

Electroconvulsive Therapy: Law, History and Practice*

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Electroconvulsive therapy (ECT) remains a publicly misunderstood and controversial therapy. However, its use for depressive illnesses, whilst accompanied by some generally transient side-effects, is regarded by most psychiatrists as safe and highly effective for patients who are unresponsive to pharmacological and other interventions. Nonetheless, psychiatry has not been effective in communicating the benefits and safety of modern ECT. Ongoing monitoring of the procedure is required to ensure quality improvements. In addition, there should be a mechanism by which patients can appeal against its administration. Legal provisions also need to be refocused in relation to the requirement for "informed consent" to ECT and the circumstances in which emergency ECT can be administered to patients unable to give "informed consent". There also need to be changes to clinical practice. Audits have shown that better ongoing training and supervision are required for practitioners who administer ECT.

Introduction

While electroconvulsive therapy (ECT) is used to treat a range of psychiatric disorders, it is now most frequently employed in the treatment of depression where suicide is a risk.¹ Patients with severe

depression rarely respond to psychotherapy alone and ECT is used because of the delay of two to three weeks before patients respond to antidepressants.² ECT is generally regarded as an effective form of treatment for people with depression and other mood disorders and it is also used when a severely depressed patient has not responded to antidepressants, is unable to tolerate the side-effects of antidepressants, or there is some

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¹ D Chodoff, "Biological Therapies" in S Bloch and B S Singh (eds), *Foundations of Clinical Psychiatry* (Melbourne University Press, Parkville, 1994); Royal Australian and New Zealand College of Psychiatrists, *Clinical Memorandum* #12.

Electroconvulsive Therapy, now incorporated into *ECT: Manual Licensing, Legal Requirements and Clinical Practice Guidelines* (Mental Health Branch, Aged, Community and Mental Health Division, Department of Human Services, January 2000).
² I Schweizer, "Mood Disorders", in Bloch and Singh, op cit n 1, p 142.

reason why speedy recovery is required.³ Modern ECT is viewed by most psychiatrists as an effective treatment with few undesirable side-effects. There are, however, some who refuse to use it, considering it to be invasive, unnecessary and dangerous.

Today practices in relation to the administration of ECT generally are more sensitive and more appropriate. In Victoria, it is standard, for instance, for each patient to be given a tour of the ECT suite in the days prior to treatment so that he or she is familiar with the surroundings and personnel. On the morning of ECT the patient is required to fast and is taken to the area by a member of the nursing staff. The patient wears normal day clothes, but is asked to remove jewellery and to have loose-fitting sleeves. The anaesthetist introduces himself or herself, the patient lies on a trolley and a small canula is inserted into a vein. A short-acting anaesthetic is administered. After the patient becomes unconscious, a muscle relaxant is given. Usually oxygen is provided via a mask. The anaesthetist indicates to the psychiatrist when the patient is fully relaxed and anaesthetised. The seizure is barely visible, given the patient's relaxed state, but is estimated clinically and also timed via the electro-encephalogram (EEG). Usually the seizures last between 30 and 45 seconds. The patient resumes breathing spontaneously as the muscle relaxant wears off and usually returns to full consciousness in a few minutes. He or she spends approximately one hour in recovery before returning to the ward or to his or her home.

ECT remains a controversial treatment, partly because of past misuse, but also because of misinformation distributed by high-profile opponents⁴ and by groups including the Church of Scientology.⁵ A recent example was to be seen in the Melbourne newspaper *The Herald Sun*⁶ where a spokesperson for the Citizens Commission on Human Rights, an organisation of the Church of Scientology, is quoted as describing ECT as "barbaric". There is a wide variety of literature on

the advantages and disadvantages of ECT, ranging from works in praise of the procedure by professionals and others⁷ to those expressing the gravest concerns about its permanent impact upon the personality and brain structure of people upon whom it is administered.

This article reviews modern knowledge and practice concerning ECT, as well as the legal and administrative controls upon its administration. These vary throughout Australia and it is argued that processes need to be in place to enable all involuntary patients to appeal to independent tribunals against the decision to administer ECT. Legislative amendments concerning what constitutes "informed consent" in the ECT context are necessary, as are provisions in all jurisdictions governing emergency administration of ECT to those unable to give "informed consent". In addition, better training for those who administer ECT is needed to ensure they are thoroughly familiar with its technology and ongoing development. Steps need to be taken to enhance the ways in which the benefits, as well as the side-effects, of ECT are communicated to patients to reduce the degree of concern the procedure continues to arouse for many.

The reputation of ECT

Media portrayals, such as the notorious scenes from the 1940s movie *The Snake Pit* and the film made from Ken Kesey's 1962 book, *One Flew Over the Cuckoo's Nest*, have left longstanding scars upon public attitudes, albeit that the version of ECT they depicted was as it was performed in the 1940s and 1950s — without muscle relaxants or anaesthetics, inducing unmodified convulsions and placing patients in danger of fractures, memory loss, confusion and extreme anxiety. While unmodified ECT is not used now in the West, it continued much longer than it should have done.⁸ And, although media portrayals of ECT are often exaggerated,

³ Fink, op cit n 3; M Fink, *Convulsive Therapy. Theory and Practice* (Raven Press, New York, 1979); N S Endler, "Living Better Electrically" in N S Endler, *Holiday of Darkness: A Psychologist's Personal Journey Out of His Depression* (Wiley & Sons, New York, 1982).

⁴ See, eg, L Gostin, *Institutions Observed* (King Edward's Hospital Fund for London, 1986), p 69. For recent concern about the use of ECT in Uruguay, see Mental Disability Rights International, *Human Rights and Mental Health: Uruguay* (MDRI, Washington DC, 1995), pp 40-41.

¹¹ S Bloch and P Chodoff, *Psychiatric Ethics* (Oxford Medical Publications, Melbourne, 1991), p 191.

¹² J Fom et al, "Mental Health Literacy: A Survey of the Public's Ability to Recognise Mental Disorders and Their Beliefs About the Effectiveness of Treatment" (1997) 166 *Medical Journal of Australia* 185.

¹³ R Abrams, *Electroconvulsive Therapy* (Oxford University Press, New York, 1997), p 5.

¹⁴ B Cronholm and J O Ottoson, "Experimental Studies of the Therapeutic Action of Electroconvulsive Therapy in Endogenous Depression", 35 (Suppl 145) *Acta Psychiatrica et Neurologica Scandinavica* 69.

¹⁵ T R P Price, T B MacKenzie, G J Tucker and C Culver, "The Dose Response Ratio in Electroconvulsive Therapy" (1978) 35 *Archives of General Psychiatry* 1131.

¹⁶ L G Kilogh, "Electroconvulsive Therapy" in L G Kilogh, J Sydney Smith and G F Johnson, *Physical Treatments in*

clinical audits in the United Kingdom, the United States, Canada and Australia have revealed that, in the 1980s and even into the 1990s, ECT was frequently administered in conditions of serious inefficiency.⁹ In short, the anxieties expressed about ECT by some commentators are not without foundation.¹⁰

There is a widespread fear of electricity, and its use on the brain still causes much anxiety among the general public. This is not to say, interestingly, that ECT has prompted a high incidence of complaints to public authorities. For instance, the health complaints commissioners in Australia receive very few complaints about ECT.¹¹ However, those patients who do complain are usually concerned about poor communication and failure to provide adequate information about the procedure.¹² Complaints are also occasionally received that patients have been denied ECT.

The major modern debates about ECT are concerned more with issues of consent, coercion and the availability of alternative treatments rather than with its efficacy. Better equipment, improved education for those administering ECT and more careful selection of patients having the treatment have led to good therapeutic results. Some psychiatrists who favour the treatment have argued that the law has enshrined the views of political

⁹ J Pippard and L Ellam, "Electroconvulsive Treatment in Great Britain" (1981) 139 *British Journal of Psychiatry* 563; J Pippard, "ECT Custom and Practice" (1993) 17 *Psychiatric Bulletin* 473; J Pippard and L Ellam, "Audit of Electroconvulsive Treatment in Two NHS Regions" (1992) 160 *British Journal of Psychiatry* 621.

¹⁰ B O'Shea and A McGennis, "ECT: Lay Attitudes and Experiences: A Pilot Study" (1983) 76 *Irish Medical Journal* 40.

¹¹ The first author recently presided over a Mental Health Board hearing in Victoria where the person whose involuntary status was being reviewed had had ECT on the morning of the hearing and repeatedly bewailed his inability to remember times, dates and other details.

¹² The Health Services Commissioner in Victoria, eg, has received a total of only 15 complaints in the last 10 years. One of the many difficulties that became apparent to an assessor of those running the Chelmsford Private Hospital in Sydney, New South Wales, during the mid-1970s was that patients who were undergoing "deep sleep therapy" were not given an anaesthetic when ECT was administered and also that ECT was given in circumstances which may have amounted to an assault: see *Herron v McGregor* (1986) 6 NSWLR 246 at 255; *Gill v Walton* (1991) 25 NSWLR 190 at 203; *Thompson v Evans* [2000] ACTSC 73 at [16]; New South Wales, *Report of the Royal Commission into Deep Sleep Therapy* (Government Printer, Sydney, 1990), Vol 7, per Slattery AJ; M Sexton, *Uncertain Justice* (New Holland, Sydney, 2000), p 167.

activists who have little knowledge of clinical practice, and they view legislation, particularly in the United States, as an unnecessary interference with a patient's right to be treated effectively.¹³ On the other hand, the opinions of many members of the public are divergent from those of mental health professionals. Mental health literacy research has indicated that ECT is a treatment the general public rates very negatively and there is a strong perception that it is harmful.¹⁴ In his comprehensive book on ECT, Abrams gives a detailed overview of patient surveys and comments:

"Doctors who give ECT have shown remarkably little interest in their patients' views of the procedure and its effects on them, and only recently has this topic received any consideration in the literature."¹⁵

What is ECT?

ECT induces a convulsion or fit. It is thought that the brain's response to the fit may be what makes ECT efficacious. Its use as a treatment for psychiatric illnesses was based on observations of the impact of convulsions on people with epilepsy who also had a mental illness. The symptoms of the mental illness were considered to have improved following the fits. The strongest evidence available for the significance and effectiveness of convulsions is in the work of Cronholm and Ottoson.¹⁶ There is also evidence of a consistent relationship between the dose-response ratio and the overall results.¹⁷ The potential impact of a fit induction is not new. The idea that convulsions might influence the course of mental illness was discussed as early as the 16th century by Paracelsus. Since that time, many agents have been used to induce convulsions.¹⁸ For

instance, convulsions induced by camphor were tried in 1785 by Oliver, in 1798 by Weickhard and in 1828 by Burrows.¹⁹

In the 1920s there was an unfounded belief that epilepsy and schizophrenia were negatively correlated and that there might be an antagonism between them.²⁰ As recently as 1958, Landolt propounded the theory that in people with epilepsy who developed schizophrenia the EEG became "more normal" indicating "forced normalisation". However, in a study of 69 people with epilepsy who developed schizophrenia-like illnesses, Slater could find no evidence to support Landolt's view.²¹ In 1932 Nyiro and Jablonsky took blood from people with schizophrenia and transfused it into patients with epilepsy.²² Their focus lay not in curing schizophrenia, but in curing epilepsy. Having observed marked improvement in the epileptic symptoms in a patient after he had developed schizophrenia, his fits having decreased in frequency and then ceased altogether, they then tried to give patients schizophrenia to cure their epilepsy. They concluded that, of 10 patients treated in this way, they had cured one.²³

Meduna took a different view from Nyiro, with whose work he was familiar. He tried to cure schizophrenia by inducing convulsions. After familiarising himself with unsatisfactory animal trials of strychnine, thebaine, nikethamide, caffeine, brucine and absinthine,²⁴ he chose camphor as the inducing agent. While he found the results to be encouraging, the camphor caused intense terror in patients while they waited for the fits to occur as it had a delayed reaction and the camphor sometimes precipitated multiple fits.²⁵ Meduna then turned to pentamethylenetetrazol (Metrazol, Leptazol, Cardiazol) which he gave intravenously. It had a faster action, was quickly excreted and less likely to cause multiple fits.²⁶ However, it did produce a few seconds of mounting anxiety prior to loss of consciousness and this was exacerbated if the

dosage was incorrect.²⁷ Meduna published his results in 1936, reporting that, of 43 patients with schizophrenia, 19 were cured and seven improved.²⁸

Experimentation in the 1930s with convulsive therapies coincided with the introduction of other treatments for schizophrenia, various sleep therapies (including narcosis therapy), lobotomies and insulin coma treatment.²⁹ At a 1937 congress in Muenzingen on "shock" therapy, Meduna suggested combining pentamethylenetetrazol with insulin coma treatment.³⁰ Other convulsants tried in those early days were triazol,³¹ picROTOXIN and ammonium chloride. Photoshock was used by Gastaut et al in 1950.³² This involved the use of hexazol to lower the convulsion threshold but sufficient to produce a fit, the idea being to reduce apprehension while convulsions were produced by photic stimulation.³³ In 1957 Kranz et al reintroduced the pharmacological approach by using a fluorinated ether that could be given intravenously or by inhalation.

In 1942 only two or three manufacturers in England made ECT machines.³⁴ There were no ECT machines available in Australia at that time so the Superintendent of Mental Institutions in South Australia, H M Birch, set about making his own with assistance from the Physics Department at the University of Adelaide.³⁵ In 1942 Birch wrote:

"It is confessed at once that the preliminary use on patients was accompanied by much apprehension – not, as with 'Cardiazol' on the part of the patient, but on the part of the operator. Had I been in need of shock therapy for schizophrenic or manic-depressive illness, I feel quite certain that the psychogenic 'shock' to me would have been all that was necessary." Birch noted that ECT was inexpensive and simple to perform but:

¹⁹ Ibid; Abrams, op cit n 15, p 7.

²⁰ Kilogh, op cit n 18, p 184.

²¹ E Shorter, *History of Psychiatry: From the Era of the Asylum to the Age of Prozac* (John Wiley & Sons, New York, 1997), p 215ff; B Wilson, "Psychosurgery: Legal and Ethical Issues" (1996) 4 JLM 21; Kilogh, op cit n 18, p 185.

²² Ibid.

²³ H C Dax, "Physical Methods of Treatment" in J R Rees (ed), *Modern Practices in Psychological Medicine* (Butterworth & Co, London, 1949), p 366.

²⁴ Kilogh, op cit n 18, p 185.

²⁵ Ibid.

²⁶ H M Birch, "Electrical Convulsive Therapy" (20 June 1942) *Medical Journal of Australia* 675.

²⁷ Ibid.

"With regard to the merits of this form of treatment as viewed from the standpoint of complete recovery, I prefer to wait until time and further experience allow definite facts to be presented."

These days convulsive therapy is induced by electricity. While Cerletti coined the phrase "electro-shock treatment" which became popular in the United States, other psychiatrists reject this expression as potentially damaging to the reputation of the therapy.³⁶ Electricity is used to induce convulsions not because there is anything specially therapeutic about electricity, but for convenience and ease of use and because it is preferable to the substances experimented with previously.

Electricity was used therapeutically as early as Roman times³⁷ when the source of the electricity was the torpedo fish which was applied to the head for treatment of headaches. In 1745 the invention of the Leyden jar condenser made it possible for electricity to be freely available and its use became widespread in the treatment of mental illnesses. It was used by John Franklin and John Wesley in 1759 who observed enthusiastically:

"I doubt not but more nervous disorders would be cured in one year by this single remedy than the whole English *Materia Medica* will cure by the end of the century."

Kilogh interprets this as "the evangelist rather than the scientist speaking".³⁸ The discovery of the battery by Volta in 1799 permitted what Keogh describes as the uncritical use of static electricity and galvanic stimulation until the middle of the 19th century. It was employed for many mental illnesses including "melancholia". The Wimshurst machine renewed interest in convulsive therapy in the latter half of the 19th century. In the 1830s Michael Faraday's work led to the indirect or alternating current which was usually not strong enough to induce convulsions even when applied directly to the head. If a convulsion did occur, this was regarded as

³⁶ U Cerletti, "Old and New Information About Electroshock" (1950) 107 *American Journal of Psychiatry* 87; Kilogh, op cit n 18, p 183; E C Dax; "Indications for Shock Therapy" (1951) 97 *Journal of Mental Science* 142; E C Dax, "Convulsion Therapy by Ammonium Chloride" (July 1940) *Journal of Mental Science* 1.

³⁷ Kilogh, op cit n 18, p 185. Kilogh notes this treatment was used by Sabinio Largo (43-48 AD), Pliny the Elder (23-79 AD) and Galen (201 AD); see also Cerletti, op cit n 36.

³⁸ Kilogh, op cit n 18, p 185.

undesirable. By the beginning of the 20th century, the use of electro-therapy was on the wane.³⁹ Carlotta and Bini are attributed with having introduced the "classical technique" of inducing convulsions by the use of electricity.⁴⁰ In the 1930s, Carlotta had been interested in the problem of whether the gliosis (scarring)⁴¹ found in the hippocampus regions of patients with limbic epilepsy was causally related to their epilepsy or was the result of repeated attacks.⁴² He was aware that a number of investigators had induced convulsions in animals by direct stimulation of the brain.⁴³ He wanted to avoid direct stimulation as this would mean that any gliosis that occurred might have been caused by the stimulation rather than the convulsion. He experimented with dogs, applying electrodes to their mouths and rectums using a 125v alternating current. Kilogh assesses this as "successful but [it] had a substantial mortality".⁴⁴ The mortality rate was reduced by using a brief stimulus duration with a stronger current.

