adolescents are diagnosed with an ED for the first time. The presence of the admitting diagnoses does not indicate EDs; however, individuals with mood disorders and anxiety disorders also have a comorbid ED diagnosis, 50% and 35%, respectively (Datta et al., 2022). It is important to note that EDs in youth can cause developmental issues such as growth retardation, delayed or interrupted puberty, decreased bone mass, and psychosocial problems (Hornberger et al., 2022). There is an emphasis on the importance of early intervention to decrease progression, intercept the development of chronic or treatment-resistant ED forms and increase recovery rates

(Robinson et al., 2013; Datta et al., 2022). Children and adolescent inpatient psychiatric admissions provide an ideal opportunity to screen, initiate treatment, and establish a discharge pathway for comorbid ED, promoting a comprehensive transition of care at discharge.

Literature Review

In 2022, the USPSTF published the first recommendation for asymptomatic ED screening of individuals 10 years old and older, concluding there is insufficient evidence for or against routine ED screening. The USPSTF recommends providers use clinical judgment to determine whether to screen asymptomatic patients. At face value, the USPSTF's recommendation has the potential to be a bit vague for providers who are unfamiliar with EDs and unaware of the additional recommendation from the AAP and the AACAP. Additionally, providers must be familiar with high-risk ED populations, primarily preteens and teens, LGBTQ, and individuals with psychiatric disorders and higher body mass index. The literature recommends that these populations be routinely screened. Males and non-whites are frequently disenfranchised in ED screening and care, which supports the need to increase ED awareness, beginning with screening.

Reviewing the literature, no articles were located on ED care in psychiatric, non-ED inpatient units. Therefore, ED screening tools were the starting point, which identified five interconnected themes. Recommended courses of action included establishing and addressing PCP roles, barriers, screening, high-risk and disenfranchised populations, along with pathways of care. An awareness of these five themes will help maximize the role of PCPs in ED screening and management as an initial point of ED care.

The prevalence of ED is increasing with a younger age of onset. The trajectory of these current trends marks a serious health concern and a need for better solutions to optimize the care

of youth with ED, especially those at high risk. PCPs have opportunities to intervene early. The reviewed literature recognizes interventions that promote better screening, such as a screening tool embedded into the EHR and established resource referrals for treatment. In addition to screening, educating PCPs to increase knowledge and awareness of the broad range of symptomatology and overlapping diagnostic criteria benefits patients' access to continued care. This also increases providers' confidence and comfort with screening and caring for EDs. Refining ED detection and care will ultimately allow for better patient outcomes, which will positively affect the disease burden. PCPs are the first point of entry for healthcare, and given the appropriate tools, PCPs have the potential to modify the trajectory of EDs, while enhancing ED care and research opportunities. Providing PCPs with resources simplifies screening, maximizes referral paths and treatment, and allows for an initial step to change the current ED care paradigm.

Conceptual Framework

The Donabedian model was used for this quality improvement project, focusing on the structure, process, and health outcome (Benes, 2021). The structure involves the facility services and infrastructure, basically the 'where' and 'who.' The process addresses the 'what' and 'how' interactions associated with the services provided. The intertwined efforts of the structure and process lead to the understanding of the outcomes of the desired effects of care. This conceptual framework maps the necessary categories to address in this QI project.

Rationale

In order to provide quality care, it is necessary to address inpatient comorbid psychiatric and ED conditions throughout the treatment process, including the transition of care at discharge. The needs assessment identified that patients with comorbid diagnoses are underserved, especially regarding ED follow-up care, welcoming the need for quality improvement. Upon direct request, PCCs were provided additional resource information for ED patients such as RDs, nutritionists, and ED counselors.

Specific Aim

The primary aim is to develop a comprehensive patient-centered transition of care for comorbid ED, from psychiatric admission to discharge from an inpatient psychiatric hospital. The secondary aim, taking into account population health, is to improve pediatric eating disorders' morbidity and mortality rates.

Context

The presenting concern regarding ED management is twofold: 1) identification of risk factors or diagnosis and 2) transition of care through psychiatric inpatient hospitalization and discharge. See Appendix B. The interdisciplinary team works in conjunction with patients and caregivers. The key team members of quality improvement are IT staff, admissions and discharge staff, and providers. Factors for consideration include capturing pertinent assessment data, communicating via universal language, querying data set (measurements and interrelatedness), and employing the information to deliver patient-centered care. The QI project

was implemented at a Rocky Mountain child and adolescent psychiatric inpatient hospital. This process is transferable because similar facilities would have access to the same staff resources, and the financial commitment is nominal. The main objective, the standard of care during hospitalization and upon discharge, is to consistently provide patients with support, knowledge, and resources. The desired outcome is to lower ED morbidity and mortality through extended care after hospital discharge. Upon receiving internal review board (IRB) approval, process changes were proposed for implementation over seven weeks in January and February 2023.

