

NACT

Nordic Association for Convulsive Therapy

Relapse after abrupt discontinuation of M-ECT during the COVID-19 pandemic

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Disclosure

No disclosures to report

Relapse after ECT

- ECT

- Safe and effective
- Severe mood and psychotic disorders

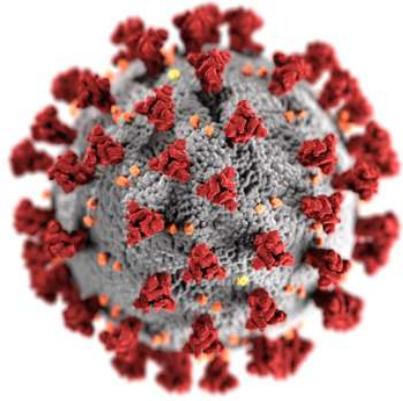
- 1-year relapse rate: 50%

Jelovac et al. (2013), NEUROPSYCHOPHARMACOL
Ward et al. (2018), PSYCHIAT RES

- M-ECT

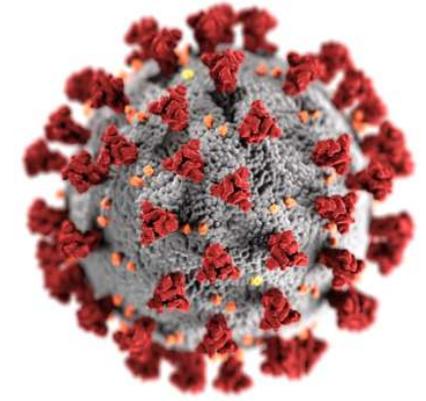
- Effectively prevents relapse
- Multiple severe episodes
- Failed to remain well on pharmacotherapy

Andrade & Kurinji (2002), J ECT
Brown et al. (2014), J ECT
Ward et al. (2018), PSYCHIAT RES



COVID-19 pandemic

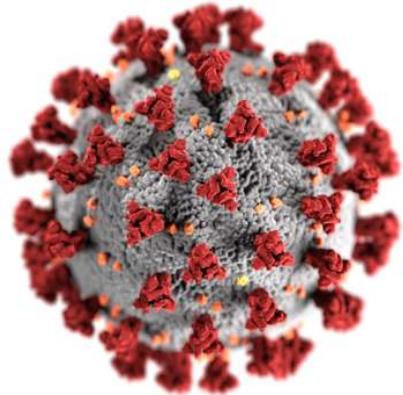
- Major changes to the practice of ECT
- Limited availability
 - Relocation of anesthesiologists
 - Risk of patient infection
 - Time-demanding safety protocols



Electroconvulsive Therapy During COVID-19-Times: Our Patients Cannot Wait

Pascal Sienaert, M.D., Ph.D., Simon Lambrichts, M.D., Leen Popleu, M.D., Elke Van Gerven, M.D., Satya Buggenhout, M.D., Filip Bouckaert, M.D., Ph.D.

“In Flanders, [...], 70% of the ECT-units stopped treatments from the start of the pandemic.”



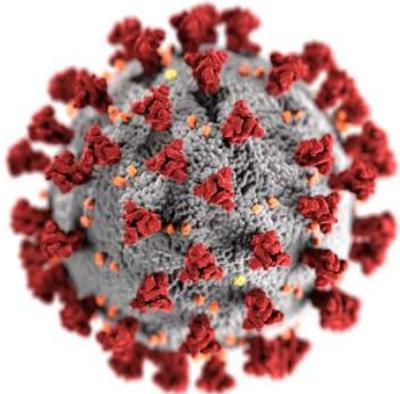
COVID-19 pandemic

- Availability-related changes in ECT schedules
- M-ECT treatments suspended



When life gives you lemons...

- Study illness course
- Outcome after discontinuation of M-ECT?
- Relapse rate and time to relapse
- Prospective cohort study



Objective



- *Younger*
- *Bipolar or psychotic disorder*
- *More previous acute ECT courses*
- *Less M-ECT sessions* *before COVID-stop*
- *Shorter M-ECT treatment* *time of discontinuation* *interval at the*

