Youngstrom, E. A., Choukas-Bradley, S., Calhoun, C. D., & Jensen-Doss, A. (2014). Clinical guide to the Evidence-Based Assessment approach to diagnosis and treatment. Cognitive and Behavioral Practice. doi: 10.1016/j.cbpra.2013.12.005

Clinical Guide to the Evidence-Based Assessment Approach to Diagnosis and Treatment

Eric A. Youngstrom, Sophia Choukas-Bradley and Casey D. Calhoun, *University of North Carolina at Chapel Hill*
Amanda Jensen-Doss, *University of Miami*

Assessment plays an essential role in diagnosis, treatment planning, and progress monitoring, but assessment data are often used in ways that are impressionistic and prone to biases. Evidence-based medicine (EBM) principles, underutilized in psychology, can be used to streamline the assessment process and increase the accuracy of conclusions. Using a case example to illustrate the application of each step, this paper outlines a 12-step approach for applying EBM assessment strategies in clinical practice. The initial steps utilize information about clinical base rates, psychopathology risk factors, rating scale scores, and selected in-depth assessment to conduct an iterative, efficient approach to estimating the probability of a given diagnosis until that probability falls into a range suggesting the diagnosis is unlikely to be present, or likely enough to warrant treatment. Once the practitioner and client agree on the treatment plan, subsequent steps monitor progress and outcomes and use that information to make decisions about termination, and then continued monitoring guards against relapse.

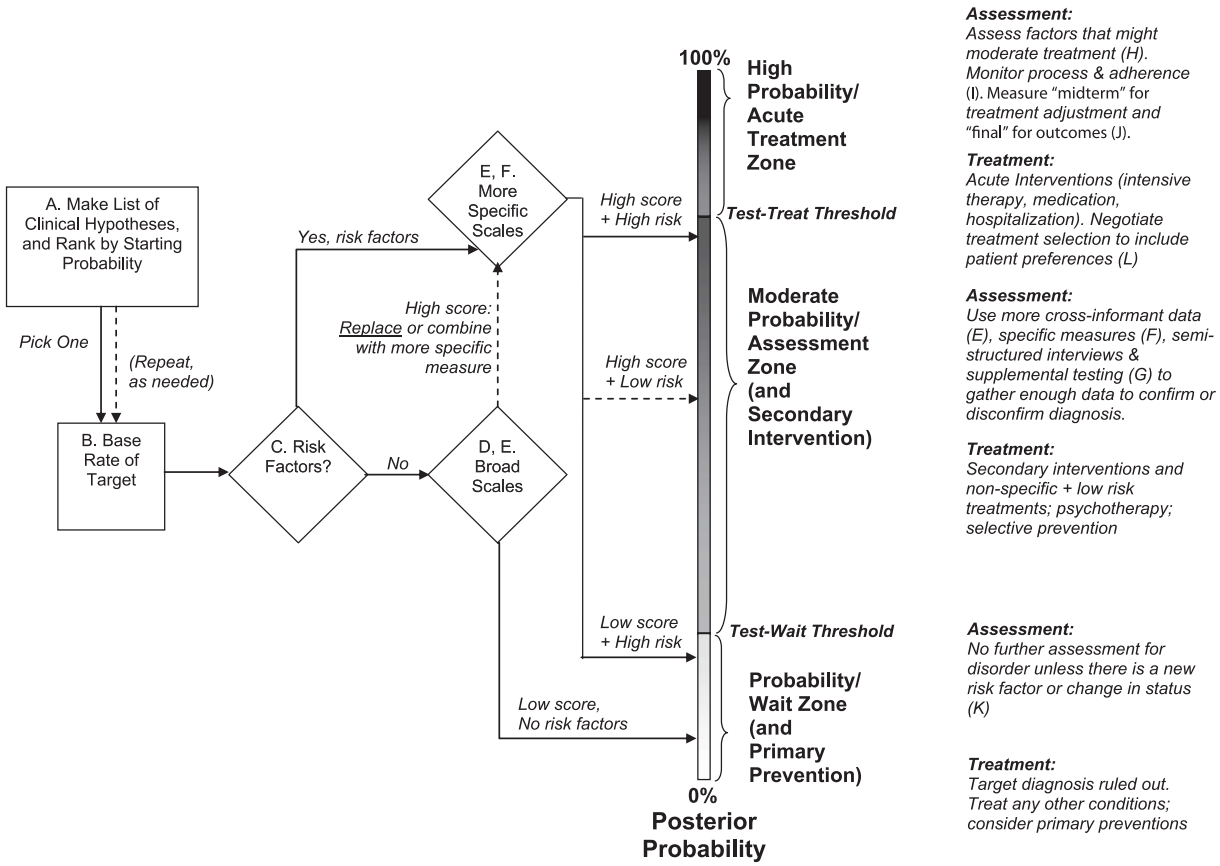

Figure 1. Mapping Assessment Results Onto Clinical Decision Making. *Note.* Letters refer to assessment step in Table 1.

