

Mental Health Care in the Pediatric Clinic

Assessing for Mental Health

Objectives

- Identify strategies to improve identification of mental health concerns preventative care
- Review practical implementation of screening in primary care clinics
- Discuss benefits and limitations of screening instruments for identifying concerns
- Consider measurement-based care to treat to target outcome

Prevalence of mental health disorders

- Psychiatric disorder in primary care samples: 12-14% (gold standard with impairment)
- Pediatrician-identified prevalence: 6% (Costello et al., 1988; Lavigne et al. 1993)
- Pediatricians miss 50% of true cases of mental health disorders: there is substantial hidden morbidity in primary care
- Statistical approaches (e.g. formalized screening) improve problem identification

Evidence Based Medicine & Evidence Based Assessment

The **Evidence Based Medicine** model shown here describes the process of identifying a problem and ruling in/out diagnoses with the synthesis of test results and critical weighing of received information.

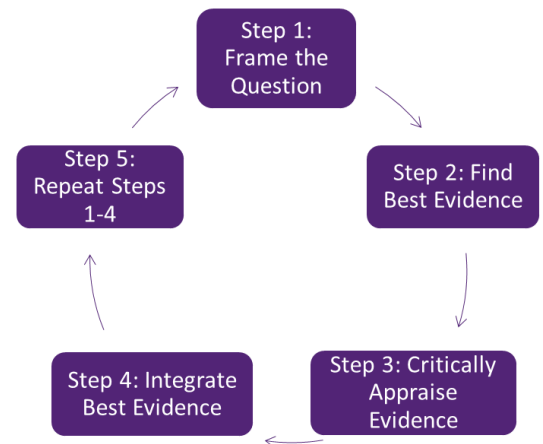
The **Evidence Based Assessment** model helps further describe the statistical, sequential steps in the EBM model.

1. Prediction

- Identifying risk factors given prevalence and known risk factors
- Adjusting probability of diagnosis given additional information

2. Prescription

- Confirmation of diagnostic hypothesis
- Treatment selection and goal development



3. Process

- Tracking treatment and supporting processes

Here are the EBA steps most applicable to mental health screening:

Step 1: Know your setting and **frequency** of presenting diagnoses in your setting

Step 2: “Bet the **base rate**” (Meehl, 1959) - Base rate, or probability, of disorder at age points

Step 3: Evaluate risks or moderators impacting diagnosis – Family history

Step 4: Identify measures and gather information about psychometrics: What can you use in your clinic that is a “strong” tool without significant burden – time, accessibility, etc.

Step 5: Broad/Universal screening

Step 6: Targeted measures

Step 7: Diagnostic Assessment (Gold Standard)

Bet the Base Rate - Prevalence and age of onset

Disorder	Lifetime Prevalence	Peak age of onset	Onset monitoring (age)
Autism Spectrum Disorder	7%-2.2%	5.5	1 – 5
Oppositional Defiant Disorder	9.2-10.2%	5	4 – 11
ADHD	7.9-9.5%	4.5	4 – 11
Separation Anxiety Disorder	5.9-9.5%	4.5	4 – 9
Specific Phobias	17.1-23%	4.5	4 – 8
Conduct Disorder	6.8%	11.6	9 – 13
Generalized Anxiety	1.6-2.8%	15.5	7 – 14
Obsessive Compulsive Disorder	1.8-3.6%	M:10.5; F: 15.5	7 – 14
Social Anxiety Disorder	6.2-11.2%	14.5	10 – 15
Depressive Disorder	8.5-16.8%	15.5	10 – 18
Bipolar/Mood Disorders	2.8-3.1%	19.5	12 – 18
Eating Disorders	.03-1.6%	15.5	12 – 18
Panic Disorder	2.1-2.5%	M: 15.5; F: 20.5	15 – 21
Substance abuse/behaviors	11.4%	15.5	15 – 21
Schizophrenia/Psychotic	.03-3.67%	24.5	18 -

A starting point is understanding the prevalence and typical age of onset/course of common disorders. As previously reviewed, we tend to see autism spectrum disorders emerge in the first years of life, ADHD in the preschool and early school years, and anxiety disorder in early school years. Depression becomes more prevalent with onset of puberty, and bipolar and psychotic disorders in later teen and early adult years.

