Featured Articles

Electroconvulsive Therapy: A Critical Perspective

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Electroconvulsive treatment (ECT) is widely used in the Anglophone world but much less in the rest of the world. In some places, it is so severely restricted as to be a rarity; in others, it is banned. Comparative data indicate there is no scientific justification for this discrepancy. Instead, there is a prima facie case to say that the major impetus behind ECT usage lies in the financial rewards it generates for psychiatrists.

Keywords: ECT; psychiatry; models of mental disorder; psychiatric mortality; depression

The official position of the Royal Australian and New Zealand College of Psychiatrists (RANZCP) on electroconvulsive treatment (ECT) is given in their Position Statement on ECT, dated March 2014:

1. ECT ... has efficacy in treating clinical depression, mania and psychosis... Its primary purpose is to quickly and significantly alleviate psychiatric symptoms.

5.6: The use of evidence based pharmacotherapy and other strategies to prevent relapse after improvement from ECT is essential for obtaining a lasting improvement.

7.2: \dots ECT remains a useful and essential treatment option that should be available to all patients in whom its use is clinically indicated \dots

Further elaboration is given in the RANZCP Submission to the U.S. Food and Drug Administration (FDA; 2011, pp. 1-2) hearing to reclassify ECT machines from Class III to Class II medical devices, that is, requiring a *lower* level of proof of efficacy and safety¹:

The RANZCP strongly supports the use of ECT as an established and valuable treatment for patients suffering severe mental disorder ... The RANZCP is strongly of the view that ECT remains an important and necessary treatment for various serious psychiatric conditions, most commonly severe depression ...

the RANCZP believes very firmly that it would be an injustice for ECT to be unavailable ... ECT is irreplaceable ...

There is further evidence that ECT does not cause brain damage or personality change, and a lack of evidence or rational reason to suggest or expect any long term ill-effects ...

The high morbidity and mortality associated with the conditions as detailed above, and the high prevalence of medication resistant depression, leaves ECT as the only alternative treatment for a significant number of patients ...

It is recognised that ECT raises anxiety and fearfulness in the community, however much of the opposition to ECT is based on fear and irrational thinking, not science.

ECT is held to be "useful, essential, irreplaceable, effective, valuable, clinically indicated, important and necessary," and harmless, while opposition to it is neurotic, "irrational," out-dated, and not scientific. These are very strong claims. Because ECT evokes strong reactions, they need the highest level of proof. In this brief review, I wish to question these claims, and will present evidence to show that they are not supported in the literature.

IS ECT USEFUL IN PSYCHIATRIC PRACTICE?

This claim is not scientific. "Useful" is entirely a subjective decision; at most, it may be said that some practitioners find it useful, but that would be a matter for research, not fiat. In fact, not all psychiatrists find it useful, as Jonathon Phillips, a former president of the RANZCP, commented:

... it is very easy to order ECT treatment. I would not like to think that it is being used just because it's easy ... I do hope it is not the start of the slippery slope. Are we going back to an era where we resort to ECT rather than talking to people and using the art of psychiatry? ... In two years in a very busy practice, I have only referred one patient for ECT ... (O'Brien, 2011)

In his inquiries, O'Brien noted an unusual discrepancy:

The Medicare figures show that last year, New South Wales men aged under 24 were given [ECT] at three times the rate of men in that age group in Victoria.

It seems highly unlikely that, on clinical grounds, patients in neighboring states could differ so dramatically; clearly, the perception of "useful" does.

IS ECT ESSENTIAL TO PSYCHIATRIC PRACTICE?

This claim is more reliable, as the word *essential* has a precise and objective meaning:

Essential. adj. 1. vitally important; absolutely necessary. 2. basic; fundamental ... 7. something fundamental or indispensable. (Essential, 1979)

If it can be shown that it is possible to practice psychiatry without or rarely using ECT, then it cannot be considered essential. This is in fact the case. Worldwide, there are very substantial variations in ECT usage internationally, intranationally and even from one locality to the next, as detailed in a lengthy review (Leiknes, Jarosh-von Schweder, & Høie, 2012). These authors use the statistic treated patient rate (TPR), meaning the numbers of people who receive ECT per 10,000 population per year.

