Screening for Depression and Anxiety in Adolescents with Chronic Medical Conditions Cared for at the ECU Physicians Pediatric Specialty Clinic

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Rhonda Strickland, MBA, BSN, RN

Unified Quality Improvement Symposium
February 3rd, 2021
Adolescents with chronic medical conditions are at higher risk for the development of depression and anxiety.

The presence of mental health disorders can be associated with non-adherence with care plans and poor disease control.

Mental health disorders often go undiagnosed in adolescents.

Screening tests administered during routine clinic visits can aid in the identification of patients who may benefit from mental health services.

While many providers at PSC report that they screen for mental health concerns, documentation in the EHR is lacking...
<table>
<thead>
<tr>
<th>Chronic Medical Condition</th>
<th>Number of patients 12 to 21 years with an EHR encounter</th>
<th>Percent of patients with a PHQ-9 noted in the EHR (absolute number)</th>
<th>Percent of patients with a GAD-7 noted in the EHR (absolute number)</th>
<th>Number of new referrals to clinic LCSW (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>514</td>
<td>2.1% (11)</td>
<td>1.9% (10)</td>
<td>12 (2.3%)</td>
</tr>
<tr>
<td>Inflammatory Bowel Disease</td>
<td>82</td>
<td>2.4% (2)</td>
<td>3.7% (3)</td>
<td>4 (4.9%)</td>
</tr>
<tr>
<td>Cystic Fibrosis</td>
<td>8</td>
<td>10% (1)</td>
<td>10% (1)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Renal Transplant</td>
<td>8</td>
<td>0%</td>
<td>0%</td>
<td>1 (12.5%)</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>10</td>
<td>0%</td>
<td>0%</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>Total</td>
<td><strong>622</strong></td>
<td><strong>2.3% (14)</strong></td>
<td><strong>2.3% (14)</strong></td>
<td><strong>18 (2.9%)</strong></td>
</tr>
</tbody>
</table>
Collaborative Team Members

- Jennifer A. Sutter, MD - Co-Pediatric Outpatient Medical Director - Pediatric Specialty Clinics and Division Chief for Pediatric Endocrinology
- Rhonda Strickland, MBA, BSN, RN - Nurse Manager for Pediatric Specialty Clinics
- Crystal Garman, MSW, LCSW - Pediatric Specialty Care Clinic
- Joanie Tyson, MBA - ECU Clinical Informatics Team
- Emily Downs, M2 - Leader in Innovative Care Scholar, Brody School of Medicine
- Dana Smith, C-PNP, MSN, RN – Clinic Nurse, Pediatric Specialty Care Clinic

- Clinical staff at the ECU Physicians Pediatric Specialty Care Clinic
Why does the Care Gap Exist?

• Lack of a formal process to screen for depression and anxiety and document the results in the EHR
  • Selection Bias – Screening only patients displaying symptoms
  • Apparent Care Gap – Formal and informal screens are not captured in the EHR in a way that can be reported

• Lack of awareness of mental health services available at the ECU Physicians Pediatric Specialty Care Clinic
Through the development and implementation of a formal and standardized screening process for depression and anxiety we aimed to:

1. Increase the **percentage** of adolescents age **12 to 21 years** with either diabetes, inflammatory bowel disease, cystic fibrosis, a kidney transplant or HIV/AIDS cared for at the ECU Pediatric Specialty Care Clinic who have an **annual screen** using a validated tool for depression or anxiety (**PHQ-9** or **GAD-7**) documented in the EHR from **2%** to **20%** in 6 months.

2. Increase the **number of internal referrals** for adolescents aged **12 to 21 years** without an established mental health provider with either diabetes, inflammatory bowel disease, cystic fibrosis, a kidney transplant or HIV/AIDS who are cared for at the ECU Pediatric Specialty Care Clinic to **Crystal Garman, MSW, LCSW** by **20%** in 6 months.
PDSA 1: Initial Screening Protocol

Prior to Appointment
- While prepping for clinic, CNS or SW identifies patients meeting criteria for screening

Day of Appointment

Patient Identification
- One day before appointment CNS/SW places screening forms with patient’s name & MRN in designated folder in check in room

Administration of Screen
- NA2/RN checks folder for forms at the start of each clinic session and gives the forms to the patient during check in (script explaining the purpose of screen to be provided)

Scoring and Documentation of Screen
- CNS/SW will retrieve form from patient after patient is roomed and enter results into EHR flowsheet to score
  - Positive score on one/both tests
  - MD/APP notified by CNS/SW of positive score or positive response to suicidal question
  - MD/APP discusses the results of testing with family (script to be provided)
  - No MH concern or already seeing a MH provider
  - No further action