Case example

Melody is 14-year-old female presenting for a well visit. You have treated Melody and her two siblings since birth. She is physically healthy with exception of two concussions while playing lacrosse. Mother was treated for postpartum depression with two of her children.

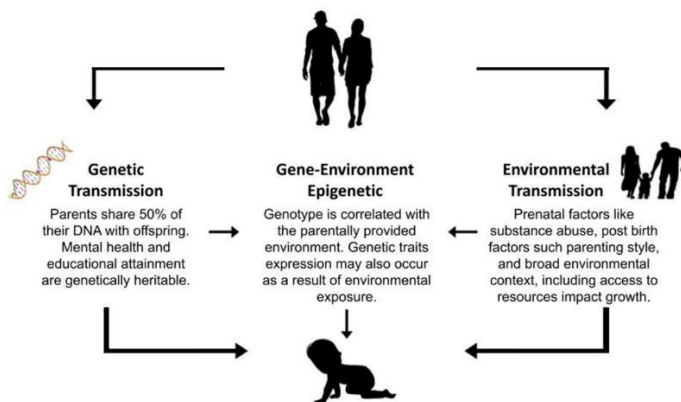
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Around age 10 Melody presented with generalized anxiety, specifically perfectionism related to school and sport performance. She received CBT for anxiety and symptoms appeared to resolve. Recently, over the winter months of her freshman year, Melody is reporting reoccurrence of anxiety symptoms and bouts of low mood.

Base Rate: Depression in teen years is common and has a complex course in that it is characterized by intermittent acute episodes of varying, length, severity, and frequency. Understanding the base rate and increased risk related to female gender is important. Additionally, the variable course of depressive episodes is suggestive of the importance of brief targeted screening.

Family History:



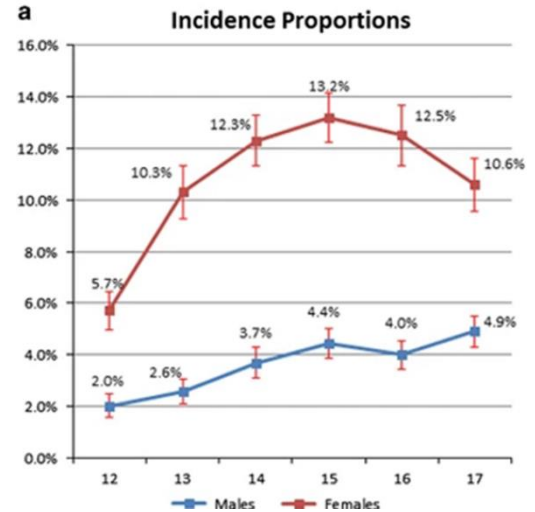
Parental history of any psychiatric diagnosis is associated with increased incidence rates of mental illness. Of importance, first degree family history of disorder is often associated with earlier presentation of the disorder in the offspring. Odds ratios for having the following disorders if there is a family history of the disorder are:

ADHD: OR 4-9

Anxiety Disorders: OR 2-6

Major Depression: OR 3-13

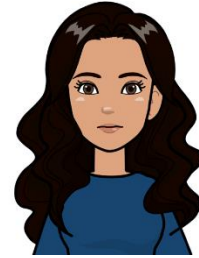
(Martin et al. 2018; Rappe et al 2012; Telman et al. 2017; Rice et al. 2012)



Case example

Melody's Risk Factors

- Base rate of 12.3% of MDD at this age/gender
- Mother with history of postpartum depression
- Youth with prior history of mental health disorder



Screening tools for Primary Care

Screening normalizes mental health. If you are going to conduct screening, it is critical to provide your interpretation of the screen, even if it is not indicative of a problem. "Normal" results may matter as much to families as a normal hemoglobin or glucose level.

Screening should be universal, confidential, and acknowledged and addressed during the visit.

The use of measures is important because youth may lack the words to say how they are feeling unless asked directly. There is strong evidence that when mental health screening is universal and confidential patients and parents are more likely to disclose mental health concerns and screening for mental health concerns is appreciated by both parents and youth.

