ELECTROCONVULSIVE THERAPY FOR DEPRESSION

BY SARAH RINEHART

Hi, I'm Sarah Rinehart. I am currently a freshman here at the University of Washington, and I study Public Health, Spanish, and Portuguese. I recently completed a research paper on electroconvulsive therapy for another class, and I decided MEDIC would be interested in the ethics of this treatment. Because many of you plan to study medicine and become physicians in the future, I thought it was pertinent that I prompt a discussion on the use of electroconvulsive therapy for depressed patients. I will present the background of electroconvulsive therapy and explain why I believe that it is a humane and necessary treatment. After that, feel free to ask questions and discuss the issue!

WHAT IS DEPRESSION?

"a mood disorder that causes a persistent feeling of sadness and loss of interest" – Mayo Clinic

Firstly, what is depression? Major depressive disorder, also called clinical depression, is defined by the Mayo Clinic as "a mood disorder that causes a persistent feeling of sadness and loss of interest" (Mayo).

PREVALENCE OF DEPRESSION

- 14.8 million adults
- Common treatments:
  - Antidepressant medications
  - Psychological therapy
- 10% will not respond

According to the Anxiety and Depression Association of America, 14.8 million adults have depression in the United States (ADAA). So if depression has touched your life through family members, friends, or directly, you are certainly not alone. The most common treatments for major depressive disorder include antidepressant medications, and medications are often paired with psychological therapy (Mayo). However, the Food and Drug Administration explains that about 10% of people with depression will not respond to antidepressants (FDA).

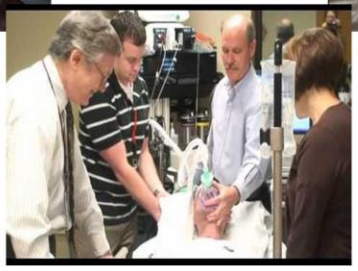
WHEN IS ECT USED?

- 100,000 patients a year
- Severe treatment resistant clinical depression:
  - No response to medication or psychological therapy
  - Psychosis
    - Refusal to eat or drink
    - Suicidal
  - Catatonia
    - Lack of movement
    - Fast or strange movements
    - Lack of speech

Only about 100,000 patients receive electroconvulsive therapy, or ECT, in the United States each year (Weiner). In comparison to the large number of people suffering from depression, the population of patients who fit the criteria to receive ECT is a small and specific. Electroconvulsive therapy is used for treatment resistant depression that is life threatening. Patients who suffer from psychosis induced by their severe depression fall under this category. Psychosis is a "detachment from reality" (Mayo). Psychosis can cause a person to refuse to eat or drink (Mayo). A patient with psychosis may also have the desire to commit suicide (Mayo). Catatonia is also a very serious condition that can be induced by depression. Symptoms of catatonia include: lack of movement, fast or strange movements, and lack of speech (Mayo).

