

VALUEOPTIONS' SUPPORT OF EVIDENCE-BASED PRACTICES

Definition

Evidence-based practice is the integration of clinical expertise, patient values and the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients to improve clinical and functional treatment outcomes.^{1,2}

ValueOptions supports evidence-based practice by disseminating information on those interventions with current best evidence for the most common behavioral health conditions.

What is best evidence?

Best evidence means evidence obtained from the highest possible level using the following hierarchy³:

Level 1 Evidence from a systematic review or meta-analysis of all relevant randomized controlled clinical trials (RCTs) or evidence-based clinical practice guidelines based on systematic reviews of RCTs.

Definitions

Randomized, double-blind controlled clinical trial: In a randomized, double-blind clinical trial, neither the investigators nor the subjects know whom is receiving the study intervention vs. the control intervention.

Randomized controlled clinical trial: Same as above, but not double blind.

Meta-analysis: A review in which the results of many RCTs are pooled and the overall results are analyzed.

¹ Crossing the Quality Chasm: A New Health System for the 21st Century, Institute of Medicine, 2001

² D L Sackett et al, "Evidence-based medicine: What it is and what it isn't," British Medical Journal 312 (Jan 13, 1996) 71-72.

³ Melnyk, B.M., & Fineout-Overholt, E. (2005). *Evidence-based practice in nursing and healthcare: A guide to best practice*. Philadelphia: Lippincott, Williams & Wilkins.

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Comment

A randomized controlled clinical trial (RCT) is a prospective study in which people are allocated at random (by chance alone) to receive one of several clinical interventions. One of these interventions is the standard of comparison or control. The control may be a standard practice, a placebo ("sugar pill"), or no intervention at all. Prospective means that no one receives the study or control intervention until the study begins. This is considered the "gold standard" of scientific studies.

Level 2 Evidence obtained from at least one properly designed randomized controlled trial

Comment

A single study, though well designed, is not as high a level of evidence as multiple studies, as there is a greater likelihood that the results were due to chance alone.

Level 3 Evidence obtained from well designed controlled clinical trials without randomization

Definition

Clinical trial: A prospective study in which an intervention is made and the results of that intervention are tracked longitudinally. The study does not meet standards for a randomized clinical trial.

Comment

If a study is not randomized, there is a possibility that the study intervention is superior because of characteristics of the subjects, not the study. However, a well designed study is still prospective, so there is still the possibility that the results are due to the intervention and not to chance alone or to some other factor.

Level 4 Evidence from well designed case-control and cohort studies

Definition

Cohort or longitudinal study: A study in which subjects are prospectively followed over time without any specific intervention.

Control study: A study in which a group of patients and a group of control subjects are identified in the present and information about them is pursued retrospectively or backward in time.

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Comment

Level 4 has a lower likelihood of showing that an intervention results in positive findings either because it is conducted retrospectively, or because there is no specific intervention studied. This level of evidence is still a clinical “study” but is scientifically weaker than the levels above.

Level 5 Evidence from systematic reviews of descriptive and qualitative studies

Level 6 Evidence from a single descriptive or qualitative study

Comment

Levels 5 – 6 are single studies without quantitative data. Because of the lack of data, the results are highly likely to be due to chance alone.

Level 7 Evidence from opinion of authorities and/or reports of expert committees

Comment

Level 7 is based on expert opinion. Although expert opinion is often the basis of the community standard of care, it is not considered scientific evidence and thus is the lowest possible level of best practice. Still, there are many conditions for which there is no scientific evidence because the relevant research has not been funded or conducted. In the absence of any research, Level 7 is acceptable as best practice.

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Best Interventions for Common Behavioral Health Conditions

Condition/ Intervention	Level 1 Systematic review of RCTs	Level 2 At least one RCT	Level 3 Non- randomized clinical trials	Level 4 Case- control and cohort studies	Level 5 Systematic reviews of qualitative studies	Level 6 Single qualitative study	Level 7 Expert opinion
Depression, Major	Antidepressant medication ^{4,5} Cognitive behavioral therapy ^{6,7,8} SSRIs (children) ⁹ Maintenance with full antidepressant dose for ≥ 3 episodes ¹⁰ Electroconvulsive therapy ¹¹ Increased physical activity	Interpersonal psychotherapy ¹⁶ Combined antidepressant medication and cognitive/behavior therapy for chronic depression ^{17, 18, 19}					

⁴ Evidence Report/Technology Assessment No. 7, Treatment of Depression—Newer Pharmacotherapies (AHCPR Publication No. 99-E014)

⁵ DiMascio, A., Weissman, M. M., Prusoff, B. A., Neu, C., Zwilling, M., & Klerman, G. L. (1979). Differential symptom reduction by drugs and psychotherapy in acute depression. *Archives of General Psychiatry*, 36, 1450-1456.

