Creating a standardized workflow for providers at South Burlington Family Practice, South Burlington VT for documenting and diagnosing attention-deficit/hyperactivity disorder in pediatric patients aged 0-17

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The University of Vermont
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Racquel DeCastro
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Whitney Calkins, MD and Katherine Mariani, MD
South Burlington Family Practice physicians provide a variety of care in the community including obstetrical care, deliveries, and health care for all ages from newborns to geriatrics.

Every month the practice implements a Plan-Do-Study-Act (PDSA) quality improvement project focused on a need in the practice and community.

**Need in the practice:** A standardized workflow for performing and documenting the attention-deficit/hyperactivity (ADD/ADHD) diagnostic process.
ADHD assessment includes:

- Parent and child interviews
- A biopsychosocial assessment interview and thorough developmental history
- Parents and teacher complete child behavior rating scales (Vanderbilt Assessment Scale)
- Parent self-report measures
- Direct behavioral observations of the child in school, home and clinical settings
- Clinic-based psychological tests
- A standard pediatric examination or neurodevelopmental screening to rule out any unusual medical conditions that might produce symptoms similar to ADHD
- Vision and hearing screening

“populations in small rural areas were more likely to travel for pediatric care compared with adult care, probably due to lack of access to pediatricians closer to home”
### Number of Physicians Who See Pediatric Patients aged 0-17
In South Burlington and The State of Vermont

<table>
<thead>
<tr>
<th>Location</th>
<th>Children per pediatrician</th>
<th>Children per family physician</th>
<th>General pediatricians</th>
<th>Pediatric subspecialist</th>
<th>Family Physicians</th>
<th>Total Children (0-17)</th>
<th>Median household income</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Burlington, VT</td>
<td>328</td>
<td>233</td>
<td>44</td>
<td>10</td>
<td>62</td>
<td>14,419</td>
<td>53,029</td>
</tr>
<tr>
<td>Vermont State</td>
<td>928</td>
<td>404</td>
<td>134</td>
<td>19</td>
<td>308</td>
<td>124,310</td>
<td>51,841</td>
</tr>
</tbody>
</table>

20% of these physicians are in South Burlington.
“First or second grade is when kids are starting to become engaged academically and now their condition is interfering with their daily activity. Family doctors and pediatricians become critical [during this time] and are well equipped to diagnose and treat ADHD”

Jeremiah Dickerson, MD
Child & Adolescent Psychiatry, University of Vermont Medical Center

“Standardizing our ADHD workflow across providers at our site is vital in order to help us deliver efficient and comprehensive care to our pediatric and adolescent population”

David Reisman, MD
Physician Site Leader, South Burlington Family Medicine

“We want to make sure that we are providing other options such as behavioral management [for patient’s], as prescribing ADHD medications has been overused in the past. We should also make sure we are looking for co-morbid conditions as well.”

Catherine Rude, MD
Pediatrics, University of Vermont Children’s Hospital
Intervention

Need in practice:
A standardized workflow and effective way to administer and collect screening forms from parents and teachers/guidance counselors

Intervention:
A workflow was created and presented to all providers (MD, DO, NP) and asked that this workflow is followed for all behavioral visits that could yield an ADHD diagnosis.

An evaluation packet was created to give to parents/guardians with all necessary documents for Vanderbilt administration, completion, and return to the practice.
Need in practice:
Epic electronic health record at The University of Vermont Medical Center currently does not have the Vanderbilt Assessment Scale as flowsheet or as a smart phrase that can be imported. All forms are scanned into Epic.

Also, the practice does not have a standardized template for documenting the initial evaluation.

Intervention:
Created smart phrases for Epic for documenting initial intake from AAP and AACAP Practice Guidelines for the Evaluation of ADHD.

Vanderbilt Assessment Scales smart phrase was created so that the scale can be documented electronically.

Other smart phrase with the grading scale and common stimulant side effects.

Need in practice:
Parents/guardians present with a concern for their child’s behavior. Several online resources are available but there is currently no written pamphlet that is routinely given to caregivers at South Burlington Family Practice.

Intervention:
Create a pamphlet with information on symptoms, diagnostic criteria and methods for helping to control the behavior of the child. All information was obtained from healthychildren.org and given to parents/guardian’s after the initial visit.

Tips for helping your child control his behavior:
- Keep your child on a daily schedule
- Cut down on distractions: loud music, computer games, and TV can be overstimulating to your child. Make it a rule to keep the TV or music off during mealtime and while your child is doing homework.
- Organize your house: If your child has specific and logical places to keep his schoolwork, toys, clothes, he is less likely to lose them.
- Set small, reachable goals: Be sure that your child understands that he can take small steps towards learning to control himself.
- Help your child stay on task: use charts and checklists to track progress with homework and chores.
- Limit choices: give only 2 or 3 options at a time.
- Find activities at which your child can succeed: all children need to experience success to feel good about themselves.
- Reward positive behavior: offer kind words, hugs, or small prizes for reaching goals in a timely manner or good behavior.
- Use calm discipline: Use consequences such as time-out, removing the child from the situation, or distractions. Sometimes it is best to simply ignore the behavior. Physical punishment such as spanking or slapping is not helpful. Discuss your child’s behavior with him when you are both calm.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive reinforcement</td>
<td>Child completes an assignment and can play on the computer</td>
</tr>
<tr>
<td>Time-out</td>
<td>Child hits sibling and as a result must sit for 5 minutes in corner of the room</td>
</tr>
<tr>
<td>Response cost</td>
<td>Child loses free-time privileges for not completing homework</td>
</tr>
<tr>
<td>Token-economy</td>
<td>Child earns stars for completing assignment and loses stars for getting out of seat</td>
</tr>
</tbody>
</table>

How the diagnosis is confirmed
Symptoms occur in 2 or more settings, such as home, school, and social situations.
Symptoms significantly impair your child’s ability to function in some of the activities of daily life, such as schoolwork, relationships with you and siblings, relationships with friends, ability to function in groups such as sport teams.

In addition to looking at your child’s behavior, your doctor will do a physical and neurological examination as well as a full medical history in order to screen for other conditions.
This project helped to fulfill the initiatives of the Vermont Child Health Improvement Program (VCHIP) grant that was given to South Burlington Family Practice and will be shared with other family medicine and pediatric providers in Chittenden County.

Each provider at South Burlington Family Practice (MD, DO, NP) received a one-hour teaching session that included:

- Education on the developed workflow
- Introduction to the evaluation packet which will be provided to patients and families
- Introduction to the behavioral pamphlet for caregivers
- A list of further resources
- Explored the Epic smart phrases in real time
The workflow that was created for South Burlington Practice was modified from the current workflow that is used at Pediatric Primary Care- Burlington. Pediatricians at this practice find the workflow efficient but are currently working with the Vermont Child Health Improvement Program (VCHIP) as well as other pediatric practices in Vermont to optimize the workflow.

This new workflow will be trialed during February’s PDSA project at South Burlington Family Practice.
Future Interventions

1. Using an online portal to fill out Vanderbilt Assessment Scale and create a platform to directly communicate with the child’s teacher/guidance counselor. Examples include mehealth.com.

2. Creating a workflow amongst providers for next steps if the patient’s behavioral concerns expand beyond inattention, hyperactivity, and impulsivity.

3. Incorporating the Vanderbilt Assessment Scale and other assessment questioners directly into Epic to maximize efficiency.

4. Develop an organized system to track Vanderbilt Assessment Scale Scores over time.