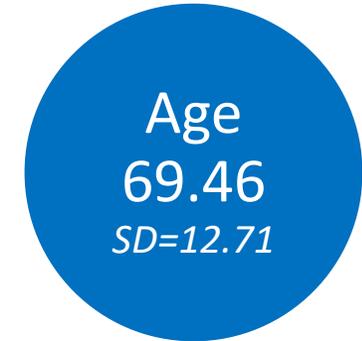
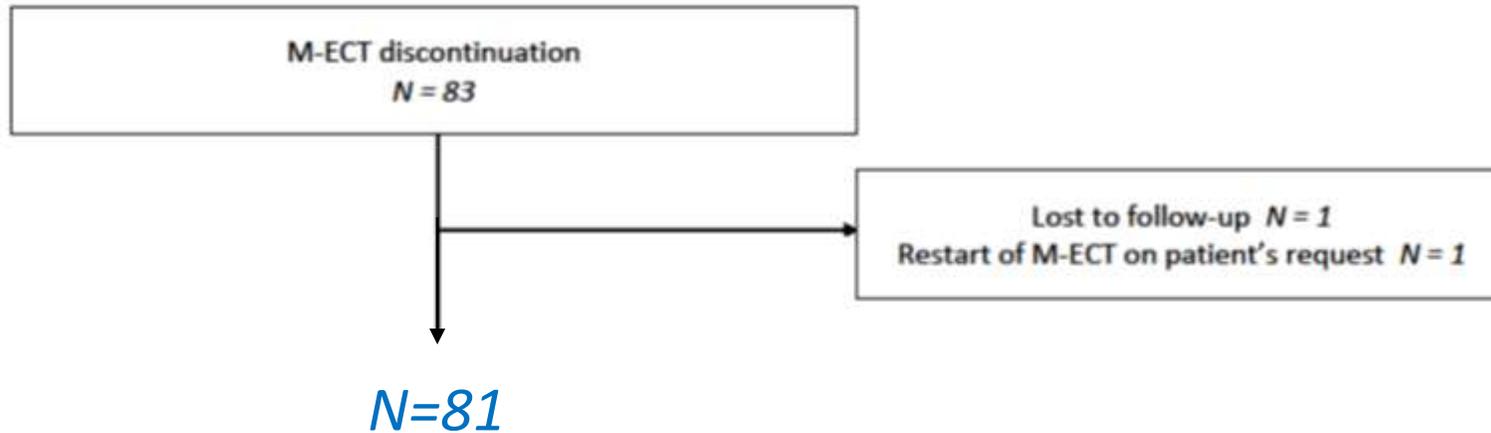
How?

- Stop M-ECT *March 16, 2020*
- 6-month follow-up
- Weekly to monthly assessments

- *Relapse definition*

- Admission
- Restart ECT
- Change medication
- Suicide (attempt)

Who?



73%

Who?

Diagnosis & indication

- *MDD: N=51 (63%)*
- *BD: N=16 (20%)*
- *Psychotic disorder: N=12 (15%)**
- *ASD: N=1 (1%)*
- *Alcohol-induced MND: N=1 (1%)*

- *Depressive episode*
 - *with psychotic features: N=32 (40%)*
 - *without psychotic features: N=31 (38%)*
- *Psychosis: N=9 (11%)*
- *Catatonia: N=8 (10%)*
- *Manic episode: N=1 (1%)*

**Schizophrenia (N=8) – Schizoaffective disorder (N=2) – Schizophreniform disorder (N=1) – Psychotic disorder due to another medical condition (N=1)*

Who?