In the United States, the national TPR is 5.2 people per 10,000 per annum, although there are enormous local variations. Australian rates vary from 2.2 to 4.4 (Victoria) while New Zealand gives it to just 0.75 people in every 10,000, one-sixth of the maximum Australian rate. Other nations use it far less. In Spain, the TPR is 0.41; Germany, 0.26 (western Laender averaged 0.36 while in the former eastern zone, it was only 0.15); and Poland uses it on only 0.11 people per 10,000 per annum. In France, only half of approved psychiatric facilities reported using ECT, while in Poland, that figure was one in three. Japan, Finland, Italy, and other countries hardly use ECT, while it is banned in Slovenia and some cantons of Switzerland.

Following the intense restrictions on ECT in Italy in 1978 (Basaglia Law/Law 180, n.d.) and again in 1999, in which private ECT was banned, Abrams (2000) predicted disaster:

[In Italy, ECT] may now be administered only as an emergency procedure in government hospitals after other treatments have failed and if the patient is in a "life-threatening" situation. Because of politically based conflicts, the use of ECT in Italy was already among the lowest in the European community; the new regulations now threaten the very existence of this truly indispensable treatment in the land of its birth.

In 2014, 91 centers in Italy were licensed to give ECT; only 14 (15%) did, meaning about 53 million people did not have access to ECT. Abrams's claim that it is "truly indispensable" has been contradicted by the passage of time. An impassioned plea for increased use of ECT in Italy by Buccelli et al. (2016) omitted to mention that, in nearly 20 years since it was effectively banned, the mental health of Italians has not declined.

In the United States, TPRs vary from 5.7 for women to 3.6 for men, a pattern which was also seen in England: female rates there were 2.56 per 10,000, while male rates were only 1.12. In Scotland in the 1990s, rates for people aged 65 and over were about five times those for people aged 18–65, but all rates in that jurisdiction dropped by over 50% during this decade. No explanation was offered. In practically all countries where the information was available, rates of ECT utilization were higher in urban than in rural regions, ranging from 50% to 500% higher.

Commenting on an earlier survey of the United States, Eranti and McLoughlin (2003) said:

No ECT use was reported in just over one-third of the 317 metropolitan areas in the 1988–1989 APA survey and, in the remaining areas, annual rates ranged from 4 to 812 patients per 100,000 population.

That is, they found TPR ranged from 0.4 to 81.2 per 10,000, or 20,000% difference in the same country.

In the English division of the National Health Service (NHS), ECT use has declined precipitously over the past 30 years, from a total 137,940 episodes in 1985, to 105,466 by 1991, then to an estimated 65,930 in 1999. The decline has continued apace, down to about 22,500 in 2014–2015, or barely one-sixth as much as a generation earlier (Davis &

Duncan, 2017). As the population has increased by over 20% in this time, the relative decline is even greater.

In this context, my own figures are apposite. 2017 marks 40 years of highly diverse practice, in public and in private, in hospitals, prisons, and community clinics, in urban and remote areas, including 6 years as the world's most isolated psychiatrist (McLaren, 1995). At present, I operate a solo, bulk-billing private practice in a working-class area with high levels of unemployment, broken families, immigrants, and pensioners, as well as high levels of crime, school absenteeism, drug and alcohol abuse (all patients are eligible for national health insurance). Having worked for years in public services, I am satisfied that the patient profile I see now is the same as would be seen in any public service in the country. In four decades, I estimate I have personally assessed and managed, or been directly responsible for, well in excess of 12,000 patients. These are consecutive, unselected public patients, including about 1,000 serving members of defense forces and perhaps 2,000 veterans. In 40 years, not one of those many thousands of patients has been given ECT.

Twice in that time, I was head of department of 30 bed units in general hospitals (Veterans Affairs, RGH Hollywood, Perth, for 5 years, and Royal Darwin Hospital, NT, for 3 years). In each of those hospitals, ECT had been in use for years prior to my appointment. It stopped for the duration of my stay and was resumed some time later. During my tenure, the admission rate in each hospital dropped, the mean duration of stay dropped, and the bed occupancy rate dropped to about half. Following my departure, when ECT resumed, these statistics returned to their previous means. That is to say, psychiatrists seeing exactly the same patient profile and, in some cases, even the same patients, were electing to use ECT in just the circumstances where I had not.