Suicidal or acute mental health (MH) concern
- SW helps determine if referral to ED or Mobile Crisis is indicated

MH concern but family prefers f/u close to home
- SW notified to provide information regarding mental health providers closer to home

Referral to LCSW
- MD/APP/CNS places internal referral to PSC LCSW in EHR

MH concerns and family prefers f/u at PSC
- MD/APP/CNS places internal referral to PSC LCSW in EHR

Urgent referral: Vicki Hayes contacts family to schedule appointment (script to be provided)

Non-urgent referral: Appointment scheduled at check out by PAS staff at the same time as the next appointment with provider (documented in follow up instructions on AVS)

Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic (Version 1)

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD
• Collaborated with ECU Physicians Clinical Informatics Team to generate a quarterly report using ICD-10 codes, age criteria and visit status

• Annual screening rate for PHQ-9 (flow sheet value)
• Annual screening rate for GAD-7 (flow sheet value)
• Number of new referrals to Crystal Garman (order number)
PDSA 1: Presentation to Clinical Teams

• Presented protocol and baseline data to clinical teams (January 2020)

• Providers, nurses and social workers from the Divisions of Pediatric Endocrinology, Gastroenterology, Pulmonology, Nephrology and Infectious Disease

• Lunch time and 5pm meeting

• Education about Mental Health Services at PSC - Crystal Garman discussed the chosen screening tests and services she is able offer patients with mental health concerns

• Solicited feedback – minimal provided
PDSA 2 and 3: Gradual Implementation

- **PDSA 2:** Test of change in Pediatric Diabetes Clinic with individual chart audits (Feb 3rd, 2020 to March 13th, 2020)
  - Patients received screens for other patients – modified protocol (patient identification)
  - Provider discomfort with positive screens – education and reassurance that resources where in place to properly manage a positive screen.

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**Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic (Version 2)**

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD
PDSA 2 and 3: Gradual Implementation

- **PDSA 2:** Test of change in Pediatric Diabetes Clinic with individual chart audits (Feb 3rd, 2020 to March 13th, 2020)
  - Patients received screens for other patients – modified protocol (patient identification)
  - Provider discomfort with positive screens – education and reassurance that resources were in place to properly manage a positive screen.

- **PDSA 3:** Gradual roll out to other sections with individual chart audits (GI – 2/24, CF/Nephrology – 3/9, ID – 3/16)
  - Only occurred in the GI clinic...
    - No renal transplant or CF patients met criteria
    - Screening in ID did not start on March 16 due to COVID-19 pandemic
Outcomes – PHQ-9

Percent of Patients Aged 12 to 21 Years with a Chronic Medical Condition seen at PSC in the Past Year with a PHQ-9 Documented in the EHR

PDSA-4:
- May of 2020 – Data presented to Pediatric Division Chiefs during a Division Chief Meeting
- Division Chief for ID coordinated with his social worker to implement the screening protocol

Total: 167 (27%)

Total: 14 (2%)
Outcomes – PHQ-9

Percent of Patients Aged 12 to 21 Years with a Chronic Medical Condition seen at PSC in the Past Year with a PHQ-9 Documented in the EHR

Virtual Visits in March & April
Since 1st week in May, the number of face-to-face visits has increased at PSC

New Providers to Practice (GI)
Reintroduced the protocol to new providers at a GI Division Meeting

Total: 167 (27%)
Total: 218 (35%)
Total: 14 (2%)
Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic (Version 2)

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD
PDSA 4: Data Analysis and Conclusions (All other clinics...)

**Prior to Appointment**

- While prepping for clinic, CNS or SW identifies patients meeting criteria for screening (12 to 21 years without a psychiatric history)
- NA2/RN checks folder for forms at the start of each clinic session and gives the forms to the patient during check-in (script explaining the purpose of screen to be provided)
- If patients no longer identified by CNS, highlighted into designated folder in check in room – providing the appropriate number of stapled screening packets

**Day of Appointment**

- Administration of screen
- CNS/SW will retrieve form from patient after patient is roomed and enter results into EHR flowsheet to score
- **Positive** score on one/both tests
- **Negative** on both score tests
  - No further action
- **No MH concern or already seeing a MH provider**
  - MH concerns and family prefers f/u at PSC
  - MD/APP/CNS places internal referral to PSC LCSW in EHR

**Suicidal or acute mental health (MH) concern**

- MD/APP notified by CNS/SW of positive score or positive response to suicidal question
- MD/APP discusses the results of testing with family (script to be provided)
- SW helps determine if referral to ED or Mobile Crisis is indicated
- SW notified to provide information regarding mental health providers closer to home
- MH concern but family prefers f/u close to home

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**Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic (Version 2)**

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD

**Urgent referral:** Vicki Hayes contacts family to schedule appointment (script to be provided)

**Non-urgent referral:** Appointment scheduled at check out by PAS staff at the same time as the next appointment with provider (documented in follow up instructions on AVS)
Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic (Version 3b - Diabetes)

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD
PDSA 4: Data Analysis and Conclusions
(All Other Clinics...)