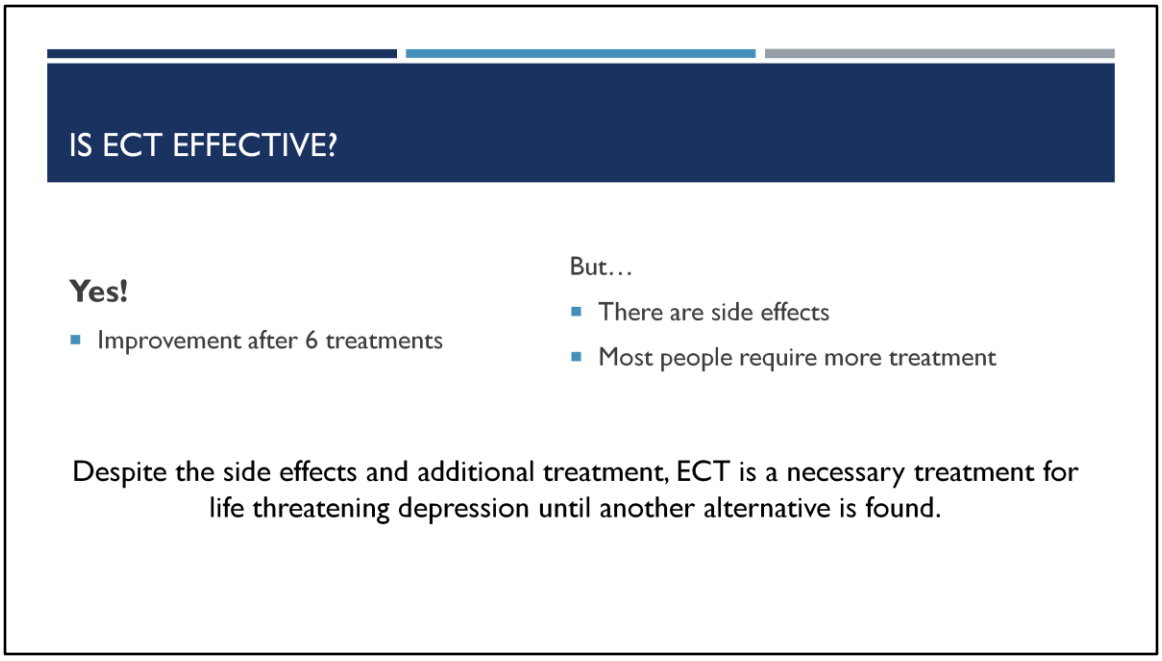
ECT PROCEDURE

American Horror Story



One Flew Over the Cuckoo's Nest

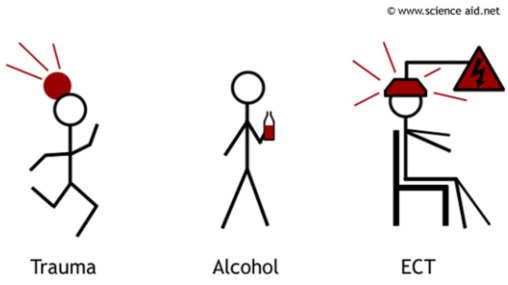
I am sure some of you have seen depictions of electroconvulsive therapy in TV shows and movies. For example, a woman was given ECT in *American Horror Story* during the asylum season that ran two years ago. If you watch older movies, you may have also seen it in the movie *One Flew Over the Cuckoo's Nest*. While such depictions certainly create an intense scene for a horror movie, they are not accurate to how ECT is actually performed today. Patients are put under general anesthesia and given muscle relaxants (Mayo). Electrodes are placed onto the head of the patient, and then the ECT machine sends electrical currents through these electrodes (Mayo). The currents will cause a seizure that lasts for less than a minute (Mayo). Typically the ECT is given 2 or 3 times a week for about 4 weeks (Mayo). As you will see in the video, you cannot even see the seizure taking place. Additionally you can see that he has a psychiatrist, anesthesiologist, and nurse present and monitoring his vitals.



Most patients begin seeing improvement after three weeks, or 6 ECT treatments (Mayo). However, from my research I have found there are considerable side effects associated with ECT treatment that should not be overlooked. Furthermore, most patients will need additional treatment after ECT to continue to manage their depression (Mayo). Despite the side effects and additional treatment, ECT is a necessary treatment for life threatening depression until another alternative is found.

