Nordic Association for Convulsive Therapy 2012

ECT Stigma, Society, Change, Training and Clinical Excellence

John Tiller

Professor of Psychiatry

The University of Melbourne

Albert Road Clinic

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Interest Statement

- Director ECT clinical service, Albert Road Clinic
- Director Australasian Postgraduate Medicine ECT training program (not-for-profit)
- Member, Victorian Chief Psychiatrist's ECT reference group
- Committee member Royal Australian and New Zealand College of Psychiatrists' ECT and neurostimulation special interest group (ENSIG)

Context

- Clinical and legislative examples
  - mostly from the State of Victoria, Australia
- 2700 ECT patients per annum (pop=4.5m)
  - 60/100,000
- Not stating that these examples have universal application
- Exemplifying some of the issues that can arise with ECT, and their management
- History
  - "Those who cannot remember the past are condemned to repeat it."[1]

1. George **Santayana** (1863 – 1952), Spanish philosopher, essayist, poet and novelist.

The University of Melbourne

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Melbourne Neuroscience Precinct

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Our Vice-Chancellor

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Albert Road Clinic

- Established 1996, part of Ramsay Health Care
  - 80 bed private hospital
  - Founded a University Professorial Unit
- Historically psychiatrists treated their own patients
  - Difficult with move to larger facility
- Decision to establish an ECT service
- Staffed by psychiatrists with specific expertise with ECT
- Commitment to excellence, risk minimisation
- Avoid psychiatrists with little or no training using ECT indiscriminately
- Established a training program
  - Pool of trained psychiatrists and nurses
  - Expected it to last one year

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Electroconvulsive Therapy (ECT)

- ECT: a useful and effective treatment
  - Introduced 1938[1]
  - Widely and rapidly adopted
- The only sustained effective treatment for depression and schizophrenia in the 1940s
- Alternative to permanent effects of psychosurgery
- Tried for other mental disorders
  - mostly unsuccessfully
- Allegations of abuse
  - outside therapeutic indications

[1] Cerletti U, Bini L (1938) *Bolletino Accademia Medica Roma*, 64:136-138

Psychiatry and Neurology

- Historical close links – then division
- By 1940
  - Freudian psychoanalysis dominance
  - Minimised biological theories and treatments
- Somatic therapies from neurologists and surgeons
  - Frontal and prefrontal leucotomy
- Psychiatrists as talking doctors
  - Not “real” doctors

Psychosurgery

- Introduced by G Burckhardt[1]
- Popularised by E Moniz[2]
  - Nobel Prize 1949
    - But not for cerebral angiography
- W Freeman (P) and J Watts[3] (NS) USA
  - Lauded for treatment (and cost savings)
  - >50% USA hospital beds with psychiatry
    - $1m/d saved by psychosurgery
  - Split after widespread use by the unqualified and untrained
  - Rejected after
    - Medicines available
    - Recognition of long term adverse events
    - Banned in many jurisdictions

1. Burkhardt G. (1891) Uber rindexcisionen, als beitrag zur operativen therapie der psychosen, Allg. Z. Psychiatr. Med. (47) 463-548 **2.** Moniz E. (1937) Prefrontal leucotomy in the treatment of mental disorders, Am. J. Psychiatry (93) 1379-1385 **3.**Freeman W and Watts JW (1937) Prefrontal leucotomy in the treatment of mental disorders, South Med. J. (30) 23-31

Rise of Psychopharmacotherapy

- Pharmacotherapy developments 1950s-1960s "Golden Age"
  - Antidepressants
    - MAOIs (1st were hydrazine N_2H_4 derivatives)
      - monomethylhydrazine in rocket fuel
      - Tuberculostats, 2 independent groups: HH Fox[1], H Yale[2]
    - TCAs (Roland Kuhn 1956)[3]
    - SSRIs etc followed
  - Antipsychotics
    - Chlorpromazine and other phenothiazines (from antihistamines)[4]
    - Butyrophenones
    - Atypicals
  - Anxiolytics – safer agents
    - Benzodiazepines (1955, fusion of benzene and diazepine ring structures)[5]
- All agents had marketing impact
  - Clamor for therapeutic space – big marketing budgets
  - No voice for ECT