In 1936 Cerletti was appointed to the Chair of Neuropsychiatry in Rome where he used convulsive therapy via administration of pentamethylenetetrazol. Working with Bini, he began using electricity. Their first patient was an unidentified man of 39 found wandering around a train station without a ticket. He was delusional, hallucinating and gesticulating, alternating between periods of mutism and incomprehensible, neologistic speech.⁴⁵ He was diagnosed as suffering from schizophrenia with gross thought disorder. It took several attempts before a grand mal seizure was achieved. After the second attempt, the patient exhibited a brief myoclonic reaction without a loss of consciousness and then began to sing loudly. He lapsed into silence while his doctors debated about what their next step should be. The silence was broken by his solemnly intoning, "Not again; it's murderous." This notwithstanding, another attempt was made and a grand mal seizure ensued.⁴⁶ After 11

³⁹ Ibid, p 186.

⁴⁰ Ibid.

⁴¹ Gliosis is a neuronal scarring – cells called astrocytes come and fill in the gaps after injury of the brain or spinal cord.

⁴² Kilogh op cit n 18, p 186.

⁴³ Cerletti, op cit n 36; Abrams, op cit n 15, p 6.

⁴⁴ Kilogh, op cit n 18, p 186.

⁴⁵ Cerletti, op cit n 36.

⁴⁶ After awakening, Abrams reports that, "The patient sat up of his own accord, looked about him calmly with a vague smile, as though asking what was expected of him. I asked him, 'What has

convulsions, the patient was discharged in a complete remission and, according to Kalinowsky,⁴⁷ remained well on follow up two years later.

ECT spread with great rapidity within the world of psychiatry. Kalinowsky, who had been present at the Cerletti clinic in the early days of ECT therapy, took ECT to Paris at the Sainte-Anne Hospital in 1939 and then to England at the Netherne Hospital at Coudon in the early 1940s. He established an ECT service at the New York State Psychiatric Institute, which was part of Columbia University, in September 1940.⁴⁸ By 1944 ECT had supplanted Cardiazol in England as an agent for inducing fits. However, the reception of ECT in the United States was never unequivocal, psychoanalysts from the start expressing a disinclination to use such physical therapies⁴⁹ and concerns being expressed about its side-effects.

In Australia a number of early reports about the use of convulsive therapies, using Cardiazol in particular, were published.⁵⁰ Birch, the Superintendent of Mental Institutions for South Australia, published an account of his construction of the technology of assembling an ECT machine in the 1940s.⁵¹ He first tested it on rabbits and then used it in August 1941 at the Parkside Mental Hospital in Adelaide, describing initial difficulties with the fuse blowing when trying to induce convulsions and problems in devising a timing mechanism for the voltage administration. These problems were addressed by obtaining an automatic telephone dial mechanism made available by the Postmaster General's Department. Another difficulty he encountered was the erratic flow of current occasioned by the propinquity of the laundry to the operating theatre with the result that ECT was

⁴⁷ "been happening to you?" He answered with no more gibberish: "I don't know; perhaps I have been asleep". Abrams, op cit n 15, p 7.

⁴⁸ Kilogh, op cit n 18, p 185.

⁴⁹ Abrams op cit n 15, p 9.

⁵⁰ Shorter, op cit n 29, p 223.

⁵¹ See, eg, R. S. Ellery and D. C. Lear, "Schizophrenic Patients Treated by Induced Convulsions" (1938) 1 *Medical Journal of Australia* 779; C. R. D. Brothers and I. Williams, "Notes on 'Cardiazol' Therapy in Schizophrenia" (1939) 1 *Medical Journal of Australia* 138; W. S. Dawson, "Cardiazol Convulsion Therapy in Psychoses" (1939) 1 *Medical Journal of Australia* 497; R. S. Ellery, "Treatment by Insulin Shock and Induced Convulsions" (1940) 2 *Medical Journal of Australia* 582; R. R. Webb, "Insulin and Cardiazol in the Treatment of Psychoses" (1941) 1 *Medical Journal of Australia* 435.

⁵² Op cit n 34.

on heels and the back of the head. The nurse watched her chance to slip a padded airway into the mouth before the clonic convulsions began. These convulsions came regularly with the force that the body possessed. A cushion or pillow was slipped under the back to provide support. Saliva was ejected from the mouth. The clonic contractions weakened, and concluded in less than half a minute. The doctor aspirated any retained saliva from the mouth. If the breathing did not commence soon enough, so that the face became congested and blue, he helped it resume with a few forced breaths of oxygen. Soon the unconscious patient relaxed and was lifted to a bed on one side of the ward, to snore it off in a noisy slumber before awakening. The next patient took his or her place.⁵⁴

He described introducing an adjunct to treatment used successfully in other countries, that dispelled the outer convulsion – an injection of scoline to relax the voluntary muscles of the body. He maintained that, for most patients, this improved safety dramatically although some who had a "metabolic defect" were "unable to breathe and had to receive artificial respiration until the scoline was all metabolised".⁵⁵

In due course Dr Birch obtained permission from the South Australian Health Department to use light anaesthesia. Cawte commented:

"We were now not subject to legal redress in the event of any anaesthetic mishap. Our anaesthetist visited regularly, with a promise to come at other times if required."⁵⁶

Although by the 1950s media attention to the treatment was adverse, Cawte described ECT as having become

"more like a routine minor medical or surgical procedure, or like the dentist's extraction of a tooth under local or general anaesthesia. We were convinced that patients gripped by deep depression or mania required this treatment if these devastating illnesses were to be halted. We

⁵⁴ J. Cawte, *The Last of the Lunatics* (Melbourne University Press, Parkville, 1998), pp 72-73. See, too, for description of the atmosphere in the early ECT wards, S. Sutherland, *Breakdown, A Personal Crisis and a Medical Dilemma* (Weidenfeld and Nicholson, London, 1976).

⁵⁵ Cawte, op cit n 54, p 74. This metabolic defect is rare. When present, it interferes with the metabolism of the muscle relaxant and leads to prolonged relaxation and a requirement for assisted respiration.

⁵⁶ *Ibid.*

were also discovering that acute psychoses and delirium could be dramatically curtailed by a short course.⁵⁷

Wherever ECT was administered, it soon became apparent that some patients, particularly the elderly, became confused after a series of convulsions and showed defects of recent memory that could last for a number of weeks.⁵⁸ Many psychiatrists interpreted these effects as an important part of the treatment process. Bone fractures or dislocations were also suffered but were considered, by psychiatrists,⁵⁹ to be a small price to pay given the severity of the symptoms of the illnesses they were treating. Others, however, were deeply concerned about the complications and sought means of minimising them. In the 1940s, muscle relaxants were introduced in many countries to avoid fractures, anaesthetics were given to allay anxiety, sinusoidal currents were replaced by pulsed current, and unilateral electrodes were introduced to try to minimise confusion and memory loss.⁶⁰

Not all psychiatrists adapted in a timely way to the evolving technology. Kilogh noted in 1988 that 40 years after pulsed current and unilateral electrode placement were introduced, a substantial number of psychiatrists continued to use the older methods routinely (often in ignorance). He also observed that ECT machines delivering only sinusoidal currents were still employed. However, as noted earlier, there is still no consensus among psychiatrists that unilateral ECT is the best method, with many still preferring bilateral ECT.⁶¹

⁵⁷ *Ibid.*

⁵⁸ Kilogh, op cit n 18, p 187.

⁵⁹ See *Bolam v Friern Hospital Management Committee* [1957] 2 All ER 118.

⁶⁰ Kilogh, op cit n 18, p 188.

⁶¹ Fink, op cit n 3, p 27, commented in 1999: "Unilateral ECT, however, is clinically less effective, and patients do not improve as quickly as they do with bilateral ECT. Treatments with unilateral electrode placement require special attention to energy dosing and the use of anticholinergic drugs. Because good results with bilateral ECT are more likely, it is preferred for systemically ill patients, for whom an immediate result and a minimal amount of treatments are desirable. Some doctors recommend high-dose unilateral ECT in young patients, the physically healthy, and those who express concern about the possible effects on memory and cognition." Abrams, op cit n 15, p 160, stated in 1997 that he continued to recommend unilateral ECT "for at least the first few treatments, to determine whether a suitable response will be obtained. If such a response is not forthcoming, a switch to bilateral ECT (with conventional anterior placement) is indicated, administered at a substantial (eg, not just above-threshold) dose."

Effects of ECT

A number of recent studies have examined the question of whether ECT causes long-term physiological effects upon the brain. Coffey et al⁶² in 1991 reported on what was then the last in a series of studies using brain imaging techniques confirming and extending previous results that no relationship exists between ECT and brain damage.⁶³ Devenand et al⁶⁴ conducted a meta-analysis of ECT literature in 1994. They concluded that ECT-induced cognitive deficits are transient, although "spotty memory loss" may persist for events immediately surrounding the course of ECT administration. They contended that prospective computerised tomography and magnetic resonance imaging studies show no evidence of ECT-induced structural changes to the brain, although some early autopsy case reports from the "unmodified ECT era"⁶⁵ reported cerebrovascular lesions that were due to agonal (terminal, pre-death) changes or undiagnosed disease. In respect of animal studies, they arrived at a similar conclusion, namely that no neuronal loss was apparent when appropriate control studies, blind ratings and perfusion fixation techniques were employed.

They concluded, on the basis of a number of studies which they classified as using sound methodology, that neuronal loss occurs only after 1.5 to 2 hours of continuous seizure activity in primates, and muscle paralysis and oxygenation further delays these changes, these conditions not being approached during ECT in humans. In short, they concluded that studies properly conducted with both animals and people provide no credible evidence of structural brain damage being caused by ECT. However, in 1992 Abrams wrote:

"[T]he day is now past when the physician can blithely reassure his patient that the memory loss will only be temporary ... at best, transient

⁶² C E Coffey, R D Weiner, W T Djang, G S Fiegel, S A R Soody, L J Peterson, P D Holt, C E Spritzer and W E Wilkinson, "Brain Anatomic Effects of Electroconvulsive Therapy: Prospective Magnetic Resonance Imaging Study" (1991) 48 *Archives of General Psychiatry* 1013.

⁶³ They also highlighted "research difficulty in assessing the impact of ECT upon the brains of elderly patients in poorer health or pre-existing brain disease. This is significant because of the numbers of elderly patients with depression upon whom ECT is administered": *ibid* at 1014.

⁶⁴ D P Devenand, A J Dwork, E R Hutchinson, T G Bolwig and H A Sackeim, "Does ECT Alter Brain Structure?" (1994) 151 *American Journal of Psychiatry* 957.

memory disturbance for events immediately before and after the course of treatment; at worst significant memory loss extending from at least 6 months before ECT to 2 months afterwards, which may persist for at least six months, and subjectively for 2 years.⁶⁶

Greenberg, in his study of ECT and elderly patients,⁶⁶ noted the frequency of depression in the elderly and its special risk factors for older people which include medical co-morbidity, suicide, malnutrition or dehydration and generally impaired recovery from medical illnesses. He concluded that many older people with depression may not respond to anti-depressants or may suffer intolerable medication side-effects. Some may also have medical illnesses with symptoms or consequences so severe it is not feasible to wait for modern anti-depressant drugs to work. For many of these people, he found, ECT can be a dramatically effective treatment which can be performed safely. He located no evidence of brain damage or permanent change and found cognitive consequences of short duration only. Greenberg also concluded that age itself does not present any particular impediments to ECT use and found no evidence that age alters its efficacy. Indeed, he has treated many patients with ECT who were well into their nineties and recorded its use on a patient aged 102.⁶⁷

Contemporary debates and knowledge

The orthodox current psychiatric view in the Royal Australian and New Zealand College of Psychiatry (RANZCP) Guidelines states that ECT is superior to drug treatment. The Guidelines cite clinical trials to conclude that the improvement rate in depressive illness is higher (70 to 80 per cent) following ECT than that following administration of tricyclic antidepressants (60 to 65 per cent), monoamine oxidase inhibitors (30 to 60 per cent) and placebo (20 to 40 per cent).⁶⁸

While ECT is recommended by the RANZCP as a safe and effective treatment which is said to be significantly superior to drugs and placebo in the treatment of depressive illness, it is clear also that it can have unwanted effects.⁶⁹ For instance, the

⁶⁵ Abrams, *op cit* n 15, p 5.

⁶⁶ R M Greenberg, "ECT in the Elderly" (1997) 76 *New Directions for Mental Health Services* 85.

⁶⁷ *Ibid* at 89.

⁶⁸ RANZCP Memorandum #12, *op cit* n 1.

⁶⁹ *Ibid*, 2-2; Abrams, *op cit* n 15.

National Institute of Health in the United States, in conjunction with the National Institute of Mental Health, convened a Consensus Development Conference on ECT in 1985. After hearing reports from mental health professionals, experts from a variety of disciplines and significant numbers of patients, a consensus panel representing psychiatry, psychology, neurology, psychopharmacology, epidemiology, law and the general public issued a consensus statement. It concluded that it was "well established" that ECT produces deficits in memory function "which have been demonstrated objectively and repeatedly, [and which] persist after termination of a normal course of ECT".⁷⁰

Schweitzer includes amongst recognised side-effects of ECT, "headache, confusion and memory disturbance", but he notes these can be reduced by the use of unilateral electrode application to the non-dominant hemisphere.⁷¹ However, there remains no consensus as to whether unilateral or bilateral ECT is better. Many senior consultant psychiatrists prefer bilateral administration. For this reason the ECT Manual published by the Department of Human Services in Victoria in January 2000 does not express a preference for either.⁷² Bloch and Singh have written:

"The chief technical variation is whether the electric current is passed through one or both sides of the brain. There is little doubt that passage through only one side leads to less confusion and memory disturbance (which in any event is temporary), but it may be less effective or more treatments may be required to achieve the same result."⁷³

The mortality rate for ECT is said to be from two to four deaths per 100,000 treatments and the RANZCP Guidelines describe this "relatively low death rate" in the context of the much higher mortality figures for suicide and physical illness in

⁷⁰ B J Winick, *The Right to Refuse Mental Health Treatment* (American Psychological Association, Washington, DC, 1997), p 93, citing National Institute of Health and National Institute of Mental Health, *Electroconvulsive Therapy: Consensus Development Conference and Statement*, No 11 (1985).

⁷¹ Schweitzer, *op cit* n 2, p 142.

⁷² The ECT Manual, published by the Department of Human Services in Victoria in 2000, is the most recent and comprehensive Australian source. It reflects evolving policy approaches, including mainstreaming, and constitutes the primary reference document for the performance of ECT in Victoria: *op cit* n 1.

⁷³ Bloch and Singh, *op cit* n 1, p 276.

untreated depressive illness and the death rates for anaesthesia induction alone. The RANZCP Guidelines note the immediate and remote effects of ECT but state there is no evidence ECT produces permanent memory loss. A recent Magnetic Resonance Imaging study is invoked to show there is no evidence that ECT produces brain damage. ECT should be given only after—

"a thorough physical and psychological evaluation of the individual patient, taking into account the illness, the past history of illness and treatment response, the degree of suffering of the patient, the preferences of the patient and their family or guardian and the prognosis if ECT is withheld".⁷⁴

ECT is usually given two to three times a week for six to 12 treatments. It is thought there is a group of patients with unipolar depressive illness who respond only to ECT but the RANZCP concedes further research is required to delineate this group.⁷⁵

ECT has been, and continues to be, used for conditions other than depression, in particular for acute undifferentiated psychoses. For some time this has been somewhat controversial. In the past, however, it was used for a very wide range of conditions. For instance, Kilegh (in 1988) reviewed favourably the use of ECT for treating certain forms of epilepsy and delirium, and referred to claims for the benefits of its administration for malignant hyperthermia, neuroleptic malignant syndrome, schizophreniform, typhoid catatonia, extrapyramidal disorders, neurosyphilis, pellagra, pernicious anaemia, Alzheimer's disease, Pick's disease, rheumatoid arthritis, multiple sclerosis, systemic lupus erythematosus, narcotics addiction, non-insulin-dependent diabetes mellitus, chronic pain syndrome and hysterical conversion. However, they expressed serious reservations about its utility in the treatment of anorexia nervosa and the neuroses.⁷⁶ A 1996 study by Sobin et al⁷⁷ has highlighted the

remaining controversies about the effectiveness of the treatment in the modern arena. They contended that, contrary to previous research, ECT is also effective for depression subtypes and depressed

⁷⁴ RANZCP Memorandum #12, *op cit* n 1.

⁷⁵ *Ibid*.

⁷⁶ Kilegh, *op cit* n 18, p 242ff.

⁷⁷ C Sobin, J Prudic, D P Devenand, M S Nobler and H Sackeim, "Who Responds to Electroconvulsive Therapy? Comparison of Effective and Ineffective Forms of Treatment" (1996) 169 *British Journal of Psychiatry* 322.

many clinics were short of staff because some consultant anaesthetists expected nurses to be seconded to separate units for additional training in other areas of nursing such as intensive care. In several clinics there was unseemly haste in getting patients back to the wards without enough time for them to sleep or to rest quietly after ECT. Space was at a premium at some of the clinics and practices were less than satisfactory at about a quarter of them. None, however, were as unsatisfactory as they had been in 1981.