Treatment history



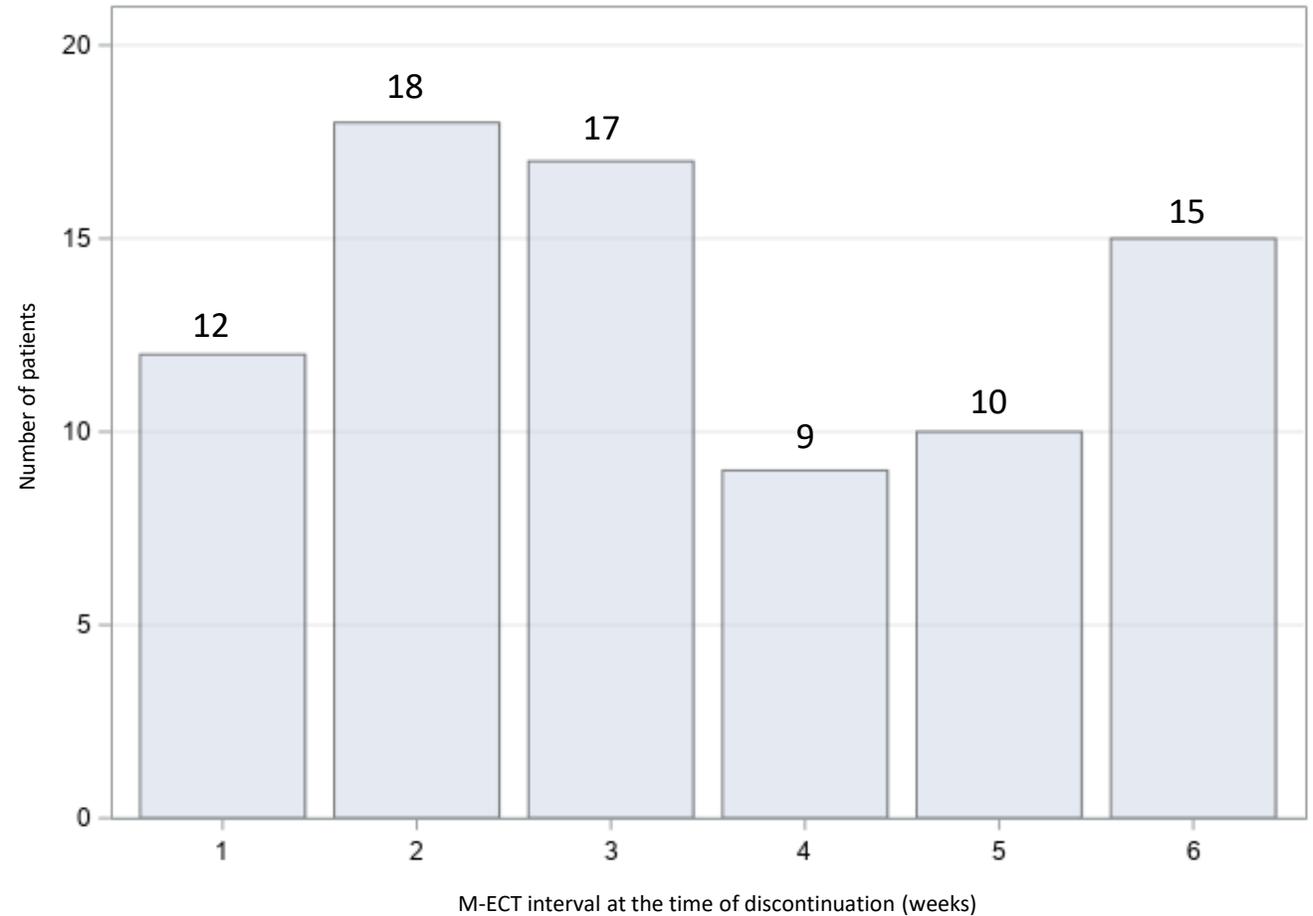
- 1 previous acute ECT course *median=1 (IQR=0-2)*
- 58 weeks of M-ECT before