1. Fox HH, Gibas JT. (1953) Synthetic tuberculostats. VII. Monoalkyl derivatives of isonicotinylhydrazine. J Organic Chem; 18: 994-1002 **2.** Grunberg E, Schnitzer RJ. (1952) Studies on the activity of hydrazine derivates of isonicotinic acid in the experimental tuberculosis of mice. Bull Sea View Hosp 13: 3-11. **3.** Kuhn R.(1957) Über die Behandlung depressiver Zustände mit einem Iminodibenzylderivat (G 22355). Schweiz Med Wchnschr 87: 1135-40. **4.** Paul Charpentier, Delay J and Deniker P in: López-Muñoz, Francisco; Alamo, Cecilio; Cuenca, Eduardo; Shen, Winston W.; Clervoy, Patrick; Rubio, Gabriel (2005). "History of the discovery and clinical introduction of chlorpromazine". *Annals of Clinical Psychiatry* 17 (3): 113–35 **5.** Sternbach LH (1979). "The benzodiazepine story". *J Med Chem* 22 (1): 1–7

Psychopharmacology – facts

- Iproniazid, imipramine and chlorpromazine
  - fundamental contributions to the development of psychiatry
- Authentic change in the care of psychiatric patients
- An indispensable research tool
  - neurobiology and psychopharmacology,
- Permitted postulation of the first aetiopathogenic hypotheses of
  - depressive disorders, and
  - psychosis

Psychopharmacology – Professional Opinion[1]

- Many critics in profession with the use of drugs
- Psychoanalysis doctrinally dominant at that time
- Depression
  - "a symptomatological manifestation of internal personality conflicts"
- Such conditions even deemed to have positive qualities
  - Externalizing a series of subconscious and traumatic internal conflicts, supposedly processed by patients themselves
- In this framework, pharmacological treatment of depressive symptoms - "a real error"
- It would prevent patients from discovering the "true" roots of their internal conflicts.

1. López-Muñoz F. and Alamo C. (2009) Monoaminergic Transmission: The History of the Discovery of Antidepressants from 1950s Until Today. Current Pharmaceutical Design. (15) 1563-1586

Public Opinion

- Psychiatric illnesses
  - Feared
  - Sufferers rejected by society
  - Incurable
- Psychosurgery
  - Permanent frontal lobe adverse effects
- ECT
  - Punishment
  - Permanent memory deficits
- Psychopharmacology
  - Possibly better
  - But wait and see the adverse outcomes - thalidomide
- Psychiatrists: potentially mad, bad and dangerous
  - See a doctor, therapist, counsellor or advisor, but not a psychiatrist

ECT Into Disrepute and Disuse

- ECT supplanted by drugs
  - marketing forces
- Many ECT services closed
- ECT targeted by antipsychiatry movement
  - Especially from the 1970s

ECT Stigma

- "Public education"
  - "One Flew Over the Cuckoo's Nest"[1]
  - Jack Nicholson (RP McMurphy)
    - A film of the 70s,
    - from book of the 60s,
    - about the 40s/50s
  - Fantastic dramatisation from fiction written over 50 years ago
  - Embedded in the public psyche
  - No discrimination between drama and clinical fact
  - Still seen as contemporaneous public education
- Continued misinformation
- Many psychiatrists "I would not use ECT"
- ECT called "shock therapy"

1. Dr. Dean Kent Brooks M.D. was the head of the Oregon State Hospital in 1975 where One Flew Over the Cuckoo's Nest was filmed. He starred, as the head of the psychiatric hospital in the film, "Dr. John Spivey M.D.".

Stigma

- Shock Therapy – Electroconvulsive Therapy (ECT)
- Are these one and the same?