The 1981 survey had recommended replacement of a large number of obsolete ECT devices. This occurred in many but Pippard still had major criticisms of the way in which the ECT apparatus was used in 1991. It was often given under mistaken belief that induction of a generalised seizure was all that was needed and the actual stimulus administered was unimportant. Nearly all clinics surveyed by Pippard used standard stimulus-dosage but the level differed fourfold among them. He noted:

"Few operators appear to understand what the apparatus does or what the settings mean and tend to use it in a rigid way. There is little grasp of the concept that there is a 'trade-off' between the extent of cognitive impairment and the efficacy and speed of recovery with ECT, which is related to the electrical stimulus used: too low a stimulus and treatment is less effective and slower; too high and cognitive impairment increases."⁹¹

Pippard noted Sackeim's findings that there is good evidence that the critical variable is the individual patient's seizure threshold; that stimulus which will just induce a generalised seizure.⁹² This varies up to fortyfold among patients and tends to be higher in men, at older ages, as a course of treatment continues and because of other factors, including drugs used concomitantly or in anaesthesia. To be effective, the stimulus needs to be moderately above threshold, perhaps double:

"The determination of threshold levels empirically is possible and is increasingly being done routinely in clinics in the United States but is beyond the capability of clinics here as they

inadequately trained psychiatrists and outmoded apparatus. An effect was that ECT was often given on too low a setting, resulting in seizures that were not therapeutic.⁸⁸

Instead of the full audit Pippard wanted, he was able to undertake only a limited audit in 1992 in two National Health Service (NHS) regions. Between February and May 1991 he visited 35 NHS hospitals and five private units in the two regions. In 1989 the College booklet on *The Practical Administration of ECT* had been published. It incorporated the advice of the 1977 College Guidelines. Pippard and Ellum had used these as the standard for their 1981 survey and Pippard used similar criteria to rate aspects of practice in 1992, comparing them with the 1981 findings. Again the findings were disturbing.

Pippard documented that the settings in which ECT was being carried out had improved. In 1991 nearly all settings had separate waiting, treatment and recovery rooms, sometimes of a very high standard, but three large hospitals had not achieved this and equipment had to be moved from bed to bed with insufficient privacy or shielding from noise.⁸⁹ In general terms 80 per cent of administrations of ECT were "excellent" or "reasonably satisfactory" compared with 50 per cent in 1980. All of the clinics he visited in 1981 were well supplied with essential anaesthetic, resuscitation and other equipment.⁹⁰ By 1991 anaesthetic practice had made great progress and high standards of care were expected of anaesthetists.

Responsibility for the anaesthetic service still rested with the consultant anaesthetist and half of all clinics were served by a consultant or senior associate anaesthetist on at least one day a week. The consultant psychiatrist in charge of the clinic was responsible for ensuring that the service provided was satisfactory but this was not achieved in a quarter of the hospitals surveyed. Pippard noted unsatisfactory rotation arrangements of medical staff which meant that one of a dozen or more doctors administering ECT had little experience of it.

Pippard observed nursing administration of ECT clinics was generally "good" or "excellent", as was patient care in 75 per cent of clinics. However,

Position Statement of the Royal College of Psychiatrists. Pippard and Ellum arrived at deeply troubling conclusions. They found ECT was being given in many clinics in a degrading and frightening way, with little consideration for patients' feelings, by bored and uninterested staff, with obsolete machines, operated by ignorant or uncaring psychiatrists.⁸⁵

The *Lancet* responded to the findings of the Pippard and Ellum survey by sharply criticising not the treatment but by psychiatrists for their careless use of ECT. The editorial admonished:

"Every British psychiatrist should read this report and feel ashamed and worried about the state of British psychiatry. If ECT is ever legislated against or falls into disuse it will not be because it is an ineffective or dangerous treatment; it will be because psychiatrists failed to supervise and monitor its use adequately. It is not ECT which has brought psychiatry into disrepute. Psychiatry has done just that for ECT."⁸⁶

In 1992, Pippard followed up on the audit work he and Ellum had completed in 1980 and published in 1981.⁸⁷ In 1989 he had tried to alert psychiatrists to important research on ECT from the United States and to the persistence of outdated habits of practice. The hope had been that, following the 1981 report, a follow-up survey could be carried out within five years to determine whether ECT practices had improved. Funding was unavailable for such follow-up because College requests were repeatedly turned down by the Department of Health and Social Services.

Pippard, as a Mental Health Act Commissioner and a Second Opinion Appointed Doctor, had observed that some hospital patients were not receiving effective ECT and would therefore not be improving. He had also observed that many consultant psychiatrists assumed their patients had been adequately treated simply because they had had a course of seizures. However, many patients were not receiving adequate treatment because of

patients with delusions and/or retardation.⁷⁸ A study by Small et al, which is cited in the RANZCP Guidelines, argues that ECT is as effective as lithium in the treatment of mania.⁷⁹ The Guidelines warn, however, that ECT should be reserved for those severely disturbed patients unresponsive to pharmacological treatment or for whom these treatments are contra-indicated.⁸⁰ ECT is also used in what have become, since the introduction of modern antipsychotic medication, rare cases of catatonic stupor and in the severe depression experienced by some patients with schizophrenia.

Clinical audits

The safety of ECT technology has been an issue since the introduction of the technique. The inadequacy of ECT machines was criticised by Davies et al in 1971⁸¹ and lack of maintenance by Lambourn and Murrills in 1978.⁸² In the United Kingdom the use of ECT came under intense scrutiny following allegations from Crow and others that psychiatrists knew too little about the mechanism of ECT.⁸³ A distinction was made between "real" ECT and "sham" ECT. Palmer was able to show that "real" ECT was an effective treatment.⁸⁴ However, the considerable variations in the use of ECT aroused deep concerns during the 1970s which culminated in the Royal College of Psychiatrists sponsoring a clinical audit conducted by Pippard and Ellum in 1981.

The audit revealed serious deficiencies in the administration of ECT. When premises, equipment, anaesthetists, psychiatrists, nurses and overall patient care were rated, fewer than 50 per cent of clinics met the minimum criteria set down in the

⁷⁸ Fink, op cit n 3, p 47.
⁷⁹ RANZCP Memorandum #12, op cit n 1, 3-1; J G Small, H Klepper, H Kellams et al, "Electroconvulsive Treatment Compared With Lithium in the Management of Manic States" (1988) 45 *Archives of General Psychiatry* 727.
⁸⁰ RANZCP Memorandum #12, op cit n 1, 3-1.
⁸¹ R C Davies et al, "Electroconvulsive Therapy Instruments: Should They be Re-evaluated?" (1971) 25 *Archives of General Psychiatry* 97.
⁸² J Lambourn and A Murrills, "Actual Practice of ECT in a Health Region of Britain" (1978) 133 *British Journal of Psychiatry* 520.
⁸³ T J Crow, "The Scientific Status of Electro-convulsive Therapy" (1979) 9 *Psychological Medicine* 401; see also M Fink, *Book Review of The ECT Handbook* in (1996) 12 (2) *Convulsive Therapy* 126 at 127-130.
⁸⁴ R L Palmer, *Electroconvulsive Therapy: An Appraisal* (Oxford University Press, 1981), p 316.

⁸⁵ Psychiatrists often worked like mechanics performing ECT after ECT for long hours: personal communication to the authors by Australian psychiatrist Dr Tom Murray. Dr Murray said he had felt more like a mechanic than a doctor.
⁸⁶ Editorial, "ECT in Britain; Shameful State of Affairs" (1981) 2 *The Lancet* 1207-1208.
⁸⁷ J Pippard, "Auditing the Administration of ECT" (1992) 16 *Psychiatric Bulletin* 59.

⁸⁸ Ibid at 59.
⁸⁹ Ibid.
⁹⁰ Ibid at 60.

⁹¹ Pippard, op cit n 87, at 60.
⁹² Ibid; H A Sackeim, D P Devanand, J Prudic, "Stimulus Intensity, Seizure Threshold and Seizure Duration: Impact on the Efficacy and Safety of Electroconvulsive Therapy" (1991) 14 *Psychiatric Clinics of North America* 803.

are at present organised, and with their present apparatus.⁹³

Dykes and Scott in 1998 considered the threshold seizure level in bilateral ECT, noting that the extent to which the electrical dose exceeds the seizure threshold is an important determinant of the efficacy of ECT.⁹⁴ Seizure thresholds had not been previously evaluated using an ECT machine made in the United Kingdom, so they studied ECT given to 100 patients bilaterally using Electron Series 5A machines. They found men and women under 30 years of age had low thresholds and men of 60 years or more had high thresholds.⁹⁵ Seizure thresholds varied at least threefold among other groups, suggesting empirical titration may be desirable for most patients treated by bilateral ECT. Noting that the most recent College Guidelines recommended the electrical dose be adjusted for each patient to take into account the variation in seizure threshold (a technique called "stimulus dosing"), they described the two approaches.⁹⁶

One was the empirical measurement of the seizure threshold by a technique called "dose titration". The other was the routine administration of a predetermined dose, dependent on the laterality of treatment and the age and the gender of the patient. Dose titration was recommended by the Royal College of Psychiatrists in 1995. The latter approach was more straightforward but its main disadvantage was the paucity of data to guide practice. Dykes and Scott recommended further research, especially on young women who may have very low thresholds. Case reports indicated that elderly men had very high seizure thresholds and this was confirmed in Dykes and Scott's study. Their findings concern only the initial seizure threshold which, they say, is likely to rise by an average of 80 per cent over a course of ECT because of the anti-convulsant effect of repeated ECT which was also reported by Sackeim et al in 1991.⁹⁷

Dykes and Scott's findings confirm the importance of new ECT machines able to deliver a

smaller dose than the earlier machines. They note that debate continues about the relative merits of the two approaches to stimulus dosing (empirical measurement versus a predetermined dose) and their findings do not suggest that age and gender alone can be used reliably to estimate the initial seizure threshold for all patients:

"While all patients under 30 years of age had a low seizure threshold and the elderly men all had a high seizure threshold, initial seizure threshold varied by more than threefold among the other patient groups who made up more than 80% of the total sample."⁹⁸

Their findings suggest empirical titration of the seizure threshold may be desirable for most patients treated by bilateral ECT.

Pippard concluded in 1992 that it would require great changes in practice and newly designed equipment if empirical determination of threshold or even intelligent estimation of likely threshold were to be used properly.⁹⁹ He recommended much closer clinical observation of patients after each administration of ECT and more involvement by consultants in the process of treatment in the clinic if optimal results were to be achieved. He also concluded that the full potential even of existing apparatus was not being used. There was no consistency in policies for restimulating if no seizure occurred or if a seizure was too short. There was no agreement about what constituted short seizures and no clear conception of their possible significance. Although seizures were routinely timed in most clinics, and the times recorded, little or no use was made of the information. He concluded:

"In most clinics the operators lack the knowledge and training which would enable ECT to be given by other than rule-of-thumb."¹⁰⁰

In 1991 Pippard continued to be critical of the availability of trained personnel for ECT administration. While it was accepted that each clinic should have a nominated consultant psychiatrist responsible for the ECT clinic, and for training of junior staff, most of the clinics had nominated consultants but few seemed actively involved in the treatments. Many had not administered ECT themselves because they were

⁹³ Dykes and Scott, op cit n 94, at 299.

⁹⁴ Pippard, op cit n 87, at 60.

⁹⁵ Ibid at 68.

overcommitted to other important work and could not give ECT the attention it merited. Pippard found only four consultants were often in their clinics and seven more took part in training, typically one session with new doctors to show them how to use the particular apparatus. In 18 clinics the consultant was rarely seen and training was delegated to a junior doctor.

Pippard criticised the policy that doctors should give ECT to their own patients, regardless of how much training or experience they had of the treatment. He found it unacceptable that over half of the doctors rated no more than "mediocre" in ECT administration and in no clinic was the training adequate or the rotation system such as to inspire confidence. He wrote:

"All the criticisms made of psychiatric practice in 1981 apply equally today. It is not, therefore, surprising that I would personally have had considerable reservations about accepting ECT, had I needed it, in about half of all clinics in which ECT is administered."¹⁰¹

Pippard also inquired into education for ECT other than the practical training. He noted the then recent publication of the American Psychiatric Association Task Force Report which included recommendations for training and found no hospital he visited in the United Kingdom came anywhere near fulfilling the requirements recommended by that report.¹⁰² He had strong criticisms about the lack of teaching and education for ECT in the United Kingdom and recommended further audits. Some of the hospitals had upgraded the premises in which ECT was administered and provided the appropriate equipment for anaesthesia and safe care of patients but much more training and supervision was required of both anaesthesia and other aspects of the administration of ECT. The rotation system meant that sometimes inadequately trained anaesthetists were used.

Pippard found nursing administration and the nursing care of patients were generally good. Indeed, in many clinics nurses were much more enthusiastic about their work and eager for knowledge than were the doctors:

¹⁰¹ Ibid at 61.

¹⁰² Ibid; American Psychiatric Association, *The Practice of Electroconvulsive Therapy. Recommendations for Treatment, Training and Privileging* (APA, Washington, DC, 1999).

"For professionals who regard ECT as an essential method of treatment, even when they differ about how frequently it is indicated, psychiatrists have been regrettably neglectful of its practice and are certainly not getting the most benefit from it for their patients. All psychiatrists need more understanding of ECT and of its practical administration than is now apparent but it is surely not necessary for all to be involved in rota for its administration, ostensibly as part of training, but, in reality, more as a convenient and customary way of getting it done. ECT requires more of the psychiatrist than just pushing a button."¹⁰³

It had been suggested to Pippard that it would be more appropriate for specially trained nurses to take over the ECT administration than to have uninterested doctors doing it. Nurses would then teach the doctors and others good practice. Anaesthetists, it was suggested, could continue to be responsible for the unconscious patients. Pippard considered well-trained nurses would certainly administer ECT more satisfactorily than inadequately trained doctors and noted nurses' frustration by psychiatrists' failure to take ECT more seriously. The suggestion for nurses to take over would also have relieved those doctors who found ECT administration a "burdensome duty". Pippard decided, however, that the failure to take ECT seriously had to be faced up to by doctors. He concluded, with some reluctance, that the administration of ECT should not be handed over to nurses, but argued that psychiatrists needed to make changes in their training and practice and ECT should be given by regular, trained and experienced teams of nurses, anaesthetists and psychiatrists. All involved in ECT, including the consultant in charge, should be trained for it. His final conclusion was:

"I am convinced that although we do not always agree about when ECT should be prescribed, it remains an important, even essential treatment and few psychiatrists would say that it should never be used. We must ensure that it is given properly."¹⁰⁴

In their 1998 study of ECT therapy practice in northwest England, Benbow, Trench and Darvill found there had been little change in clinical practice since Pippard and Ellam's national

¹⁰³ Pippard, op cit n 87, at 61.

¹⁰⁴ Ibid.

survey.¹⁰⁵ Benbow et al's research examined details of the position held by those answering the survey, their opinion of ECT and its appropriateness in various psychiatric conditions, investigations carried out prior to ECT, ECT practice, and contra-indications to ECT.¹⁰⁶ They sent 146 questionnaires to consultant psychiatrists in hospitals in the northwest region and received 122 replies, a response rate of 82.9 per cent. One per cent of their respondents stated they never used ECT, 3 per cent were generally opposed to the treatment, 1 per cent had no opinion on ECT and 93 per cent were in favour of ECT for appropriate patients. (Pippard and Ellum had reported a corresponding figure of 83 per cent.) Two per cent did not indicate their view. The three conditions listed as appropriate for ECT were depressive psychosis, schizoaffective disorder and depression with dementia. ECT was considered the treatment of choice for depressive disorder unresponsive to antidepressant drugs by 53 per cent of the respondents; depressive illness responsive in the past to ECT but not to drugs by 85 per cent; psychotic depressive illness by 61 per cent; depressive illness with severe agitation by 52 per cent; depressive illness with high suicidal risk by 67 per cent; and depressive illness with refusal to eat or drink by 89 per cent.¹⁰⁷ Fifty-seven per cent of the respondents stated they would usually use bilateral ECT, 22 per cent unilateral treatment and 16 per cent expressed no preference. Twice weekly treatment was usual (88 per cent of respondents).

The respondents were asked to state which conditions they considered to be absolute or relative contra-indications to ECT.¹⁰⁸ These were mainly physical medical problems such as cardiovascular difficulties. Benbow et al concluded:

"Practice may change in future in response to the new document and the recent program of continuing professional education relating to the use of ECT carried out by the College. Since ECT remains an emotive treatment, it is important that we continue to strive towards best ECT practice throughout the UK."¹⁰⁹

The motivation for best practice should always be to

¹⁰⁵ S Benbow, D Tench, S Davvill, "Electroconvulsive Therapy Practice in North-west England" (1998) 22 *Psychiatric Bulletin* 226.

¹⁰⁶ *Ibid* at 226.

¹⁰⁷ *Ibid* at 227.

¹⁰⁸ *Ibid*, —

¹⁰⁹ *Ibid* at 228.

provide better care rather than because a treatment may cause anxiety amongst members of the general community. Subsequent studies have indicated that Benbow et al's hopes that the College Guidelines and improved training might improve ECT administration were not realised and it is in the areas of training and supervision to ensure quality improvements that the real challenges remain.