Patient Identification, Administration, Scoring and Documentation

Prior to Appointment

Clinic nurse reviews list of patients meeting criteria for screening (12 to 21 years without a screen in the past year) and preps screen with name and date of next appointment

Day of Appointment

Clinic nurse hands the screen to the patient at check in (if clinic nurse will not be present, she will provide screen to CNS/SW for the section to hand to the patient)

Clinic nurse or CNS/SW retrieves form from patient and enters results into EHR flowsheet to score

MD/APP notified by clinic nurse or CNS/SW of positive score or positive response to suicidal question

MD/APP discusses the results of testing with family (script to be provided)

SW helps determine if referral to ED or Mobile Crisis is indicated

SW notified to provide information regarding mental health providers closer to home

MH concern but family prefers f/u close to home

No MH concern or already seeing a MH provider

No further action

Positive score on one/both tests

Depression and Anxiety Screening in Adolescents at the Pediatric Specialty Care Clinic

(Version 3a – IBD, CF, Renal Transplant, HIV/AIDS)

Rhonda Strickland, RN, BSN and Jennifer Sutter, MD

Urgent referral: Vicki Hayes contacts family to schedule appointment (script to be provided)

Non-urgent referral: Appointment scheduled at check out by PAS staff at the same time as the next appointment with provider (documented in follow up instructions on AVS)

MH concerns and family prefers f/u at PSC

MD/APP/CNS places internal referral to PSC LCSW in EHR
Outcomes – PHQ-9

Percent of Patients Aged 12 to 21 Years with a Chronic Medical Condition seen at PSC in the Past Year with a PHQ-9 Documented in the EHR

- Diabetes
- IBD
- Cystic Fibrosis
- Renal Transplant
- HIV/AIDS
- Total
- Aim

Total: 14 (2%)
Total: 167 (27%)
Total: 218 (35%)
Total: 267 (44%)
Outcomes – PHQ-9

Percent of Patients Aged 12 to 21 Years with a Chronic Medical Condition seen at PSC in the Past Year with a PHQ-9 Documented in the EHR

- Diabetes
- IBD
- Cystic Fibrosis
- Renal Transplant
- HIV/AIDS
- Total
- Aim

Total: 14 (2%)
Total: 167 (27%)
Total: 218 (35%)
Total: 267 (44%)
Total: 289 (47%)
Outcomes – Referrals to LCSW

Number of New Patient Referrals to the LCSW at PSC per Quarter per Year

- 6 months: 34 referrals, 89% increase in the number of referrals
- 12 months: 46 referrals, 155% increase in the number of referrals

<table>
<thead>
<tr>
<th>Year</th>
<th>Jan-Mar</th>
<th>April-June</th>
<th>July-Sept</th>
<th>Oct-Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>2020</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>25</td>
<td>46</td>
</tr>
</tbody>
</table>
# Challenges

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Lessons Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider discomfort with the possibility of positive screening results</td>
<td>Need to provide education and reassurance that resources are in place to support the change.</td>
</tr>
<tr>
<td>COVID-19 - Delayed initiation of protocol and the use virtual visits</td>
<td>Flexibility and willingness to regroup and restart</td>
</tr>
<tr>
<td>A multi-step protocol utilizing multiple staff in the setting of competing priorities will lead to protocol deviations.</td>
<td>A clinic wide champion responsible for the multistep protocol may be more effective than just simplifying the protocol.</td>
</tr>
<tr>
<td>Delayed data analysis lead to delayed action.</td>
<td>Intermittent check-ins with stakeholders including re-introduction and re-education are important.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>How do you maintain energy and momentum for a proposed change? All of the above…</td>
</tr>
</tbody>
</table>
Next Steps

Global aim: To improve the mental and physical health of adolescents with chronic medical conditions in Eastern North Carolina

PHQ-9 – 33% positivity rate, GAD-7 – 34% positivity rate

Focus on outcome measures for patients with positive screens

• Analysis of our referral process to mental health providers
• Impact on health outcomes with regards to markers of disease control and treatment adherence
Questions?

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