“Shock Therapy”

- Electric shocks from Leyden jars (1745) (condensers) could cause subjective shocks and muscle contractions
- Faraday (1831) developed electromagnetic induction
- Shock therapy machines (1880s)[1]
- Patient holding 2 charged electrodes experiences tingling and muscle contraction “shock therapy”
- Placebo, but widely used, before disrepute as inefficacious

1. The original shock therapy machine. In Highlights of the Collection: Medical History Museum. (2012) University of Melbourne, Melbourne pp50-51

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

ECT is Not Shock Therapy

Magneto-electric Machine (Shock Therapy - 1885)[1]

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

1. The original shock therapy machine. In Highlights of the Collection: Medical History Museum. (2012) University of Melbourne, Melbourne pp50-51

ECT

- Highly effective, but…
- Into disrepute with
  - Denigratory name from prior ineffective placebo
  - Public perception, dramatisations accepted as fact
  - Many in psychiatry profession opposed to ECT
- Units closed, access to treatment limited
- Expertise lost
- ECT unnecessary as medicines will suffice
- Little motivation to develop ECT
- Few advocates for ECT
  - Underfunded and under resourced
- Evolving legislation to contain psychiatrists

Education to Counter Stigma

- Explain ECT
- Specific information for patients and their families[1]
- Patients can be the most trusted and effective advocates for ECT
- Recognise that patients have rightly criticised
  - instances of poorly conducted ECT, and
  - the use of what are now old-fashioned techniques
    - Less efficacy than may otherwise achieve
    - More adverse events than necessary (especially memory deficits)
- Understand your society and its concerns
- Professional engagement in legislation
- Challenge misinformation on basis of science
- Best-practice ECT cannot guarantee positive results

1Tiller JWG, Lyndon RW (2003) Electroconvulsive Therapy: An Australasian Guide Appendix 3, APM, Melbourne

Community Wishes

- Safe and effective treatment
- Do not want the brain interfered with
  - Yet do want psychiatric disorders treated
  - As if psychiatric illness occurs outside the brain
- Cautious regarding involuntary treatment
- Fear the unknown
- Respect doctors, but uncertain about psychiatrists
- Endeavour to manage fear and lack of trust by legislation
  - Not by gaining knowledge
  - Legislation driven by emotion and political expediency, not fact

Legislation

- Only 2 evidence based medical treatments have specific legislation
  - ECT
  - Psychosurgery
- Legislative focus
  - Restriction
  - Banning
  - Cannot respond to rapid changes in medical knowledge and care

Victorian Experience with ECT -1970s

- Average number of treatments in course 10-12
- Involuntary patients treated under direction of Chief Psychiatrist
- Voluntary patient signs general consent for treatment
  - Covers any required treatment including drugs and ECT
- Any doctor can prescribe ECT
- ECT usually administered by psychiatrist trainee (or other mental health staff)
- Trainee gives both anaesthetic and ECT
- Not seen as a procedure done by a psychiatrist
- Bilateral treatment with muscle relaxant
  - One standard dose for all

Victorian Experience with ECT -1980s

- Review of Mental Health Act in 1980s
- **Only a psychiatrist can prescribe ECT**
  - **silent on who to administer ECT**
- Government Committee's inputs on number of ECT treatments
  - From psychiatrists
    - allow 12 ECT treatments before review
  - From "concerned citizens"
    - allow 0 ECT treatments
- Committee members obviously had not read the Bible
  - 1 Kings 3, 16-28
  - Solomon's decision on the dispute between harlots as to who was the mother of a surviving baby
- Government Committee's Advice
  - **Can only consent to a maximum of 6 treatments**
  - **After 7 days consent lapses**
  - **State start and end date for course of treatment (not more than 6 weeks)**

Victorian Experience with ECT

- Consequence of 6 ECT limit
  - Most have to consent 2-3 times for a single course of treatment
- Until recent training, Victoria had bimodal distribution for acute course of ECT of 6 and 12, rest of country 10-12
  - Bad legislation results in bad clinical practice
- Misinformation to patients
  - Legislation defines “a course of ECT” is 6 treatments
  - Advice in Government Handbook on a course, used to state
    - Legal definition: “6 treatments”
    - Clinical definition: “on average about 12 treatments but can require 25 or more”
  - Clinical definition removed from latest revision of Handbook

Draft Mental Health Bill 2010 – The Intent

- "Marks a major shift in policy"
  - Contemporary
  - Compatibility with the Charter of Human Rights and Responsibilities
- Supported decision making by patients
  - With presumption of capacity unless determined otherwise
- Voluntary treatment preferred
- Codes of practice to
  - Clarify the operation of the Act