Barnes and Kingsley in 1998 published an article on practical training in the administration of ECT.¹¹⁰ They noted the wide use of ECT in Britain and that in most cases ECT was administered by junior doctors, many of whom were inexperienced. They argued that the variety of machinery available made acquisition of experience difficult.¹¹¹ Concerns had been raised about the poor standards of training by Henderson et al in 1993¹¹² and again by Robertson et al in 1997. Barnes and Kingsley observed that, even in units where good training was provided in the theory of ECT, the practical administration training was learned on patients.¹¹³ This, they asserted, should be supervised by an experienced consultant but often is not.¹¹⁴ They concluded:

"If ECT is to remain a useful treatment option for severe depression and other psychiatric disorders, trainees must be able to administer it correctly. In order to manage this, trainees need to be fully confident with the equipment they have to use, a confidence which only comes with practice."¹¹⁵

They noted the variations in training practices which have been revealed by various surveys. For instance, Robertson et al in 1997 found that 90 per cent of clinics in Scotland had an ECT Lecture Induction Course, but only 74 per cent provided supervision for trainees giving their first treatment.¹¹⁶

¹¹⁰ R Barnes and D Kingsley, "Practical Training in the Administration of ECT" (1998) 22 *Psychiatric Bulletin* 633.

¹¹¹ *Ibid* at 633.

¹¹² T Henderson, M J Anderson and C R Starks, *Administration of Electroconvulsive Therapy in Great Britain* (Gaskell, London, 1980); C Robertson, C P L Freeman, G Ferguson, "ECT in Scotland" (1997) 21 *Psychiatric Bulletin* 699.

¹¹³ Barnes and Kingsley, *op cit* n 110, at 633.

¹¹⁴ A Scott, "Training and Supervision" in C A Freeman (ed), *The ECT Handbook* (Royal College of Psychiatrists, London, 1995), p 94.

¹¹⁵ Barnes and Kingsley, *op cit* n 110, at 634.

¹¹⁶ *Ibid*; R H Lahtey, *Electroconvulsive Therapy in the Republic of Ireland* (Galway University Press, Galway, 1982), p 62.

There have been very few audits of ECT in Australia but there is some evidence of similar deficiencies in this country to those revealed by Pippard and Ellum. During the early 1980s, while attempting to standardise the practice of ECT, and in developing a Position Statement, the RANZCP canvassed a wide range of practitioners throughout Australia. The responses it received indicated similar problems existed in Australia as in the United Kingdom. However, the results have never been published and the following findings are taken from the original research documents. There was considerable variance in all areas associated with the use of ECT. It was hoped that, as a result of the survey and the subsequent Position Statement, the body of College members would recognise the need for a total review of ECT practice and the educational requirements of those working in this area. In Victoria the surveyors approached 19 hospitals, only 10 of which responded. Seven of the hospital respondents rated their own ECT procedures according to the categories used by Pippard and Ellum. At three of the hospitals ECT machines were 8 to 10 years old and were not serviced regularly. Only four of the hospitals rated their resuscitation equipment as satisfactory. Only three rated the premises for administering ECT as satisfactory.

While the machinery in Australia was not as archaic and obsolete as that in Britain, problems occurred because of the lack of regular maintenance. ECT was routinely given by untrained and inexperienced medical staff and only rarely by a consultant psychiatrist. One unit did not have the regular services of an anaesthetist. The surveyors found that treatment was often given in an environment psychologically unsuited to the procedure — an environment unfamiliar to the patient and remote from the wards.

The unpublished 1980s RANZCP survey found, however, that there was considerable conflict in the area of unilateral versus bilateral treatment. In the United Kingdom, Pippard and Ellum in 1981 found that 80 per cent of United Kingdom hospitals did not use unilateral ECT but this figure was much less in Australia. The need for education was also apparent from the responses received by the RANZCP survey. Areas of difficulty included diagnostic indicators for treatment, waveform, time passage of current, current strength, frequency of treatment, and anaesthetic drugs.

Guidelines for the use of ECT were published in Victoria in 1991 and updated and revised in 2000. In 1995 legislative changes required all services in Victoria performing ECT to be licensed.¹¹⁷ While some other Australian jurisdictions have tighter appeal and review mechanisms for ECT for involuntary patients, Victoria has now the strictest licensing regime. All public facilities have been provided with new United States-built machines which have the capacity to take EEGs during the procedure. This allows immediate evidence of a convulsion having occurred, making it less likely that a second will be performed "just to be sure". Previously, the presence of the convulsion could only be detected by observation, usually of hand movements. If there was any doubt a convulsion had occurred, the procedure was likely to be repeated, making the unwanted effects more likely.

In 1995 private facilities in Victoria were given until 30 June 1997 to purchase new machines, this being made a condition of their licences. Since then, all have updated their equipment. All services were subsequently inspected to ensure they met the requirements of the legislation. Only time and subsequent audits will reveal whether the new machinery has improved quality in ECT services.

The importance of the audit cycle

The audit process has been important in mapping deficiencies in the administration of ECT in the United Kingdom. In 1996 Childs and Edwards noted:

"Most published reports on psychiatric audit have been based on surveys of current practice. Such surveys are important, but they are only points of entry into audit cycles; to demonstrate that audit has contributed to an improvement in clinical practice it is necessary to complete the cycle."¹¹⁸

They questioned the "invalid assumption" that, if an audit is carried out, there will be an automatic improvement in clinical practice. Such improvement, they asserted, does not necessarily occur and they presented the results of audited ECT documentation which did not lead to improved practice.¹¹⁹ They usefully pointed out that the audit

¹¹⁷ *Mental Health Act 1987* (Vic), ss 74 and 75.

¹¹⁸ P Childs and J G Edwards, "Failure to Produce Improvement in ECT Documentation" (1996) 20 *Psychiatric Bulletin* 422.

¹¹⁹ *Ibid* at 422.

itself needs to be well structured, and the reasons for failure to improve practices need to be documented and addressed.

Childs and Edwards' study was one of a series of audit exercises in which all medical staff in their unit at the Royal South Hampshire Hospital in Southampton participated. Pippard and Eilam had demonstrated that the administration of ECT often failed to meet agreed standards. Childs and Edwards concentrated on a survey of an ECT documentation regime which aimed to help correct deficiencies. The results of their first study were presented in one of their regular audit meetings where all psychiatrists were circulated with a written summary of the deficiencies previously identified. Childs and Edwards then attempted to collect information on a structured data collection sheet designed specifically for the purpose. It tabulated information on all patients who had received ECT during a six-month interval. The data should have been routinely recorded by trainee psychiatrists on an ECT form as well as in patients' medical records.

The records of 50 patients were assessed. Childs and Edwards had expected that agreed standards of practice, observations of the extent to which they were being met, pointing out deficiencies to colleagues and repeating the observations (in other words, completing the audit cycle), would lead to improvement. However, this was not the case.¹²⁰ Indeed, in some areas there was a decline in performance. Documented information on the reasons for beginning and ceasing ECT and the results of physical examination were worse, although there was an improvement in the recording of the response of patients to ECT. Childs and Edwards sought reasons for "these disappointing results". They speculated that perhaps the importance of documentation for both clinical and medico-legal reasons and the previous audit findings were not emphasised as much as they should have been. A more likely explanation was that, when working under pressure, and dealing with more urgent clinical matters, documentation takes second place or is forgotten. A third possibility was results were more efficient induction procedures for new trainees and more intense supervision by consultants or senior registrars, as had been

¹²⁰ Ibid at 423.

recommended by the Royal College of Psychiatrists in 1989 and 1995.¹²¹

The administration and outcomes of ECT were the subject of a retrospective study over two successive periods of 12 months by Trezise and Conlon in 1997.¹²² The studies were conducted before and after replacement of the Ectron Series 5 ECT machines by a Thymatron DGx. It was found that the Thymatron enabled the same outcome of ECT to be achieved while administering significantly fewer treatments per patient.¹²³

Trezise and Conlon noted that in July 1994 the Ectron Series 5 ECT machine in their unit was replaced by a Thymatron DGx. The Series 5 had been recognised by the Royal College of Psychiatrists in 1995 to be underpowered with a maximum output of 400 mC as compared with 1008 mC for the Thymatron and was no longer recommended for routine use. Trezise and Conlon had become concerned about the number of patients in whom they were unable to induce seizures of adequate therapeutic length when using Series 5 and had therefore decided to upgrade their equipment in line with the recommendation of the Royal College. The introduction of the new machines required increased consultant supervision of ECT sessions and training of medical and ancillary staff. This prompted Trezise and Conlon to examine their standards of ECT practice and study the effects of change in the machinery and of consequently increased supervision.

The study was a retrospective analysis of case notes for all patients receiving ECT during the previous year and the year after the change of machinery. This involved 64 and 60 patients respectively from a catchment area of 310,000. Their information came from case notes and included discussion with colleagues and records kept by the ECT clinic staff. They recorded for each patient: name, date of birth, gender, unit number, consultant, legal status requiring treatment, in-patient or out-patient status, diagnosis, number of treatments received, range of motor fit length, range of energy setting used, medication during treatment and outcome. Diagnoses were ascertained from the notes and discharge summaries and were divided

¹²¹ Ibid

¹²² K. Trezise and B. Conlon, "Effects of Change of Practice of Electroconvulsive Therapy Over a 2 Year Period" (1997) 21 *Psychiatric Bulletin* 10.

¹²³ Ibid at 10.

into severe depressive disorder with or without psychotic symptoms, depressive disorders with an additional diagnosis (cerebrovascular disease), dementia, anxiety disorder, personality disorder and schizophrenia, and diagnosis other than depression (schizophrenia, manic episode, schizoaffective disorder, mixed affective episode and alcohol-induced dementia). Outcomes were defined as "recovered", "improved", or "no change". There were no patients who had been made worse by treatment. These results were determined by the completion of treatment by studying the medical records and discharge summaries as before. Medication was also examined.¹²⁴

Trezise and Conlon's study found no significant difference between the groups in terms of gender and age, in-patient or out-patient status or legal status during treatment. Three-quarters of patients in each group had a diagnosis of a depressive disorder, and the proportions in the other two diagnostic categories were not significantly different. The outcomes for the two groups were virtually identical. For both treatment groups 89 per cent of patients were either recovered or improved, the remaining 11 per cent being unchanged. Medication received by the patients during treatment was similar for the two groups with the marked exception of antidepressants. Medication was classified into major tranquillisers, tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs) other antidepressants, minor tranquillisers, lithium, carbamazepine, and any other drugs. Similar proportions in each group were receiving antidepressant medication but for category one the majority of these were the TCAs whereas for group two a significantly greater proportion of patients were prescribed SSRIs. There was no significant difference between the numbers of each group receiving any other type of medication.¹²⁵

The overall rate of complications for the first treatment group was 15 per cent (six patients with confusion or persistent memory loss, and three who became hypomanic). The corresponding figure for the second group was 10 per cent (six patients with confusion or memory loss). Of the group treated with the Ectron Series 5, 12 patients (19 per cent) had persistently short fits. Of these, half were

¹²⁴ Ibid at 21.

¹²⁵ Ibid at 10.

treated at the maximum energy setting of the machine for the group treated with the newer Thymatron machine. Only one had fits that were persistently short.¹²⁶ The authors noted:

"Unfortunately, however, this is not a strictly accurate comparison, as the method of timing the motor fits was altered slightly between the two groups."

Nonetheless, the patients treated with the newer machine received significantly fewer treatments per course of ECT. The mean number of treatments received by patients in group one was 6.78 and for patients in group two the corresponding figure was 5.58, a difference of 1.2 treatments per course.

Trezise and Conlon acknowledged a limitation of this study because diagnoses were not operationally defined.¹²⁷ It was not possible to be certain the two groups were directly comparable in terms of severity of illness. Also, for a period of 11 weeks during the second half of the study, methohexitone sodium for induction of anaesthesia became unavailable.¹²⁸ During this time Propofol was used instead. Propofol has been known to reduce fit lengths when used for ECT, and is therefore not recommended for this purpose.¹²⁹ Trezise and Conlon noted that for their patients, of whom nine were affected, outcome on average numbers of treatments received did not appear to differ significantly from the figures for the whole group.¹³⁰

The main finding was that, while using the newer machines, psychiatrists were able to achieve the same results in terms of treatment outcomes although giving significantly fewer treatments per patient.¹³¹ The explanations for this were that possible changes in antidepressant prescribing might have made a difference between the two groups of patients as it is known that both TCAs and SSRIs reduce fit thresholds. The authors acknowledged that these effects are complex and

¹²⁶ Ibid at 11.

¹²⁷ Ibid at 11.

¹²⁸ Methohexitone was the drug of choice for anaesthesia in ECT but in 1999 Eli Lilly indicated it would disappear from the market because of difficulties in finding a manufacturer. See C. Freeman, "Anaesthesia for Electroconvulsive Therapy. Statement from the Royal College of Psychiatrists' Special Committee for Electroconvulsive Therapy" (1999) 23 *Psychiatric Bulletin* 740.

¹²⁹ Ibid at 740.

¹³⁰ Trezise and Conlon, op cit n 122, at 11.

¹³¹ Ibid at 12.

"[I]f, as seems likely, degree of supervision as well as formal teaching has an effect on confidence and competence then it has important implications for the well-being of patients and the professional development of the trainee psychiatrist. The 'see one, do one, teach one' culture is beginning to be replaced by more organised teaching."¹³⁸

Hillam et al recommended that proposals to adopt more rigorous tuition of ECT along United States lines should be considered if psychiatry was to ensure its most widely prescribed practical procedure was carried out effectively. They also believed that audit of ECT practice, and particularly of the competence of those administering it, should be the priority of every Mental Health Unit, as should regular and continuing supervision and tuition of trainees by an appropriate senior psychiatrist.¹³⁹

The experience of junior doctors' training in the theory and practice of ECT was also researched by Duffett and Lelliott in 1997.¹⁴⁰ Noting that recent advances in knowledge about effective administration of ECT had placed great emphasis on the importance of good training and supervision of those administering it, Duffett and Lelliott reported that the American Psychiatric Association required doctors to be specially accredited before being allowed to give ECT.¹⁴¹ In England and Wales training was much more informal and ECT was often given by junior doctors. Doctors rostered to administer ECT in Wales and in two areas of England were surveyed by Duffett and Lelliott as part of the College's third audit of ECT. About two-thirds of respondents were senior house officer level and the training of ECT appeared to be of a variable quality with a half not being supervised by an experienced psychiatrist on the first occasion they administered ECT. Responses to examination-type questions revealed that 45 per cent lacked knowledge of one or more basic issues related to effective administration of ECT.¹⁴² Duffett and

¹³⁸ Op cit n 133, at 219.

¹³⁹ Ibid.

¹⁴⁰ R Duffett and P Lelliott, "Junior Doctors' Training in the Theory and Practice of Electroconvulsive Therapy" (1997) 21 *Psychiatric Bulletin* 563. See also R Duffett, D R Seigert and P Lelliott, "Electroconvulsive Therapy in Wales" (1999) 23 *Psychiatric Bulletin* 597.

¹⁴¹ Op cit n 140, at 563.

¹⁴² Ibid at 564.

the theoretical teaching was inadequate and four stated that practical instruction was inadequate. Three also admitted to lack of confidence in the procedure itself.

The Hillam et al survey had two main aims, the first being to identify levels of supervision and adequacy of training and trainees' attitudes and confidence in giving ECT. The second aim was to compare the then situation with that prevailing five years earlier. Formal teaching sessions on the theory of ECT had been implemented in the interim as part of the trainees' induction course. The authors warned that their study involved only small numbers and that statistical analysis should be considered accordingly. They found some improvements in the training of ECT administration since the initial survey, at least so far as the trainees themselves were concerned. Overall, a higher proportion had been supervised by a more senior doctor and more reported practical training was at least adequate. Trainees were more satisfied with the theoretical tuition received and there was a significant increase in levels of confidence. However, this was high in both surveys and is a poor indicator of actual competence. Evaluation of competence of administration of ECT was outside the scope of this research.¹³⁶

Hillam et al concluded too many trainees were being supervised by their peers rather than by more senior psychiatrists and the extent of even this level of supervision was limited. Their findings were similar to those from other units and training rotations but fell short of the recommendations of the Royal College of Psychiatrists in 1989 that "all trainees should have the opportunity of seeing ECT administered on several occasions by an experienced operator".¹³⁷ The authors criticised the College Guidelines because the 1995 version omitted the above recommendation and, although suggestions for supervision received greater emphasis, the Guidelines remained sparse and open to interpretation in this regard. They concluded:

¹³⁶ Ibid at 219.

¹³⁷ A J Hill-Smith and M S Lee, "ECT - Current Practical Administration" (1992) 16 *Psychiatric Bulletin* 269 at 271; N Ramsay and M A Phillips, "Training and Supervision of Electro-convulsive Therapy" (1993) 17 *Psychiatric Bulletin* 716; T Henderson, M J Anderson and C R Stank, "Administration of Electro-convulsive Therapy: Training, Practice and Attitudes" (1993) 17 *Psychiatric Bulletin* 154.

supervision and tuition. Hillam et al compared the results of two surveys five years apart exploring levels of supervision, satisfaction with training and confidence in the procedure of training psychiatrists at the Royal Free Hospital Scheme.¹³⁴ They found continuing problems with supervision and emphasised the need for organised ongoing training. Their study involved contacting trainees by telephone and conducting interviews using a structured questionnaire. The aim was to determine the extent and adequacy of trainee supervision and theoretical instruction. They also explored the more subjective variables of competence in giving ECT and of experience of distress experienced by the person giving ECT. The questionnaire was designed to allow comparisons with the results of a previous survey of Royal Free trainees undertaken five years previously. At the time of the first study there was no formalised teaching of ECT, and a substantial proportion (over one-fifth) had admitted to distress or unease when giving ECT.