COVID-stop *median=58.71 (IQR=23.86-98)*
- 25 M-ECT sessions before COVID-stop *median=25 (IQR=12-47)*

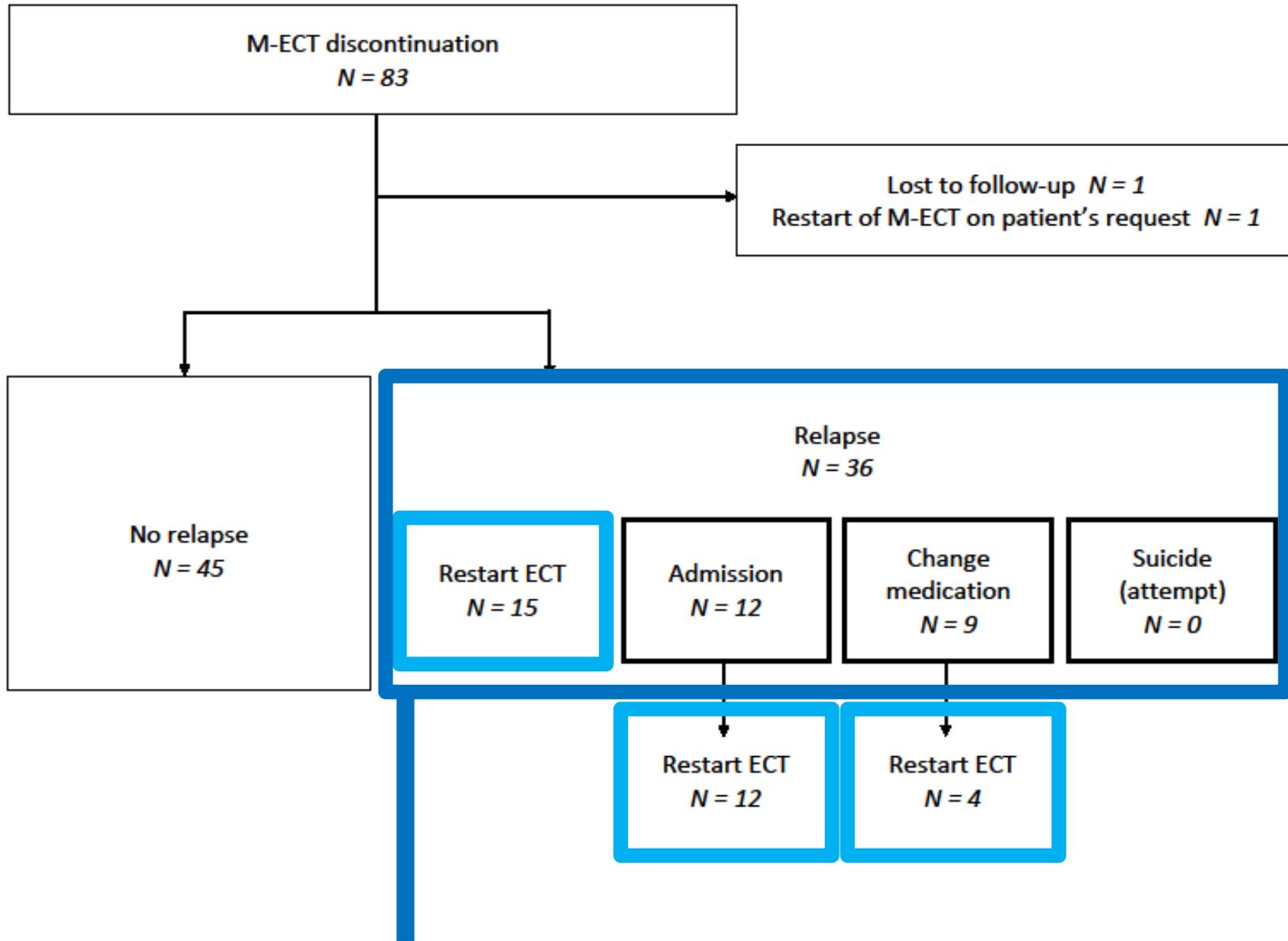
Who?