Draft Mental Health Bill 2010 – The Psychiatrists' Hope

- Respect patient decisions when possible
- Engage relatives and friends in treatment when appropriate
- Encourage "best practice" care
- Optimal care for involuntary patients
- Remove impediments to treatment
- Respect the expertise of psychiatrists

Draft Mental Health Bill 2010 – The Reality

- Discriminates against patients with mental illness
- Discriminates against psychiatrists

Draft Mental Health Bill 2010 – Patients

- Voluntary
  - Cannot consent to ECT without Tribunal Review
- Involuntary
  - Illness impairs capacity to recognise they are ill or need treatment
  - Cannot have ECT without their consent
  - Denial of effective treatment
  - No recognition of consequences (need more beds)
- Enduring power of medical attorney
  - applies to every illness and condition
  - except ECT, and psychosurgery for psychiatry
- Advanced treatment directives introduced, but…
  - No requirement to consider them – not effective
- Patients under 13 years not permitted ECT

Discrimination Against Psychiatrists

- Penalties for legislative breaches
  - Physicians or surgeons
    - 5 penalty points
  - Psychiatrists
    - 120 points and/or 12 months imprisonment
- Psychiatrists cannot recommend involuntary ECT without Mental Health Tribunal review
  - Second opinion deemed inadequate, yet
  - Tribunal may have no medical expertise
  - If involuntary patient refuses ECT, it cannot be given
- Psychiatrist must effect treatment determined by the Tribunal, or a Tribunal appointed psychiatrist
  - Even if treating psychiatrist thinks recommendations inappropriate

What Happened?

- Government lost election 1 month before Bill to be introduced
  - New government
- Lobby Minister by university academics
- Personal representation to Minister for Health
- Draft Bill deferred – consultation and redrafting process
- Professional engagement in Minister for Health review of Bill
- Provision of data, analysis, and cost effective recommendations
- Counter misinformation in public consultation
- Public awareness through advocacy organisations
- Watch this space
  - A political process, not evidence based medicine