These figures indicate that many psychiatrists and many centers around the world feel able to practice psychiatry using ECT rarely or never. They do not support the claim that ECT is essential, that is, "vitally important, absolutely necessary, indispensable."

CAN ECT BE CLINICALLY INDICATED?

A "clinical indication" is just what the prevailing medical standards say it is. It is an attempt to impose some sort of order on daily practice, as in: "If conditions A, B and C prevail then, all things being equal, current mainstream opinion is that treatment K should be followed." Most emphatically, it does not shift the decision to use a treatment from the practitioner to the clinical picture, which is the impression the expression gives: ultimately, the practitioner is responsible. Needless to say, two psychiatrists can look at the same patient and come to radically different conclusions about the best form of management. ECT, like all other forms of treatment, is indicated just when the psychiatrist says it is. In practice, Point 7.2 of the RANZCP Position Statement now reads:

ECT ... should be available to all patients if the psychiatrist decides to use it ...

This imparts quite a different significance.

If the notion of "clinical indication" has any objective standing, it is difficult to explain how there could be such enormous variation between, say, rural areas in Belgium and its main cities (TPR 2.0 and 10.0, respectively), or the American figures quoted by Eranti

State	2007	2016	Increase %
New South Wales	4,936	8,039	63
Victoria	4,895	8,639	76
Queensland	4,852	9,274	91
South Australia	1,163	2,487	114
Western Australia	1,457	4,242	191
National totals	18,183	33,641	85

TABLE 1 Increase in Medicare Rebates for ECT in Australia 2007-2016

and McLoughlin (2003). More pertinently, it is necessary to explain New Zealand's relatively low rate compared to Australia. Since the populations are so similar on all socioeconomic and cultural parameters, and psychiatrists in both countries are trained with the same curriculum, it is not possible to say that "clinical indication" can account for the 600% difference in utilization of ECT. A potential explanation is buried in the paper by Leiknes et al. (2012): In New Zealand, ECT is not given in private facilities.

In practice, it is the psychiatrist's decision whether or not to use ECT but this has immediate impact on the concept of informed consent. Ideally, all patients advised to have ECT should be told that while their psychiatrist advises it, other psychiatrists in the same town would not; while, in some countries, it is so severely restricted that the question would not arise. As will be shown later, the clinical outcome of ECT versus no ECT is about the same; therefore, whether patients receive ECT or not is not a matter of science, it is a matter of the psychiatrist's personal predilection, meaning chance.

There are further grounds to suspect the value of attributing ECT to "clinical indications." In Australia, use of ECT in private settings increased very dramatically in the decade from 2007, as Medicare rebates show (Table 1).

Nationally, the "clinically indicated" use of ECT in private practice increased nearly six times faster than population growth in that decade (15%). The dramatic rise of 190% in Western Australia cannot be explained on any reasonable clinical grounds. In Queensland (4.8 million population), ECT usage in both public and private sectors jumped from 16,602 episodes in 2013–2014, to 19,365 episodes the following year, that is, a 16.5% increase. By way of comparison, Davis and Duncan (2017) noted that in 2015–2016 in England (53 million population), NHS trusts reported about 22,500 episodes of ECT, that is, Queensland uses ECT approximately 1,000% more than England.

A similar pattern is seen in the United States, where ECT is largely reserved to the private sector:

A typical ECT patient in the United States was said to be an elderly White female paying for treatment with insurance or private funds. (Leiknes et al., 2012)

Sackeim et al. (2007) reached the same conclusion:

... ECT recipients are older, more often White, more likely to have private insurance, and more likely to live in more affluent areas. Contrary to its portrayal as a treatment inflicted on the poor or destitute, ECT is disproportionately administered to those more well-off.

After a most extensive review, Read and Arnold (2017) commented:

We should, meanwhile, remain cognizant of the fact that the archetypal ECT recipient remains, as it has for decades, a distressed woman more than 50 years old.

This raises another question—the allocation of ECT.

IS ECT PROPERLY ALLOCATED BY CLINICAL INDICATIONS?

