

Implementation of Depression Protocol in Rural Nebraska Pediatric Clinic

Devin Rhoades, Allyson Jablonski, Katherine Roth, Kelly J. Betts and Trina Aguirre*

Associate Professor, University of Nebraska Medical Center, College of Nursing - West Nebraska Division, Scottsbluff, United States

***Corresponding author**

Trina Aguirre, Associate Professor, University of Nebraska Medical Center, College of Nursing - West Nebraska Division, Scottsbluff, United States.

Received: November 29, 2023; **Accepted:** December 06, 2023; **Published:** December 11, 2023

ABSTRACT

Problem: The prevalence of depression among adolescents in the U. S. is 20%. Homicide, substance abuse, suicide, self-injury, and low academic performance are linked to adolescent depression. There are not enough mental health providers or access to treat these adolescents,

Background: It is often difficult for adolescents to understand their own feelings and navigate social pressures. The COVID-19 pandemic only exacerbated that. Most adolescents (90%) see a primary care provider annually for physicals, immunizations, or illness. However, mental health screenings are often not initiated, and depression is not addressed. Through this avenue, we propose that depression treatment be initiated in the primary care setting.

Methods: We proposed a project to initiate screening and treatment using the Glad-PC guidelines by primary care. Our first steps were to 1) discuss the need for this measure with facility providers 2) plan for data collection 3) obtain IRB approval 4) implementation.

Findings: We were met with great reception from providers, who both recognized the problem of adolescents with untreated depression and were willing to help find a solution. The percentage of clients referred from pre-intervention was 34%, while the percentage referred post intervention was 53%. There was a dramatic decrease in the number of PHQ-9s completed in the post intervention phase, yet the number of patients screening positive for depression doubled from pre-intervention to post-intervention.

Conclusion: The dramatic increase in those screening positive for depression highlights the importance of this project and the need for providers to use the Glad-PC guidelines in primary care to recognize, begin treatment and refer the affected adolescents.

Introduction

The prevalence of depression among adolescents in the United States is 20%. Homicide, substance abuse, suicide, self-injury, and low academic performance are linked to adolescent depression [1]. One study shows that 18% of adolescents experience some form of depression. This is higher among females (25%) than males (10%) and is also reported at a different rate based on ethnicity [2]. Reports of increased depression and suicide during the self-isolation and quarantines during COVID-19 are beginning to be investigated. Behavioral health resources are scarce nationwide, especially in rural areas. It is important for primary care providers to help diagnose and treat depression in adolescents to make up for behavioral health shortages.

Background

In Nebraska, 79 out of 93 counties are designated as shortage areas for mental health resources, with only 12 counties having a psychiatrist in 2014 [3]. Between 2009 and 2018, suicide increased 52% in Nebraska [4]. An alarming 71.3% of Nebraska's youth had a major depressive episode without mental health services compared to 59% in the US.

Primary care providers often identify mental health problems in adolescents but are not always successful in addressing the illness [5]. Ninety percent of the adolescent and child patient population in the United States receive care from pediatric primary care (PPC) providers. PPC providers have the potential to play a significant role in the early recognition of signs and symptoms

of mental illness. With proper guidelines and screening tools in place, PPC providers can better recognize and manage mental health problems in adolescents. The United States Preventive Services Task Force (USPSTF) has presented evidence that screening tests can identify major depressive disorders in adolescents and that collaborative care and psychotherapy are the most effective treatment regimen [1]. The USPSTF encourages primary care practices to screen for depression in the population of adolescents 12 to 18 years of age [6]. Maurer et al. (2018) noted that “screening must be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up” (p. 508). According to Zuckerbrot et al. (2018) as many as 2 out of 3 youth with depression are not identified by their Primary Care Provider [7].

Methods

This project will focus on adolescents ages 12-18 in a rural Nebraska pediatric clinic. The clinic currently sees about 7-8 patients a week in this age group. Of the 7-8 patients seen in this age group, 4-5 have a mental health complaint. There are approximately 1-2 each month that report adverse events from depression. Over three months, this will give an approximate sample size of 72-96 patients. The setting for our DNP (Doctor of Nursing Practice) project was a rural, West Nebraska pediatric clinic that sees approximately 4-5 patients per week, ages 12-18, with complaints of a mental health problem as the cause for their visit. The clinic has 2 pediatricians, two Pediatric Nurse Practitioners, 2 Registered Nurses, and 4 Licensed Practical Nurses. The clinic was populated with children from diverse backgrounds (Hispanic/Latino, Caucasian, Black, and other ethnicities). Children also come from rural, underserved areas of the Panhandle of Nebraska, as well as children who are from more affluent backgrounds. Currently, there is not a specialized pediatric mental health facility within a three-hour drive.

Using the PHQ-9 screening tool and GLAD-PC guidelines, research shows an increase in the number of adolescents with depression being screened and treated at the primary care level [7,8].