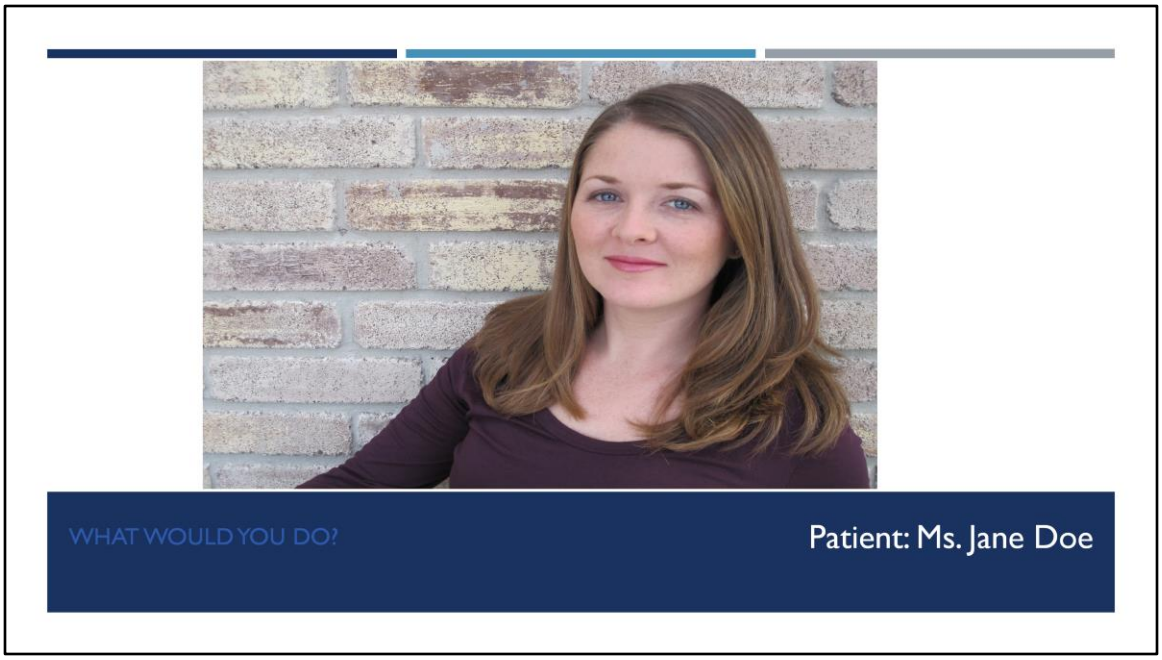
COGNITIVE EFFECTS

- Postictal confusion
  - varies in presentation
  - last minutes
- Retrograde and anterograde memory loss
  - days and weeks surrounding course of treatment
- May experience persistent amnesia