The number of questionnaires returned in 1990 was 51 from a total of 55 trainees compared with 34 from 46 trainees in 1995.¹³⁵ In the 1995 survey all but six trainees had administered ECT, mostly within the last year, and the majority reported having given more than five treatments. All had been supervised on the first occasion although in most cases (54 per cent) this was by a fellow trainee and only one had observed or had been supervised for more than three treatments. This represented some improvement. However, as in 1990, 16 per cent were unsupervised on the first occasion, and a further 7 per cent were supervised by the nurse or anaesthetist. There was an increased number of trainees reporting their practical instruction as at least adequate (71 per cent as compared with 62 per cent). Perceived adequacy of theoretical instruction was also higher in the 1995 sample with 75 per cent as compared with 47 per cent in 1990. Most trainees were confident in their ability to administer ECT, 86 per cent in 1995 and 80 per cent in 1990, but a substantial proportion (over one-fifth in both surveys) also admitted to distress or unease when giving ECT. In the 1990 survey, confidence was associated with degree of supervision received and inversely related to distress experienced. Of the nine who reported distress in the 1995 survey, three felt

¹³⁴ Ibid at 217.

¹³⁵ Ibid at 218.

variable and it is difficult to reach conclusions about the effects of altering prescribing practice in their results. The differences between the two groups, they speculated, might have been accounted for by changes in practice by one or more consultants but this did not appear to be the case as seven out of eight consultants reduced the number of treatments given by approximately one per course. The authors considered it unlikely that the consultants would have decided independently of one another to use fewer treatments during the course of the study and discounted this explanation.

Another explanation is that the Thymatron is a much more powerful machine and those patients who might not have convulsed adequately with the earlier Ectron machine for reasons of high fit threshold could have been more effectively treated with a new machine. Despite this argument, 23 patients in the second group were treated at energy settings which exceeded the maximum output of the Series 5.

The final explanation for the marked difference in the number of treatments received by the two groups was the level of supervision of the treatment sessions. For the group one patients, a total of 97 treatment sessions were attended by one of the supervising clinicians. Following introduction of the Thymatron, 91 out of 97 sessions were supervised directly by one or both doctors with a special interest in ECT. This helped to ensure that junior doctors giving treatment adjusted the energy settings on the machine in accordance with the documented response to treatment.¹³² Once again the importance of adequate supervision and training in use of the machinery is emphasised by this study. And once again this study shows the introduction of new machinery alone is insufficient to improve practice. Quality improvements require good equipment, effective training and supervision, and accurate diagnoses.

In 1997 Hillam et al noted the increasing concern that trainee psychiatrists were not receiving adequate training and were not fully competent in the administration of ECT.¹³³ This had led to the inclusion in the Guidelines of the Royal College of Psychiatrists of the recommendation to improve

¹³² Ibid.

¹³³ J Hillam, A Thompsell and R Toblansky, "Administration of ECT by Trainee Psychiatrists: An Audit of Supervision, Adequacy of Tuition and Attitudes" (1997) 21 *Psychiatric Bulletin* 507.

Lelliott noted recent research had shown the passage of an electric current just sufficient to induce a seizure may be inadequate for maximum effective therapy. The current, they wrote, should be 50 per cent or more above the seizure threshold (the minimum required to induce a seizure) for bilateral ECT and 200 per cent above in unilateral ECT.¹⁴³ The seizure threshold varies according to the patient's age, gender, medication, previous ECT treatments and other individual factors as revealed by Sackeim in 1991.¹⁴⁴ They maintained that those administering ECT needed to fully understand these findings and have adequate training in the use of appropriate equipment.

Duffett and Lelliott's work revealed, among other things, that while there was new knowledge about ECT, this was not provided to those administering it. Of the doctors who commented on their training (48), 15 praised their recent training, 23 were wholly critical and 10 had mixed views.¹⁴⁵ Duffett and Lelliott concluded that practice would not markedly improve simply in response to the latest handbook and "despite the College's recent initiatives to improve practice and 17 years of audit, ECT is still often being delivered by inadequately trained personnel". They found of particular concern

"the 45% of doctors who answered incorrectly one or more of the first three questions pertaining to the delivery of ECT which are considered by the authors to be essential knowledge for anyone administering ECT".¹⁴⁶ They also found that junior doctors in two clinics which were "genuinely consultant-led" had significantly greater knowledge. These two clinics, however, were the exception rather than the rule, with most clinics adopting the traditional British system of delegating responsibility for ECT administration to junior doctors on rotation. The authors concluded:

"Unless this system is changed it will remain difficult to assure the quality of training and supervision in ECT or to introduce a comprehensive national accreditation scheme."¹⁴⁷ Matters had not improved much by 1999. Yousaf et al re-audited ECT in 1999 over a period of five

months using the new College Guidelines.¹⁴⁸ The audit at the Sutton Hospital in London included obtaining consent from patients, training and supervision of junior doctors, and the practical aspects of ECT administration, including dose titration.¹⁴⁹ While there was some improvement in the training and supervision of junior doctors, shortcomings were identified in the areas of pre- and post-ECT preparation, information recording and correct use of stimulus-dosing policy. Yousaf et al concluded:

"Psychiatrists still need to be challenged to introduce modern ECT machines, using EEG monitors and dosing schedules to maximise treatment and minimise side effects."¹⁵⁰

Surveys of usage

In the 1940s and the 1950s convulsive therapy was a principal treatment of those with severe mental illnesses. The introduction of anti-psychotic medications in the 1950s affected the rate at which ECT was used, as well as other treatments. It was thought that the new medications would replace ECT, insulin coma and leucotomy. While the use of the latter treatments all but disappeared, the same is not the case for ECT. The frequency at which depressive conditions do not respond to antidepressants, and the time which these can take to be effective, has meant that ECT continues to be used commonly in Australia, New Zealand, Canada, the United States and the United Kingdom.

The first national survey of ECT was conducted in the United States in 1976 by the American Psychiatric Association (APA).¹⁵¹ The survey used self-reports by a randomly selected sample of 20 per cent of members of the APA and an estimated annual usage of 4.4 per 10,000 population was made. This estimate has been similar to surveys in Canada (2.99 per 10,000 in 1979), 3.53 per 10,000 in Great Britain in 1980 and 5.3 per 10,000 in Ireland in 1982. In 1987 Thompson and Blaine estimated for the United States that usage had reduced to 2.79 per 10,000 in 1975 and 1.6 per 10,000 in 1980.

¹⁴⁸ F Yousaf, M Lee and J King, "A Re-audit of ECT Training and Practice" (1999) 23 *Psychiatric Bulletin* 419.

¹⁴⁹ *Ibid* at 419.

¹⁵⁰ *Ibid* at 421.

¹⁵¹ M Fink, "Is ECT Use Decreasing?" (1987) 3 (3) *Compulsive Therapy* 171.

Disappointingly few up-to-date publicly available data exist about the extent to which ECT is used, its effectiveness and adverse sequelae following its application. This is particularly so for Australian jurisdictions. In Victoria the Department of Human Services has collected self-reported data about the number of ECT administrations. These are expected soon to be available. They will include figures on private and public, voluntary and involuntary administrations. About 1,500 Victorians now receive ECT treatments annually and the national figure is around 4,000 treatments with 80 per cent received by women. The disproportionate percentage of women is in large part attributable to the disproportionate percentage of women diagnosed as suffering from depression. Nonetheless, it is prompting disquiet in some quarters.¹⁵²

Health Insurance Commission data indicate 12,130 sessions of ECT in Australia during 1999-2000, with 3,700 sessions on 600 Victorians in the private sector alone. In New South Wales, where ECT for involuntary patients must be approved by the Mental Health Review Tribunal, some data are available. The Tribunal plans to publish them soon.

Similar deficiencies of information exist in the United Kingdom where, in the House of Lords,¹⁵³ Lord McNair (a member of the Church of Scientology) asked a question about ECT-related deaths:

"What are the recorded statistics for electroconvulsive therapy (ECT) related deaths in this country as a proportion of total annual administrations of ECT?"

Baroness Cumberlege replied:

"There has been one death registered with a mention of electroconvulsive therapy (ECT) on the death certificate since the beginning of 1993, certified by a coroner. Reliable information on the number of administrations of ECT treatment is not available centrally."

Lord McNair then asked:

"Whether there are procedures to ensure that electroconvulsive therapy (ECT) is cited as a cause or contributing factor in the death of a patient, if that patient dies of a heart attack

following the administration of ECT, or dies of other causes which could be linked to ECT, and if not, whether they have plans to implement such procedures; and whether there are procedures to record the administration of electroconvulsive therapy (ECT) in death records if a patient dies within two years of receiving this treatment, if so how many reports have been made since such recording began, and if not, whether they have plans to implement such procedures?"

Baroness Cumberlege responded by saying: "There is no procedure specific to electroconvulsive therapy (ECT) for ensuring that it is cited as a cause or contributing to the death of a patient within two years of receiving this treatment. We have no plans to implement such a procedure."

In 1999 Duffett et al assessed the frequency of ECT use in people under the age of 18 in the United Kingdom,¹⁵⁴ maintaining that particular ethical issues arise in relation to the use of the procedure on young people. They surveyed ECT clinics, private hospitals, adolescent units and United Kingdom members of the Royal College of Psychiatrists. They identified 12 young people who had been treated with ECT. Three were aged 15 years or younger and eight were female. Nine were rated as having improved following treatment with ECT. The indications for its use were the same as for adults and the authors concluded that ECT is rarely administered to young people in the United Kingdom.

A useful profile is available from Texas where from 1993 it has been mandatory for data to be compiled about the use of ECT. In a study reported in 1998¹⁵⁵ all reports of the administration of ECT between September 1993 and April 1995 were examined. There were 2,583 such reports referring to 15,240 treatments. About 6 per cent of Texas psychiatrists performed ECT during the period at some 50 hospitals. Almost all recipients were white. However, caution needs to be applied to commenting on this result because of the demographics of the State of Texas. Older age

¹⁵⁴ R Duffett, P Hill and P Lelliott, "Use of Electroconvulsive Therapy in Young People" (1999) 175 *British Journal of Psychiatry* 228.

¹⁵⁵ W H Reid, S Keller, M Leatherman and M Mason, "ECT in Texas: 19 Months of Mandatory Reporting" (1998) 59 (1) *Journal of Clinical Psychiatry* 8.

groups were disproportionately represented, as were women, 70.3 per cent of recipients being female. Almost all patients provided their own consent (99.0 per cent), including committed but consenting patients (1.5 per cent). Group data assembled from clinician reports (as against patient perceptions) indicated generally good-to-excellent responses, as measured on a five-point severity symptom scale. However, eight patients died within 14 days of a treatment, two possibly of anaesthesia complications and three others in accidents or suicide. Four were receiving maintenance treatments every second week. No death appeared to be related directly to ECT stimulus or seizure.

Clinicians were asked to estimate global memory before and after treatment using a five-point scale. In results that are not very discerning, the clinicians reported improvements in memory. They indicated that there was moderate memory dysfunction in 21 per cent of patients before treatment and in 18.3 per cent after treatment; severe memory dysfunction before treatment. The authors of the Texas profile concluded that their data disputed any suggestion that, in their jurisdiction at least, ECT was being used disproportionately amongst minority populations. They drew attention to the health risks of depressive and mood disorder illnesses, as well as to the risks of chemical treatments, arguing:

"The risks of ECT included a lower (as against antidepressant medication) potential for adverse cardiac effects and a considerably lower probability that it would be ineffectual for severe depression."¹⁵⁶

Attitudes toward ECT

Lewis¹⁵⁷ writes that the first recorded use of "electric treatment" (a battery and a generator being employed) was at the New Norfolk Asylum in Tasmania in 1851:

"The electrical treatment seems to have been used as a form of discipline as well as a means of therapy [for depression and schizophrenia-like symptoms]. Thus, a clinical entry of 1870 recorded that an 'obstinate' and 'defiant' patient

who refused to eat was 'subdued' immediately when given electric shocks."¹⁵⁸ Such uses of electro-therapy (as distinct from ECT) and their resonance with torture continue to provoke anxiety in some.

As Fink observed in 1999, "the public's images of electroshock too often reflect practices that were discarded more than forty years ago".¹⁵⁹ It is important, though, to acknowledge that the images produced by both film and emotive descriptions have proved enduring. Regardless of the evolving improvements in the effectiveness and safety of ECT, it falls into a category of treatment that induces considerable fear in many patients. The history of its usage and the adverse publicity it has attracted have contributed to these fears. Some patients have described the treatment as frightening and/or unpleasant. Some have been "won over" or used in the course of anti-psychiatry campaigns. In an early study, Pettit¹⁶⁰ found that anxiety about ECT, and also about drug therapy, does not reduce with experience, women particularly harbouring such concerns. By contrast, Kerr, McGrath, O'Kearney and Price¹⁶¹ found the patient's factor had no effect upon their fear of ECT; the factors making a difference were personal experience of ECT or a doctor's reassuring explanation of the treatment. Hillard and Folger¹⁶² too found patients tended to fear ECT less if they had experience of it. An Australian study by Spencer¹⁶³ suggested it was the wait for ECT treatment, rather than the treatment itself, that caused most distress for patients.

¹⁵⁸ See further G M Crabbe, *The History of Lachlan Park Hospital* (Govt Printer, Hobart, 1966). The use of electrical treatment for a variety of conditions is recorded periodically during the 18th and 19th centuries: see R Hunter and J Maralpine, *Three Hundred Years in Psychiatry, 1535-1860* (Carlisle Publishing Inc, Hartsdale, 1982), pp 332, 420, 506, 532, 534, 780.

¹⁵⁹ Fink, op cit n 3, p 4.

¹⁶⁰ D E Pettit, "Patients' Attitudes Toward ECT: Not the 'Shocker' We Think" (1971) 16 *Canadian Psychiatric Association Journal* 365.

¹⁶¹ R A Kerr, J J McGrath, R T O'Kearney and J Price, "Misconceptions and Attitudes" (1982) 16 *Australian and New Zealand Journal of Psychiatry* 43.

¹⁶² R J Hillard and R Folger, "Patients' Attitudes and Attributions to Electroconvulsive Shock Therapy" (1977) 33 *Journal of Clinical Psychiatry* 185.

¹⁶³ J Spencer, "Psychiatry and Convulsant Therapy" (1977) 1 *Medical Journal of Australia* 844.

Cawte has commented of the early days of ECT administration in Australia that complaints from patients were proportional to the number of treatments:

"The longer the course, the greater the complaints. And if more neurotic symptoms were mixed with the depression, there were more complaints. However, my notes show that less than 10 per cent of my patients were troubled by slowness in memory, or change in personality — less than with the tranquillisers used today."¹⁶⁴ Patients have had different perceptions of the impact that ECT has had upon their condition. Freeman and Kendell,¹⁶⁵ for instance, interviewed 106 patients who had received ECT 12 to 18 months previously, as well as 60 patients who had received ECT six years before the interview. Seventy-eight per cent of respondents said ECT had helped them a little or a lot and two-thirds said they would have ECT again if it were deemed necessary. Eighty per cent reported side-effects, 30 per cent of them maintaining that their memory had never returned to normal after the ECT. Forty-eight per cent reported headaches after the treatment.

Hughes, Barraclough and Reeve¹⁶⁶ arrived at similar results with 83 per cent of their sample reporting side-effects, most frequently headaches, drowsiness, confusion and memory loss. Forty-four per cent reported memory impairment and 18 per cent claimed it was still present at the time of interview.

In 1987 Fahy and Latey compared ECT surveys in Great Britain and Ireland and found what they described as "remarkable uniformity of opinion and practice in the selection of patients for treatment, treatment technique and clinical outcome".¹⁶⁷ Fourteen and 20 days after completion of treatment, between 75 per cent and 80 per cent of patients were as satisfied with the outcome as were their psychiatrists.¹⁶⁸ About 20 per cent of the patients

¹⁶⁴ Cawte, op cit n 54, p 75.

¹⁶⁵ C P L Freeman and R E Kendell, "ECT: Patients' Experiences of and Attitudes Toward ECT" (1980) 137 *British Journal of Psychiatry* 8.

¹⁶⁶ J Hughes, B M Barraclough and W Reeve, "Pre Patients Shocked by ECT" (1981) 74 *Journal of the Royal Society of Medicine* 283.

¹⁶⁷ T J Fahy and R H Latey, "Short Term Course and Outcome of Patients Treated with Electroconvulsive Therapy: Irish and British Surveys Compared" (1987) 3 (3) *Convulsive Therapy* 210.

¹⁶⁸ *Ibid* at 214.

disagreed with the psychiatrists about the outcome. Fahy and Latey acknowledged that both the Irish and British psychiatrists who agreed to report on outcome were themselves biased in the direction of good outcome. The psychiatrists who favored ECT the most, and who therefore ordered its administration most often, were also those who reported the best results. In the British survey over 80 per cent of the patients were treated by the 50 per cent of psychiatrists who reported more than the median of cases. The authors concluded it was likely that the psychiatrists who reported good outcomes in both surveys were among those who favored the treatment most.¹⁶⁹

Freeman and Cheshire¹⁷⁰ argued in 1986 that the question of effects needs to be kept in perspective, taking account both of the life-changing effects of ECT and that almost every procedure has an incidence of some degree of ill-effects. Moreover, they argued:

"Both the general public and ECT patients remain largely ignorant of the nature and purpose of ECT... Patients, relatives, and the lay community, in general, are therefore especially vulnerable to anti-ECT propaganda. Continued lay hostility derives from the view that the treatment is dangerous and coercive, if not punitive."¹⁷¹

Freeman and Cheshire called for further investigation into the ability of patients to give informed consent to ECT, arguing that unrealistic expectations of the benefits of ECT and fear of the consequences of the procedure have contributed to dissatisfaction with it. They championed further research to assess the quality and effect of communication between psychiatrists and patients and relatives to inform them and reassure them about ECT.¹⁷²

Westreich et al¹⁷³ conducted an interesting study which was reported in 1995. They showed some patients a video about ECT and did not show it to others. The result suggested no extra understanding

¹⁶⁹ *Ibid* at 216.