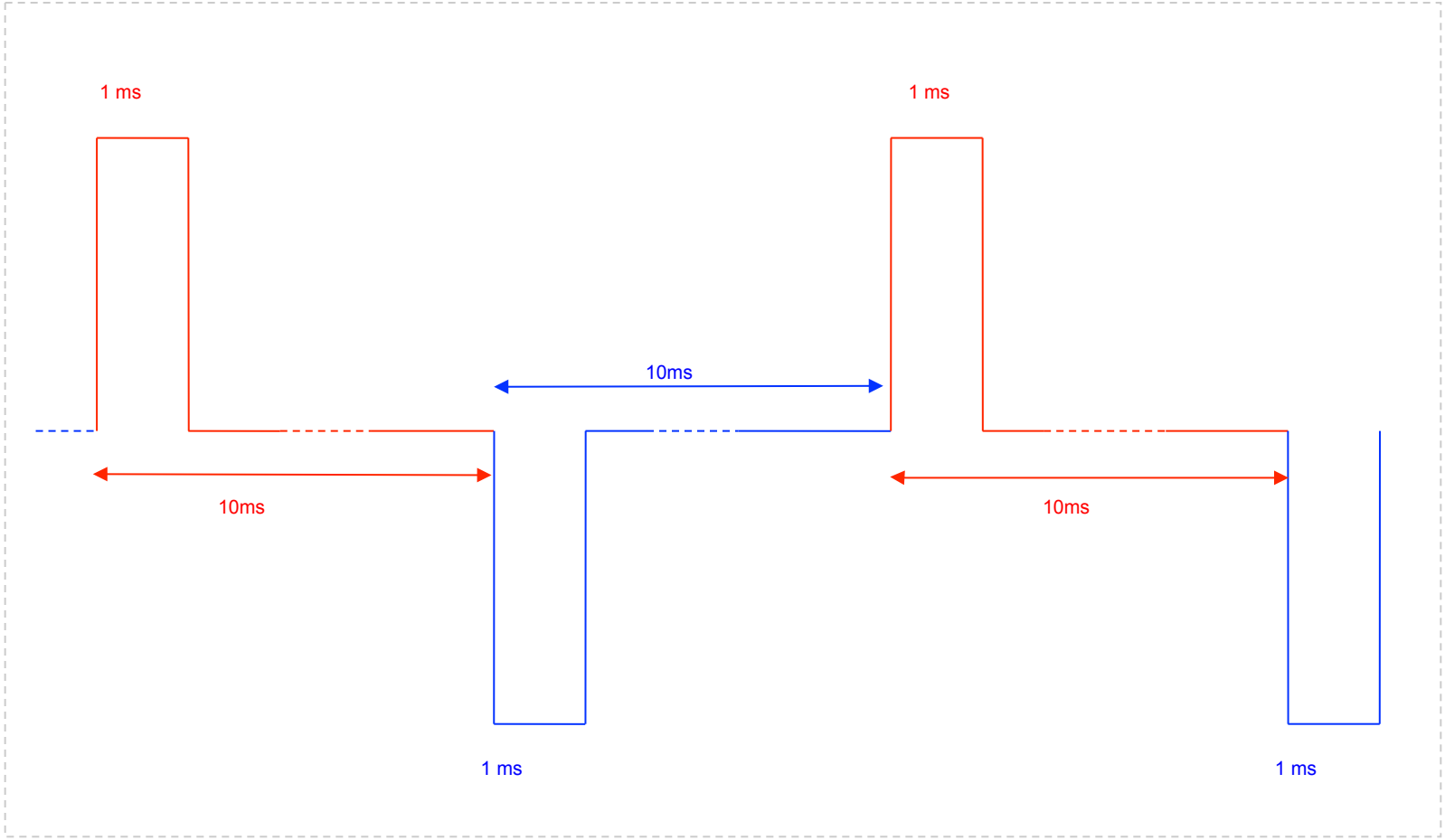
ECT

- Valuable treatment
- Stigma arising from
  - Historical events
  - Commercial factors and competition
  - Psychiatrist opposition
  - Community fears and concerns
- Understand in a social and legislative context
- Engage in the community and legislative change

Training and Clinical Excellence – Impetus in a Time of Change

- Standards for services – changed community expectations
  - Waiting area, treatment room, recovery area
- Anaesthetic changes
  - Consultant or specialist anaesthetist
- Improved ECT machines
  - Computer controlled stimulus, monitoring
- Psychiatrist able to adjust treatments
  - Understand and operate ECT machine, including EEG
  - Psychiatrists with specialised knowledge of ECT
  - ECT service offering ECT, not each psychiatrist treating their own patient
- Accreditation of services and staff
  - Move to accredit processes as well as facilities and training