This project was developed with the objective of identifying more adolescent children with a positive PHQ-9 resulting in treatment

for mental health disorders by the PCP (primary care providers) utilizing the GLAD-PC guidelines in the Electronic Medical Records (EMR). This would be an improvement in care for these adolescents when compared to past data where no guidelines and/or screening were implemented, and there was no access to the AAP GLAD -PC guidelines in the clinic EMR.

The aims of this project are:

1. To determine if adolescents aged 12-18 who are diagnosed with depression and then treated by the PCP using the GLAD-PC guidelines experience fewer mental health events versus those who are not treated by GLAD-PC guidelines by the same providers.
2. Provide evidence that use of the GLAD-PC guidelines by the Pediatric Primary Care Provider result in improved treatment of depression in adolescents.
3. To evaluate provider/nurses’ knowledge of using the GLAD-PC guidelines for treatment and referral of depression in adolescent patients aged 12-18, and their experience pre and post-implementation of the GLAD-PC guidelines at one month and again at three months.

Results

Pre intervention data: There were 391 patients seen in the clinic for which data was collected. There were 215 PHQ 9’s completed. Of the 215 completed, 32 had a score of 10 or more. Therefore, 14.8% of the patients were identified as screening for at least moderate depression. There were 11 referred on for professional counseling and 7 who were already attending counseling.

Post intervention data: There were 254 patients seen in the clinic. There were PHQ 9’s completed for 49 of those patients. There were 15 of the 49 with a score of 10 or greater, identifying 30.6% of these patients as screening for at least moderate depression. Eight referrals were made for professional counseling and 2 were already attending counseling. There was a dramatic decrease in the number of PHQ 9s completed in the post intervention phase, which will require further investigation. However, the percentage referred from pre-intervention was 34%, while the percentage referred post intervention was 53%, indicating a significant increase in referrals after the protocol was in place.

Table 1

	# of Patients	PHQ-9s completed	% PHQ-9 score of 10 or greater	% Referrals	Previously attending counseling
Pre-Intervention Data	391	215	14.8	34%	7
Post Intervention Data	254	49	30.6	53%	2

Discussion

The mental health needs of the pediatric population of Western Nebraska are underserved, considering that prior to this project, the pediatric clinic did not have any type of consistent mental health screening and treatment guidelines in place. Great efforts to ensure the project’s success have been made through education and follow-up with the clinic staff on the purpose of the GLAD-PC and the expectation of consistent implementation. This has been an attempt to minimize barriers that could not only impede the progress of this project but promote the best care for these pediatric patients. The clinic staff, including providers, have shown their

support of this project and acknowledge the necessity of access to mental health care for their patients. They have promoted the success of this project through participation in education and consistently implementing the GLAD-PC guidelines. This project is the beginning of filling the mental health void from which the pediatric population of Western Nebraska suffers.

Acknowledgements

The authors wish to thank the staff and providers who made this project possible at Regional West Medical Center. Furthermore, they are thankful for the patients and families who consented.

References

1. Chowdhury T, Champion J. Outcomes of depression screening for adolescents accessing pediatric primary care-based services. *Journal of Pediatric Nursing*. 52: 25-29.
2. Saluja G, Iachan R, Scheidt PC, Overpeck MD, Sun W, Giedd JN. Prevalence of and risk factors for depressive symptoms among young adolescents. *Archives of Pediatrics & Adolescent Medicine*. 2004. 158: 760.
3. Braun SM, Deras M, Erickson KC, Grimm BL, Lovgren KE, et al. Nebraska behavioral health needs assessment - 2016. Department of Health and Human Services. <https://dhhs.ne.gov/Behavioral Health Documents/Needs Assessment - 2016.pdf>
4. United Health Foundation. 2020 Annual Health Report: Explore depression in Nebraska. 2020. https://www.americashealthrankings.org/explore/annual/measure/Depression_a/state/NE
5. Honigfeld L, Macary SJ, Grasso DJ. A clinical care algorithmic toolkit for promoting screening and next-level assessment of pediatric depression and anxiety in primary care. *Journal of Pediatric Health Care*. 2017. 31: 15-23.
6. Maurer DM, Raymond TJ, Davis BN. Depression: screening and diagnosis. *American Family Physician*. 2018. 98: 508-515.
7. Zuckerbrot RA, Cheung A, Jensen PS, Stein RE, Laraque D, et al. Guidelines for adolescent depression in primary care (GLAD-PC): Part I. Practice preparation, identification, assessment, and initial management. *Pediatrics*. 2018. 141.
8. Cheung AH, Zuckerbrot RA, Jensen PS, Laraque D, Stein RE. Guidelines for adolescent depression in primary care (GLAD-PC): Part ii. treatment and ongoing management. *Pediatrics*. 2018. 141: e20174082.