Using figures taken from the website of the Australian National Depression Initiative (Beyond Blue, 2017), in any year, about one million Australians suffer a depressive episode. Some, of course, suffer several episodes, so the total figure is considerably higher. In 2015, 3,027 deaths by suicide were recorded, of which a certain proportion were not associated with depression, say one quarter. This yields 2,270 suicides among one million plus cases of depression, where the risk for men is 3.4 times greater than for women.

Accepting Beyond Blue's figures that two-thirds of cases of depression are female, the annual risk of suicide among depressed women is approximately 545 deaths in 670,000 cases per annum, or 81 suicides per 100,000 cases per annum (one suicide per 1,234 cases of depression). The equivalent risk for men is 525 per 100,000 cases of depression (one death per 190 cases of depression), 650% greater, but women get 80% of the ECT in this country. Clearly, this constitutes a grave misallocation of resources. Equally clearly, it would not be feasible to try to prevent all suicides by admitting all depressed people to hospitals and giving them ECT.

IS ECT IRREPLACEABLE?

To paraphrase the RANZCP submission to the FDA, ECT is absolutely essential as an emergency measure to treat severe mental disorders and their associated morbidity and mortality. This applies especially to severe depression, which is becoming more problematic due to the rise of "treatment resistant depression." In a recent review of ECT, Kolar (2017) stated:

... acute ECT has an essential role when the urgency of the clinical situation (an increased risk of suicide, treatment resistant catatonia, malnutrition, etc.) demands a treatment with a rapid onset of therapeutic action.

However, in Norway, ECT is restricted and it is reported (Leiknes et al., 2012) that, at centers authorized to use ECT, waiting lists of up to 8 weeks are not uncommon. In Italy, 91 centers are authorized to use ECT but, in 2014, only 14 did so. That is, about 85% of the population of some 63 million did not have access to ECT. There is no evidence that they were any worse off. There is no doubt that, if there were a discrepancy in suicide rates between areas where ECT is available and those where it is not, advocates of ECT would seize upon it eagerly. There is, however, no such evidence.

Despite the recent rapid increase in use of ECT in Australia, the suicide rate has recently peaked at 12.6 per 100,000 per annum (Australian Bureau of Statistics, 2017). For men,

the figure is 19.2, about 340% of the rate for women, but since most patients receiving ECT in Australia are female, it is clear that ECT is misallocated:

... 100 female psychiatrists performed 109 ECTs with equal numbers of male and female patients, but 100 male psychiatrists performed 345 ECTs and there were four females for every male patient. These results are reflected in the national data. Male psychiatrists perform 93.5% of ECTs ... (Quadrio, 2001)

Those patients who receive ECT, essentially meaning older White women who can be managed in private hospitals, are among the least likely to attempt suicide. The population at gravest risk of suicide is younger, male, unemployed, often with drug and alcohol problems, possible criminal history, recent major losses, and so on. That is, they show exactly the profile of my own practice. Needless to say, this group cannot afford private hospitals, and would be unlikely to cooperate in any event. It would not be unfair to conclude that the allocation of ECT in Australia is determined by some factor other than "the urgency of the clinical situation." ECT therefore appears to be very replaceable, dependent entirely on the patient's socio-demographic factors, otherwise known as finances.

A psychiatrist who says to a depressed patient "You must have ECT, it is irreplaceable in your case," is saying only one of three things:

1. "I am firmly committed to the concept of depression as a genetically determined, biological disease of the brain and, as such, I believe that physical methods of management are irreplace-able."

2. "I have tried everything I can but I have reached the limit of my skill set. I don't know what else to do."

3. "It pays well."

In the first case, the psychiatrist is adopting a position which has been shown to be ideological, not scientific, and which is probably wrong anyway (McLaren, 2013). In the second case, the psychiatrist should request a second opinion from a colleague who is able to practice without ECT, or hardly uses it. There are other doctrinaire positions but they lie outside the scope of this article.

ECT is never irreplaceable, but people who use it routinely will never discover that. It is only when it is *not* available that valid alternatives become obvious. Essentially, the decision to use ECT should be taken from individual psychiatrists and handed to an impartial committee, including critics of ECT. In order to remove the financial incentive as a confounding factor, it would be reasonable to argue that all ECT should be given in public facilities, as in Norway, or that private psychiatrists can give it but cannot charge for it.