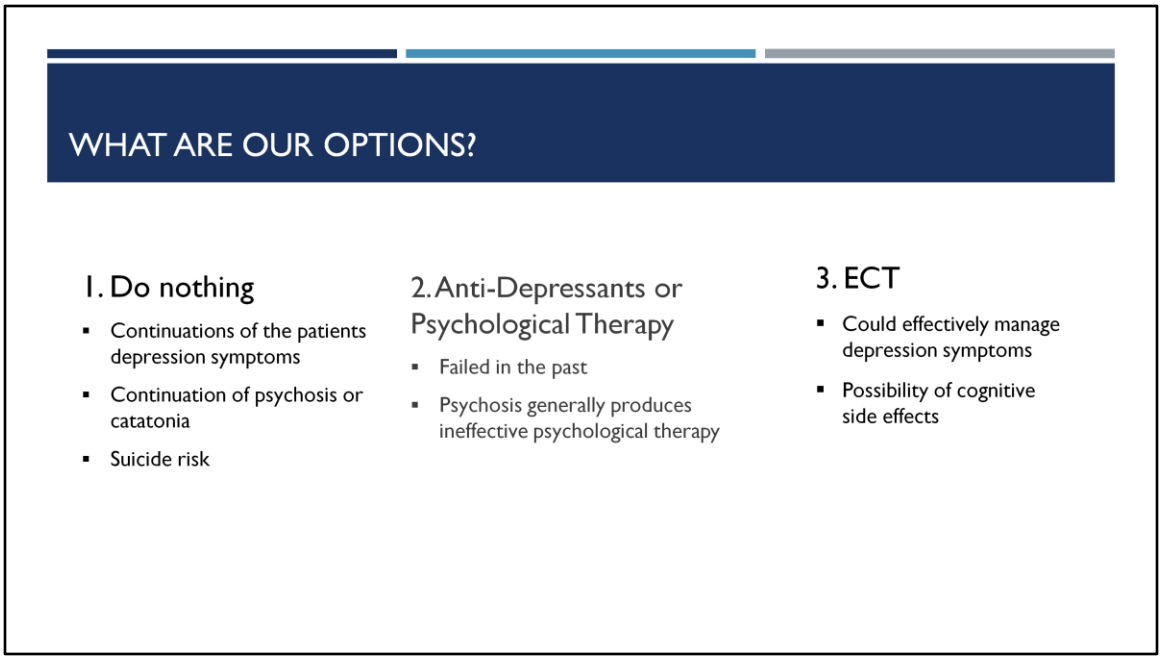


Causes of Memory Loss

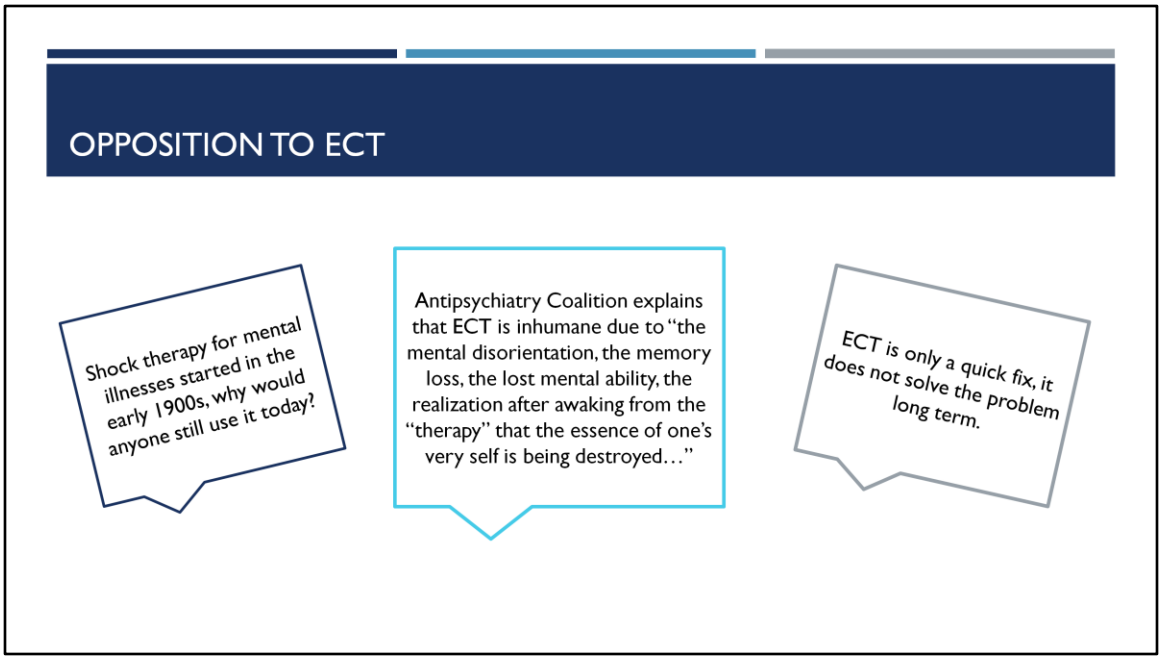
By looking at the diagram above, you can see trauma, such as a ball hitting you in the head during a soccer match, drinking too much alcohol at a party, and ECT can all result in memory loss. The most benign cognitive symptom that is experienced from ECT is postictal confusion (Weiner). This is a confused state that someone enters after experiencing a seizure (Weiner). Because electroconvulsive therapy induces controlled seizures, postictal confusion commonly occurs after the treatment (Weiner). Although the postictal state varies from patient to patient, most people report feeling drowsy, disoriented, or confused. Postictal confusion and its associated symptoms resolve after a few minutes (Weiner). The side effects that cause most concern to people are retrograde and anterograde memory loss. Retrograde memory loss, also called retrograde amnesia, is when a patient cannot remember events that occurred before the electroconvulsive therapy (Weiner). Anterograde memory loss on the other hand causes a patient to be unable to form new memories after the therapy is administered (Weiner). When retrograde and anterograde memory loss occur, they typically only take place during the days or weeks surrounding the treatment (Weiner). A small number of patients may experience persistent amnesia, but this is not common (Weiner).



I want you all to take a minute, and image that you have gotten you degree from University of Washington and completed medical school. You are now a practicing psychiatrists. Ms. Jane Doe has been admitted with severe clinical depression. Antidepressant medications and therapy has not worked to manage her depression symptoms. She says that she feels so depressed that she is beginning to no longer have a will to live. Her husband tells you that she will sit in the same chair for days (catatonia), and will sometimes refuse to eat (psychosis). Now that you know how ECT treatment is performed and various cognitive side effects, would you suggest ECT to Ms. Jane Doe? For the next few minutes discuss this with the person beside you.