M-ECT treatment interval



Maintenance
pharmacotherapy





Median time to relapse: 8 weeks IQR=6.29-13

44%

6-month relapse rate

86%

Restart of ECT

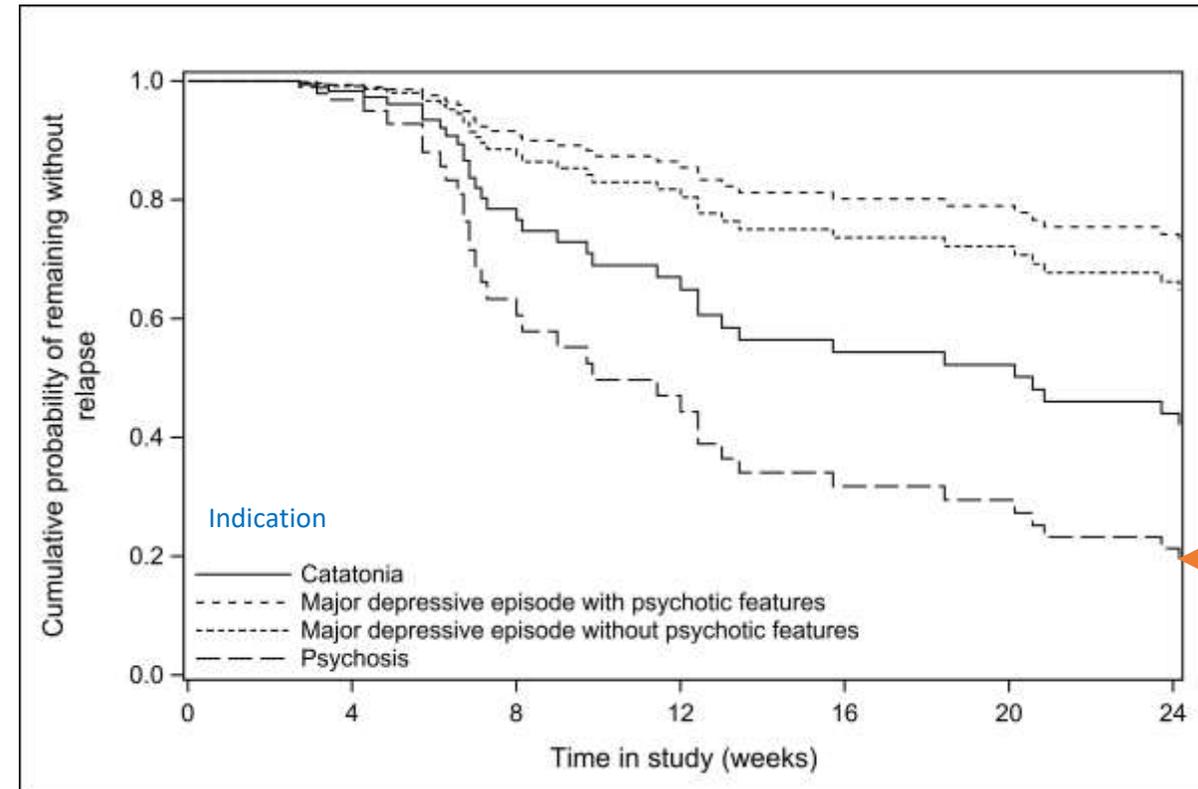
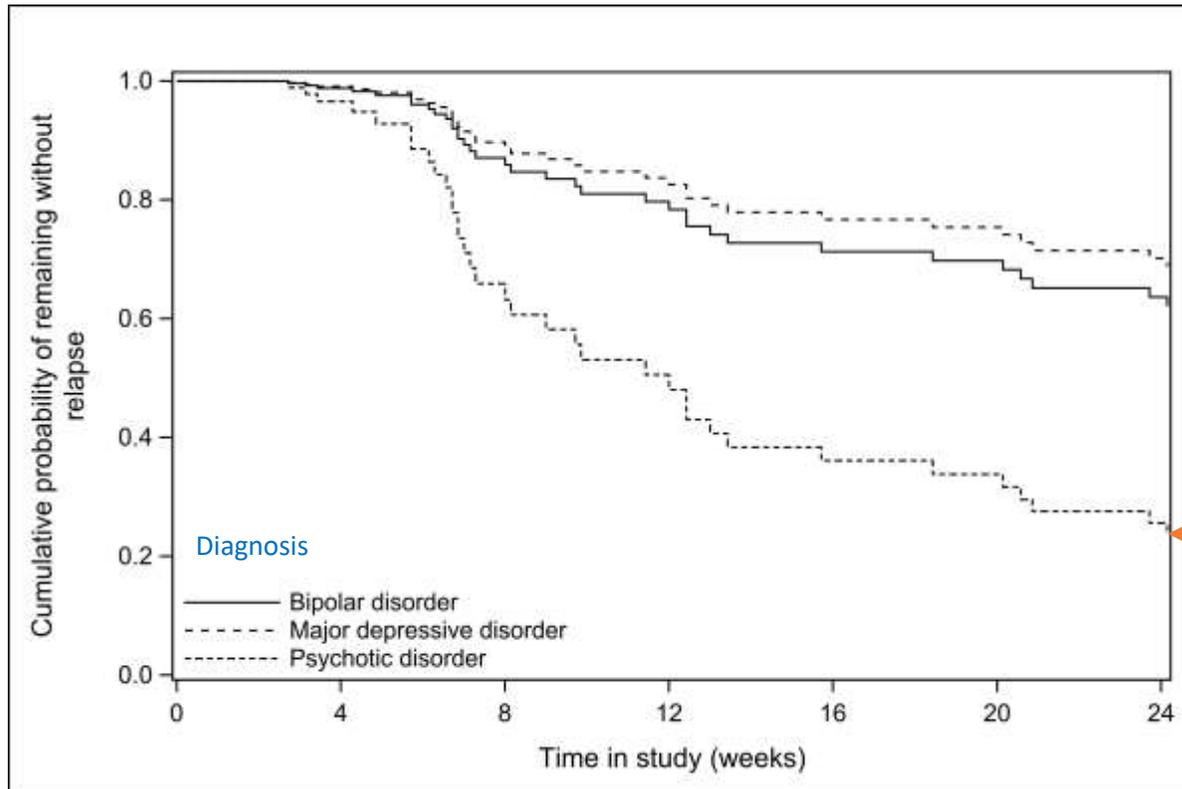
No effect of age or number of M-ECT sessions