WHO BELIEVES ECT IS BEST?

From the RANZCP Submission to U.S. FDA (2011):

The RANZCP strongly supports the use of ECT ... The RANZCP is strongly of the view that ECT remains ... the RANCZP believes very firmly ...

This is a category error (Ryle, 1949). The organization known as RANZCP is not the type of entity that can hold beliefs or opinions, nor "strongly support" anything because it doesn't have mental properties. Its members do, but that is a different matter. As it stands, the submission is highly misleading. It should have said something like this:

A small proportion of the membership of the RANZCP, all of whom use ECT, strongly support the use of ECT, etc., but they didn't survey the full membership, nor did they include critics of ECT in their deliberations.

IS ECT HARMLESS?

From the RANZCP Submission to U.S. FDA (2011):

There is further evidence that ECT does not cause brain damage or personality change, and a lack of evidence or rational reason to suggest or expect any long term ill-effects ... much of the opposition to ECT is based on fear and irrational thinking, not science.

Historically, convulsive techniques were developed, initially by Ladislas Meduna in the 1920s, explicitly for the purpose of inducing diffuse, low-grade brain damage as evidenced by gliosis. There is now a substantial body of literature showing that ECT can cause long-lasting damage to memory, to other cognitive functions, and to the sense of self. For example, the American Psychiatric Association [APA] Committee on ECT (2001) left no room for doubt:

In some patients the recovery from retrograde amnesia will be incomplete, and evidence has shown that ECT can result in persistent or permanent memory loss.

A few years later, Rose, Fleischmann, Wykes, Leese, and Bindman (2003) were perfectly blunt:

The current statement for patients from the Royal College of Psychiatrists that over 80% of patients are satisfied with electroconvulsive therapy and that memory loss is not clinically important is unfounded.

Similarly, in a well-planned, multicenter study of 347 patients receiving ECT, Sackeim et al. (2007) concluded:

... this study provides the first evidence in a large, prospective sample that adverse cognitive effects can persist for an extended period, and that they characterize routine treatment with ECT in community settings.

MacQueen, Parkin, Marriott, Bégin, and Hasey (2007) conducted a detailed neuropsychological study of post-ECT patients and found:

Compared with healthy subjects, patients had verbal learning and memory deficits. Subjects who had received remote ECT had further impairment on a variety of learning and memory tests when

compared with patients with no past ECT. This degree of impairment could not be accounted for by illness state at the time of assessment or by differential past illness burden between patient groups.

Similarly, after an extensive review, Read and Bentall (2010) concluded:

Given the strong evidence of persistent and, for some, permanent brain dysfunction, primarily evidenced in the form of retrograde and anterograde amnesia, and the evidence of a slight but significant increased risk of death, the cost–benefit analysis for ECT is so poor that its use cannot be scientifically justified.

More recently, the Royal College of Psychiatrists appears to have had second thoughts, as its current patient leaflet explains:

Memory problems can be a longer-term side effect [of ECT]. Surveys conducted by doctors and clinical staff usually find a low level of severe side-effects, maybe around 1 in 10.² Patient-led surveys have found much more, maybe in half of those having ECT ... Some memory problems are probably present in everyone receiving . ECT. ... some people do complain that their memory has been permanently affected, that their memories never come back. ... It is not clear how much of this is due to the ECT, and how much is due to the depressive illness or other factors.³ Some people have complained of more distressing experiences, such as feeling that their personalities have changed, that they have lost skills or that they are no longer the person they were before ECT. They say that they have never got over the experience and feel permanently harmed. What seems to be generally agreed is that the more ECT someone is given, the more it is likely to affect their memory. ... Between 30% and 50% of patients complained of difficulties with memory after ECT. (Royal College of Psychiatrists, n.d.)

In a presentation to the U.S. FDA enquiry on the reclassification of ECT machines, and speaking as a member of the FDA's research and assessment staff, Como (2011) stated:

... self-reported memory loss tends to be more persistent than the deficits that can be measured on formal neuropsychological testing. However, for those patients who do experience memory or cognitive impairment, they consider this to be a considerable source of distress for themselves and their families.

