Risk Stratification for Pediatrics

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What is Risk Stratification?

“Risk stratification is an intentional, planned and proactive process carried out at the practice level to effectively target clinic services to patients.”

Asaf Bitton, MD, MPH, FACP, Center for Primary Care at Harvard Medical School
Why is Risk Stratification Important?

- Right service
- Right Patient
- Right Time

Reduce waste
Reduce chaos
Improve outcomes
How is Pediatrics different?

% of Population with Multiple Chronic Conditions

Continued

% of Population with Overnight Hospital Stay

How is Pediatrics the Same?

- Resources and support are still needed
- Resources, especially time, are limited
- Patients and families do not always get the support they need
Change in perspective

Credit to Sadie Hernandez, https://www.flickr.com/photos/sadiediane/4884006357
Risk Stratification for the Whole Patient

CMS concluded after a pilot of 500 clinics (CPCi):

- Objective elements
- Subjective elements (Clinical Intuition)

- Must have a:
  Two Step Risk Stratification Tool
Mercy Pediatric Risk Stratification Tool

Not too many Pediatric Risk Stratification Tools created

Hierarchical Condition Category (HCC) is for billing analysis, does not determine need for Care Management
Why Risk Stratify Pediatric Patients

Family Medicine cares for patients from the Cradle to the Grave

We Care Manage our entire population
Mercy Pediatric Risk Stratification Tool

• Developed 6 years ago

• Have risk stratified over 5000 patients birth to 18

• Centura Health Physician Group holds Copy Right for both Adult and Pediatric Risk Stratification Tools
### Mercy Pediatric Risk Stratification Tool

**Birth to 18 Years**

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<table>
<thead>
<tr>
<th>Risk Level:</th>
<th>Evaluated By:</th>
<th>Evaluation Date:</th>
<th>Last Evaluation Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider:</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>DOB:</th>
<th>Age:</th>
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<tbody>
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</table>

<table>
<thead>
<tr>
<th>Risk Stratification Level/Score</th>
<th>Level 1</th>
<th>Score: 0</th>
<th>Level 2</th>
<th>Score: 1</th>
<th>Level 3</th>
<th>Score: 2-3</th>
<th>Level 4</th>
<th>Score: 4-6</th>
<th>Level 5</th>
<th>Score: 7-9</th>
<th>Level 6</th>
<th>Score: 10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARE PLANNING</td>
<td>LOW</td>
<td>LOW</td>
<td>MODERATE</td>
<td>HIGH</td>
<td>HIGH</td>
<td>EXCESSIVELY HIGH</td>
<td></td>
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</tr>
<tr>
<td>Score</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3 OR MORE</td>
<td>2 OR MORE</td>
<td></td>
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<table>
<thead>
<tr>
<th>AGE</th>
<th>3 years to 10 years</th>
<th>Birth to 35 months</th>
<th>Premature (&lt;36wks) - 12 months</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>HOSPITALIZATIONS (last 12 months)</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>ER VISITS (last 12 months)</th>
<th>0-1</th>
<th>1</th>
<th>2</th>
<th>3 OR MORE</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ALL OFFICE VISITS (last 12 months)</th>
<th>Birth to 23 months: 4-5 visits</th>
<th>Birth to 23 months: 2-3 or 6-7 visits</th>
<th>Birth to 23 months: 1 visit or &gt;8 visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 years to 18 years: 1-2 visits</td>
<td>2 years to 18 years: 3-4 visits</td>
<td>2 years to 18 years: &gt;5 visits</td>
</tr>
</tbody>
</table>

| CURRENT PRESCRIPTION MEDICATIONS | No Medications | 1-2 medications | 3 or MORE |

<table>
<thead>
<tr>
<th>Excluding antibiotics, unless prophylactic</th>
<th>Oxygen Use</th>
</tr>
</thead>
</table>

#### Family/Caregiver/Patient Language/Health Literacy

- Primary language: English
- Carries out plan of care well
- Demonstrates understanding of health care needs
- Independently seeks health information
- Requires interpreter for all practice interactions
- Not able to carry out plan of care without continued reinforcement
- Requires routine reinforcement and education

#### Chronic Disease

- No chronic disease
- Non Smoker/no secondhand smoke
- Growth Chart >50th percentile for height

#### Chronic Disease Qualifier

- N/A
- 1 or more chronic disease diagnoses uncontrolled
- 1 or more chronic disease diagnoses, severely uncontrolled

#### Family/Caregiver/Patient Mental & Behavioral Health Substances, eating disorders, developmental delays, autistic disorders, depression, ADD, ADHD, etc.

