

Position Statement 34: Electroconvulsive Therapy (ECT)

Policy Position

As confirmed by the 1999 report of the United States Surgeon General concerning mental health, electroconvulsive therapy (ECT) can be an effective treatment, primarily for individuals with severe depression, some acute psychotic states, and mania.¹ However, there are risks of memory loss and other cognitive damage, and the administration of ECT is controversial and stigmatized. The severity and prevalence of the side effects appear to be in part the result of the failure to ensure that ECT is administered in conformity with current clinical practice guidelines. Mental Health America recognizes that though the risks are substantial, for some people the benefits may outweigh the harms. Accordingly, Mental Health America supports the use of ECT, in conformity with current clinical practice guidelines, when the person being treated has consented to it, after a thorough appreciation of the risks and benefits.

Mental Health America also recognizes that some people with severe depression are unable to give informed consent because they lack the judgment to adequately weigh the risks and benefits of ECT. In such circumstances, the states should have enforceable advance directives and a judicial process with adequate procedural safeguards to ensure that effective services reach people for whom ECT is appropriate while protecting their right to reasonably refuse treatment and preserving their liberties when their consent is only nominal.

Mental Health America acknowledges that many consumers are opposed to any involuntary imposition of ECT. This is a controversial subject, since there is evidence that for some extremely depressed and catatonic individuals who are refusing food, or for persons with mania-induced, fluctuating, very high fever with no infection, involuntary ECT can be a life-saving intervention. Accordingly, Mental Health America cannot preclude involuntary use of ECT but supports it only with appropriate procedural protections that recognize the substantial cognitive side effects of ECT, a finding of an emergency that cannot be met by any other treatment, and a high threshold of proof.

Mental Health America recommends that all use of sine wave stimulation ECT be prohibited. It is recommended that the states implement comprehensive monitoring programs to determine what types of ECT are being administered and how ECT is being administered. The states should also ensure that all administering physicians are aware of and acting in conformity with current clinical guidelines.

Background

What is ECT? ECT is a form of electrical stimulation of the brain that has been in use since the 1930s. A psychiatrist, an anesthesiologist, and other supportive medical personnel supervise the treatment. The person being treated is anesthetized. In bilateral ECT, electrodes are placed on the

scalp above each temple. In unilateral ECT, the electrodes are placed above the temple on one side of the brain and in the middle of the forehead. An electrical current is then passed through the brain, inducing a grand mal seizure similar to that experienced in epilepsy. Clinically effective seizures generally last from about 30 seconds to just over a minute. The body does not convulse, and the person being treated feels no pain. Some persons may experience headache, nausea, confusion and muscle stiffness upon awakening. A typical course of ECT treatment requires six to 12 treatments over a period of less than a month. To sustain the response to ECT, continuation treatment, often including medication, should be provided when the ECT course has been completed.

Different types of ECT. There are currently three different ways to administer ECT: bilateral pulse stimulation, unilateral pulse stimulation, and sine wave stimulation. Sine wave stimulation is no longer considered justifiable under American Psychiatric Association guidelines because there is a considerably greater risk of memory loss without any increased benefit.² Bilateral and unilateral brief pulse stimulation are each accepted treatments. A recent study showed that bilateral pulse stimulation, the former “gold standard” for ECT, produces greater risks of memory loss than unilateral pulse stimulation and suggests that, while it may still be necessary to use bilateral pulse stimulation during the course of treatment as the recipient’s threshold increases, unilateral pulse stimulation should always be used first.³ If unilateral pulse stimulation is not effective, the recipient should have the opportunity to reconsider consent before bilateral pulse stimulation is administered.

Tailoring ECT to individual recipients. Within each method of ECT administration, the charge dose, pulse length, and duration may be varied. Each of these variables in ECT administration may be adjusted to tailor the treatment to the needs of the person receiving ECT. The best practice is to tailor the treatment to the recipient throughout the course of treatment. Tailoring the treatment permits physicians to induce the desired seizure with the minimal amount of energy.

Benefits of ECT. ECT can be the best course of treatment for some individuals with severe depression, some psychotic states, and mania.⁴ ECT may be particularly suitable for people who have not responded to medication, or for whom medication is not a suitable treatment. While ECT has been shown to be effective, it is not a cure and many recipients will relapse at some point after the treatment is terminated.