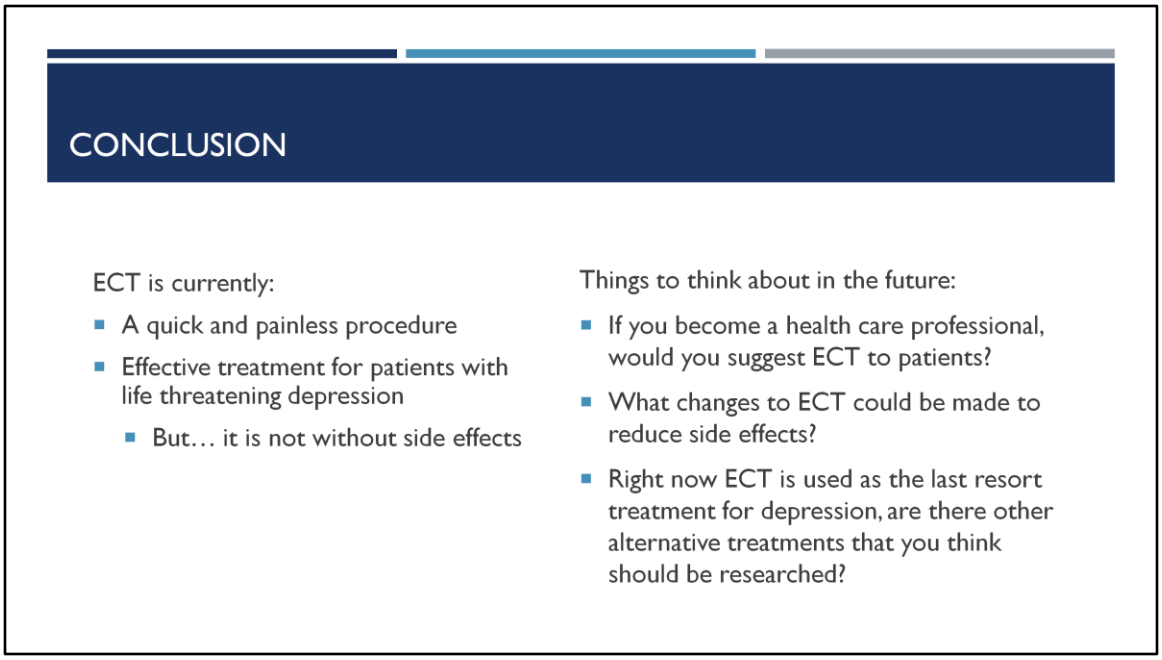


There are three main options. The first option would be to do nothing. While Jane would have no side effects from medications or therapies, her severe depression symptoms would persist. She could continue to suffer from psychosis and catatonia, and is at risk for committing suicide. You could give Jane antidepressant medications; however, medication has been unsuccessful in the past. Similarly, psychological therapy and counseling has failed in the past. Furthermore, Jane is exhibiting symptoms of psychosis. This detachment from reality cause psychological therapy sessions to be ineffective. You can begin an ECT treatment plan. The patients depression symptoms may be managed, but serious cognitive side effects are a possibility.



If you decided that you would not want to suggest ECT to Ms. Jane Doe, you are not alone. One of the arguments against ECT that I have read is that because ECT, previously called shock therapy, originated in the early 18th century it must inherently be an outdated medical treatment (Espejo). However, this argument is a logical fallacy. For example, the first vending machines were invented in about 215 BC by an Egyptian mathematician (History). Imagine how much harder it would be to get a snack while studying at Odegaard if vending machines had been outlawed purely based on the fact that they are an old invention. Much like vending machines, many changes and improvements have been made to ECT and it continues to be relevant today. The Antipsychiatry Coalition is opposed to ECT due to the cognitive side effects caused by the treatment (Espejo). While there certainly are serious side effects caused by ECT, the Antipsychiatry Coalition has left out some key information. The mental disorientation, which is an example of postictal confusion, lasts for only a few minutes after the treatment (Weiner). Long term memory loss is rare, and most amnesia only occurs for the days or weeks surrounding the treatment (Weiner). What's more, is many patients report having improved mental ability after ECT treatment because it has eased the cognitive symptoms associated with their severe depression (Weiner). Finally, some say that ECT is only a quick fix, and not a solution to the problem (Espejo). Although many people need additional treatment after ECT,

it does not mean ECT is worthless. Because these patients have severe depression and have often exhausted other treatment options, ECT provides necessary lifesaving treatment even if it is only short term.



In conclusion, the procedure for ECT is quick and painless. It is an effective treatment for patients with severe depression. Although the cognitive side effects can be serious, electroconvulsive therapy is needed for life threatening and treatment resistant depression cases until another alternative is found. To end, I want you all to think about these questions: If you become a health care professional, would you suggest ECT to your patients? What changes to ECT could be made to reduce side effects? Right now ECT is used as the last resort treatment for depression, are there other alternative treatments that you think should be researched? And while you are discussing the questions above, if you think of other issues or solutions regarding ECT feel free to delve into those as well. I hope that you continue to ponder how current medical treatments can be improved upon so that you may provide the best care to patients in the future.

THANK YOU MEDIC!

Thank you for allowing me to present to your group. I really enjoyed providing the background of ECT and my opinion. Have a great night!

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