Process Changes and Implementation

The pediatric psychiatric inpatient hospital has a reputable psychiatric inpatient program; however, the subspecialty of eating disorders is less established at the facility. In alignment with the hospital's mission and values to be the state's leading resource in children's mental health and family well-being, the facility acknowledges improvement is necessary for increasing comorbid eating disorder diagnoses. Therefore, quality improvement to convey screening data and facilitate discharge planning has been developed with a few small changes to the current process. See Appendix C.

The first step was to generate a document with outpatient ED resources in preparation for discharge planning. Appendices D and E. The implementation of this document addressed the perception of, or reality of, lack of accessible resources for the transition of care for patients with comorbid diagnoses, enabling PCCs to design a comprehensive discharge plan. The project lead utilized the internet, word of mouth, and telephone to explore outpatient ED treatments throughout the state, including RDs, and eating disorder counselors.

During the hospital admission process, the RN screens for eating disorders via EHR. The next two process changes involved the communication of a positive screen. The first action included relaying the positive screen via EHR to the discharge team in preparation for discharge planning. IT added disordered eating to the anticipated discharge needs dropdown in EHR. The second part of the admission process included a paper form labeled “nursing assessment and screening,” which travels with the patient to the admitting unit. The documentation of a patient’s positive screen on this form allows for immediate, relevant communication at hand-off contact. The unit RN documents additional assessment screening and findings to be reviewed by the FNP further solidifying timing communication. In order to prevent less overlap of providers’ orders, the FNP was identified as the team member to consult with the hospital RD.

The last process change focused on the discharged process to safeguard the transition of care to outpatient treatment with the use of an EHR dotphrase. Initially, a dotphrase was proposed; however, an additional option of nutrition was added under “anticipated discharge needs,” and was preferred for capturing ED diagnosis earlier during the admission process. This EHR populated list feature allowed providers to communicate needs for comprehensive patient-centered discharge care through the identification of “anticipated discharge needs” for necessary ED outpatient treatment. Previously, the discharge planner routinely based discharge follow-up on “anticipated discharge needs” labeled “other.” This simple EHR change and the outpatient resource list provide specific pathways and resources for discharge transition. The implementation of the proposed dotphrase was replaced by another EHR preference for a more efficient option earlier in the hospitalization process. These subtle process changes are the first steps to establishing an all-inclusive transition of care for comorbid ED and psychiatric

disorders, thereby decreasing the morbidity and mortality of EDs within the pediatric population.

Ethical Considerations

The project facility does not have an internal review board; therefore, the project process changes were reviewed by the Montana State University Institutional Review Board (IRB) and approved under exempt status. See Appendix F. Medical records reviewed to evaluate the process change only recorded whether the QI process actions were completed.

The site representative provided a list of patient names/medical records numbers with positive ED screening results, which were admitted and discharged during the project implementation period; only charts meeting these criteria were reviewed. This list was used to access records for review only. No personal health information (PHI) was removed from the facility. Data collection involved project site process changes, with no PHI. The data is stored in a Microsoft Excel spreadsheet on a secure computer.

Results

The results reflect the overall impact of the QI process changes, including the percentages of the completed “change actions” that were implemented. SMART goal #1 included the development of a resource list of statewide ED-RDs and counselors/therapists. The project lead provided a resource list of statewide RDs and counselors whose scope includes working with eating disorders on an outpatient basis. The main criteria for the professionals on the resource list were experience working with individuals with EDs. Additional provisions were accepted insurance and appointment options, in-person, and telehealth. This list was provided to the discharge team prior to the start of the QI project implementation in anticipation of providing a

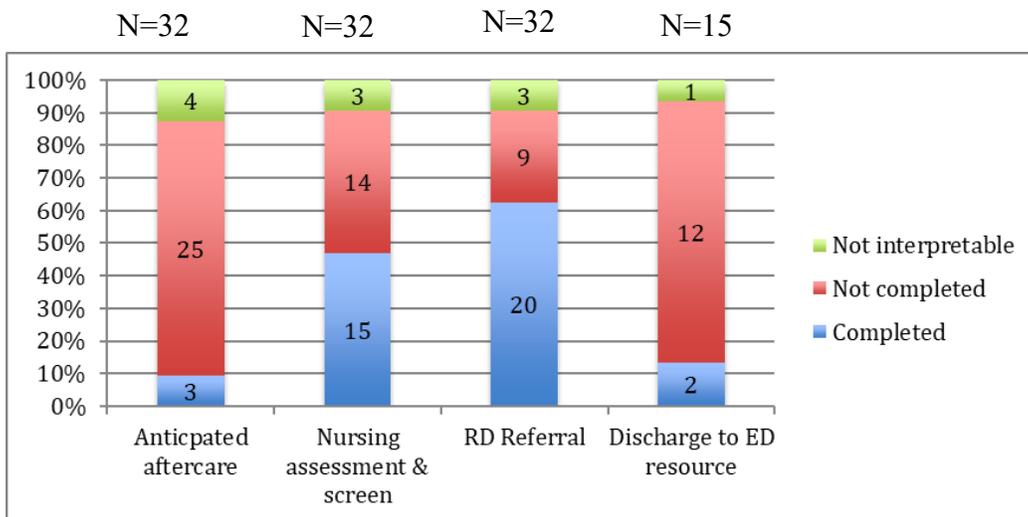
smooth transition of care for EDs from inpatient to outpatient. The compiled resource list was accepted with gratitude due to its comprehensive nature.