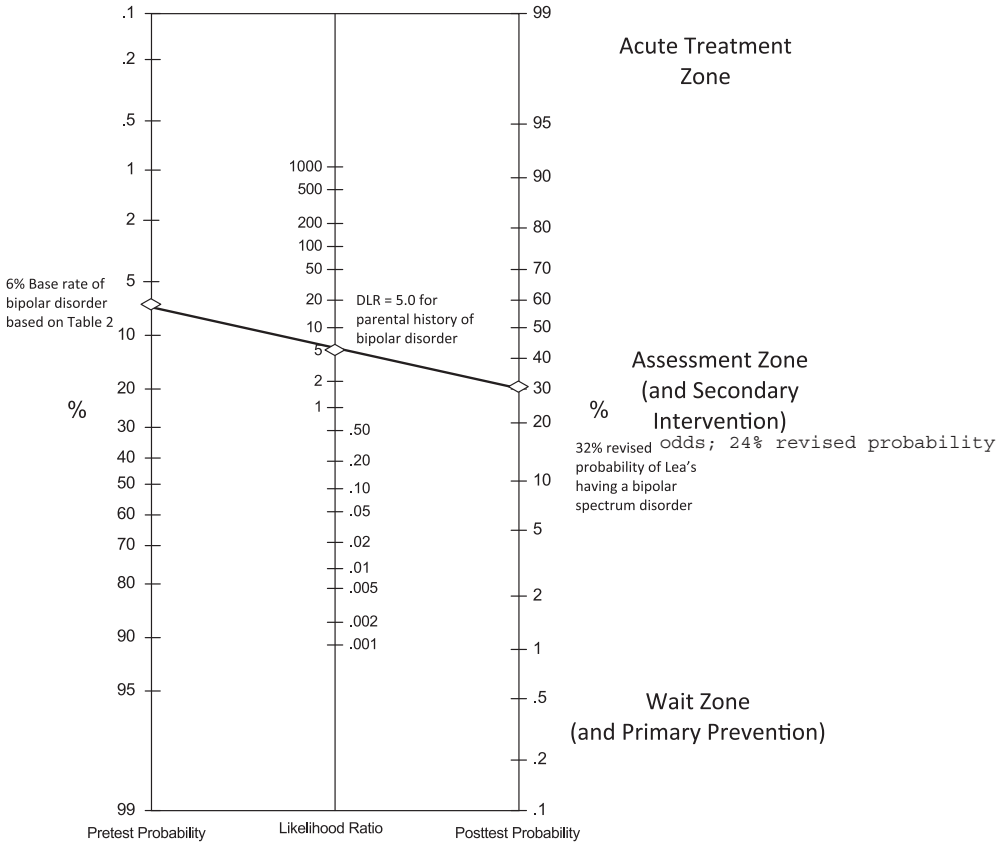

Figure 2. Probability nomogram used to combine prior probability with likelihood ratios to estimate revised, posterior probability. Straus et al. (2011) provide the rationale and medical examples; Jenkins et al. (2011) illustrate applying the nomogram to a case with possible pediatric bipolar disorder, and Frazier & Youngstrom (2006) with possible ADHD; all three sources include nomograms without marking up for example of family history and bipolar disorder.

Table 1
Twelve Steps in Implementing Evidence-Based Assessment and Applying It to Individual Cases

Assessment Step	Rationale	Steps to Put in Practice
A. Identify most common diagnoses in our setting	Planning for the typical issues helps ensure that appropriate assessment tools are available and routinely used	Review practice database, notes, reports; generate "short list" of most common diagnoses and clinical issues
B. Benchmark base rates	Base rate is an important starting point to anchor evaluations and prioritize order of investigation	Select a sample of cases (six months, random draw from past year) and tally local base rate; compare to benchmarks from other practices and published rates; identify any potential mismatches
C. Evaluate risks and moderators	Risk factors raise "index of suspicion," and he combination of multiple risk factors elevate probability into "assessment" or possibly "treatment" zones	Make short checklist of key risk factors; make second list of factors that might change treatment selection or moderate outcome; develop plan for how to routinely assess them
D. Synthesize intake instruments into revised probabilities	Probably already using in practice; upgrading the value for formulation and decision-making by clarifying what the scores mean vis changing probability for common conditions	Make a table crossing assessment instruments with common presenting problems. Identify gaps in coverage. Make cheat sheet with key information about assessment for each application.
E. Interpret cross-informant data patterns	High scores across settings or informants often mean worse pathology; do not over-interpret common patterns.	Gather collateral information to revise case formulation; consider parent, spouse, roommate; also behavioral traces such as Facebook postings. Anticipate typical level of agreement.
F. Add narrow and incremental assessments to clarify diagnoses	Often more specific measures will show better validity, or incremental value supplementing broad measures	Have follow-up tests available and criteria for when they should be used. Organize so that key information is easy to integrate
G. Add necessary intensive methods to finalize diagnoses and formulation	If screening and risk factors put revised probability in the "assessment zone," what are the evidence-based methods to confirm or rule out the diagnosis in question?	Do (semi-)structured interview or review checklist with client to confirm sufficient criteria; supplement with other methods as needed to cross treatment threshold.
H. Finish assessment for treatment planning and goal setting	Rule out general medical conditions, other medications; family functioning, quality of life, personality, school adjustment, comorbidities also must be considered	Develop systematic ways of screening for medical conditions and medication use. Assess family functioning, personality, comorbidity, SES and other potential treatment moderators.
I. Measure processes ("dashboards, quizzes and homework")	Check learning of therapy skills, evidence of early response or need for change in intervention	Track homework, session attendance, life charts, mood check-ins at each visit, medication monitoring, therapy assignments, daily report cards (Weisz et al., 2011).
J. Chart progress and outcome ("midterm and final exams")	Repeat assessment with main severity measures – interview and/or parent report most sensitive to treatment effects; if poor response, revisit diagnoses.	Make cheat sheet with Jacobson & Truax (1991) benchmarks for measures routinely used; track homework, progress on skills; Youth Top Problems (Weisz et al., 2011).
K. Monitor maintenance; relapse warnings	Consolidating treatment gains and planning for maintenance are core features of excellent termination planning, and crucial to long term management of many problems	Develop list of key predictors, recommendations about next action if starting to worsen.
L. Seek and use client preferences	Client beliefs and attitudes influence treatment seeking and engagement, and are vital for balancing risks and benefits.	Assess client concordance with treatment plan; ask about cultural factors that might affect treatment plan and engagement