⁶ Shambles, et. al. , *Update on Empirically Validated Therapies, II*, *The Clinical Psychologist*, 51:1, Winter, 1998

⁷ http://www.apa.org/divisions/div12/rev_est/depression.html

⁸ <http://www.nrepp.samhsa.gov/index.htm>

⁹ <http://www.hawaii.gov/health/mental-health/camhd/library/pdf/ebs/ebs011.pdf>

¹⁰ Kupfer DJ, *Management of recurrent depression*, *J Clin Psychiatry*. 1993 Feb;54 Suppl:29-33; discussion 34-5. Review

¹¹ Janicak PG, Davis JM, Gibbons RD, Ericksen S, Chang S, Gallagher P. Efficacy of ECT: a meta-analysis. *Am J Psychiatry* 1985 Mar;142(3):297-302

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Condition/ Intervention	Level 1 Systematic review of RCTs	Level 2 At least one RCT	Level 3 Non-randomized clinical trials	Level 4 Case-control and cohort studies	Level 5 Systematic reviews of qualitative studies	Level 6 Single qualitative study	Level 7 Expert opinion
	(aerobic exercise and resistance training) ^{12, 13, 14, 15}						
Generalized Anxiety Disorder	Cognitive behavioral therapy ^{20, 21} Antidepressant medication ²² SSRIs (children) ²³						

¹² Dunn AL, Trivedi MH, O'Neal HA. Physical activity dose-response effects on outcomes of depression and anxiety. *Med Sci Sports Exerc.* 2001 Jun;33(6 Suppl):S587-97; discussion 609-10.

¹³ Fox KR. The influence of physical activity on mental well-being. *Public Health Nutr.* 1999 Sep;2(3A):411-8. Review.

¹⁴ Babyak, M, Blumenthal, JA, Herman, S, Khatri, P, Doraiswamy, M, Moore, K, Craighead, WE, Baldewicz, TT, Krishnan, KR, Exercise Treatment for Major Depression: Maintenance of Therapeutic Benefit at 10 Months. *Psychosomatic Medicine* Volume 62 Number 5 September/October 2000

¹⁵ Singh NA, Clements KM, Singh MA., The efficacy of exercise as a long-term antidepressant in elderly subjects: a randomized, controlled trial. *J Gerontol A Biol Sci Med Sci* 2001 Aug;56(8):M497-504

¹⁶ Weissman MM., *Psychotherapy in the maintenance treatment of depression.* *Br J Psychiatry Suppl.* 1994 Dec;(26):42-50.

¹⁷ Thase ME, Greenhouse JB, Frank E, Reynolds CF 3rd, Pilkonis PA, Hurley K, Grochocinski V, Kupfer DJ., Treatment of major depression with psychotherapy or psychotherapy-pharmacotherapy combinations. *Arch Gen Psychiatry.* 1997 Nov;54(11):1009-15

¹⁸ Hirschfeld RM, Dunner DL, Keitner G, Klein DN, Koran LM, Kornstein SG, Markowitz JC, Miller I, Nemeroff CB, Ninan PT, Rush AJ, Schatzberg AF, Thase ME, Trivedi MH, Borian FE, Crits-Christoph P, Keller MB. , Does psychosocial functioning improve independent of depressive symptoms? A comparison of nefazodone, psychotherapy, and their combination, *Biol Psychiatry.* 2002 Jan 15;51(2):123-33.

¹⁹ Scott J, Teasdale JD, Paykel ES, Johnson AL, Abbott R, Hayhurst H, Moore R, Garland A., Effects of cognitive therapy on psychological symptoms and social functioning in residual depression, *Br J Psychiatry.* 2000 Nov;177:440-6.

²⁰ Heuzenroeder L, Donnelly M, Haby MM, Mihalopoulos C, Rossell R, Carter R, Andrews G, Vos T, Cost-effectiveness of psychological and pharmacological interventions for generalized anxiety disorder and panic disorder, *The Australian and New Zealand journal of psychiatry,* 2004 Aug; 38(8): 602-12.

²¹ http://www.apa.org/divisions/div12/rev_est/anxiety.html#gad

²² Kapczinski F, Lima MS, Souza JS, Cunha A, Schmitt R. Antidepressants for generalized anxiety disorder. Art. No.: CD003592. DOI: 10.1002/14651858.CD003592

²³ <http://www.hawaii.gov/health/mental-health/camhd/library/pdf/ebs/ebs011.pdf>

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Behavioral change for substance use, lifestyle modification and medication adherence	Motivational interviewing (MI) ^{24, 25}						

ValueOptions' position:

Because there is Level One evidence supporting the use of Cognitive Behavioral Therapy, singly or in combination with appropriate prescribed medication, for the treatment of both Major Depression and Generalized Anxiety Disorder, ValueOptions encourages providers to use this treatment approach for these two disorders as appropriate.

²⁴ Drake, RE, Mueser, KT, Psychosocial approaches to dual diagnosis, Schizophr Bull. 2000;26(1):105-18. Review

²⁵ Miller, WR, Benefield RG, Tonigan, JS: Enhancing motivation for change in problem drinking: a controlled study of two therapist styles. J Consult Clin Psychol 1993; 61:455-461