SMART goal #2 was to indicate positive ED screening for the EHR plan of care. The purpose of this goal was to include the newly added nutrition option in the ‘anticipated discharge needs’ within the EHR. This goal was not met, with 9.37% of charts showing nutrition care as an anticipated discharge need.

SMART goal #3 addressed the indication of positive ED screenings to admitting unit, by the admission nurse and FNP’s referral, for RD consultation. The written documentation of a positive ED screen from admission to the unit was present in 46.8% of the charts and FNP completed RD referrals in 65.6% of the charts reviewed.

SMART goal #4 was to evaluate whether the transition of care to outpatient included ED resources in the discharge plans. During the QI timeframe, only 15 of the 32 positive ED screening patients were discharged. Of the 15 individuals discharged, two patients, or 13.3%, were recommended additional ED care.

Table 5. Rates of Completion



Discussion

Considering the project site noted 31% of the previous year's admissions had a positive ED screen, a QI project was welcomed. This QI project aimed to build an improved chain of communication of positive ED screenings at points of transitions of care, admission to unit, and unit to discharge as well as identify FNP as the provider to order the RD referral/consult. The QI project recognized challenges with screening tool validity, barriers to implementation, communication, and intentional utilization of primary care providers.

Screening Tool

The project site uses a non-validated screening tool comprised of three questions; a score of two or more indicates a positive correlation with EDs. Employing the existing screening tool, 71 of 75 individuals admitted were screened for EDs. Those not screened were under the age of ten. After completing the needs assessment, 31% of the admissions over 12 months screened positive for ED risks. Upon completion of the seven-week QI project process change, 42% of the admissions screened positive. Based on the findings of the QI project results, there is potential for individuals with EDs to not be captured, and conversely, the screening tool can incur false positives. The literature recommends the use of a validated screening tool. There are numerous free brief ED screening tools. The most commonly noted screening tools include the SCOFF, EDS-PC, and the SDE consisting of four to five questions.

Barriers to Implementation

There were a few notable challenges, both foreseen and unforeseen. A couple of the predicted barriers to the project implementation included staffing shortage, anticipated and actual relocation of patients to the new facility, and organizational resistance to change. The staffing shortage is most apparent in the unlicensed nursing staff, followed by licensed nursing staff. The latter is the role that initiated the entire process change through ED screening and documentation of positive ED screen to admitting unit staff. The screening questions are in the EHR and are therefore completed routinely. The additional step in the process change to document positive ED screens on a paper form was completed more consistently at the initial weeks of the QI project; however, in the latter weeks, there was less compliance. It is important to note that all patients and staff were relocated the second half of the QI timeframe to a new location.

The unanticipated barriers to the process change included QI project education and familiarization for involved staff. The facility declined a formal in-person education for those involved in the process changes. The reasons included hospitalists' model of working every other week, remote workers, and minimal staffing. Additionally, the project site culture of communication is primarily electronic, except for unit rounds. Therefore, in conjunction with the project preceptor, a written document was provided to the team members and distributed via email by the project preceptor. See Appendices B and C.

Another barrier that was not anticipated involved IT. The IT staff has software limitations due to the nature of being an extension of a shared software system. Consequently, EHR modifications aiming to incorporate an "alert" window were restricted.

Communication

Each responsible team member for patient care fulfilled their role; however, the team members were not interfacing with each other. Based on qualitative feedback from staff, the project lead acknowledged that a well-established process change was not communicated from admission directly to the discharge team, which potentially impacted the “anticipated discharge needs” low percentage results. The RN and FNP process changes had the highest goal application, communicating positive ED screens during the transition to the inpatient unit and ordering RD referrals, respectively. It is worth mentioning that the project lead had numerous informal teaching opportunities with nursing staff in anticipation of project implementation. Additional email communication occurred weekly between the project lead and site preceptor to ensure there were no questions or concerns. Another member necessary for the implementation of this QI project included the IT staff. This staff provided data queries as part of the needs assessment, EHR addition, and prepared the eligible charts for review.

Role of Primary Care Provider

Recognizing that patients admitted to the project site are admitted for a psychiatric crisis and not necessarily a type of disordered eating, the priorities of the discharge plan addressed mental health services. In addition, nearly all discharge notes included follow-up with a PCP but did not state the specific reason for PCP follow-up. Repeatedly, the literature identified that PCPs have the potential to play a pivotal role in identifying, monitoring, and treating at-risk or identified ED patients. Working in conjunction with mental health providers, PCPs have the potential to maximize positive health outcomes. The literature acknowledges that PCPs have

limited knowledge of ED signs, symptoms, management, and referral options. In order to support the PCPs, the literature recommends ED education and training along with an established and frequently updated ED resource list for PCPs.

