Military Children with Attention Deficit Hyperactivity Disorder (ADHD): Maximizing Adherence to Clinical Practice Guidelines

Purpose: This project evaluated the current status of provider adherence to the ADHD CPG in a military primary care pediatric clinic 24 months after a targeted educational intervention. In keeping with the quality improvement framework of “Plan-Do-Study-Act” (PDSA) this project additionally incorporated a session for providers to evaluate performance, identify existing barriers that impede guideline adherence, and address areas for improvement through the using evidence-based interventions.

Background and Significance: Despite almost two decades of clear clinical practice guidelines (CPG) for the diagnosis and treatment of attention deficit hyperactivity disorder (ADHD), provider adherence to the guidelines continues to vary greatly. While variable adherence to the CPG in non-military settings is widely reported in the literature, adherence in military settings has yet to be established. There are no published studies evaluating ADHD treatment or CPG adherence in the military sector, and recent clinical observations suggest that military children with ADHD may not be receiving evidence-based care. Furthermore, children of military parents may be particularly vulnerable to fragmented care with frequent relocations and associated family stress.

Questions:
- What is the current status of provider adherence to the ADHD CPG?
- What are the outcomes of the PDSA session?

Design: Evaluation of guideline adherence was conducted using a quantitative, retrospective, chart review of a convenience sample (n=50) of patients over 62 encounters empaneled to the selected military pediatric clinic from January through December 2016. Records were reviewed using an adapted, validated abstraction tool (Vreeman, Madsen, Vreeman, Carroll, & Downs, 2006). Demographic data are reported to characterize the sample.

Findings: Each of the six guideline components were scored related to adherence to the ADHD CPG as follows: “met = 1”, “not met = 2”, or “N/A “= 3”. And reported as frequency distributions and percentages. The PDSA session guided by the use of an adapted guideline-based questionnaire, and findings reported.

Clinical Implications: This project, including the process and findings, addresses a critically important gap in the diagnosis and treatment of military children with ADHD. This pediatric population is particularly vulnerable due to transiency of care associated with frequent family relocations and parental deployments. Facilitating adherence to CPG will foster improved behavioral, academic, and physiological outcomes for these children and their families. Finally, this project highlights the important role of the DNP-prepared APRN in fostering evidence-based practice and outcomes improvement.

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NAPNAP Research Agenda Priority: Caring for children of military members and ADHD.
Introduction

- ADHD prevalence is 11% in the U.S.; 5% annual increase
- CPG adherence is variable among providers
- Military children maybe more vulnerable to care fragmentation due to frequent relocations, parental deployment, and family stress
- Average cost for psychoeducational evaluation $2-$5,000 per child

Objectives

1. Evaluate provider adherence to the ADHD CPG in a military primary care pediatric clinic.
2. Conduct a quality improvement session using the “Plan-Do-Study-Act” (PDSA) framework with the following goals:
   - Performance evaluation
   - Barrier identification
   - Development of ongoing process improvement.

Material and Methods

- Retrospective chart review of a convenience sample (n=50, 62 encounters)
- Key components of the guideline are deemed “Met” if addressed in >/= 80% of the encounters.
- Barrier themes and recommendations for improvement identified/discussed during QI session.
- IRB approval granted by the University of Virginia, Air Force Human Research Protection Program, and Defense Health Agency. UVA-HSR #19169

Table 1. Sample Demographics.

<table>
<thead>
<tr>
<th>Age (yrs.)</th>
<th>Range</th>
<th>Mean (SD)</th>
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<tbody>
<tr>
<td>5-18</td>
<td>12.76</td>
<td>(3.01)</td>
</tr>
<tr>
<td>Age at diagnosis</td>
<td>4-13</td>
<td>7.98 (2.40)</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>35.2-206.4</td>
<td>81.09 (33.33)</td>
</tr>
<tr>
<td>Height (inches)</td>
<td>44.3-61.3</td>
<td>52.26 (5.29)</td>
</tr>
</tbody>
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Table 2. All services represented except Marine Corps. Air Force most heavily represented.

<table>
<thead>
<tr>
<th>Military Status</th>
<th>n (%)</th>
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<tbody>
<tr>
<td>Rank</td>
<td></td>
</tr>
<tr>
<td>Officer</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>Enlisted</td>
<td>37 (74%)</td>
</tr>
<tr>
<td>Retired</td>
<td>9 (18%)</td>
</tr>
<tr>
<td>Service</td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>Navy</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Air Force</td>
<td>44 (88%)</td>
</tr>
<tr>
<td>Coast Guard</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Marines</td>
<td>0</td>
</tr>
</tbody>
</table>

Results

- Medication management overall was a strength for the providers; formulation and dose (89.5%), titration (93%), monitoring side effects (90.7%).
- Behavior therapy addressed in very few encounters (3/62, 4.8%), although history counseling assessed (80.6%).
- Provider contact with school noted in 0/62 encounters; however, 41.9% (26/62) of encounters noted IEP status and 95.2% asked about school performance.
- Validated rating scale for follow-up visits were not utilized.
- Care coordination (EFMP status) addressed (93.5%).

PDSA Session Findings

- Barriers
  - Timely receipt of paperwork, especially when families are stressed.
  - Self-referrals to psychologist for evaluation are being covered by TRICARE.
  - Lack of quality resources/mental health professionals that accept TRICARE.
  - Access is limited in the pediatric clinic; it often takes 2-3 weeks to get in with PCM. Providers are able to offer fewer appointments due to military requirements.
  - Providers unaware that follow-up scales are recommended in guideline.

- Protective Factors
  - Free mental health visits, medical visits, and medications.
  - Family members with stable income and overall emphasis on health.
  - Military Family Life Consultant and school liaisons available to identify local resources.

Actions Identified for Improvement

- Implement routine use of Vanderbilt ADHD Follow-up Scales.
- Revise ADHD template to include key guideline components.
- Require a PCM referral for psychoeducational testing.
- Providers in selected military clinic adhered to 2/6 of the key guideline components. A PDSA session was conducted, and providers identified interventions to implement to improve areas of weaknesses. Empowering the primary care manager (PCM) to diagnose and manage ADHD in compliance with the CPG can reduce healthcare cost, expedite diagnosis and treatment for children in need, and minimize the burden on community psychologists specializing in the care of children.

Conclusions