Effective Health Care

Electroconvulsive Therapy (ECT) to Treat Depression in Older Adults Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Electroconvulsive therapy for the treatment of depression in older adults is not feasible for a full systematic review due to the limited data available for a review at this time.
- Although this topic is not moving forward as a research review, it could be considered for a potential new research project within the Effective Health Care (EHC) Program.
- An in-process AHRQ report titled *Comparative Effectiveness of Non-Pharmacologic Treatments for Refractory Depression* will partially address the nomination by evaluating the use of ECT in the elderly for patients with treatment-resistant depression. This report will not address the use of ECT as first-line therapy. To sign up for notification when this and other Effective Health Care Program topics are posted for public comment, please go to http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/.

Topic Description

Nominator: Anonymous Individual

Nomination Summary: The nominator is interested in the effectiveness and long-term outcomes of using electroconvulsive therapy (ECT) in older adults (≥65 years) for the treatment of depression. The nominator would like to see ECT compared with medication, psychotherapy, and combination therapy. Outcomes of interest include survival, cardiovascular side effects, reduction in depressive symptoms, and level of cognitive functioning.

Population(s): Elderly (≥65 years) patients with severe depression (including patients with a missed diagnosis of mild or moderate depression)
Intervention(s): Electroconvulsive therapy as first-line treatment
Comparator(s): Pharmacotherapy, psychotherapy, and combination therapies
Outcome(s): Benefits: improvement in symptoms, response times, survival, fewer drug-drug interactions and side effects; Harms: memory loss, side effects of anesthesia, cardiovascular side effects, and level of cognitive functioning

Key Questions from Nominator: None

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/.)

- Very little research has been conducted on the use of ECT as first-line therapy for depression in the elderly. Additionally, among studies that address the use of ECT in the elderly, very few studies are comparative and conducted exclusively in the elderly population. Although this is an important topic representing an area of uncertainty for providers, this topic is not feasible for a full systematic review due to the limited data available for a review at this time.

- New research may be useful for this topic. It appears that the use of ECT is increasing, while long-term outcomes, benefits, and harms are missing from the current literature. A potential new research project could address issues surrounding prevalence, age, mortality, and harms such as cognitive decline.

- The nominator may also be interested in an in-process AHRQ report titled *Comparative Effectiveness of Non-Pharmacologic Treatments for Refractory Depression.* This report will partially address the nomination by evaluating the use of ECT in the elderly for patients with treatment-resistant depression. Patients with treatment-resistant depression have generally failed previous first- and second-line treatments. This report will not address the use of ECT as first-line therapy. The draft key questions from this report include:

  1. For adults with treatment-resistant depression (TRD, defined as two or more failed adequate trials of a biologic intervention), do non-pharmacologic interventions such as electroconvulsive therapy (ECT), vagus nerve stimulation (VNS), repetitive transcranial magnetic stimulation (rTMS), or an evidence-based psychotherapy (e.g., cognitive therapy [CBT or IPT]) differ in efficacy or effectiveness in treating acute phase depressive symptoms (e.g., response and remission), whether as a single treatment or part of a combination treatment?
  2. For adults with TRD, do non-pharmacologic interventions differ in their efficacy or effectiveness for maintaining response or remission (e.g., preventing relapse or recurrence) whether as a single treatment or part of a combination treatment?
  3. Do non-pharmacologic interventions (single or combination) differ in their efficacy or effectiveness for treating TRD as a function of particular symptom subtypes (e.g., catatonic (frozen or hyper) or psychotic symptoms)?
  4. For adults with treatment-resistant depression, do non-pharmacologic interventions differ in safety, adverse events, or adherence? Adverse effects of interest include but are not limited to: amnesia, memory loss, headaches, post-operative complications.
  5. How do the efficacy, effectiveness, or harms of treatment with non-pharmacologic treatments for treatment-resistant depression differ for the following subpopulations?
     elderly or very elderly patients; other demographic groups (defined by age, ethnic or racial groups, and sex); patients with medical comorbidities (e.g., seizure history, stroke, diabetes, dementia, perinatal, ischemic heart disease, cancer).
  6. For adults with treatment-resistant depression, do non-pharmacologic interventions differ in regards to payor treatment costs and other health-related outcomes (e.g., quality of life)?