Limitations

This QI project had a few limitations. The design focused on four points of process change in the workflow, involving nursing and non-nursing team members. The first limitation involved buy-in from interdisciplinary team members. This could be the result of electronic communications regarding the QI workflow changes, with no opportunity to provide in-person training by the project lead and preceptor, both chartering the QI project. The second limitation resulted from the conceptual model; the process had two weak components involving non-nursing professional team members. The action for the process change was addressed, but the responsible party was not delegated leading to limited results. The second component involved the resources utilized for discharge. The design only addressed the ED resources utilized at discharge and negated an opportunity to maximize the use of the PCP in ED treatment after discharge. The final limitation was only one chart review at the end of the seven-week period, which did not allow for an opportunity to provide additional reminders of the QI process changes. Despite these limitations, the results provided a starting point for process change to address the comorbid diagnoses of ED and psychiatric disorders.

Conclusion

Despite the overall QI project goals not being fully met, the results provided data to support the complexity of comorbid disorders: psychiatric and EDs along with a need for further

improvements in care. The project site is diligent about ED screening of nearly all admissions, referring positive ED-screened patients to RDs during the inpatient stay, and prioritizing the focus on the acute reason for admission.

The increase in positive ED screening rose from the previous data obtained, which is reflective of the rising prevalence of EDs. The hospital provides care for an extremely high-risk population, and this QI project provides data to evaluate further the current process and provide initial steps into constructing an ED protocol. The results also reiterated that PCPs have the potential to play a larger role in ED discharge, and outpatient care. The project site preceptor and a nurse resident remain committed to this QI and are open to recommendations for sustainability. Lastly, the QI project reiterates the numerous factors identified in the literature involving the screening and management of comorbid eating disorders and the need for further awareness, education, and research.

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CHAPTER FOUR

REFLECTION OF DOCTOR OF NURSING PRACTICE ESSENTIALS AND MY EDUCATIONAL JOURNEY

The AACN (2022) defines a DNP as a terminal degree in nursing practice—preparing graduates with leadership skills to improve health outcomes and implement research into practice. The DNP curriculum expands the previous master-level programs with additional knowledge surrounding evidence-based practices, quality improvements, and systems thinking (AACN, 2022). Looking back at my decision to enroll in a DNP program, my perception of the role of a DNP was different from the vastness of the curriculum.

I started this program eager to provide direct patient care and maximize my knowledge base and skill set to deliver evidence-based care to patients in primary care settings. However, throughout the curriculum, a shift took place, requiring me to think outside of the individual patient and assess the bigger complicated picture of healthcare. Initially, these larger concepts of translational research, design of healthcare delivery systems or program planning, health outcomes, and quality improvement were not on my radar. Now that these courses are behind me, I realize the importance of a DNP-prepared provider to be a leader in the field as well as a practitioner. Seeing the complexities within the healthcare system and how these different elements collectively improve health outcomes is now embedded into my critical thinking practice.

The AACN provides Essentials of Doctoral Education for Advanced Nursing Practice, and I recognized early in my education that the eight essentials create the necessary principles of my future as a “change agent” for health outcomes in individuals and surrounding population

health. Reflecting throughout the study, I recognize that these individual essentials were threaded, overtly or covertly, in nearly every course, but I did not appreciate the concepts until they were in the rearview mirror. I understand that the essentials are not the isolated silos, which I saw during my individual courses, but are rather intertwined in the fabric of healthcare. Below is the list of the essentials.

Essentials of Doctoral Education for Advanced Nursing Practice

I. Scientific Underpinnings for Practice II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care V. Health Care Policy for Advocacy in Health Care VI. Interprofessional Collaboration for Improving Patient and Population Health Outcomes VII. Clinical Prevention and Population Health for Improving the Nation's Health VIII. Advanced Nursing Practice (AACN, 2006)

The first five essentials encompass the competencies that I initially found to be a bit more tedious and less applicable to my practitioner goals but still a necessary part of the curriculum to achieve the end goal. As I progressed, I began to view each of these five essentials as integral parts of the framework necessary to fulfill the expected last three essentials and competency expectations as a practitioner. Below, I will describe the impact of each essential on my education, with examples and future applications.

Essential I, scientific underpinnings for practice, was addressed repeatedly throughout the program of study and, more specifically, with my DNP project. With this skill set, I modified strategies within a current health system, intending to enhance better patient care at points of transition, especially discharge planning. As a DNP student, I was able to demonstrate competence in integrating research literature, newly published ED recommendations, and facility needs assessment, which identified gaps in care for comorbid psychiatric disorders with EDs.

Therefore, I designed a QI project for comorbid diagnoses to improve care at a local institution. This QI project process provided the skill set to identify needs, gather the evidence, incorporate conceptual models, and implement QI projects in the future.