Breggin (2010) prepared a review for the same FDA enquiry, concluding:

Electroconvulsive therapy (ECT) and the machines that deliver it have never been tested for safety and efficacy in order to receive approval from the FDA. The APA and ECT advocates protested when the FDA took steps to classify the machines as posing "an unreasonable risk of illness or injury", which would have required their testing before approval. Without requiring this testing, the FDA is now preparing to classify the treatment and the machines as safe ... ECT is very harmful to the brain and mind ... the FDA should demand the usual testing, starting with animals, that is required before psychiatric treatments and machines are approved for marketing and use.

Breggin (2017) maintains a website with over 150 citations, dating from 1942 to 2012, showing that ECT can cause lasting damage. It is worth noting that medical attitudes

to cognitive impairment have changed over the years. For example, a detailed research paper from 1951 found considerable levels of impairment of memory, but this was seen as evidence for the efficacy of ECT as "facilitat(ing) the selective forgetting or repression of emotionally disturbing material" (Janis & Astrachan, 1951). This view is generally not shared by patients. The amnestic effects of ECT are addressed poignantly in a widely cited, first person account by Donahue (2000) and in another by Ian McPhee, a Sydney anesthetist (McPhee, 2009). In a section entitled "The Disaster of ECT," McPhee said:

The consequences [of ECT] were dire. Retrograde memory loss was profound. I was devastated and searched for answers where my treating doctors could give none I was left then to claw back a life only half remembered.

The Nobel Prize-winning author, Ernest Hemingway, committed suicide shortly after completing a course of 20 ECT sessions (Hotchner, 1966). Just before he shot himself, Hemingway said bitterly:

What these shock doctors don't know is about writers and such things as remorse and contrition and what they do to them ...What is the sense of ruining my head and erasing my memory, which is my capital, and putting me out of business? It was a brilliant cure but we lost the patient.

However, the question of the risks of ECT is not the point: If it is unnecessary, then questions of safety do not arise. As for the suggestion that opponents of ECT are necessarily "irrational, anti-scientific," the burden of proof rests with those who use it. As it happens, ECT has no rational basis in an articulated model of mental disorder (McLaren, 2013). It should be recalled that in the debate over Italy's Basaglia Law (Basaglia Law/Law 180, n.d.), which severely restricted ECT to the point where it is hardly used today, psychiatrists aimed just these criticisms at proponents of the law. They were shown to be wrong: The mental health of Italians did not deteriorate measurably and, 40 years later, they appear to be coping admirably without it.

IS ECT EFFECTIVE?

ECT is widely held to be highly effective for treating depression and other major mental disorders. In fact, it is less effective than its supporters claim. In a study of 290 patients, Sackeim's group found that only 159 remitted (55%). Moreover, the remission is generally not maintained:

Our study indicates that without active treatment, virtually all remitted patients relapse within 6 months of stopping ECT. (Sackeim et al., 2001)

That is, ECT is at best a temporary alleviation of symptoms, not a cure. Similarly, a study of 531 patients as part of the Consortium for Research on ECT revealed a remission rate of just 64% (Kellner et al., 2006). This is not much better than most drug trials claim. The RANZCP Position Statement on ECT (RANZCP, 2014) explicitly acknowledges this:

5.6: The use of evidence based pharmacotherapy and other strategies to prevent relapse after improvement from ECT is essential for obtaining a lasting improvement.

Indeed, the very notion of "maintenance ECT" indicates clearly that any benefit is likely to be transient. Read and Arnold (2017) were equally skeptical:

By 2010, there had only been ten such studies (placebo-controlled randomized trials) for ECT and depression, and none since 1985. Those ten had produced minimal evidence of some temporary benefits, for a minority, during the treatment period, and no evidence at all of benefits beyond the end of the treatment period.

DOES ECT REQUIRE SPECIAL SKILLS?

In public practice in many countries, it is normal for ECT to be administered by the most junior hospital doctors. In Norway, 6% of ECT is administered by nurses (Leiknes et al., 2012) while I have seen it administered by medical students. In the UK and in the Netherlands, ECT is now being given by general practitioners and by geriatricians. Their view is that they can diagnose depression sufficiently reliably to prescribe antidepressants, and ECT is just another minor procedure to them. There are reports that ECT is now being administered to treat Parkinson's syndrome, and in early dementia. These are not psychiatric diagnoses and are therefore beyond the scope of this article, but I doubt the physicians regard ECT as demanding special skills only possessed by psychiatrists.