The primary difficulty in measuring the efficacy of ECT is determining the rate of relapse. About 50% of people who receive ECT (without continuing ECT) relapse between 6 and 12 months after treatment, and the relapse rate 4 to 5 years after treatment is around 72%.⁵ Several studies have indicated that the relapse rate after 6 months, with medication, is between 30% and 50%.⁶ Another study indicated that after 2 years of treatment, the relapse rate was 48%, and rose to 82% at 5 years out.⁷ When continuing ECT is administered, studies have indicated that the relapse rate is significantly lower than without continuing ECT.⁸ One study showed that with continuing ECT, at 2 years after treatment, the treatment was 93% effective, and at 5 years after treatment, 72% still had not relapsed.⁹

Risks of ECT. Memory loss and other cognitive damage are the primary reasons for the ongoing controversy over the use of ECT. There are varying degrees of memory loss and other damage,

depending on the recipient. There are also varying opinions as to how memory is affected by ECT. Many people report loss of memory concerning events that occurred in the period surrounding the ECT. The 1999 report of the Surgeon General asserted that “confusion and disorientation seen upon awakening from ECT typically clear within an hour.” [10](#) Some memory loss is common and generally affects the period from up to six months before treatment to up to two months afterward but may affect a longer period. Some of this memory loss may be caused by the depression that the ECT is being used to treat. [11](#) In some cases, the memory loss and other cognitive damage can be significant. Recent studies show that the risks of memory loss are correlated with the type of ECT administered and how it is administered. For instance, sine wave stimulation carries the highest risk of memory loss and should not be used. Bilateral stimulation is associated with greater memory loss than unilateral stimulation.

In addition to controversy surrounding the practice of ECT, there is also a considerable stigma. Popular culture often calls ECT by another name – shock therapy. This conjures up strong images of draconian administrative practices like those shown in *One Flew Over the Cuckoo’s Nest*. Administration of ECT has changed considerably since this depiction, yet the image remains as a primary reference in American culture. Today, advances have been made that make ECT safer and have reduced the cognitive side effects. A minority of people who have received ECT have had devastating memory loss and other cognitive damage. Mental Health America is concerned because we now know that the risk of memory loss can be substantially reduced by adherence to current clinical practice standards, yet those standards are often ignored.

In an article published in 2007, Dr. Harold Sackeim, an expert in the use of ECT, reported that “adverse cognitive effects can persist for an extended period, and that they characterize routine treatment with ECT. . . .” [12](#) The administration of ECT has been refined over the years, and practice guidelines have been devised that reduce the risk of memory loss, but the danger of memory loss and other cognitive damage remains significant.

Monitoring treatment practices. It is important for the states to know how ECT is being administered so that they can devise suitable regulations and ensure that practitioners are using current methods. States should implement a monitoring system that collects data concerning how much ECT is being administered, who is receiving ECT, the age of the person receiving ECT, what type of ECT is being administered, how it is being administered (dosage, duration, number of treatments, etc.), the legal basis for the administration (informed consent, judicial process, advance directive, etc.), and the number of injuries and adverse outcomes resulting from ECT.

Regulation of treatment practices. The states should regulate how ECT is administered to ensure that treating physicians conform with current clinical guidelines. The states should focus efforts to ensure conformity with current standards through licensing and mandatory continuing education. In some states a significant number of practitioners are still administering sine wave stimulation. [13](#) Some practitioners may be over-administering bilateral stimulation when unilateral stimulation may be sufficient. [14](#) Finally, many facilities administer a fixed dose of electricity to the recipients instead of tailoring the administration to create the desired effect with the minimal amount of electricity. [15](#) Continuing education and licensing requirements will help insure appropriate use of ECT to avoid the evils of past practice.

Regulation of informed consent for ECT. Informed consent suggests that the recipient of treatment has both the intellectual capacity and the judgment to give consent. Most individuals who are candidates for ECT have severe depression. A mood disorder, such as depression, may cause an individual to agree to ECT while giving insufficient weight to, or not caring about, the harms that ECT poses.

When an individual lacks ability to give informed consent, the states must provide an adequate alternative that ensures substantial procedural safeguards. Use of advance directives will improve and enhance autonomy, and is encouraged. However, in the absence of an advance directive, states should have a judicial process that provides individuals with a hearing and an attorney. During the hearing, the fact finder should hear evidence on the risks and benefits of treatment, and if an order for treatment is granted, it should specify the treatment type to be administered, and the maximum number of treatments.