Essential II, quality improvement and systems thinking addresses the foundation of my DNP project. Using this essential, I evaluated the project site's macrosystem based on the IHI checklist. See Chapter 2, Table 1. I also incorporated the Donabedian model to identify current institution structures, processes, and outcomes to create my project proposal and implementation. This IHI tool and Donabedian model helped me recognize that there was a strong structure in place, and a few small process changes would improve patient transitions of care and, ultimately, health outcomes. I also aimed to employ actions requiring minimal staff time commitments and minimal additional costs for the project site. I look forward to additional systems assessments and QI projects in my future roles. I am better able to acknowledge change within systems that can be challenging moving forward. I will keep in mind more tangible stepwise conceptual models may afford more significant compliance and results.

Essential III, clinical scholarship and evidence-based practice, was addressed throughout the coursework, clinical practicums, and DNP project itself. Continually, as a DNP student, I identified "needs" through assessments, reviewing, and appraising the evidence in the literature, engaging with stakeholders/patients to identify problems or diagnoses, and then implementing a change or treatment based on the available evidence and best practice for better health outcomes. The competencies of Essential III would not be made possible without competently accessing information systems and technology, which is Essential IV. Informatics and technology were part of nearly every piece of my DNP education, from direct patient care to course content, and

requirements to my DNP project. Data was extracted at the project site to identify the prevalence of an ED and psychiatric comorbid disorder as well as highlight gaps in the communication of ED information. Ideally, my project will minimize communication gaps. IT will remain an integral component in future practice, both on the patient and systems levels.

Essential V, advocacy in healthcare, expands the concept of advocating to the next level, not just the individual patient in the exam room. My DNP project demonstrated advocacy at the institutional level by implementing procedural changes to improve the transition of comorbid eating disorders. On a state level, I also educated a special committee of policymakers on the role and resources Montana State Hospital has in caring for individuals with severe mental illness. As a nurse leader and healthcare provider, I am better prepared to continue to advocate for patients and healthcare policies to promote holistic, patient-centered care through health promotion, disease prevention, and maintenance. In the future, this will be another element of the healthcare system that I desire to impact, especially for underserved and disenfranchised populations.

Essential VI, interprofessional collaboration, the role of the interdisciplinary care team is very near and dear to my heart because humans are complicated, and one provider/team member will not have all the answers or be able to meet all patient needs. The collaboration of providers and staff is very familiar due to my psychiatric mental health background, which is based on interdisciplinary team care maximizing knowledge and resources. As I prepared for my scholarly project involving EDs, I realized for the first time that I have under-recognized and underutilized a valuable resource, an RD. RDs are obvious eating disorder team members, yet it was not until I contacted numerous RDs that I recognized the vast scope of RD practice. Understanding the value RDs bring to healthcare, I would utilize this specialty to provide holistic patient care in my

clinical practice. The diet someone reports to providers is a valuable part of the assessment: recognizing habits, the familiarity of nutrition, and the overarching impact on prevention and disease management. Population health would benefit if RDs were utilized as more active members of the healthcare system. This directly affects Essential VII, prevention and improvement of health, one patient at a time. This team approach enables additional resources for holistic care through education, screening recommendations, treatments, and disease management.

Essential VIII, advanced nursing practice, is a culmination of all the previously mentioned essentials. At the start of my DNP education, it was this Essential VIII that I gravitated toward because my goal was to become a PCP. Gaining knowledge in advanced assessment, differential diagnosis, medication, and disease management was my initial objective. However, after my first practicum experiences, I became aware that I was not operating in a holistic nursing model but rather a “hybrid” nursing, medical, and business model. Therefore, I quickly learned that advanced nursing practice was more expansive than my idealistic approach to direct patient primary care. The contributions of DNP education aim to better healthcare delivery, healthcare resources, and healthcare outcomes, which aligns with my ultimate educational and professional goals.

Reflecting on my initial goal of becoming an APN, I have realized that becoming an APN in primary care is no longer my end goal. The curriculum courses involving direct patient care certainly prepared me clinically. Specifically, the courses addressing systems design, improvements, and policies provided the direction and frameworks to blend this “hybrid model” of care to ultimately reestablish a humanistic approach to medical care. I am uncertain what will

unfold for me in the healthcare arena, but I know I will need to actively participate in methods of healthcare reform. Delivering evidence-based care and following established guidelines and recommendations along with direct patient interactions are merely microscopic pieces in the grandiose and convoluted network called healthcare. As I move forward as a DNP-prepared practitioner, I will remain present with the person in front of me and I will seek opportunities to implement movements for safe, effective, patient-centered, timely, efficient, and equitable care in my communities with a focus on patient-centered and equitable care.

My long drawn-out time in the DNP program has had its hurdles and frustrations, but I am confident it was worth the journey. The long journey and various DNP project topics provided me with opportunities to gain valuable knowledge and insight, not only professionally but also personally. As a psychiatric mental health clinical nurse specialist graduate student, my family systems professor repeatedly said, “knowledge is power,” and at the end of my DNP education, I can recognize the power and responsibility of my new knowledge. The timing was perfect!