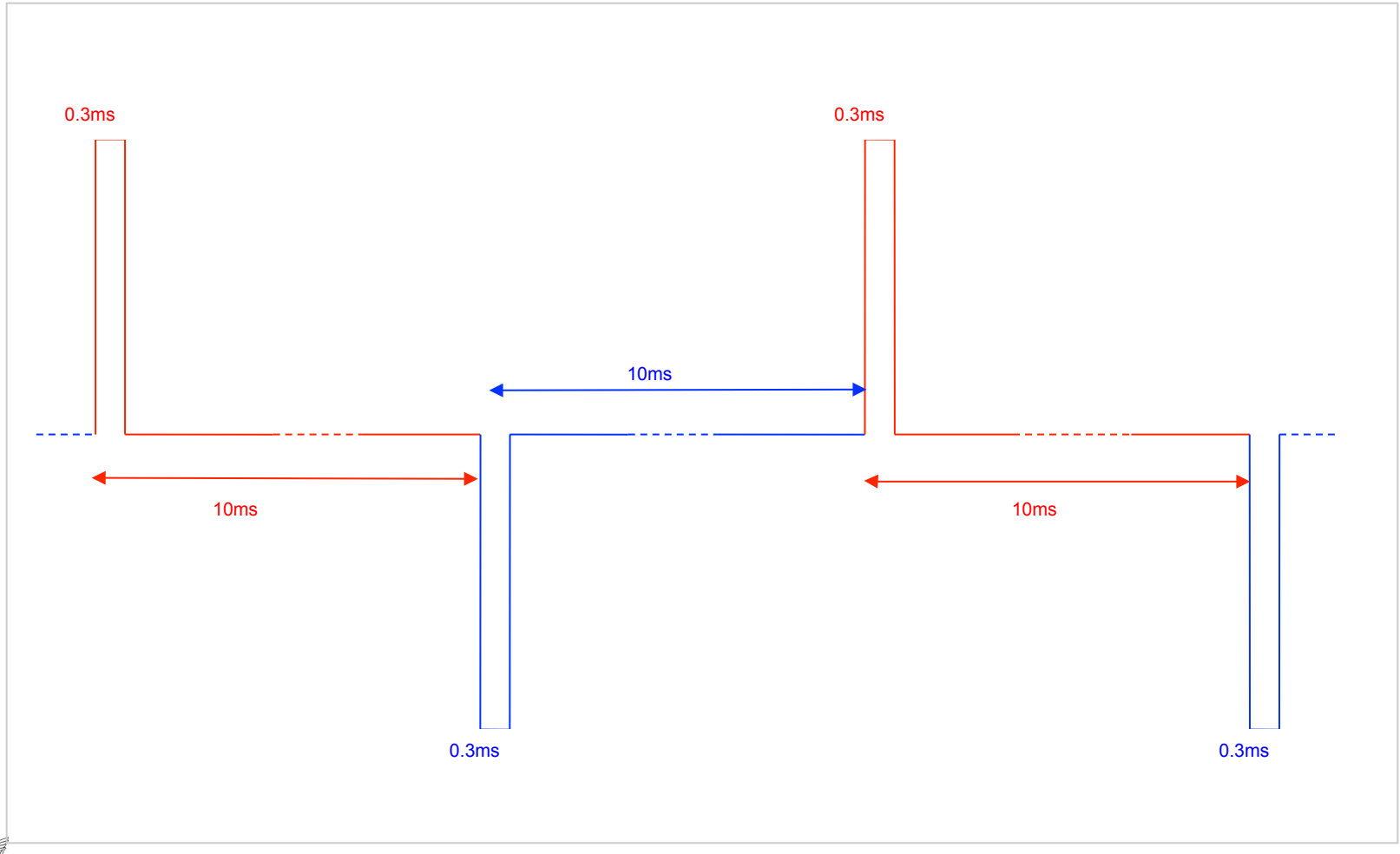
DGx Stimulus (1ms)



THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Ultrabrief Stimulus (0.3ms)



THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Multiple Types of ECT

- ***Stimulus***
  - Brief pulse square wave,1-2.5 ms; ultrabrief pulse 0.25ms, 0.3ms, 0.5ms; intermittent pulses
- ***Electrode placement***
  - Bilateral (bitemporal), bifrontal, right unilateral, left unilateral
- ***Monitoring***
  - Fronto-mastoid with acromioclavicular ground, or none
- ***Dosing***
  - Titration, age based, maximal for all
- ***Dose range***
  - 10 - 504mC, 10 – 1008 mC, 25 – 504mC, 25 – 1008mC
- ***Options***
  - 1000s of options in ordinary clinical practice

Evaluating Clinical Outcomes CGI

1. Normal, not at all ill
2. Borderline mentally ill
3. Mildly ill
4. Moderately ill
5. Markedly ill
6. Severely ill
7. Extremely ill.

Guy W: ECDEU Assessment Manual for Psychopharmacology —Revised (DHEW Publ No ADM 76-338). Rockville, MD, U.S. Department of Health, Education, and Welfare, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, NIMH Psychopharmacology Research Branch, Division of Extramural Research Programs, 1976, pp 218–222