Language you can use:

For Parents:

Thank you for completing these mental health screening measures. It looks like you don't have any concerns about your child's feelings or behaviors right now. Is that correct? We will continue to check on that in the future, because mental health and physical health are both important.

For youth:

From your answers to the mental health questions, it doesn't sound like you have any current concerns with anxiety or depression. Is this correct? I appreciate you taking the time to do this, and we will be checking on this regularly because it's an important part of your health. If you ever do have concerns, you can let me know about them and this conversation is typically confidential.

In developing a mental health screening program there are a few tension points:

A few tension points:

- Who and when to screen?
- Which conditions should receive screening?
- Age range that should be screened?
- Length, age-range, cost, sensitivity/specificity of measure
 - Utility of tool for diagnosis?
 - Utility of tool for progress monitoring?

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The big picture: Does this tool improve accurate detection of mental health diagnosis without **unjustified** burden to families, staff, workflow?

Recommendation:

Universal screening means that every person in your practice is screened for a common condition at a set time point, such as a well-child visits.

- **Start with a broad mental health measure** built to detect multiple conditions.
- If the broad measure indicates concern, **follow up with a measure targeted at the** area of concern.

This **sequential screening** approach zeros in on a subgroup of a population through a brief set of consecutive screens, reducing false positives and false negatives.

Below are broad tools used to capture multiple disorders. We focus on freely available measures that can be accessed in the public domain. Broad measures available for purchase include the Achenbach Child Behavior Checklist, the Child Symptom Inventory, and the Behavior Assessment System (BASC).

Measure	Items	Age Range	Informant	Cut offs	Sensitivity/Specificity
Patient Symptom Checklist – 17 (PSC-17)	17 (35 item)	4-17	Parent Youth	Total Score: ≥ 15 Internalizing: ≥ 5 Externalizing: ≥ 7 Attention: ≥ 7	Total Score: .73/.74 Internalizing: .52/.74 Externalizing: .62/.89 Attention: .59/.91
Strengths and Difficulties Questionnaire (SDQ)	25	3-18	Parent Teacher Youth	Total Score: ≥ 15 Emotional (Anx): ≥ 5 Conduct (ODD): ≥ 3 Conduct (CD): ≥ 4 Inattention/HI: ≥ 6	Total Score: .81/.42 Emotional (Anx): .75/.51 Conduct (ODD): .84/.66 Conduct (CD): .89/.63 Inattention/HI: .95/.32

If your patient's PSC-17 internalizing score is ≥ 5 , you would follow up with age-appropriate screening measures for anxiety and depression. If you patient's PSC-17 externalizing and/or attention scores were ≥ 7 , you would follow-up with age-appropriate ADHD/ODD screening measures. Similar follow-up measures are recommended for elevated emotional, conduct, or inattention/hyperactivity scores on the SDQ.

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ADHD/ODD – Targeted Measures

Measure	Items	Age Range	Infor	Cut offs	Sensitivity/Specificity
NICHQ Vanderbilt	55 (P) 43 (T)	6-12	Parent Teacher	ADHD Comb: ≥ 6 ODD Total: ≥ 10	ADHD Combined: .67/.86 ODD: .88/.85
NICHQ Parent Vanderbilt positive cutoff requires 6 of 18 items on the Combined Inattention/ Hyperactivity scale be recorded as 2 or 3 and at least one 4 or 5 rating on the performance scale.					
SNAP-IV	26	6-18	Parent Teacher	ADHD IN: $\geq 2.56/ \geq 1.78$ ADHD H/I: $\geq 1.78/ \geq 1.44$ ADHD CT: $\geq 2.00/ \geq 1.67$ ODD: $\geq 1.38/ \geq 1.88$	
Subscale scores for the ADHD and ODD subscales on the SNAP-IV are calculated by summing the scores on the items in the subset (eg., Inattention) and dividing by the number of items in the subset (eg., 9).					

Anxiety – Targeted Measures

All of these are in the public domain. The longer instruments, including the SCARED and the Spence, include subscales that can help identify the particular anxiety disorder a child might have. The GAD-7 is specific to generalized anxiety disorder and is commonly used in adults. The PROMIS measures are brief, general, and may be useful as initial screening measures as well as for tracking response to treatment over a broad age range.