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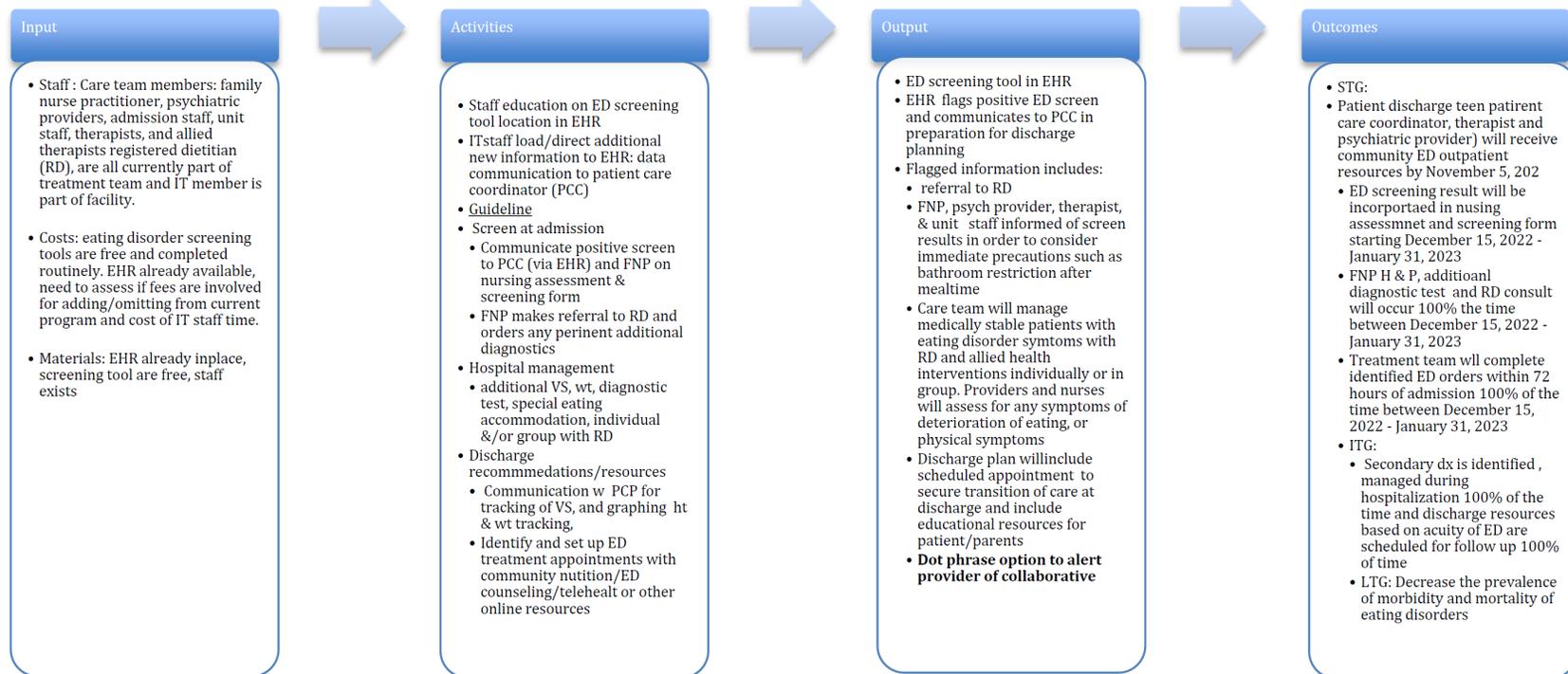
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APPENDICES

APPENDIX A

LOGIC MODEL: GUIDELINE FOR COMORBID EATING DISORDER (ED) DIAGNOSIS
AT INPATIENT CHILD & ADOLESCENT MENTAL HEALTH HOSPITAL

Logic Model: Guideline for Comorbid Eating Disorder (ED) Diagnosis at Inpatient Child & Adolescent Mental Health Hospital



APPENDIX B

QUALITY IMPROVEMENT PROJECT:
COMORBID EATING DISORDERS INTRODUCTION

Dear Staff

My name is Christine “Shelley” Banta and I am a DNP student at Montana State University. Katie Wilkins is my preceptor for this quality improvement project. I appreciate the opportunity to support the good work already being implemented with slight modification to the communication process. I am excited to provide more resources and seamless transitions to care for the comorbid eating disorder population. The suggested steps of actions begin at admission, transition to unit, and support continual assessment of patient eating disorder risk. Additionally, an exhaustive outpatient resource guide has been provided to discharge to support transition to outpatient care.

Problem:

Thirty-one percent of patients admitted from September 2021-September 2022 were identified to have a comorbid eating disorder diagnosis. The staff input identified gaps in communication during transition to unit and discharge.

Purpose:

To initiate the beginning steps of an eating disorder protocol through timely and efficient communication. The data from these initial steps will provide a comprehensive understanding of comorbid eating disorders and appropriate treatment.

Specific Aims

The primary aim is to develop a comprehensive patient-centered transition of care for comorbid ED, from psychiatric admission to discharge from inpatient psychiatric hospital. Taking into account public health, the secondary aim is to improve pediatric eating disorders morbidity and mortality rates.