- No Mental Health diagnoses
- 1 Mental Health diagnoses
- Routine follow up with provider and or mental health provider
- 1-2 Significant life stressors (divorce; single parent; young parents <20; unemployment; moving/new home; bullying; cutting; physical/emotional abuse)

#### Mental & Behavioral Health Qualifier

- N/A
- 1 or more Mental Health diagnoses uncontrolled
- 1 or more Mental Health diagnoses severely uncontrolled
- Suicidal = Level 6

#### Social Determination & Self Management

- Steady income
- Stable residence
- Adequate medical insurance
- Meets basic care needs (ADLs) including adequate supervision
- Screen Time <2hr/d
- Receives some support to meet social needs
- Some medical insurance
- Meets some of basic ADL’s with limited supervision
- Screen Time <6hr/d
- Homeless/inadequate or no supervision
- Unsafe home environment
- Unemployed
- Lack of financial or family support that impacts care
- Transportation barrier
- Foster Care
- Screen Time >6hr/d

**Comments:**

**Complex Care Coordinator Referral** (Please Circle) | YES | NO
Objective Elements

Age:

- Age 3yrs -18yrs = score of 0
- Infant/toddler age birth to 35mo = score of 1
- Premature through their first year = score of 2
Objective Elements

Hospitalizations:
• None = 0
• 1 = score of 1
• 2 or more = score of 2

Emergency Department:
• none or only 1 = score of 0
• 2 visits = score of 1
• 3 or more visits = score of 2
Objective Elements

Office Visits last 12 months: count # of visits to score:

- Birth to 23mo: 4-5 (all of well child checks +1)
  = score of 0
- Birth to 23mo: 2-3 or 6-7
  = score of 1
- Birth to 23mo: 1 visit or >8
  = score of 2
Objective Elements

Office Visits continued:

- 2yrs – 18yrs: 1-2 visits
  = score of 0
- 2yrs – 18yrs: 3-4 visits
  = score of 1
- 2yrs – 18yrs: >5
  = score of 2
Objective Elements

Medications (excluding antibiotics unless prophylactic):

- No medications = score of 0
- 1-2 medications = score of 1
- 3 or more and/or use of oxygen = score of 2
Subjective Elements (Require Care Team Judgement)

This step is Critical: You’ll See 😊
- CMS recognized this from the CPC initiative
- Intuitive judgement
- Difficult to quantify
- NOT screening tool

Goal of Risk Stratification Tool:
- Identify the top 1-5% to care manage
- Identify need for:
  Behavioral Health Care Integration
Subjective Elements (Require Care Team Judgement to Score)

Family/Care Giver

Language/Health Literacy:

- Evaluating language barriers
- Evaluating ability to act on information
Subjective Elements (Require Care Team Judgement)

Family/Caregiver/Patient

Chronic Disease (does not include mental health diagnoses)
  • Chronic Disease
  • Secondhand Smoke and/or Tobacco Use
  • Body Mass Index (BMI)

Family/Caregiver/Patient

Chronic Disease Qualifier
  • Uncontrolled
  • Severely Uncontrolled
Subjective Elements (Require Care Team Judgement)

Family/Caregiver/Patient

Mental and Behavioral Health

- Substance abuse; eating disorders; developmental delays; autistic disorders; depression, ADHD
- No Diagnoses
- 1 or more Diagnoses: In treatment or not
- Life Stressors: Divorce; Unemployment; Young Parent <20; Single Parent; Moving; Bullying; Cutting; Physical/Emotional Abuse
Subjective Elements (Require Care Team Judgement)

Family/Caregiver/Patient
Mental and Behavioral Health Qualifier
- Controlled
- Uncontrolled
- Severely Uncontrolled
- SUICIDAL = automatically a LEVEL 6
Subjective Elements (Require Care Team Judgement)

Family/Caregiver/Patient

Social Determination and Self Management

- Income/Financial assistance
  - Food
- Residence/Safe
- Transportation
- Medical insurance
- Meet basic ADL’s/Foster Care
- Screen Time
How Much is Too Much
Electronic Health Record

Must allow for end-user ability to score

- Objective elements can be automated
- Subjective element require judgement
Case Study:
10y/o girl (Sophia) who has been to the ER four times in the last 6 months with: severe head ache; nausea and vomiting; stomach pain; and needed stitches in her finger from a knife cut. She has only seen her PCP once this past year for a upper respiratory infection. She is currently on no medications. Sophia is < 5th %tile for her BMI.
Case Study Continued…

Her mother (who has alcohol on her breath for the 10am appointment) only speaks Spanish so Sophia does all of the translation during the office visit. Her mom and dad are divorced and they recently moved from Texas (8mo ago). They are living in a mobile home with her Aunt and Uncle and their 4 children. Sophia has a little brother who is 14 months old which she holds on her lap. The 14mo old is dirty, has long fingernails, and is barefoot (outside temp of 45). Her mom appears anxious and irritated, speaking rapidly in Spanish to Sophia. Sophia’s brother cries when she has to put him down for her exam. Her mom ignores the baby and pays attention to her phone.
Developing a Useful Stratification

Who?
• Who are you trying to identify?
• What is your population of focus?

Key Components
• What are some key components that define that population?

Data Elements
• What are the data elements that describe that key component?

Reporting
• How can you easily report on that data element?
Example – Preventative Focus

Who?
- Who are you trying to identify?
  - Patients that may have preventable, negative health outcomes in the future

Key Components
- What are some key components that define that population?
  - Adverse Childhood Events
  - Social Determinants of Health
  - Healthy Weight, good physical activity and nutrition habits

Data Elements
- What are the data elements that describe that key component?
  - ACEs Score
  - Family Poverty, Food Insecurity, etc.
  - BMI %ile, # of sugar sweetened beverages in last 2 weeks, etc.

Reporting
- How can you easily report on that data element?
  - Patients with positive ACE score
  - Report on Insurance type
  - Report on patients with BMI %ile increasing in last year
Discuss at your table:

- **What is your population of focus?**
- **What are some key components that define that population?**
Thank you!

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