- *Younger*
- *Bipolar or psychotic disorder*
- *More previous acute ECT courses*
- *Less M-ECT sessions before COVID-stop*
- *Shorter M-ECT treatment time of discontinuation*

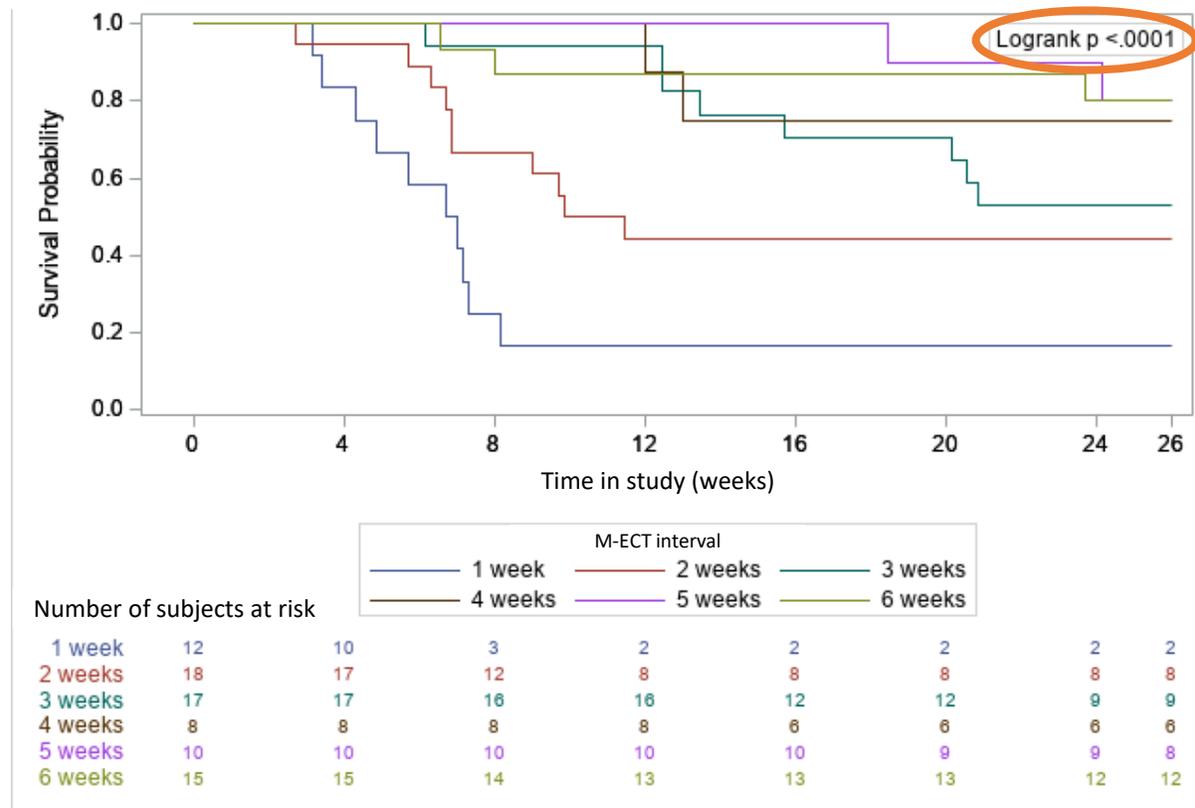
interval at the

Mood disorders do better



Shorter interval, earlier relapse

Kaplan-Meier survival curves by M-ECT interval



Relapse after stop M-ECT

Retrospective studies

<i>First author (year)</i>	<i>Sample size</i>	<i>Follow-up</i>	<i>Relapse definition</i>	<i>Relapse rate</i>	<i>Risk factor(s) for relapse</i>
Huuhka (2012)	45	12 m	Rehospitalization Restart of ECT	44% (all within 8 m)	Diagnoses other than MDD
Martinez-Amoros (2020)	73	≥12 m	Rehospitalization Restart of ECT Suicide	49% (18% within 6 m)	Higher number of previous episodes M-ECT interval <1 m
Cabelguen (2020)	16	≥6 m	New episode (DSM-5)	50% (22% within 6 m)	Not assessed

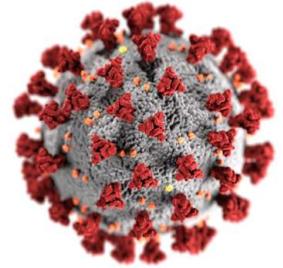


Relapse after stop M-ECT

Retrospective studies

1. Design
2. M-ECT discontinuation
 - Clinical judgement
 - Patients' refusal
3. COVID-19 pandemic
 - Stress
 - Reduced access to treatment

May 2021



Relapse after abrupt discontinuation of maintenance electroconvulsive therapy during the COVID-19 pandemic

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Eva Pilato¹ | Jonas Denduyver² | Katrien Ernes² | Pieter-Paul Maebe² |
Charlotte Migchels² | Lore Roosen² | Satya Buggenhout² | Filip Bouckaert² |
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Effectiveness of maintenance electroconvulsive therapy— Evidence from modifications due to the COVID-19 pandemic

Isabel Methfessel | Matthias Besse | Michael Belz | David Zilles-Wegner 

Discontinuation of Continuation or Maintenance
Electroconvulsive Therapy Caused by the
COVID-19 Pandemic
*A Naturalistic Study Investigating Relapse in Patients With Major
Depressive Disorder*

Nele Van de Velde, MD, Pieter-Jan Geerts, MD,† Hannelore Tandt, MD,* Marie-Anne Vanderhasselt, PhD,‡
Koen Titeca, MD,† and Gilbert Lemmens, MD, PhD*‡*

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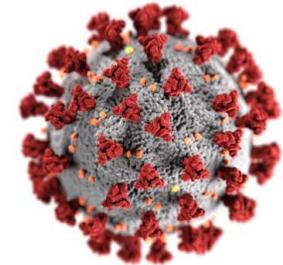
- N=53
- MDD, BD or schizophrenia
- 6-month follow-up
- **Clinical decision** regarding M-ECT
 - Continued without modification (n=7)
 - Continued with reduced frequency (n=12)
 - Discontinued (n=34)



Effectiveness of maintenance electroconvulsive therapy— Evidence from modifications due to the COVID-19 pandemic

Isabel Methfessel | Matthias Besse | Michael Belz | David Zilles-Wegner 

- Relapse definition
 - Admission
 - Restart ECT
- 6-month relapse rates
 - Continued without modification: 14%
 - Continued with reduced frequency: 75%
 - Discontinued: 44%



Discontinuation of Continuation or Maintenance Electroconvulsive Therapy Caused by the COVID-19 Pandemic

*A Naturalistic Study Investigating Relapse in Patients With Major
Depressive Disorder*

