Practice Improvement Project: Child Obesity Screening and Referral

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Background & Significance
- 11.9% of children ages 2-19 have BMIs ≥ 97th percentile and 16.9% have BMIs ≥ 95th percentile (CDC, 2014).
- Less than 50% of obese children receive BMI screening or preventive counseling about diet and physical activity (Smith et al., 2013).
- Lack of translational studies around obesity screening and referral in pediatric health clinics.

Problem
- Staff at a county health clinic in the NW identified that their clinic lacked a systematic way to screen and refer children for obesity.
- Prior to this practice change BMI was charted for most children, but each provider treated obesity differently and not according to USPSTF recommendations.

Implementation

Theoretical Background
- Overarching Theory
  - Socio Ecological Theory
  - Dynamic interrelations among various personal and environmental factors of the child
- Implementation Model
  - Knowledge-Attitude-Action Cycle (Graham et al., 2006)
  - Knowledge translation theory model where new knowledge moves through different stages until it is adopted and used

Implementation Steps
- Participants included 3 pediatric providers and support staff.
- IRB approval received from University of Portland.
- Support staff records height and weight in child's EHR.
- EPIC calculates BMI.
- Providers check each chart for BMI percentile ≥ 95% by looking at growth chart in EPIC.
- Assess child and family for readiness to attend an appointment with a BHC.
- Refer to BHC for behavioral intervention.
- Appointment made for child and parents with BHC.
- Child and family attends appointment.
- At end of three months, providers surveyed to evaluate the process.

Results

<table>
<thead>
<tr>
<th>Total Visits</th>
<th>BMI Recorded</th>
<th>BMI ≥ 95%</th>
<th>Screened for Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1048</td>
<td>874</td>
<td>372</td>
<td>69%</td>
</tr>
<tr>
<td>Visits BMI ≥ 95%</td>
<td>237</td>
<td>237</td>
<td>27%</td>
</tr>
<tr>
<td>Visits with BMI ≥ 95% that were screened for readiness</td>
<td>40</td>
<td>40</td>
<td>17%</td>
</tr>
<tr>
<td>Children screened who were ready for an appointment with a BHC</td>
<td>9</td>
<td>9</td>
<td>23%</td>
</tr>
<tr>
<td>Children screened at ready who were referred for an appointment with a BHC</td>
<td>9</td>
<td>9</td>
<td>100%</td>
</tr>
<tr>
<td>Children referred who attended the appointment</td>
<td>4</td>
<td>4</td>
<td>44%</td>
</tr>
</tbody>
</table>

Staff Evaluation
- TIME (implementation not feasible during shorter episodic appointments).
- Undeveloped relationship with children caused discomfort for providers in discussing obesity.
- Staff reported children and families have a negative association to a “counselor/BHC.”
- Challenges discussing obesity, including cultural challenges (73% Latino children).

Discussion
- BMI recording of 69% at all visits was higher than national average (less than 50%) but still under the clinic’s goal of 100%.
- Heights were often omitted and support staff had different rates of recording.
- Readiness for change screening was the weakest and most challenging part of the implementation.
- Providers did not feel comfortable discussing obesity (needed more rapport with child and family).
- Staff reported decreased readiness due to family members uncomfortable with behavioral “psychological” intervention versus nutritional counseling.
- Referral to a BHC showed the strongest results (100%).
- Presence of a referral process and BHC staff that spoke Spanish in the clinic.

Recommendations
- Review BMI goal (100% recording) regularly during the pediatric monthly team meetings and incorporate a clinical reminder in EPIC.
- Discuss obesity and assess readiness for referral at WCCs instead all visits.
- Discuss readiness in a more informal way than using 0-10 scale.
- Provide cultural training for providers about how to discuss obesity with families and mitigate the negative connotations associated with a behavioral provider.
- Continue current referral process and have behavioral staff located in the clinic.
- Continue monitoring children for decrease in BMI.

Literature Review for Intervention
- USPSTF (2005) recommends screening children aged 6 and older with BMI ≥ 95th and refer them to a comprehensive behavioral program.

Purpose and Aims of Practice Change
- To implement a systematic obesity screening and referral process for children ages 3-17.

1. Screen 100% of children ages 3-17 for BMI.
2. Screen children with BMI ≥ 95th for readiness to be referred to a behavioral health consultant (BHC).
3. Refer all children with BMI ≥ 95th and readiness ≥ 6 on a scale from 0-10 (0 = no motivation, 10 = fully motivated) to a BHC.
4. Schedule an appointment for children referred with the BHC.

References provided upon request.