¹⁷⁰ C P L Freeman and K E Cheshire, "Attitude Studies on Electroconvulsive Therapy" (1986) 1 (1) *Convulsive Therapy* 31 at 41.

¹⁷¹ *Ibid*.

¹⁷² *Ibid*.

¹⁷³ L Westreich, S Levine, P Ginsburg and I Wilets, "Patient Knowledge About Electroconvulsive Therapy: Effect of an Informational Video" (1995) 11 (1) *Convulsive Therapy* 32.

of ECT amongst those who had seen the video, although it did engender increased interest from family members both about ECT and about the process that led to the provision of consent. The authors noted a study by Cassileth et al in 1980 indicating that, even with competent patients, elaborate consent forms do not guarantee patient understanding, with only 60 per cent of a group of 200 understanding the nature and purpose of the procedure.¹⁷⁴ In 1999 Greening et al conducted a randomised blind comparison of a structured consent procedure against routine consent to determine any utility in improving treatment knowledge in patients after they had received ECT.¹⁷⁵ Of the 32 patients studied, structured consent involved giving the subject 10 basic, important items of information about ECT, in short, specific verbal and written statements, and using drawings.¹⁷⁶ Subjects were then asked to recall the information and if fewer than 10 items were recalled. This significantly improved the number of knowledge items recalled pre-ECT, while knowledge scores declined significantly after completion of the treatment course in both the structured consent group and the control group. The authors concluded that structured consent procedures may be a useful way of improving patient knowledge of ECT.¹⁷⁷

There remains controversy about the advantages and disadvantages of different modes of ECT administration. Schweitzer in 1994 listed the main unwanted effects of ECT as headache, confusion and memory disturbance, but noted these can be reduced by the use of unilateral electrode application to the non-dominant hemisphere.¹⁷⁸ Unilateral electrodes were introduced to try to minimise confusion and memory loss.¹⁷⁹ In the

¹⁷⁴ B R Cassileth, R Zuphis, K Sutton-Smith and V March, "Informed Consent - Why Are Its Goals Imperfectly Realized?" (1980) 302 *New England Journal of Medicine* 896.

¹⁷⁵ J Greening, P Bentham, J Stenman, V Siapels, S Ambegokar, R Uptegrove and E Day, "The Effect of Structured Consent on Recall of Information Pre- and Post-electroconvulsive Therapy: A Pilot Study" (1999) 23 *Psychiatric Bulletin* 471.

¹⁷⁶ *Ibid* at 472.

¹⁷⁷ *Ibid* at 473.

¹⁷⁸ I Schweitzer, "Mood Disorders" in Bloch and Singh, *op cit* n 1, p 142.

¹⁷⁹ Kilogh, *op cit* n 18, p 188.

training, there is a risk that they will lack understanding of how to deal with psychiatric patients and will be fearful of them. This, ironically, has the potential further to stigmatise such patients and, in particular, the administration of ECT.

Abrams considers "the traditional litany on the history of the medical uses of electricity, beginning with the Roman use of electric fish to treat headaches" as being irrelevant.¹⁸⁴ For him ECT evolved solely as a result of Meduna's investigations of the effects of camphor-induced convulsions in patients with schizophrenia. Nonetheless, an understanding of the role of electricity in medicine is a useful background and also partly explains why patients are often so fearful of ECT. It is worth asking whether patients would be so apprehensive if convulsions could be induced as effectively without the use of electricity. We are taught as children to treat electricity with great caution as parents live in terror of their children being electrocuted by, for example, putting a knife in the toaster or playing with power points. Electricity has also been used in torture and sometimes patients perceive that ECT is given as punishment.

In her novel, *Faces in the Water*, for example, Janet Frame through her fictional narrator described an overheard conversation between her nurses, "We'll give her shock treatment tomorrow," one said. "A worse shock than she's ever had; and she can't escape. You've locked the door securely?" "Yes," replied the other. "She's down for shock. It will put her in her place I tell you. She needs to be taught a lesson. No breakfast for her tomorrow." In personal correspondence she bewailed the nightmares she felt ECT generated, the atmosphere of the ECT ward, and the losses sustained to her memory.¹⁸⁶ The apprehension Frame expressed is a common experience for many patients prior to ECT. It is common for patients to describe the waiting as worse than the treatment:

"To my dying day I will remember those waits, the black marble lino on the floor, the deathly quiet of the room, and the red, serpent-eye of the light which showed the current was 'on' and the job was in progress in the adjoining room."

¹⁸⁴ Abrams, *op cit* n 15, p 3.

¹⁸⁵ J Frame, *Faces in the Water* (Pegasus Press, Christchurch, 1961).

¹⁸⁶ See M King, *Wrestling with the Angel* (Pan MacMillan, Sydney, 2000), p 97.

Occasionally one heard the muffled shout of the 'victim' as she went 'out'. Most endured these treatments stoically; I was always very quiet at the actual time. My protesting had been done vocally beforehand, or in a written letter to the doctor, all of which were ignored.¹⁸⁷

Care must be taken, however, in judging the past by present standards. It has to be remembered that for many years ECT was almost the only available treatment for many forms of mental illness. Endler, in his personal account of ECT, commented:

"During the mid-to-late 1950s I was a graduate student in clinical psychology at the University of Illinois. As part of our training we were required to study various clinical techniques and procedures which included ECT. We visited a psychiatric state hospital in central Illinois to observe patients of various diagnostic categories and how ECT was administered. As I write this, I still shudder at the memory and feel the sickness in my stomach."¹⁸⁸

He became a vigorous opponent of ECT until he himself suffered depression which responded well to ECT. The Australian poet Francis Webb, who benefited from ECT, saw it as "Lifting up the worried, the weary, and the afraid".¹⁸⁹

Feminist writers have argued that ECT is used more frequently on women.¹⁹⁰ This may be a factor of the incidence of depression, or refractory depression, amongst women.¹⁹¹ However, there may also be other reasons why women have tended to be over-represented as the recipients of this form of treatment, as with a number of others. One explanation is that women are more likely than men to seek any treatment for depression. Further research on this issue is required.

ECT is no longer performed in the way described by Janet Frame, Endler and many others. There have been positive changes in the attitudes of those

¹⁸⁷ D McI Johnson and Norman Dodds (eds), *The Plea for the Silent* (Christopher Johnson, London, 1957). See, too, the memories of the plaintiff in *Kingsman v Health Administration Corp* [2000] NSWSC 136 at [81], although James J did not accept these as "real memories": at [172].

¹⁸⁸ Endler, *op cit* n 7, p 71.

¹⁸⁹ R Porter (ed), *The Faber Book of Madness* (Faber, London, 1991), p 280.

¹⁹⁰ J Busfield, *Men, Women and Madness* (McMillan, London, 1996), p 239.

¹⁹¹ See P Fennell, *Treatment Without Consent: Law, Psychiatry and the Treatment of Mentally Disordered People Since 1845* (Routledge, London, 1996).

The California law has been the subject of many sources of criticism. For instance, Winslade et al have lamented that it has resulted countertherapeutically in delays or denial of service while failing to resolve critical legal issues involving competence and consent.¹⁹⁶ They also decried attempts to curtail ECT in Alabama where, in State hospitals, three specialists and five others are required to give consent before ECT can be performed.¹⁹⁷ In Minnesota the Supreme Court in 1976 prohibited the use of ECT for incompetent patients without a court hearing taking place on the "necessity and reasonableness of the proposed treatment".¹⁹⁸

Common law liability

One of the best-known decisions in English medico-legal jurisprudence ruled on the propriety of the application of ECT without consent. In *Bolam v Friern Hospital Management Committee*¹⁹⁹ the plaintiff, who suffered from depression, was readmitted to hospital suffering serious symptoms of his illness. He was seen by a consultant psychiatrist attached to Friern Hospital who advised him to undergo ECT. The consultant said that he proposed to undertake the procedure on the next day. The plaintiff signed a consent form but was not warned of the risks involved. He received the ECT and then again four days later. On this second occasion, an initial shock was passed through the plaintiff's brain for approximately one second and was followed within about four seconds by a succession of five momentary shocks administered for the purpose of damping the amplitude of the jerking movements of the plaintiff's body. The convulsion engendered was not unusually violent, the voltage of the current being 150 volts and the frequency 50 cycles per second. During the treatment, the plaintiff reclined in a supine position, a pillow under his back and his lower jaw being supported on a mouth gag by a male nurse.

¹⁹⁶ W J Winslade, E H Liston, J W Ross and K D Weber, "Medical, Judicial and Statutory Regulation of ECT in the United States" (1980) 137 *American Journal of Psychiatry* 26, see also S Y Johnson, "Regulatory Pressures Hamper the Effectiveness of Electro-convulsive Therapy" (1993) 17 *Law and Psychology Review* 155.
¹⁹⁷ *Wynard v Haradin*, No 3195-N (MD Ala, 28 Feb 1975, modified 1 July 1975); see (1976) 1 *Mental Disability Law Reporter* 55
¹⁹⁸ *Price v Sheppard* 239 NW 2d 905 (Minn 1976).
¹⁹⁹ [1957] 2 All ER 118

Otherwise the plaintiff was not restrained in any way, although a male nurse stood on either side of him in case he should move. No relaxant drugs were administered.²⁰⁰ In the course of the treatment the plaintiff sustained severe physical injuries consisting in the dislocation of both hip joints with fractures of the pelvis on each side. These were caused by the head of the femur on each side being driven through the acetabulum. The medical evidence in the patient's negligence action against the hospital disclosed that competent doctors at the time held divergent views on the desirability of using relaxant drugs, on restraining the patient's body by manual control and on the question of whether a patient should be warned of the risks of ECT.

Evidence at the trial was to the effect that such injuries were extremely rare, even at the time. A medical witness for the defendant swore he had only seen one acetabular fracture in 50,000 cases, involving 250,000 treatments. McNair J of the Queen's Bench Division commented in his charge to the jury:

"It is clear that the particular injury which produced these disastrous results in the plaintiff is one of extreme rarity. Another fact which I think it right to bear in mind is this, that whereas some years ago when a patient went into a mental institution afflicted with mental illness, he had very little hope of recovery - in most cases he could only expect to be carefully and kindly treated until in due course merciful death released him from his sufferings. Today, according to the evidence the position is entirely changed. You were told that that change was due almost entirely to the physical methods of treatment of mental illness, and of those physical methods the electro-convulsive therapy ... is the most important."²⁰¹

McNair J directed the jury that the test they should apply was "the standard of the ordinary skilled man exercising and professing to have that special skill" and instructed them that for a "medical man" negligence does not take place if he has acted "in accordance with the practice of a competent

²⁰⁰ The account of the administration of this treatment is very similar to that described by Lebensohn, op cit n 5, at 176.
²⁰¹ [1957] 2 All ER 118 at 120. See, eg, Dax, op cit n 36; Birch, op cit n 34

body of professional opinion".²⁰² He emphasised his opinion pointedly to the jury:

"Members of the jury, although it is a matter entirely for you, you may well think that when a doctor is dealing with a mentally sick man and has a strong belief that his only hope of cure is submission to electro-convulsive therapy, the doctor cannot be criticised if he does not stress the dangers, which he believes to be minimal, which are involved in that treatment."²⁰³

The decision reflects much about the hopes invested in the 1950s in ECT, about trust in the medical profession and about paternalistic attitudes of the era toward those with mental illnesses.

Legislative regulation of ECT in England

In England ECT can be administered to a patient if the patient consents and the responsible treator or a doctor appointed for the purpose by the Secretary of State certifies in writing that the patient is capable of understanding the nature, purpose and likely effect of ECT and has consented to it.²⁰⁴

Alternatively, if the patient is certified by the doctor appointed by the Secretary of State (that is, not the treating doctor) as unable to understand the nature, purpose and likely effects of ECT or has not consented to it, ECT can still be administered. This is subject to two further qualifications. The first is that the doctor appointed by the Secretary of State certifies in writing that the patient should be given ECT, having regard to the likelihood of its alleviating or preventing a deterioration in the patient's condition. The second is that (other than in circumstances of "emergency") prior to making the certifications the practitioner is obliged to consult two other persons who have been professionally concerned with the patient's medical treatment, one of them being a nurse and the other neither a nurse nor a medical practitioner.²⁰⁵ However, all that is

²⁰² [1957] 2 All ER 118 at 121. The law in Australia in relation to negligent diagnosis, treatment and information provision has since departed from this formulation and applied an objective standard, as distinct from one which focuses upon the views of cross-sections of the medical profession: see *Rogers v Whitaker* (1992) 175 CLR 479; *Rosenberg v Percival* [2001] HCA 18.
²⁰³ [1957] 2 All ER 118 at 124.
²⁰⁴ *Mental Health Act* 1983 (UK) s 58(2)(b).
²⁰⁵ The "essence of consultation has been held to be the communication of a genuine invitation to give advice and a genuine consideration of that advice": *R v Secretary of State for Social Services, Ex parte Association of Metropolitan*

many efforts have been made to give the consumer a voice of his own. Some of which were undertaken by Westreich and others in their 1995 study of patient knowledge about ECT. They identified that poor knowledge might be accounted for by unsuccessful communication from the doctors or cognitive impairment and apathy on the part of the patients.¹⁹⁷ The positive finding of Westreich's study was that the families of patients did benefit from an information video about ECT. Clearly there is a need for the provision of accurate, understandable information to patients when they are well rather than only when they are in crisis.

Legal controls

In 1974 legislation was passed in California (described by some psychiatrists as "anti-ECT") because of complaints of misuse of the treatment. At the same time, consideration was given to passing similar legislation in Massachusetts, Michigan and New York. Then followed the clinical audits by Pippard and Ellam and others in the United Kingdom and assessments from Canada, Australia, Ireland, The Netherlands, New Zealand and Scandinavia.

Bloch and Chodoff stated in the introduction to the second edition of *Psychiatric Ethics* that ECT has been decried, with its critics labeling it as "hazardous and barbaric".¹⁹³ They wrote:

"The reaction was so intense that a vociferous patients' advocacy group was responsible for the passage of legislation in the State of California imposing almost impossible barriers before ECT can be used."¹⁹⁴

They argued that the informed consent provisions for competent patients in California include scientifically unproved criticism of ECT "and a misleading allegation about its efficacy which disparages the available scientific information".¹⁹⁵ The result is that in California consent to perform ECT on patients who are not competent requires a court hearing as well as the consent of a relative or guardian.

¹⁹³ *Weisreich et al*, op cit n 173, at 32.
¹⁹⁴ Op cit n 13, p 6.
¹⁹⁵ *Ibid.*
¹⁹⁶ *Ibid.* 90.

necessary is that there be "consultation", not that a second opinion should match that of the appointed medical practitioner. In short, therefore, there are very modest constraints upon the administration of ECT.²⁰⁶

Fennell in 1996 reported that ECT was administered in circumstances of "emergency"²⁰⁷ at a "surprisingly high" level. This meant that the consultation process did not need to be undertaken. In a survey on second opinions carried out between December 1991 and August 1992, Fennell found a remarkable incidence of the phenomenon for ECT patients, 112 of the 116 emergency patients receiving emergency treatment being ECT cases, 84 women and 28 men. Forty-five of the women were over 60 years of age, and 25 were over 70. In all cases, the justification proffered was "either immediate need to save life" or "to prevent serious deterioration in the patient's condition".²⁰⁸

In England there is no appeal from the decision to administer ECT.

Legislative regulation of ECT in Australia and New Zealand

Legislation in all Australian jurisdictions and in New Zealand governs the administration of ECT. In the Australian Capital Territory, New South Wales, South Australia, Victoria, Western Australia and New Zealand, there are specific provisions relating to the use of ECT, while in the Northern Territory, Queensland and Tasmania, the general provisions dealing with psychiatric treatment apply to the administration of ECT.

The Australian Capital Territory

In the Australian Capital Territory convulsive therapy is defined as a "procedure for the induction of an epileptiform convulsion in a person"²⁰⁹ and may only be administered by a medical practitioner.²¹⁰ "Informed consent", exhaustively defined, is necessary from voluntary patients. A

²⁰⁶ *Authorities* [1986] 1 All ER 164 at 167 per Webster J.

²⁰⁷ Under s 62 of the *Mental Health Act* 1983 (UK).

²⁰⁸ Fennell, op cit n 191, p 199; see also P Bartlett and R Sandland, *Mental Health Law, Policy and Practice* (Blackstone Press, London, 2000); A Eldergill, *Mental Health Review Tribunals: Law and Practice* (Sweet & Maxwell, London, 1997).

²⁰⁹ Fennell, op cit n 191, p 200.

²¹⁰ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 55(1).