Nele Van de Velde, MD, Pieter-Jan Geerts, MD,† Hannelore Tandt, MD,* Marie-Anne Vanderhasselt, PhD,‡
Koen Titeca, MD,† and Gilbert Lemmens, MD, PhD*‡*

- N=37
- MDD
- 3-month follow-up
- **Clinical decision** regarding M-ECT
 - Continued without modification (n=4)
 - Discontinued (n=33)



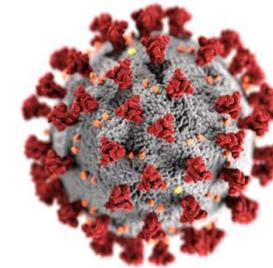
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- Relapse definition

- Admission
- Restart ECT

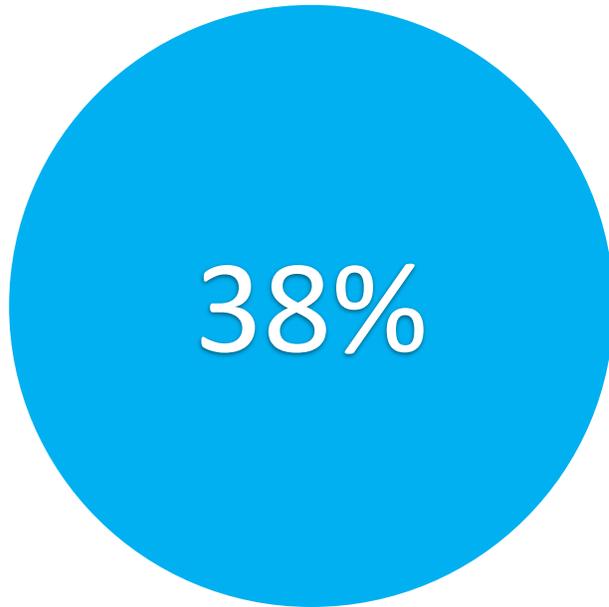


- 3-month relapse rates

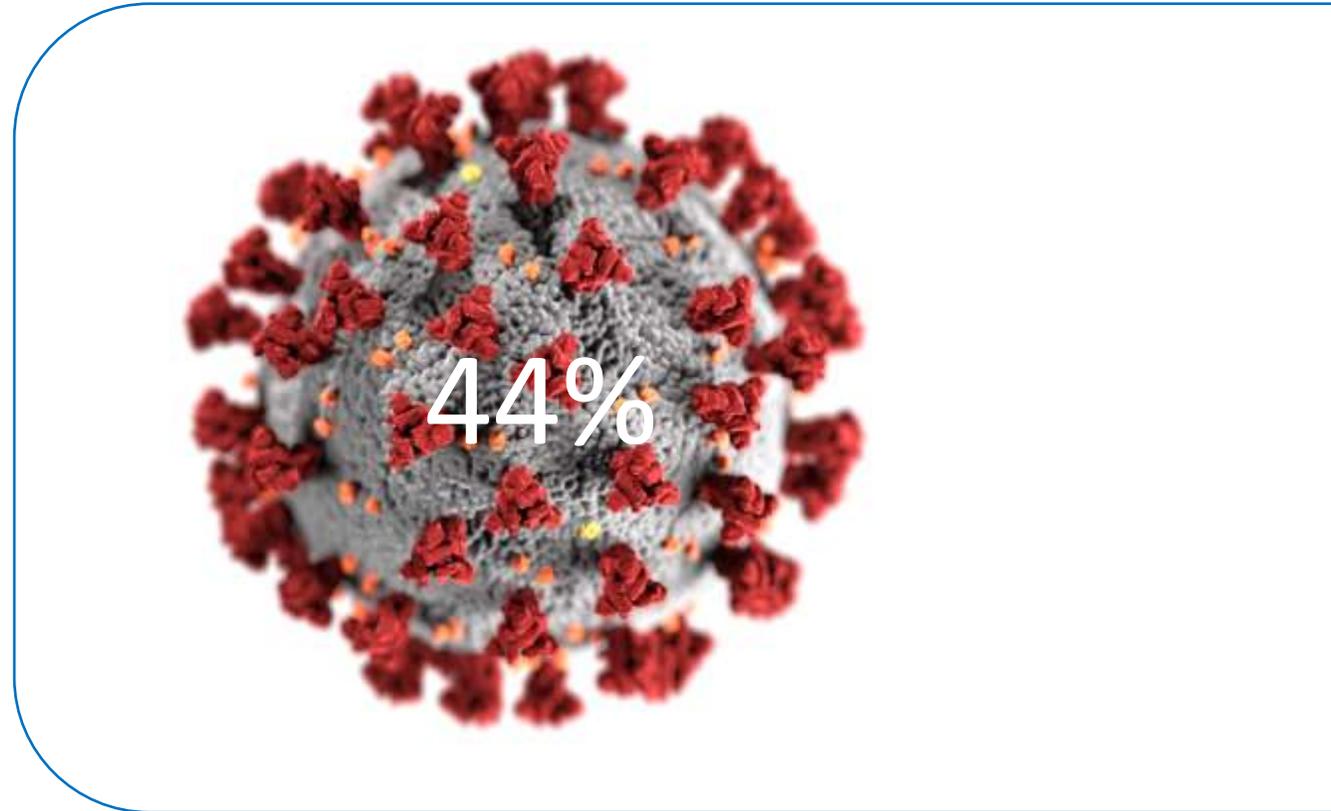
- Continued without modification: 0%
- Discontinued: 61%