Measure	Items	Age Range	Informant	Cut offs	Sensitivity/Specificity
Screen for Child Anxiety and Related Disorders (SCARED)	41	8-17	Parent Youth	Total Score: ≥ 25 Panic: ≥ 7 GAD: ≥ 9 Separation Anx: ≥ 5 Social Anx: ≥ 8 School Avoidance: ≥ 3	Parent Total: .65/.99 Parent GAD: .77/.90 Parent Social: .79/.92 Youth Total: .64/.92 Youth GAD: .54/.91 Youth Social: .64/.84
SPENCE Child Anxiety	44	3-6; 8-15	Parent Youth	T-Score: ≥ 60 (T-Score, M = 50; SD 10)	-
Generalized Anxiety Disorder (GAD-7)	7	12+	Youth	Total Score: ≥ 10	-
Patient Reported Outcomes Measurement System (PROMIS - Anxiety)	8	5-17	Parent Proxy Youth	Parent T-Score: ≥ 62 Youth T-Score: ≥ 63 (T-Score, M = 50; SD 10)	-

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Depression – Targeted Measures

Measure	Items	Age Range	Informant	Cut offs	Sensitivity/Specificity
Short Moods and Feelings Questionnaire (SMFQ)	13 (33 item version)	8-18	Parent Youth	Total Score: ≥ 11	Parent Total: 65%/99% Youth Total: 64%/92%
Patient Health Questionnaire (PHQ-9)	9	11+	Youth	T Score: ≥ 11	Total Score 89.5%/77.5%
Patient Reported Outcomes Measurement System (PROMIS -Depression)	8 (6)	5-17	Parent Proxy Youth	Parent T-Score: ≥ 60.5 Youth T-Score: ≥ 62.5 (T-Score, M = 50; SD 10)	-

Other Conditions – Targeted Measures

Other freely accessible measures target mental health concerns. See our module on suicide screening for more information on the ASQ. While the PHQ-9 includes one item related to suicide, it may not be sufficient to screen for suicide. One study suggests that using the single item PHQ9 would miss 1/3 of those at risk.

Other measures appropriate to primary care pediatrics include the CRAFFT substance abuse screen and the EAT-26 that screens for disordered eating. Note however that the most important indicator for eating disorders is a precipitous change in body weight and BMI.

Measure	Items	Age Range	Informant	Domain	Cut offs	Sensitivity/Specificity
Ask Suicide Questionnaire (ASQ -4)	4	10-18	Youth	Suicidality	Any “Yes” response	100%/87.9% .64/.92
CRAFFT	9	12-21	Youth Clinician	Substance use/abuse	T Score: ≥ 2	Total Score 76%/94%
Eating Attitudes Test-26	26	8-13	Youth	Disordered Eating	Total Score: ≥ 20	-

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Sequential Screening Strategy

A. Start with a parent-completed PSC-17 at all well-child visits for children aged 5-17 years.

1) PSC-17 completed prior to meeting the pediatrician by front office staff

“Please complete this confidential and brief behavioral health screening”

2) PSC-17 visually scored by staff and identified to physician

- Positive PSC-17: Noted for pediatrician, secondary measure provided by physician to complete after visit
- Negative PSC-17: Noted for pediatrician, no secondary measures given unless further assessment reveals concern

3) Screening reported and billed (96127) in appointment note.

Comprehensive screening is important to understand the total health of your child. Please complete this page if you have any questions about your child's mental or behavioral health.

PEDIATRIC SYMPTOM CHECKLIST (PSC -17) PARENT COMPLETED VERSION				Child/Youth's Name: _____		
				Today's Date: _____		
				Date of Birth: _____		
				Person Completing Form: _____		
Emotional and physical health go together in children. Because parents are often the first to notice a problem with their child's behavior, emotions, or learning, you may help your child get the best care possible by answering these questions. Please indicate which statement best describes your child.				Office Use		
	Never (0)	Sometimes (1)	Often (2)	I	A	E
Does your child (Please Mark)	0	1	2			
1. Feel sad.						
2. Feel hopeless.						
3. Feel down on themselves.						
4. Worry a lot.						
5. Seem to be having less fun.						
6. Fidget, is unable to sit still.						
7. Daydreams too much.						
8. Distract easily.						
9. Have trouble concentrating.						
10. Act if driven by a motor.						
11. Fight with other children.						
12. Not listen to rules.						
13. Not understand people's feelings.						
14. Tease others.						
15. Blame others for their troubles.						
16. Refuse to share.						
17. Take things that do not belong to them.						
Total						
Highlight if child meets any cut off score in any area		≥ 15		≥ 5	≥ 7	≥ 7