Call to Action

Each state should assume an active monitoring role concerning use of ECT. States should collect data on:

- Demographic information
- Number of recipients
- Type of ECT administered (sine wave, bilateral pulse, unilateral pulse)
- Extent and use of tailoring
- Approval process for administering ECT
- Informed consent procedures used by treating facilities, and whether recipients are giving informed consent
- Numbers of injuries and adverse outcomes arising from the use of ECT

Each state also should assume a regulatory role concerning use of ECT. States should:

- Implement continuing education programs for physicians who administer ECT to ensure awareness and conformity with current standards
- Implement special licensing requirements for physicians and facilities administering ECT
- Prohibit the administration of sine wave stimulation

Each state should assume a regulatory role for obtaining informed consent to ECT to ensure that consent is not merely nominal. States should:

- Require an informed consent form specifically for ECT that articulates the risks and benefits
- Strengthen procedures to ensure that the recipient has the judgment to give informed consent
- Require a consent process where a person other than the treating physician evaluates the potential recipient's capacity to give informed consent and confirms that the appropriate information has been explained and understood
- Encourage the use of advance directives

Each state should implement a judicial process for administration of ECT in instances when informed consent cannot be obtained. Judicial process for administration of ECT should contain the following procedural safeguards:

- A petition process that specifies the parameters of treatment sought
- A hearing before a neutral finder of fact
- An attorney to advocate for the individual
- Access to an independent expert
- Weighing of risks and benefits of treatment

Effective Period

This policy was approved by the Mental Health America Board of Directors on March 3, 2007. It is reviewed as required by the Mental Health America Public Policy Committee.

Expiration: March, 2012

1. Mental Health: A Report of the Surgeon General, United States Department of Health and Human Services (1999), at p. 258-261.
2. American Psychiatric Association (2001). *The Practice of ECT: Recommendations for Treatment, Training and Privileging*, 2nd ed. (American Psychiatric Press Washington, DC.).
3. Sackeim et al: "The Cognitive Effects of Electro-convulsive Therapy in a Community Setting," *Journal of Neuropsychopharmacology* (2007), <http://www.nature.com/npp/journal/v32/n1/full/1301180a.html#bib3>.
4. See, generally, Rudorfer, M. V., Henry, M. E., and Sackeim, H. A., "Electroconvulsive Therapy," in A. Tasman, J. Kay, and J. A. Lieberman (Eds.), *Psychiatry*, W. B. Saunders (Philadelphia 1997).
5. Aronson TA, Shulka S, Hoff A: Continuation therapy after ECT for Delusional Depression: a Naturalistic Study of Prophylactic Treatments and Relapse. *Convuls Ther* 3:251-259 (1987).
6. Malcom K, Dean J, Rowlands P, Peet M. Antidepressant drug treatment in relation to the use of ECT. *J Psychopharmacol* 5:255-258 (1991); Sackeim HA, Prudic J, Devanand DP, "Effects of Stimulus Intensity and Electrode Placement on the Efficacy and Cognitive Effects of Electroconvulsive Therapy, *N Engl J Med* 328:8390846 (1993); Aronson TA, Shulka S, Hoff A, "Continuation therapy after ECT for Delusional Depression: a Naturalistic Study of Prophylactic Treatments and Relapse, *Convuls Ther* 3:251-259 (1987).
7. Gagne GG, Furman MJ, "Efficacy of Continuation ECT and Antidepressant Drugs Compared to Long-term Antidepressants Alone in Depressed Patients, *Am J Psychiatry* 157:1960-1965 (2000).
8. This is generally accepted, but there are methodological problems with these retrospective studies, and often times the size of the study is very small.
9. Gagne GG, Furman MJ, op. cit.
10. *Id.* at p. 259.
11. *Id.*
12. Sackeim et al: "The Cognitive Effects of Electro-convulsive Therapy in a Community Setting," *Journal of Neuropsychopharmacology* (2007), at p.253,
13. Olfson & Sackeim: "Electroconvulsive Therapy Practice in Community," *Journal of Psychological Medicine* 31(5) pp 929-934 (2001).
14. *Id.*
15. Pippard, J: "Audit of Electroconvulsive Treatment in Two National Health Service Regions," *British Journal of Psychiatry* 160:621-637 (1992).