Cognitive Adverse Effects

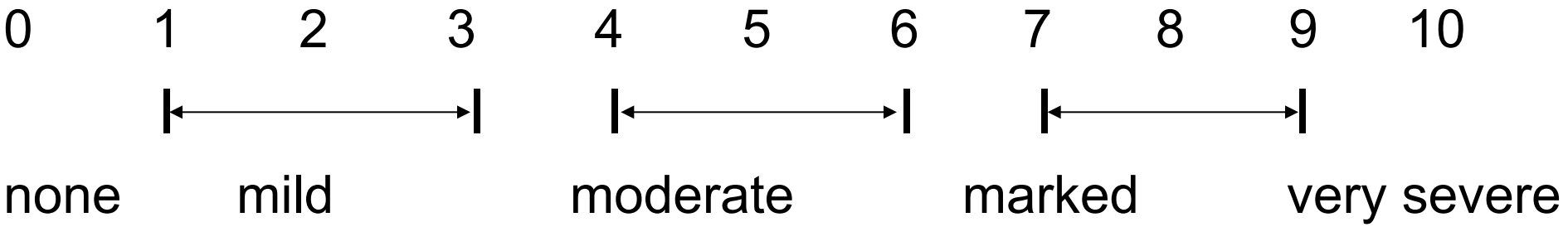
- The main objection to ECT
- Especially autobiographical memories
- MMSE does not assess adversity well
- Cognitive tests long and cumbersome
- Modified CAPECT[1,2]
  - Do you have memory problems?
  - How badly do they affect you?

1. Philpot M, Collins C, Trivedi P et al., (2004) Eliciting users' views of ECT in two mental health trusts with a user-designed questionnair. Journal of Mental Health,; 13(4): 403 – 413
2. Communicate, asking patients about ECT (CAPECT)

Cognitive Impacts of ECT

Circle one number

That best describes your memory problems with ECT



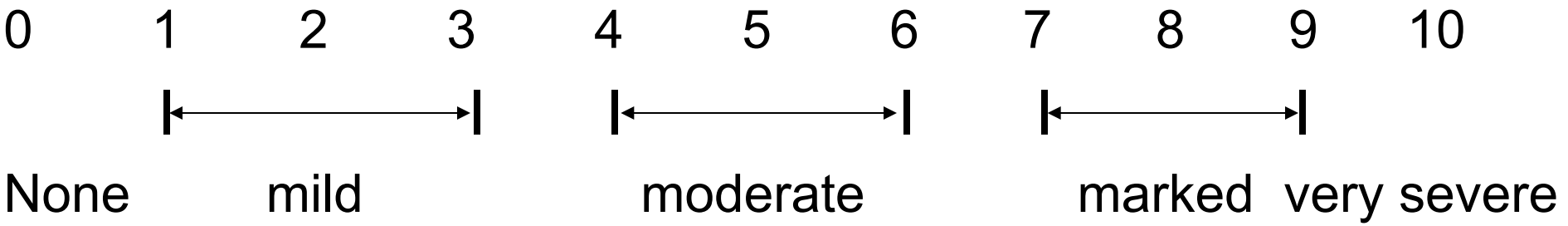
THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Cognitive Impacts of ECT

Circle one number

That best describes the impact of these memory problems on your life



THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC

Training

- Course for professionals
- Psychiatrists and ECT nurses
- Not simply a technical training course
- Help professionals adapt to new changes, innovations and developments
- History of ECT, and how it may work
- Indications, patient assessment, and monitoring
- Information and consent
- Social and cultural context, legislation
- Drugs and ECT
- ECT treatment techniques: theoretical and hands on
- 50 professionals per annum