Internalizing: Anxiety/Mood

Attention: ADHD

Externalizing: ODD/Conduct Disorder

Do any of the above concerns impact your child's performance at school, home, or with friends? Yes No

Does the child's biological mother, father, or siblings had any of the following concerns? (Please circle)

ADHD Anxiety Obsessive Compulsive Disorder Depression Bipolar Disorder Learning Disorders

The PSC-17 is a broad psychosocial screen for children aged 4-17 designed for busy pediatrics offices, parent completed in < 5 minutes, with quick read scoring, English, Chinese, Spanish, translations, and downloadable for free.

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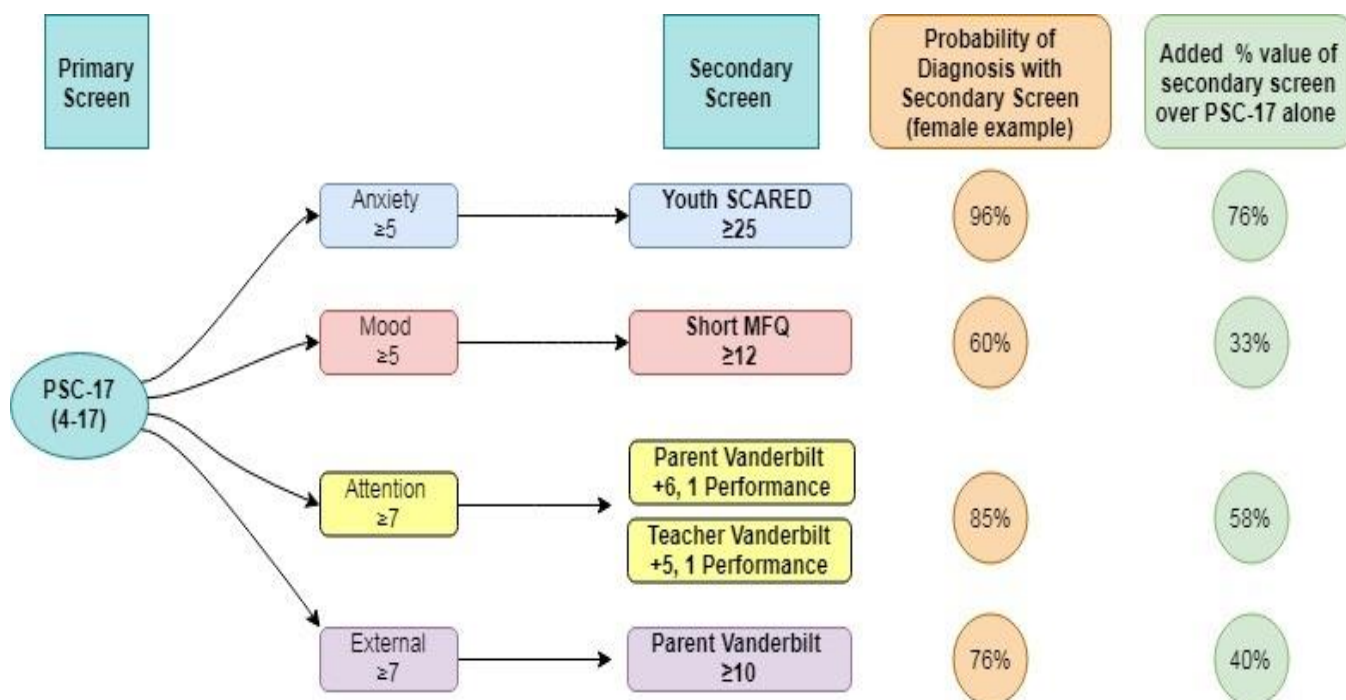
B. Targeted secondary/subsequent screening if PSC-17 subscore is elevated or if there is other defined concern.