As professionals committed to the healthcare of youth, it is imperative to continually make modifications to better support health outcomes. The intention of the minor modifications in the communication process and resources will help facilitate the identification of these complex comorbid diagnoses. Often times the acute psychiatric crisis leads to hospitalization, and the comprehensive admission assessment screens and identifies individuals at high risk for comorbid eating disorders. Recognizing eating disorders are secondary to the admitting diagnoses; however, it important to keep the comorbid condition on the problem list.

The model for modification was based on input, provided from a small representation of staff members from admissions, admitting unit nurses, discharge members and providers, The minor modifications are intended to show measurable outcomes with minimal additions to workflow. By providing a process and a resource guide, a foundation will be established to support healthcare staff to develop future protocols in addressing eating disorders. Ultimately, the process and the collection of the data will enable further actions to support treating this complicated comorbid population.

APPENDIX C

QUALITY IMPROVEMENT PROJECT: EATING DISORDER TRANSITION OF
CARE

In preparation for the quality improvement regarding eating disorder process modifications, below are the step-by-step instructions to the minor changes for staff members. The goal is to initiate a protocol of care for those identified with positive eating disorder screens, as well as, diagnosed disordered eating. The intention of the revised process is to identify responsible staff roles and courses of action to support the care of patients with comorbid psychiatric and eating disorders.

Admissions

Admission staff continues to screen all admissions for eating disorders using the implemented three-question screening tool. The two modifications include electron and paper documentation.

a. Process modification #1:

Admission staff will document positive eating disorder screen on the *Nursing Screen and Assessment* paper form. The physical exchange of this form will continue to be transferred as usual from admission's office to the admitting unit with patient.

Unit staff will continue to follow current unit orders for identified positive eating disorder screens, continually assess patient behaviors around meals/eating.

Nursing Medical Team

Family Nurse Practitioner staff will continue to assess and order necessary diagnostic tests. As the primary medical provider, the FNP will be responsible for continuity of care concerning positive eating disorder screening results.

a. Process modification #1:

Upon acknowledgement of existing positive eating disorder screen, FNP will order registered dietitian consultation for all positive eating disorder screens.

b. Process modification #2:

FNP will include disordered eating/eating disorder in the *problem list* in EPIC EHR..

FNP will remain available to collaborate with treatment team and consistently continue to implement modifications.

Discharge Planning

a. Process modification #1:

Patient Care Coordinator (PCC) will select the newly added nutrition option in *anticipated aftercare* of EPIC EHR

b. Process modification #2

Patient Care Coordinator (PCC) will be utilize the comprehensive resource list of additional eating disorder services available as part of the outpatient treatment team discharge planning.

The ideal goal is to have the patient's discharged with an appointment scheduled with eating disorder professional, either a counselor, registered dietitian or both.

Disclaimer: This Facility Quality Improvement project is considered research by Montana State University. If you have any concerns about participation, please contact your immediate supervisor for possible options to opt out. Participation implies consent.

APPENDIX D

OUTPATIENT EATING DISORDER REGISTERED DIETITIAN RESOURCE LIST

Registered Dietitians: Eating Disorder Providers

Name Agency	Contact Information	Age range	Appoint- ment types	Insurances
Ali Fox <i>Nutritional Counseling</i>	406-926-0337 Bozeman https://www.alifoxnutritionalcounseling.com	Older teens	Virtual & in- person	Aetna, BCBS, Cigna, First Choice Health, MT Health CO-OP, Pacific Source, Sliding scale
Katie Campbell <i>Bitterroot Nutrition</i>	406-296-4733 Bozeman https://www.bitterrootnutritionllc.com/contact	14+	Virtual	Allegiance, BCBS, Cigna, MT Health CO-OP, Pacific Source, Sliding scale
Rebecca Jones <i>Northern Nutrition Group</i>	206-283-4720 Bozeman https://www.northernnutritiongroup.com ED certification	14+	Virtual & in- person	Aetna, BCBS, Cigna, First Choice Health, Pacific Source, United Healthcare, Medicaid
Erin Campbell <i>Emily Wish</i>	406-551-1742 ext.115 Great Falls https://www.emilywish.com/connect	6+	Virtual	Aetna, BCBS, Cigna, First Choice Health, Pacific Source, United Healthcare, Medicaid, MT Health CO-OP
Dana Zurchin <i>Three Rivers Nutrition</i>	406-219-1747 Bozeman	8+	Virtual & in- person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, MT Health CO-OP, Pacific Source, Medicaid~ in process
Dani Sindelar <i>Emily Wish</i>	406-296-5265 ext 106 Great Falls https://www.emilywish.com/connect	6+	Virtual & in- person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, Tricare, United Healthcare Medicaid

