



Implementation of an ADHD Electronic Portal in Primary Care

Heather H. Cathey, MSN, FNP-BC

Tennessee Technological University Whitson-Hester School of Nursing/ East Tennessee State University College of Nursing



Introduction

Attention Deficit Hyperactivity Disorder (ADHD) impacts 10% of the pediatric population in the United States (Xu et al., 2018).

2/3 of children with a diagnosis of ADHD will also be diagnosed with one or more learning or mental health conditions in their lifetime (UC Davis Mind Institute, 2022).

Undiagnosed or untreated ADHD can lead to poor academic outcomes, increased mortality, impaired relationships, employment/financial difficulties, and increased mental health and substance abuse problems (Faraone et al., 2021)

Clinical practice guidelines recommend symptom rating scales and comorbidity assessments to be completed at initial diagnosis and incrementally throughout treatment (Wolraich et al., 2019).



Abstract

Clinical practice guidelines (CPGs) for Attention Deficit Hyperactivity Disorder (ADHD) recommend documentation of symptom scales and comorbidity screenings at the time of diagnosis and routinely throughout care. Rates of documentation are consistently low, creating a gap in care that impairs diagnosis, management, and patient outcomes. The purpose of this quality improvement project is to implement an online ADHD portal that emails, collects and scores these tools. The aims of the project are to improve utilization of CPGs by increasing documentation rates of symptom scales and comorbidity screenings for pediatric patients with ADHD. One primary care pediatrician located in Middle Tennessee piloted the project. A six-month retrospective chart review was conducted to determine baseline rates for the two outcomes. During the ten-week project, the portal was activated and evaluation tools were sent. A second chart review will be conducted at the conclusion of the project to determine if utilization of CPGs for the two outcomes has improved. The expected outcomes of this project include improved rates of documentation for symptom scales and comorbidity assessments. This project could potentially improve CPG utilization and ultimately impact the quality of care for pediatric patients with ADHD.

Problem

The utilization of clinical practice guidelines for appropriate diagnosis and management of ADHD can be inhibited by missing/incomplete documentation of symptom scales from two or more setting and comorbidity assessments.

Undiagnosed or untreated ADHD can lead to impairment in several domains of functioning, including academic, psychological, social and financial/employment.