Anxiety: Parent & Youth SCARED

Mood: Parent & Youth Short Moods and Feelings Questionnaire

ADHD: Parent & Teacher Vanderbilt

ODD: Parent Vanderbilt



This diagram illustrates the sequential screening process and shows how sequential screening increases the probability of an accurate diagnosis.

Case example

Let's look at the screening you would do for Melody. As part of your practice policy all youth older than 10 receive a parent PSC-17. Since Melody has a history of anxiety, you gave her the SCARED.

- The PSC-17 internalizing scale was elevated.
- The SCARED total score was a 27 with a 9 on generalized anxiety.
- Given the presenting concerns related to depression you also had Melody complete a Short Moods and Feelings Questionnaire, which was elevated at 15.
- She denied suicidality.



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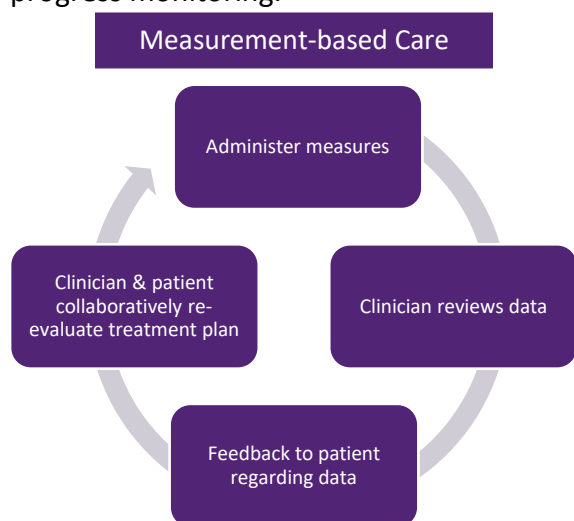
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How does mental health screening fit into primary care workflow?

- Pediatric primary care providers across the nation have found that behavioral health screening can be completed quickly and efficiently.
- No additional staff is required.
- Minimal training is needed and can be acquired through a variety of educational venues, including the internet
- Most parents are not only accepting but appreciative of screening practices.
- In a growing number of states Medicaid and most private insurers reimburse for developmental and behavioral health screening conducted at any primary care visit (health maintenance, sick, problem focused). More than one screen per visit is increasingly reimbursed.
- Typical reimbursement per screen (\$6-\$18) (CPT 96127).
- Screening is unlikely to substantially increase the need for mental health referrals.

Each pediatric practice must determine how screening will fit into its goals and workflow, including its capacity to distribute screens, collect and score them, address them with patients and families, respond to results and get results into the medical record.

The outcomes for practices have been largely positive. Screening has added value in not substantially increasing the need for referrals, increased accuracy of detection, reimbursement, and utility in progress monitoring.



Evidence-based assessment doesn't end after the diagnostic evaluation. Evidence-based assessment constitutes an ongoing, iterative process that ideally continues throughout the course of clinical care.

Research over the past couple of decades has demonstrated wide-reaching benefits of routine progress monitoring/feedback; seen across multiple stakeholders, including patients, practitioners, and organizations.

For the patient, progress monitoring and feedback has been associated with quicker symptom improvement, even when used in community settings across a variety of therapeutic approaches.

Routine progress monitoring may help patients better understand their symptoms, increase engagement in therapy, and encourage communication with the practitioner.

For practitioners, progress monitoring provides essential information about whether a given treatment is having its intended effect.

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Alerts practitioners when a patient may be deteriorating with a greater degree of accuracy than clinical assessment.

For organizations, progress monitoring may decrease overall costs of care, provide feedback about practitioners, and can be used for quality improvement.

Patients	Practitioners	Organizations
<ul style="list-style-type: none"> • Quicker symptom improvement • Helps understanding of symptoms • Increases engagement • Encourages communication with practitioner 	<ul style="list-style-type: none"> • Provides information about whether treatment is working • Alerts when patient is deteriorating • Guides treatment planning 	<ul style="list-style-type: none"> • Decreases costs of care • Provides feedback about practitioners • Can be used for quality improvement

See reviews by Boswell et al (2013), Lewis et al, (2018), Bickman (2016)

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