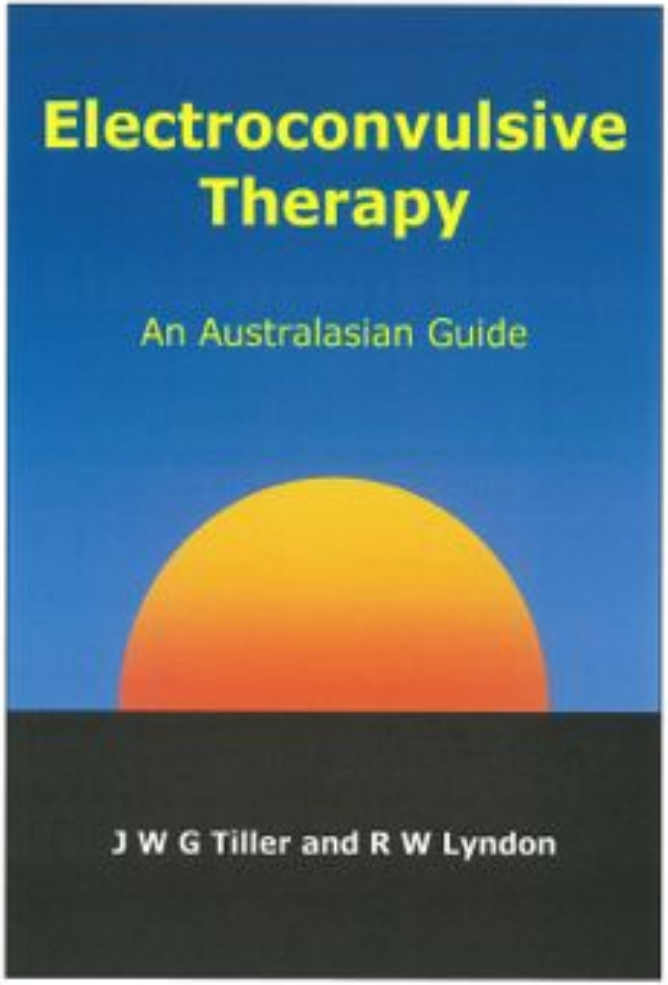
Outcomes

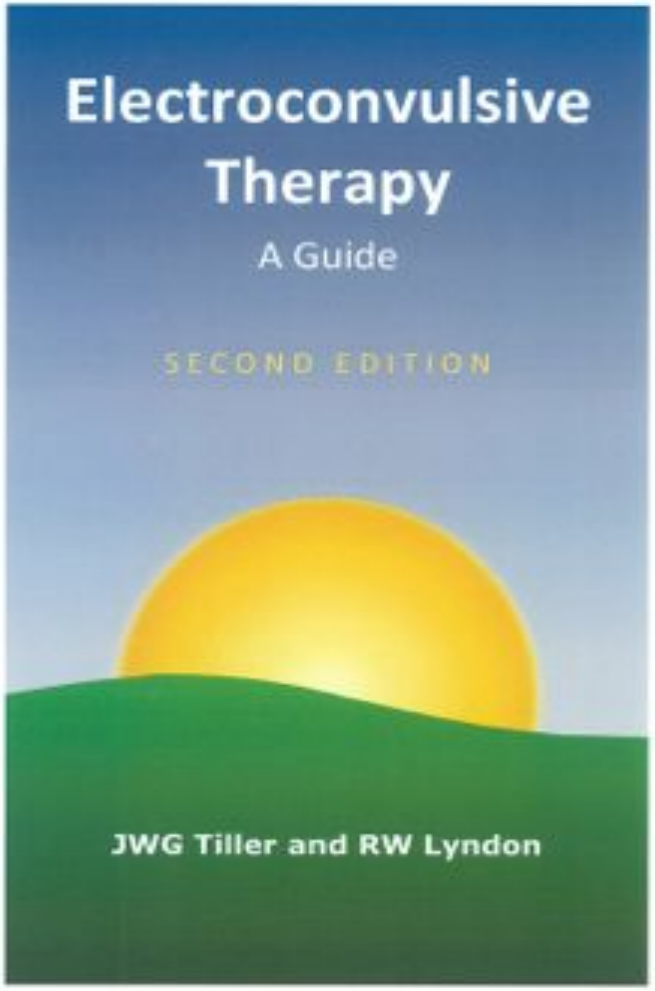
- Better processes
- Very few incidents, no critical incidents
- Better patient acceptance
- Better family acceptance
- Better clinical outcomes
  - maintenance more practical
- Fewer adverse events
  - some still get memory impairment
- Training adopted with varied enthusiasm
- Informed Department of Health standards of practice

Conclusions

ECT Stigma, Society, Change, Training and Clinical Excellence

- ECT is stigmatised
- Stigma reflects
  - the history of ECT, and
  - community and psychiatrist attitudes
- Recognition of the inadequacy of other treatments
- Changes with new equipment and treatment techniques
- Respond to legislation and community expectations
  - Engage in the legislative process
- Training for a specialist service
- Accreditation of facilities and staff
- Expectation of clinical excellence
- Improved patient outcomes


Electroconvulsive Therapy
An Australasian Guide
J W G Tiller and R W Lyndon


Electroconvulsive Therapy
A Guide
SECOND EDITION
JWG Tiller and RW Lyndon

Relax

THE UNIVERSITY OF MELBOURNE

ALBERT ROAD CLINIC