Christina Erickson <i>Pediatric Specialty Billings Clinic</i>	406-435-6044 Billings	6+	In-person	Aetna, Allegiance, BCBS, Cigna, CHIP, First Choice Health, MT Health CO-OP, Pacific Source, Tricare, United Healthcare Medicaid
<i>Eating Disorder Center of Montana</i>	406-451-7370 Missoula & Bozeman https://edcmt.com/?gclid=CjwKCAjwitShBhA6EiwAq3RqA98HhcNPxdU8l0dvpIYzms0YAwfP_OIV_RxH1-kSW28i4yGEt5fwx0CPG8QAvD_BwE	Older teens	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, MT Health CO-OP, Pacific Source, United Healthcare
Katie Zimmer <i>Strive Nutrition</i>	406-219-8862 Missoula	13+	In-person	Allegiance, BCBS, Cigna, First Choice Health, MT Health CO-OP, Pacific Source, United Healthcare Medicaid-limited
Allie Richardson <i>Enhance Nutrition Associates</i>	406-770-2158 Bozeman https://www.northernnutritiongroup.com	6+	Virtual	BCBS
Kim Johnson <i>Northern Nutrition Group</i>	406-282-1398 Bozeman https://www.northernnutritiongroup.com	8+	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, United Healthcare Medicaid
Lindsay Grauman <i>Northern Nutrition Group</i>	406-282-1398 Bozeman https://www.northernnutritiongroup.com	8+	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, United Healthcare Medicaid

Paige Reddan <i>Eating Disorder Center of Montana</i>	406-451-7370 Missoula & Bozeman https://edemt.com/?gclid=CjwKCAjwitShBhA6EiwAq3RqA98HhcNPxdU8l0dvpIYzmsoYAwfP_OIV_RxH1-kSW28i4yGEt5fwxoCPG8QAvD_BwE ED certification	16+	Virtual & in-person	Aetna, Allegiance, Beacon, BCBS, Cigna, First West, MT Health CO-OP, Pacific Source, United Healthcare Medicaid, Sliding scale
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APPENDIX E

OUTPATIENT EATING DISORDER COUNSELORS AND
THERAPISTS RESOURCES LIST

Counselors ED Specialty Resources

Name & Agency	Contact Information	Age range	Appointment types	Insurances
Diana Smith	406-290-7456 Wilsall <i>Spanish speaker</i>	14+	Virtual & in-person	Allegiance, BCBS, Cigna, Pacific Source, Humana Medicaid, CHIP
Crystal Kirschman <i>Emily Wish</i>	406-952-3772 ext 101 Great Falls https://www.emilywish.com/connect ED certification	6+	In-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, Tricare, United Healthcare Medicaid <i>May vary</i>
Shauna Nagaoka-Symonds <i>Emily Wish</i>	406-952-3772 ext 102 Great Falls https://www.emilywish.com/connect	6+	In-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, Tricare, United Healthcare Medicaid <i>May vary</i>
Tonya Maye <i>Emily Wish</i>	406-952-3772 ext 104 Great Falls https://www.emilywish.com/connect	6+	In-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, Tricare, United Healthcare Medicaid <i>May vary</i>

Alexa Yarnell <i>Wellspring Counseling</i>	406-747-0314 Bozeman	13+	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, United Healthcare, Pacific Source, Healthy MT kids
Hillary Morin	603-249-6130 Bozeman	10+	Virtual & in-person	<i>Most insurances</i>
Kathryn Ryen <i>New Insight Counseling</i>	406-407-0266 Kalispel newinsightcounselingmt@gmail.com	6+	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, Medicaid-waitlist
Leanne Young	406-360-3262 Missoula	16+	Virtual	Aetna, Allegiance, BCBS, Cigna, First Choice Health, Pacific Source, United Healthcare
Eating Disorder Center of MT Several counselors	406-451-7370 Bozeman, Missoula https://edcmt.com	14+	Virtual & in-person	Aetna, Allegiance, BCBS, Cigna, MT Health CO-OP, Pacific Source, United Healthcare

Lisa Choquette <i>Vibrant Mind Therapeutics</i>	406-219-8713 Butte	10+	Virtual & limited in-person	Aetna, Allegiance, BCBS, Cigna, First Choice Health, MT Health CO-OP, Pacific Source, United Healthcare, Medicaid, CHIP
Warren Vaughan	406-747-0473 Bozeman	14+	Virtual & in-person	Aetna, Allegiance, BCBS, Fispecialty rst Choice Health, MT Health CO-OP, Pacific Source, United Healthcare, Medicaid, sliding scale

APPENDIX F

IRB PROTOCOL

IRB Protocol

IRB Protocol #2022-467-EXEMPT APPROVED

N NoReply@TOPAZTI.net     
To: Hammersla, Margaret; Banta, Shelley +1 other Tue 12/13/2022 11:21 AM

External Sender

Hello Banta, Christine ,

Your protocol was reviewed by the IRB and has been approved.

PI: Banta, Christine

Approval Date: 12/13/2022

Title: Pathways of Care for Comorbid Eating Disorders: Transitions from Psychiatric Inpatient to Outpatient

Protocol #: 2022-467-EXEMPT

Review Type: Exempt Review

Expiration Date: 12/13/2027