IS ECT COST-EFFECTIVE?

As noted several times above, ECT is more likely to be given to people who can afford it. Despite any claims to the contrary, ECT is an expensive form of management. In Australia, the current Medicare rebate for ECT, MBS Item 14224, is \$70.35. In 1974–1976, while in training in Perth, WA, assisted by an anesthetist, I routinely gave four to six modified ECT treatments per hour (55 minutes of which was spent standing around watching). The bulk-billing fee for a 1-hour consultation for the purpose of treatment, Item 306, is \$156.15. Bearing in mind that very few private psychiatrists charge the base fee for ECT, more likely double or triple, it is clear that giving ECT to a severely depressed patient is much more profitable and requires much lesser effort than psychotherapy with the same patient. Moreover, in Australia, private office psychotherapy funded by Medicare is capped at 50 sessions per year, which is not a lot for a seriously disturbed patient, whereas for a patient admitted to the hospital, there are no restrictions. A psychiatrist could administer ECT once a week and see the patient every other day and still charge full fees.

Assume that a day in a dedicated private psychiatric bed costs something of the order of \$1,500, plus the psychiatric and other fees. ECT will cost of the order \$500 per episode, roughly one-third of each of the psychiatrist, the anesthetist, and the hospital theater fees (in Brisbane, the actual figure is substantially higher). The cost of a 5-week admission to the hospital for 12 ECT treatments will start at about \$58,500. Ten weeks of psycho-

therapy, which, in qualified hands, will produce about the same result, will cost at most \$1,600, about 97% less.

CONCLUSION

The claims made on behalf of ECT are that it is "useful, essential, irreplaceable, effective, valuable, clinically indicated, important and necessary," and harmless, while opposition to it is neurotic, "irrational," out-dated, and not scientific. This brief survey shows that these claims are not sustainable. ECT is most certainly not essential; it is not irreplaceable as alternatives are readily available; it is not based in a model of mind or of mental disorder so it has no rational or scientific basis; it is expensive; it carries significant risks which psychiatrists usually don't ask about; and it is effective in the short-term only. Suggestions that it is "useful, valuable and clinically indicated" are personal judgments only, devoid of any empirical content.

By international standards, Australia uses ECT at a grossly excessive rate (e.g., 600% more than New Zealand, 4,400% more than Poland), yet its use is increasing far more rapidly than any demographic factors can justify. It is thus reasonable to conclude that a major impetus for its use in this country is the perverse financial incentive built into the Medical Benefits Schedule of the National Health Insurance Commission. Bearing in mind that the remission rates of ECT-treated depression are quite poor, and that relapse is common, "the cost-benefit analysis for ECT is so poor that its use cannot be scientifically justified" (Read & Bentall, 2010). However, psychiatrists who use it, and their closely associated private hospitals, represent an enormously influential lobby which governments show no signs of resisting. As the writer, Upton Sinclair, noted:

It's difficult to get a man to understand something when his salary depends on his not understanding it.

Remarkably, insurers show practically no signs of interest in the notion that we can dispense with ECT and get the same results at a tiny fraction of the cost of ECT.

NOTES

1. The RANZCP made a submission to a foreign government agency because "any decision by the FDA that leads to a restriction in the availability of ECT devices will have an impact on Australia and New Zealand as countries reliant on US manufacturers." ECT devices were in Class III but, for historical reasons, they had never been tested properly. When the FDA asked manufacturers to meet the standards of that class, they demured on the basis of cost. They then asked to have the devices regraded to Class II so that they did not have to comply, which led to the hearings.

2. A 10% rate of "severe" side effects is hardly "low level."

3. This isn't clear, as they had already said the depression had resolved; now they are saying persisting memory defects must be due to persisting depression, for which the treatment, presumably, is more ECT. In any event, since it isn't clear how much is due to ECT and how much is due to "other factors," and since alternative treatments are available, it would be reasonable to stop using ECT.

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