²¹¹ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 54(4).

person is prescribed to have given "informed consent" to ECT (and psychiatric surgery) in very limited circumstances if the patient has given consent in writing (independently witnessed) after:

- (a) the person has been given a clear explanation of the procedure that contains sufficient information to enable the person to make a balanced judgment about whether or not to consent to the procedure;
- (b) the person has been given an adequate description (without exaggeration or concealment) of the benefits, discomfort and risks involved in the procedure;
- (c) the person has been advised of all alternative treatments reasonably available that may be of benefit to the person;
- (d) the person has been given an opportunity to ask any questions about the procedure, those questions have been answered and the person appears to have understood the answers;
- (e) a full disclosure has been made to the person of any financial relationship between the person seeking to obtain the consent, the doctor who is proposing to conduct the procedure or both (as the case may be) and the psychiatric institution at which it is proposed to conduct the procedure;
- (f) the person has been given, has read and appears to have understood a [prescribed] notice...; and
- (g) the person has been given an information statement.²¹¹

The concentration of the legislative requirements, therefore, is upon the provision of significant amounts of information and the disclosure of financial conflicts of interest by doctors and institutions. What will constitute "adequate description" of the advantages and disadvantages of the procedures is not entirely clear. The level of information provision, both oral and a written level, has to be of a high order. A key component of the obligations on the part of the doctors is that they provide a prescribed notice and that the patients have read and appeared to have understood it. Otherwise, the primary criterion for the informed consent consists of the provision of consent after having been given a large amount of information, whether or not patients have been able in any meaningful sense to come to grips with it, if

²¹¹ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 54(4).

subtleties or its intricacies. In fact, often a person is well enough to be in need of ECT would not be able to evaluate effectively an explanation, amongst other things, of the "benefits, discomfort and risks" of ECT.²¹²

A new consent must be obtained if the person has been administered convulsive therapy on nine occasions since the provision of the previous consent.²¹³ If a person is involuntarily detained, the Mental Health Review Tribunal of the Australian Capital Territory has responsibility for determining whether approval should be given to the administration of convulsive therapy.²¹⁴ The same procedure must be followed if an involuntary patient, in respect of whom approval for convulsive therapy has been provided by the Tribunal, has had nine administrations of convulsive therapy. The procedure for the making of application to the Tribunal is via the Director of Australian Capital Territory Mental Health Services or a medical practitioner. The application must be supported by the evidence of a psychiatrist.²¹⁵ The criteria for the Tribunal to grant approval are if the person has given informed consent,²¹⁶ as defined, or if the Tribunal is satisfied that the person is not able to give informed consent but the therapy is "likely to result in substantial benefit to the person" and is "the most appropriate form of treatment reasonably available".²¹⁷ In the latter regard, therefore, the question comes down to little more than the Tribunal making a decision on clinical advisability. However, the role of the Tribunal results in ongoing external oversight of the administration of ECT to those who are involuntarily detained in the Territory.

New South Wales

The *Mental Health Act* 1990 (NSW) imposes stringent requirements for the administration of ECT which, curiously, is undefined in the

²¹² See R P MacDonald, "Medical, Ethical and Legal Considerations of Electroconvulsive Therapy" (1984) 22 *Osgoode Hall Law Journal* 683 at 697.

²¹³ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 55(2).

²¹⁴ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 55(3).

²¹⁵ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 55(4).

²¹⁶ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 54.

²¹⁷ *Mental Health (Treatment and Care) Act* 1994 (ACT), s 55(5).

legislation. The locations at which it may be administered must be approved by the Director-General of Health.²¹⁸ It may only be given by a medical practitioner where at least two doctors are present, one of whom must be experienced in such therapy and the other experienced in administering anaesthesia.²¹⁹ As in the Australian Capital Territory, there are requirements about the information that must be provided before a patient can be said to provide informed consent to the treatment. The disclosures must be made in writing and orally in a language with which the person is familiar. The requirements are similar to those existing in the Australian Capital Territory, but contain some subtle differences. Before the consent of a person is obtained for the administration of ECT:

- (a) a fair explanation must be made to the person of the techniques or procedures to be followed, including an identification and explanation of any technique or procedure about which there is not sufficient data to recommend it as a recognised treatment or to reliably predict the outcome of its performance, and
- (b) a full description must be given, without exaggeration or concealment, to the person of the possible attendant discomforts and risks (including possible loss of memory), if any, and
- (c) a full description must be given to the person of the benefits, if any, to be expected, and
- (d) a full disclosure must be made, without exaggeration or concealment, to the person of appropriate alternative treatments, if any, that would be advantageous to the person, and
- (e) an offer must be made to the person to answer any inquiries concerning the procedures or any part of them, and
- (f) notice must be given to the person that the person is free to refuse or to withdraw consent and to discontinue the procedures or any of them at any time, and
- (g) a full disclosure must be made to the person of any financial relationship between the person proposing the administration of the treatment or the medical practitioner who proposes to administer the treatment, or both,

²¹⁸ *Mental Health Act* 1990 (NSW), s 182.

²¹⁹ *Mental Health Act* 1990 (NSW), s 181.

and the hospital or institution in which it is proposed to administer the treatment, and

(h) notice must be given to the person that the person has the right to obtain legal and medical advice and to be represented before giving consent, and

(i) any question relating to the technique or procedures to be followed that is asked by the person must have been answered and the answers must appear to have been understood by the person.²²⁰

The final requirement is significant – wherever the patient poses questions about ECT, the answers given to the questions posed must “appear to have been understood”. Curiously, it is not the general information provided which needs to appear to be understood, just the answers to questions subsequently asked by the patient. If the patient is significantly depressed and/or frightened or intimidated, he or she may well ask no questions or very few. This means that the understanding criterion is largely irrelevant.

ECT may be administered where informed consent is given, namely consent that is free, voluntary and in writing after the provision of the relevant disclosures. It is specifically provided that a person is presumed to be incapable of giving informed consent if before, or at the time when the consent is sought, “the person has received medication which, at the time that the consent is sought, impairs the person’s ability to give that consent”.²²¹ If the patient is sufficiently depressed for ECT to be considered, generally attempts will have been made to remedy the illness by the provision of medication. On a significant number of occasions this would have the capacity to impact upon the person’s ability to provide consent, although it may well be that it will be the illness, more than the medication, that will actually impair the ability to give consent.

The consent must be given by a person capable of providing it and where at least two doctors, one of whom must be a psychiatrist, certify in writing that: “after considering the person’s clinical condition, history of treatment and any appropriate alternative treatments, they are of the opinion that the treatment is a reasonable and proper

treatment to be administered to the person and is necessary or desirable for the safety or welfare of the person.”²²²

Special procedures apply if the patient in New South Wales is involuntarily detained in a mental health facility. A doctor may administer ECT where the person is, in the opinion of the medical superintendent of the facility, incapable of giving informed consent or has refused or the person has neither consented to nor refused the treatment. However, there is a requirement for a second medical opinion to the same effect. Before ECT can be administered to an involuntary patient, two doctors, one of them being a psychiatrist, must have certified in writing that:

“After considering the patient’s or person’s clinical condition, history of treatment and any appropriate alternative treatments, they are of the opinion that the treatment is a reasonable and proper treatment to be administered to the patient or person and necessary immediately in order to save the life of the patient or person.”²²³

This is a high order criterion. It is not directed merely to alleviation of suffering or retarding deterioration in mental state. The condition of the patient must be such as to require ECT straightaway to save the person’s life. In principle, this should be a rare phenomenon, generally pertinent to cases where the person is likely otherwise to commit suicide.

The medical superintendent of the facility may apply to the Mental Health Review Tribunal to determine whether a person is capable of providing informed consent to the treatment and, in the case of a person who has been involuntarily detained who is incapable of giving consent or has refused consent, or at any rate who has not provided consent, whether the administration of the treatment is “a reasonable and proper treatment” and “necessary or desirable for the safety or welfare of the person”. The Tribunal is obliged to hold an inquiry to determine such issues “as soon as is practicable” and must consider medical certificates, as well as the patient’s views about the treatment by way of ECT.²²⁴ The medical superintendent may decide

²²² *Mental Health Act 1990 (NSW)*, s 185(1).

²²³ *Mental Health Act 1990 (NSW)*, s 186(1).

²²⁴ *Mental Health Act 1990 (NSW)*, ss 191, 193.

against such treatment taking place, even if the Tribunal permits it.²²⁵

Until 19 September 1997 hospitals had the power in New South Wales to proceed with the administration of ECT on an emergency basis without prior approval by the Tribunal. However, this power was removed by the *Mental Health Legislation Amendment Act 1997 (NSW)*, the main instigation for the change coming from hospitals and medical superintendents. From 19 September 1997, the Tribunal in three-person hearings began to deal with cases involving patients regarded by clinicians as needing emergency ECT, through its ordinary hearing processes.

In the 316 concluded hearings of applications to administer ECT to involuntary patients brought before the Tribunal in 1998, 27 patients were determined by the Tribunal to be capable of giving informed consent. Of the remaining 288 cases, 274 were found by the Tribunal to be unable to provide informed consent. The Tribunal granted 272 applications and refused two. On 27 occasions the Tribunal was not required to give a determination because it found the patient to be able to decide for himself or herself. About twice as many women as men are shown through the New South Wales Mental Health Review Tribunal figures to have received ECT as involuntary patients. About half of the patients receiving ECT were over 55 years of age. Of the 316 applications to the Tribunal to approve the administration of ECT in 1988, 13.9 per cent (n=44) were in respect of persons of a non-English speaking background.

South Australia

In South Australia a slightly different mechanism for ECT regulation is used. ECT is classified as a Category B Prescribed Psychiatric Treatment under the *Mental Health Act 1993 (SA)*. Such treatment cannot be administered in any mental health facility unless it has been authorised by the psychiatrist who had examined the patient and the consent in writing has been obtained from the patient, if he or she is “capable of giving effective consent”; from the patient’s guardian, if the patient is under 16 years of age and incapable of giving effective consent; or from the Guardianship Board where the patient is over 16 years of age and incapable of giving

²²⁵ *Mental Health Act 1990 (NSW)*, s 195.

effective consent.²²⁶ No guidance is given to the Guardianship Board’s exercise of its discretion to permit or decline ECT.

However, an important further discretion is left with medical practitioners – consent to a “particular episode” of ECT is not required if the administration of the treatment is “urgently needed for the protection of the patient or other persons” and in the circumstances it is “not practicable to obtain that consent”.²²⁷ In short, therefore, ECT can be administered where it is urgently needed not for the saving of the patient’s life as, for example, in New South Wales, but for the broader category of patients – where the patient needs it for his or her protection or for the protection of others by reason of what the patient might do if ECT is not administered. The concept is the same but the bar is lower.

Victoria

In Victoria ECT is defined to “include a course of electroconvulsive therapy consisting of not more than six treatments given over a period with not more than seven days elapsing between any two treatments”.²²⁸ The giving of informed consent to ECT is governed by principles that are the same as those relating to informed consent to psychosurgery. Thus, a person is taken to have given informed consent to ECT if he or she has given written consent to the administration of ECT after:

- (a) The person has been given a clear explanation containing sufficient information to enable him or her to make a balanced judgment; and
- (b) The person has been given an adequate description of benefits, discomforts and risks without exaggeration or concealment; and
- (c) Any relevant questions asked by the person have been answered and the answers have been understood by the person; and
- (d) A full disclosure has been made of any financial relationship between the person seeking informed consent or the registered medical practitioner who proposes to perform the treatment, or both, and the service,

²²⁶ *Mental Health Act 1993 (SA)*, s 22(1)(b). See, eg, *Thompson v Evans* [2000] ACTSC 73 at [16].

²²⁷ *Mental Health Act 1993 (SA)*, s 22.

²²⁸ *Mental Health Act 1986 (Vic)*, s 7(2).

hospital or clinic in which it is proposed to perform the treatment.²²⁹

In addition, the patient must be given a printed statement advising of his or her legal rights and other entitlements, including the right to obtain legal and medical advice, the right to obtain a second psychiatric opinion, and to be represented before giving consent; and the right to refuse or withdraw his or her consent and to discontinue all or any part of the treatment at any time; and containing any other information relating to the treatment that the Department of Human Services considers "relevant".²³⁰ In addition, the patient must be given an oral explanation of the information contained in the statement and, if he or she appears not to have understood, or to be incapable of understanding, the information in the statement, arrangements must be made to convey the information to the person in the language, mode of communication or terms which the patient is most likely to understand.²³¹

As with the Australian Capital Territory provisions, therefore, the obligation on the part of the authorised psychiatrist and of the approved mental health service is to provide information. It does not need to have been understood or appear to have been understood by the patient. However, what is necessary is that answers given by the doctor to questions posed by the patient "have been understood" (not appear to have been understood, by contrast with the position in the Australian Capital Territory). This would require interchange between the doctor and the patient, sufficient for the doctor to be able to assure himself or herself that the answers given by the doctor actually have been comprehended at a cognitive and affective level to a reasonable degree by the patient. On many occasions, this could be problematic, but, as previously noted, most patients considered by doctors to be candidates for ECT are unlikely to enter into assertive and probing discourse about the advantages, disadvantages and side-effects of the treatment.

The performance of ECT is expressly proscribed to be a criminal act and professional misconduct unless it is done in accordance with Victoria's mental health legislation.²³² If an involuntary patient

²²⁹ *Mental Health Act 1986 (Vic)*, s 53B(1).

²³⁰ *Mental Health Act 1986 (Vic)*, s 53B(2).

²³¹ *Mental Health Act 1986 (Vic)*, s 53B(3).

²³² *Save if the practitioner can satisfy the Medical Practitioners Board of Victoria that there were valid reasons for not obtaining*

consent from the patient.

²³³ Section 3 of the *Mental Health Act 1986 (Vic)*.

²³⁴ *Mental Health Act 1986 (Vic)*, s 73(3)(i)-(iv).

²³⁵ *Mental Health Act 1986 (Vic)*, s 73(4).

²³⁶ *Mental Health Act 1986 (Vic)*, s 75.

²³⁷ *Mental Health Act 1986 (Vic)*, s 77.

²³⁸ *Mental Health Act 1986 (Vic)*, s 76.

decisions to the Board.²³⁹ However, it means that the decision in relation to administration of ECT to involuntary patients is a clinical decision in Victoria, and not subject to any formal mechanism of external oversight.

Western Australia

In Western Australia the *Mental Health Act 1996* (WA) permits electroconvulsive therapy to be administered in prescribed circumstances. The provisions within the Act are the newest in Australia and are directed toward mandating a high level of information by psychiatrists about the advantages and disadvantages of ECT and enabling patients, so far as possible, to make informed decisions about whether they wish to submit to the procedure.

"Electroconvulsive therapy" is defined as:

"the application of electric current to specific areas of the head to produce a generalised seizure which is modified by general anaesthesia and the administration of a muscle relaxing agent."²⁴⁰

ECT can be performed on four categories of patients:

1. a person who is an involuntary patient;
2. a mentally impaired defendant in an authorised hospital;
3. a person who has given "informed consent" (as defined); and
4. a patient in need of emergency psychiatric treatment.²⁴¹

The penalties for infraction are a \$10,000 fine and imprisonment for two years. It is specifically provided that it is no defence to the offence of giving ECT without informed consent that the patient refused to give or was incapable of giving informed consent.²⁴²

ECT cannot be performed on an involuntary patient or a mentally impaired defendant who is in an authorised hospital unless it is recommended by the treating psychiatrist and the recommendation is approved by another psychiatrist.²⁴³ However, there is a major exception. The preclusion does not apply if the ECT is given as "emergency psychiatric treatment" which is defined as psychiatric treatment necessary to be given to a patient to save his or her

²³⁹ By contrast, decisions in relation to psychosurgery are reviewed by the Psychosurgery Review Board.

²⁴⁰ *Mental Health Act 1996 (WA)*, s 92.

²⁴¹ *Mental Health Act 1996 (WA)*, s 107(1).

²⁴² *Mental Health Act 1996 (WA)*, s 107(3).

²⁴³ *Mental Health Act 1996 (WA)*, s 104.

life or to "prevent the person from behaving in a way that can be expected to result in serious physical harm to the person or to any other person".²⁴⁴ No timeframe is specified in relation to such dangerous behaviour.

Before a psychiatrist makes a recommendation of ECT, the psychiatrist is required:

- to be satisfied that the proposed therapy has clinical merit and would be appropriate in the circumstances;
- to decide whether or not the person has the capacity to give informed consent to the proposed therapy;
- if the person has the capacity –
 - to ascertain whether or not that consent has been given; and
 - to have regard to whether or not that consent has been given.²⁴⁵

Importantly, therefore, both the treating and other psychiatrist are directed to give thought to whether the patient is capable of giving informed consent. The principal criterion for administration of ECT upon involuntary and "mentally impaired" patients, though, remains clinical merit and appropriateness, a very broad notion, and one in respect of which the patient does not have any right of appeal.

There is one limited situation in which an independent perspective is brought to bear on the decision to administer ECT. Where the psychiatrist does not approve the recommendation that ECT be performed, he or she must refer the matter to the Mental Health Review Board.²⁴⁶ This has only happened on the one occasion, in 1998, since the *Mental Health Act 1996* (WA) came into force. On that one occasion, the patient was discharged from involuntary detention before the matter came before the Board.²⁴⁷

Upon a referral from a psychiatrist, the Board has constrained powers. It is not authorised to substitute its decision for that of the psychiatrist withholding approval. If the psychiatrist continues to withhold approval, the Board is empowered to recommend to the treating psychiatrist an alternative treatment; to transfer responsibility for treating the person from

²⁴⁴ *Mental Health Act 1996 (WA)*, s 113.