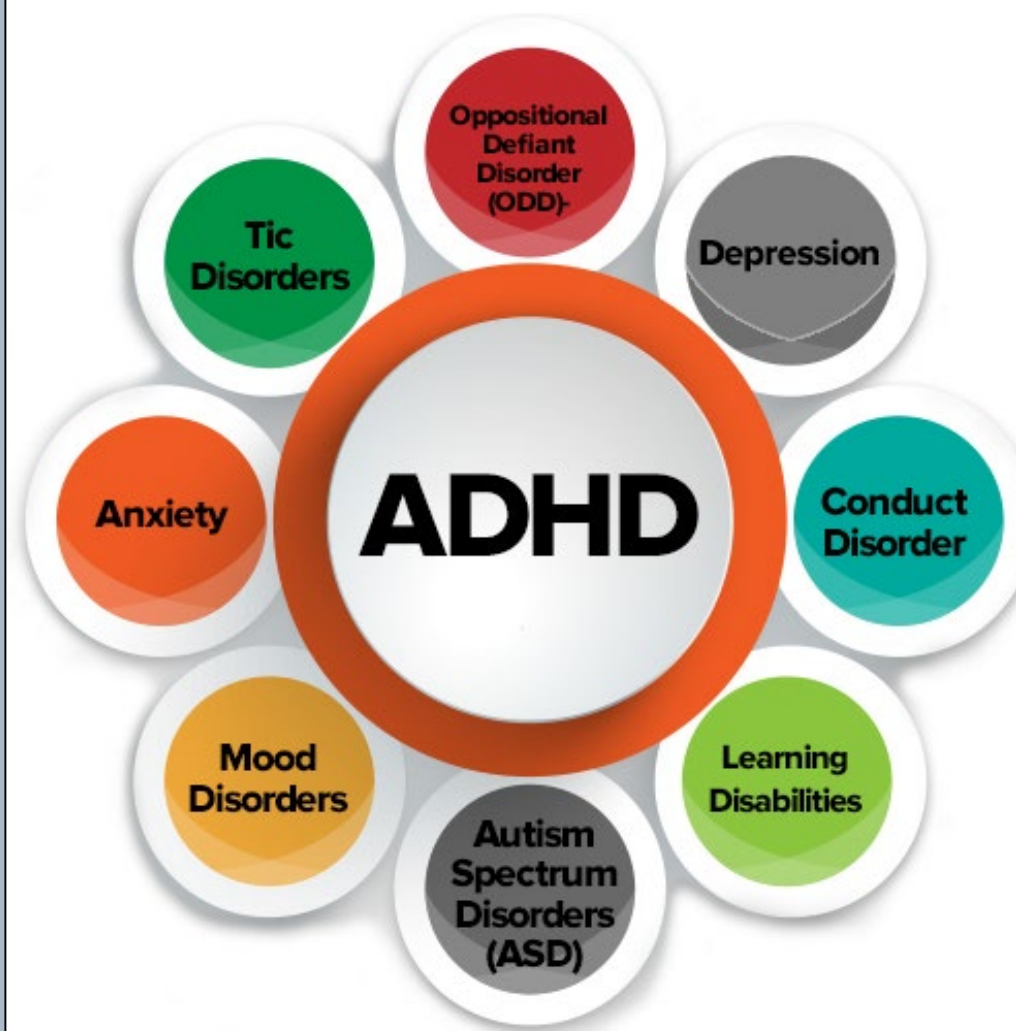


Figure 1. This figure depicts the common conditions associated with ADHD. Adapted from UC Davis Mind Institute, 2022 (<https://health.ucdavis.edu/mindinstitute/research/about-adhd/adhd-associated-conditions.html>)

Clinical Question

Does implementation of an electronic ADHD portal improve provider utilization of clinical practice guidelines for the documentation of clinical symptoms in two or more settings and assessment of comorbidities for pediatric patients with known or suspected ADHD?

Materials and Methods

Retrospective Chart Review

6 month retrospective chart review	Patients 4-18 years old with a diagnosis of ADHD were identified	Rates of documentation of symptoms scales in two or more settings were gathered	Rates of documentation of co-morbidity assessments were gathered
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Portal Implementation Phase

Portal activated by pediatrician; patient data entered into the system	Caregivers emailed and mailed information about the ADHD portal with activation information	ADHD Portal emails Vanderbilt Assessment Scales to parents and teachers at intervals set by the pediatrician.
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Post-Implementation Chart Review

Second Retrospective Chart Review	Rates of documentation of symptoms scales in two or more settings were gathered	Rates of documentation of co-morbidity assessments were gathered	Pre and post-implementation rates will be compared
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Figure 2. This diagram depicts the process and methods for the project

Measurable Outcomes

- Rates of documentation of symptom rating scales in two or more settings
- Rates of documentation of comorbidity assessments

Results/Conclusion

- This project is currently in the implementation phase.
- Analysis will consist of aggregate and descriptive data related to symptom rating scales and comorbidity assessments completed during the 10-week project and the 6 months prior to project implementation.
- **Aims of the Project**
 - Implement an online ADHD portal
 - Improve provider utilization of clinical practice guidelines by:
 - Improving documentation of symptoms in 2 or more setting
 - Improving documentation of co-morbidity assessments

References

Faraone, S.V. et al. (2021). The World Federation of ADHD International Consensus Statement: 208 Evidence-based conclusions about the disorder. *Neuroscience & Biobehavioral Reviews*, 128:789-818. DOI:10.1016/j.neubiorev.2021.01.022

UC Davis Mind Institute (2022). Conditions associated with ADHD. <https://health.ucdavis.edu/mindinstitute/research/about-adhd/adhd-associated-conditions.html>

Wolraich, M. L., et al. (2019). Clinical practice guideline for the diagnosis, evaluation, and treatment of Attention-Deficit/Hyperactivity Disorder in children and adolescents. *Pediatrics*, 144(4). American Academy of Pediatrics. <https://doi.org/10.1542/peds.2019-2528>

Xu, G., Strathearn, L., Liu, B., Yang, B., Bao, W. (2018). Twenty-year trends in diagnosed attention-deficit/hyperactivity disorder among US children and adolescents. *JAMA*, 1(4). DOI:10.1001/jamanetworkopen.2018.1471

Contact Information

Heather H. Cathey, MSN, FNP-BC
hcathey@tntech.edu
(615) 631-3794
 314A Bell Hall
 Tennessee Technological University