²⁴⁵ *Mental Health Act 1996 (WA)*, s 105.

²⁴⁶ *Mental Health Act 1996 (WA)*, s 106(1).

²⁴⁷ Personal communication to first author from Neville Barber, President of the Western Australian Mental Health Review Board, 10 April 2001.

the treating psychiatrist to another psychiatrist; or in the case of an involuntary patient, to order that the person be discharged as an involuntary patient.²⁴⁸

In short, therefore, the role of the Board is limited, only being able to be activated by a disagreement between psychiatrists. Patients' ECT is not reviewed by the Board; nor can a patient appeal to the Board specifically about the decision to administer ECT.

A patient is prescribed to give "informed consent" to treatment only if the requirements for such consent are made out and the consent is "freely and voluntarily given".²⁴⁹ The aim of this provision appears to be to exclude forms of consent which are the product of duress or inducement. The provision of consent is distinguished from passive acquiescence – failure to offer resistance to treatment is stipulated not of itself to constitute consent to treatment.²⁵⁰ A patient is provided to be incapable of giving "informed consent", as defined, unless he or she is capable of understanding a range of matters:

- the things that are required to be communicated to him or her;
- the matters involved in the decision; and
- the effect of giving consent.²⁵¹

Before "informed consent" is given, the patient must be given a clear explanation of the proposed ECT:

- containing sufficient information to enable the patient to make a balanced judgment about the treatment;
- identifying and explaining any medication or technique about which there is insufficient knowledge to justify its being recommended or to enable its effect to be reliably predicted; and
- warning the patient of any risks inherent in the treatment.²⁵²

The legislation again raises the dilemma of how well placed a patient for whom ECT is contemplated will be able to make a balanced judgment about it. However, the legislative requirements are predicated upon the psychiatrist having the responsibility for supplying enough

²⁴⁸ *Mental Health Act 1996 (WA)*, s 106(2)(a)-(c).

²⁴⁹ *Mental Health Act 1996 (WA)*, s 95(1)(a)-(b).

²⁵⁰ *Mental Health Act 1996 (WA)*, s 95(2).

²⁵¹ *Mental Health Act 1996 (WA)*, s 96(a)-(c).

²⁵² *Mental Health Act 1996 (WA)*, s 97(1)(a)-(c).

information to enable such a judgment. On occasions, this could be an involved process.

The amount of information needing to be supplied to the patient is dictated by the particular needs and circumstances of the patient. This is made plain by a further provision which stipulates that the extent of the information required to be given to a patient is limited to information that a "reasonable person in the patient's position" would be likely to regard as significant unless it is, or reasonably should be, known that the patient would be likely to regard as significant.²⁵³ This provision enacts the dual obligations of medical practitioners to advise of risks pursuant to the ruling of the High Court in *Rogers v Whitaker*²⁵⁴ and as later confirmed in *Rosenberg v Percival*.²⁵⁵ The information required to be communicated to the patient is prescribed not to be considered to have been effectively communicated unless it is in a language or form that is readily understood by the patient using a competent interpreter if necessary and it is so expressed as to facilitate his or her understanding of what is required to be communicated.²⁵⁶ In addition, informed consent is not to be considered to have been given unless the patient has been allowed sufficient time to consider the matters involved in the decision and to obtain such advice and assistance as may be desired.²⁵⁷ This provision is directed toward enabling a patient to have a "cooling-off" period after receipt of information from the psychiatrist, so that he or she can make a decision upon unpressured consideration of their options.

New Zealand

In New Zealand the *Mental Health (Compulsory Assessment and Treatment) Act 1992 (NZ)*, which came into effect on 1 November 1992, introduced new regulation in relation to ECT. Under s 60 of the Act, no patient can be required to accept ECT for a mental disorder unless he or she consents in writing or unless the treatment is considered by a psychiatrist appointed by the Review Tribunal to be in the interest of the patient. Under the *Mental Health Act 1983 (UK)*, by contrast, there is the additional requirement for overriding the patient's

²⁵³ *Mental Health Act 1996 (WA)*, s 97(2).

²⁵⁴ (1992) 175 CLR 479.

²⁵⁵ [2001] HCA 18.

²⁵⁶ *Mental Health Act 1996 (WA)*, s 97(4).

²⁵⁷ *Mental Health Act 1996 (WA)*, s 98.

refusal of consent that "[h]aving regard to the likelihood of its alleviating or preventing a deterioration of his condition the treatment should be given".

An indication of the courts' view of the function of s 60 is provided by the decision of the New Zealand High Court in *Re S (A Mental Patient)*²⁵⁸ where a judicial inquiry took place under s 84 of the Act into a decision by the patient's "responsible clinician" that the patient should be administered ECT over his objections. Temm J interpreted s 60 to mean that if the patient is considered by the responsible clinician to be one for whom ECT would be "beneficial", even if the patient does not consent, it can still be administered subject to a second psychiatrist appointed by the Review Tribunal agreeing on its clinical advisability.

Brookbanks has expressed concern about the ramifications of the decision, suggesting that it leads to a return to a presumption of global incompetence in relation to decision-making about treatment by those with mental illnesses.²⁵⁹ He argued that where a patient with a mental illness declines ECT treatment, his or her wishes will almost invariably be overridden by contrary clinical opinions, in effect being able to be dismissed as the product of lack of insight.²⁶⁰ He has argued that s 60 should be read subject to an implied limitation that, where it is decided that the patient's refusal of consent may legitimately be overridden by the psychiatrists' views,

"the treatment must be considered to be 'necessary' in the interests of the patient. Such a limitation would mean that the procedure under s 60 could not be invoked simply because it would be clinically 'useful' or 'beneficial' where other, more benign treatments would be equally effective and less intrusive."²⁶¹

²⁵⁸ (1993) 11 FRNZ 15.

²⁵⁹ W Brookbanks, "Electro-convulsive Therapy and the Mental Health (Compulsory Assessment and Treatment) Act 1992 (NZ)" (1994) 1 JLM 184 at 190.

²⁶⁰ For an analysis of the complex issue of insight, see *Re the (forthcoming)*.

²⁶¹ See also D Court, "Mental Disorder and Human Rights: The Importance of a Presumption of Competence" (1996) 8 *Auckland University Law Review* 1.

Should ECT be given to patients without their consent, or against their will?

Anecdotal evidence alone must be viewed with some reservations. In May 2000, for example, the Mental Health Legal Centre Inc (MHLCC), an advocacy group for consumers in Victoria, Australia, published *A Position Paper on the Law and Electro Convulsive Therapy in Victoria*.²⁶² The Paper included recommendations for changes to the law based on "consumer views" which are presented as a series of anecdotes told to MHLCC workers. There is no way such information can be validated or replicated and the reader is not able to know how many consumers are unhappy with the present situation and whether or not they are representative of the general community of ECT patients. The recommendations include compulsory approval by the Mental Health Review Board for approval of all ECT where informed consent is not possible; ECT only to be given without consent where without ECT the person is likely to suffer serious mental or physical deterioration; informed consent to be a three-step process with regular existing legislation on emergency treatment with ECT; the risks and benefits of ECT to be explained in writing; the presence of an appropriately trained independent person; and the reporting of ECT use in both private and public hospitals.

Research is needed to determine if such proposals are in accordance with consumer concerns. This could be achieved by an appropriate consultation process under the auspices of the Department of Human Services with all stakeholders. Compulsory review by a tribunal can, in itself, be intrusive and delaying. It may be preferable that appeal rights be available rather than compulsory review. The experience of two Presidents of the Mental Health Review Board in Victoria is that ECT is sometimes delayed so that patients can be given an opportunity to come to terms with it.²⁶³ However, consumer complaints and the concerns of their advocates demonstrate a need for a greater preparedness to engage in dialogue with patients for whom the treatment is clinically

²⁶² Mental Health Legal Centre Inc, *A Position Paper on the Law and Electro Convulsive Therapy in Victoria* (May 2000).

²⁶³ Beth Wilson was President of the Mental Health Review Board from 1992 until 1997 and Julian Gardner from 1997 until 2000.

indicated so that misunderstandings are reduced, fears are alleviated and decisions are made by patients who are informed about the present state of scientific knowledge on the procedure, its success and its side-effects. Consumers also need assurances that machinery is appropriate and well maintained and that those using it are trained, supervised and have up-to-date skills.

As with many treatments, ECT at first was greeted with excessive enthusiasm and applied intemperately to categories of patients for whom its use was not supported by evidence.²⁶⁴ It has had a troubled image in the media and even in the courts, the English case of *Bolam v Friern Hospital Management Committee* creating an enduring record of its risks when used without an anaesthetic or a muscle relaxant. Poor communication between psychiatrists and patients has not assisted understanding in a highly vulnerable group of patients. While few complaints are recorded in Australia about ECT's administration, the figures, or absence of them, must be regarded with caution, as few patients who receive psychiatric treatment register formal complaints or initiate legal action against their doctors. Anecdotal reports, some of them communicated passionately, make clear that a significant proportion of patients are frightened about ECT but may feel unable to voice their fears or their disinclination to have the treatment. For such patients the elaborate definitions of "informed consent" have little application because they are unlikely to give voice to their concerns and misapprehensions. ECT can be a confronting emotive treatment. However successful the statistics show it to be, and although side-effects have been reduced in the modern era of its administration, these still occur, especially if ECT is given incorrectly.

As recently as 1997, Abrams commented: "Doctors who give ECT have shown remarkably little interest in their patients' views of the procedure and its effects on them."²⁶⁵ He noted: "Psychiatrists have lagged behind other medical specialists in developing and promulgating the doctrine of informed consent for medical procedures", speculating that this relates to the patient group with which they deal, and noting the

special significance of consent in the context of ECT.²⁶⁶

The audit process in the United Kingdom has revealed strong concerns about the training of those able to administer ECT. Raskin²⁶⁷ in 1986, for instance, was critical of the educational standards of psychiatrists' training programs in relation to the administration of ECT, no attempt being made to ascertain the didactic material being taught to the trainees. Fink²⁶⁸ the following year observed how much the technological revolution was affecting what needs to be understood by those with responsibility for administering ECT, concluding that teaching programs were often deficient in respect of the information they provided about ECT. A 1989 survey of residents in Philadelphia confirmed many of Fink's concerns,²⁶⁹ as did the American Psychiatric Association Task Force Report on ECT which deplored the quality of teaching in relation to ECT.²⁷⁰

Despite these concerns, the pace of change has been slow. In 1992 Fink and Abrams were still criticising inadequate training for residents in the United States,²⁷¹ while similar concerns have also been raised in England²⁷² and in Canada.²⁷³ In 1999 proposals were advanced by Kramer for an integrated post-residency training module in respect of administration of ECT.²⁷⁴

The voices of the articulate consumers have also been recorded. Roy Porter, for instance, in *The Faber Book of Madness*, writes:

²⁶⁶ *Ibid.*, p 275.
²⁶⁷ D E Raskin, "Survey of Electroconvulsive Therapy: Use and Training in University Hospitals in 1984" (1986) 2 *Convulsive Therapy* 293.
²⁶⁸ M Fink, "New Technology in Convulsive Therapy: A Challenge in Training" (1987) 144 *American Journal of Psychiatry* 1195.
²⁶⁹ R Jaffe, B Shoyer, L Siegel, R Roemer and W Dubin, "An Assessment of Psychiatric Residents' Knowledge and Attitudes Regarding ECT" (1990) 14 *Academic Psychiatry* 204.
²⁷⁰ American Psychiatric Association Task Force on ECT, *The Practice of Electroconvulsive Therapy: Recommendations for Treatment, Training and Privileging* (APA Press, Washington, DC, 1990).
²⁷¹ M Fink and R Abrams, "Qualification for ECT" (1992) 8 *Convulsive Therapy* 1.
²⁷² *Op cit* n 86.
²⁷³ D S Goldbloom and D J Kussin, "Electroconvulsive Therapy Training in Canada: Survey of Senior Residents in Psychiatry" (1991) 36 *Canadian Journal of Psychiatry* 126.
²⁷⁴ B A Kramer, "A Teaching Guide for Electroconvulsive Therapy" (1999) 40 (5) *Comprehensive Psychiatry* 327.

"[N]othing in the literature is so harrowing as the opposition expressed by most patients to compulsory doses of any of these deeply disagreeable and painful shock procedures."²⁷⁵ It is important to note here, however, that Porter's book presents a history, not a contemporary account.

Conclusions

In their acknowledgment of the controversy surrounding ECT, Bloch and Singh write:

"We now turn to a treatment wrapped in enormous controversy, despite a half-century of its use as a mainstay therapy in psychiatric practice. Many people see it as a link to the barbarity they associate with treatments used long ago for the mentally ill: blood letting, dunking and the twirling stool."²⁷⁶

ECT is an effective treatment when accurate diagnoses are made. The early enthusiasm for ECT led to it being used carelessly and in a high-handed and undiscerning manner. Prior to the 1950s, it was used without anaesthetics or muscle relaxants and injuries ensued. While psychiatrists nowadays generally view ECT as safe and effective, especially in the treatment of severe depression, the public perception of the procedure is often characterised by fear and mistrust. Until these fears are addressed, ECT will remain controversial.

As Fink pointed out in 1999,²⁷⁷ pressures on hospital beds and shorter and cheaper admissions for those patients who receive prompt ECT²⁷⁸ are likely to lead to more frequent administration of ECT in the years to come.

The United Kingdom audits have shown that the introduction of new machinery and good guidelines are insufficient to ensure high-quality practice. Some jurisdictions are making real efforts toward improvements, however. Victoria, for instance, has begun the reform of its ECT practices with the publication of College Guidelines, the ECT Handbook, the introduction of new machinery and requiring the licensing of premises where ECT is given. Licensing has the potential to ensure improved standards for the provision of ECT but

²⁷⁵ Porter, *op cit* n 189.
²⁷⁶ Bloch and Singh, *op cit* n 1, p 275.
²⁷⁷ Fink, *op cit* n 3, p 109.
²⁷⁸ See M Olsson, S Marcus, H A Sackeim et al, "Use of ECT for the Inpatient Treatment of Recurrent Major Depression" (1998) 155 *American Journal of Psychiatry* 22.

high-quality practice requires closer scrutiny and audit before consumer and public confidence in ECT will be enhanced. External scrutiny via appeal rights for patients who do not wish to have ECT also has much to commend it by introducing a form of additional perspectives; giving consumers a voice in relation to a treatment that can have frightening associations for many patients; and by providing for greater transparency generally of ECT administration.

Finally, further consideration needs to be given to the criteria for the emergency administration of ECT to those who are involuntarily detained by reason of their experience of symptoms of mental illness, and therefore are deemed unable to give informed consent. Explicit provisions should be directed in all mental health legislation to ECT because of its distinctive character as a treatment modality, its history of overuse, inadequately monitored use and its association for many members of the general community with torture. Such provisions could usefully draw upon those already existing in the Australian Capital Territory, New South Wales, South Australia, Victoria, Western Australia and New Zealand. However, anomalies in the definitions of "informed consent" need to be addressed, there should be standardisation of licensing requirements, and ECT should only be able to be administered (subject to appeal) without "informed consent" (as defined):

1. where it is urgently required, other modalities having been attempted and not having been successful, or
2. to address significant levels of distress experienced as a result of the symptoms of mental illness, or
3. to prevent significant deterioration in the patient's mental state in the short or medium term, or
4. to protect the patient against a serious imminent threat to his or her physical well-being.

ECT also needs to be monitored to ensure quality improvements through better training, closer supervision, more accurate diagnoses and improved communication with patients. Dr David Barton, a Melbourne psychiatrist, has suggested that Victoria needs a specialist ECT Unit to provide second opinions, review the treatment of patients whose illness is difficult to treat, facilitate continuing education and training and to provide services via videoconferencing to rural and remote services so

hat care for patients in those regions is not second rate.²⁷⁹ These suggestions have merit beyond the confines of Victoria. However, second opinions and review of patients may be better carried out by practitioners who have an open mind about ECT. Clinics which specialise in the treatment have made a significant financial and intellectual commitment to the treatment and may be too ready to recommend its use. There has been far too little information and research made available about ECT in Australia. Thorough audits are required to determine where problems continue to exist and what measures are required effectively to address them.

Until, and unless, the quality assurance issues are addressed, we cannot assume that ECT, an effective treatment, is being effectively and appropriately administered. Incorrect treatment will not maximise benefits for patients and will increase undesirable side-effects. ECT is effective in treating depression in the short term but there is a significant relapse rate following the treatment. High-quality aftercare remains of the utmost importance.²⁸⁰ Accreditation of psychiatrists administering ECT is required to ensure that adequate training and supervision are provided so that psychiatry does not continue to bring ECT into disrepute and fall short of what its patients deserve.²⁸¹

²⁷⁹ D Barton, "ECT: A Review of Recent Developments", presentation at the Mental Health Legal Centre Inc Seminar, May 2000, Melbourne (unpublished). Dr Barton is in charge of the Mental Health Program, North Western Health Care Network, The Royal Melbourne Hospital.

²⁸⁰ C Robertson and J M Eagles, "Review of ECT Prescription and Outcome in Depression" (1997) 21 *Psychiatric Bulletin* 498; L Ogunlipo, M Jorsh, B Wai and J Lea, "Onset of Clinical Improvement of Depressive Illness Following Electroconvulsive Therapy" (1999) 23 *Psychiatric Bulletin* 474.
²⁸¹ Porter, *op cit* n 189.