Relapse after acute ECT course

Meta-analysis: 6-month relapse rate



Jelovac et al. (2013), NEUROPSYCHOPHARMACOL



Limitations

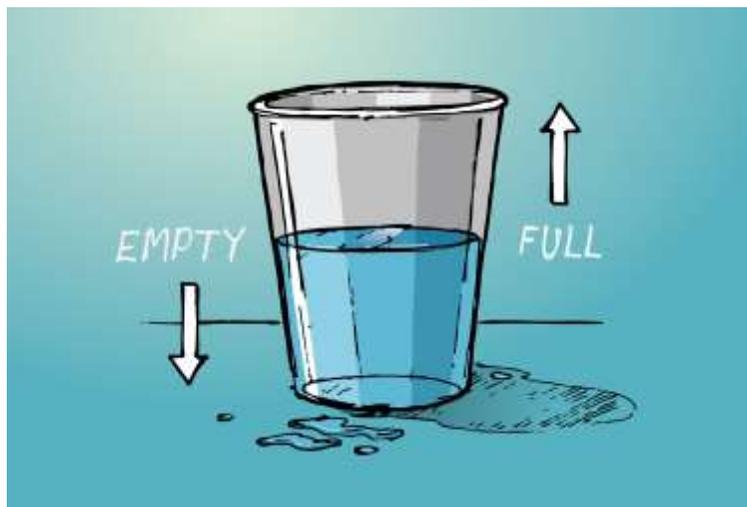
- High mean age *69.46 years*
- Impact of maintenance pharmacotherapy not assessed
- Abrupt discontinuation of M-ECT is not 'common practice'

Conclusion

- Almost half of the patients **relapsed** within 6 months following abrupt discontinuation of M-ECT
- Similar to relapse rate after an acute course
- More than half of the patients **did not relapse** within 6 months following abrupt discontinuation of M-ECT

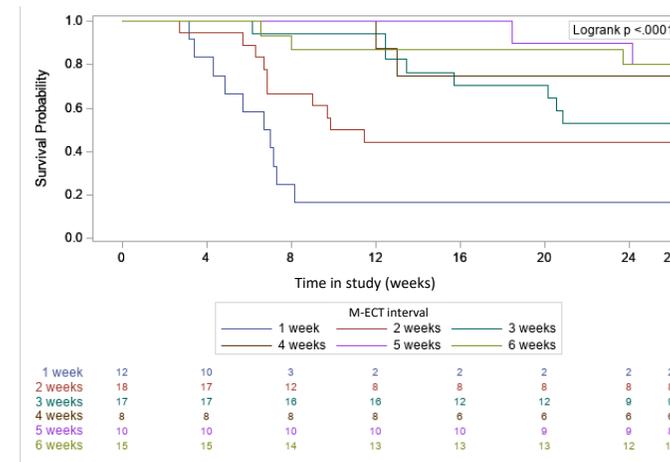
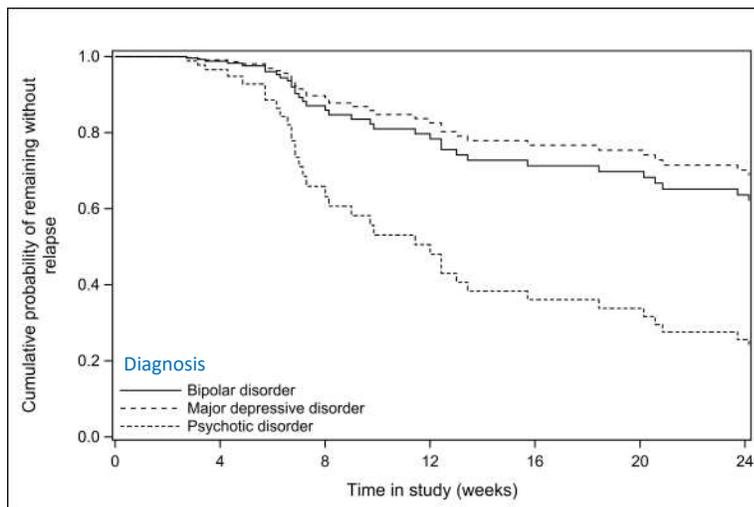
> Consider **continuation** of M-ECT

> Consider **discontinuation** of M-ECT



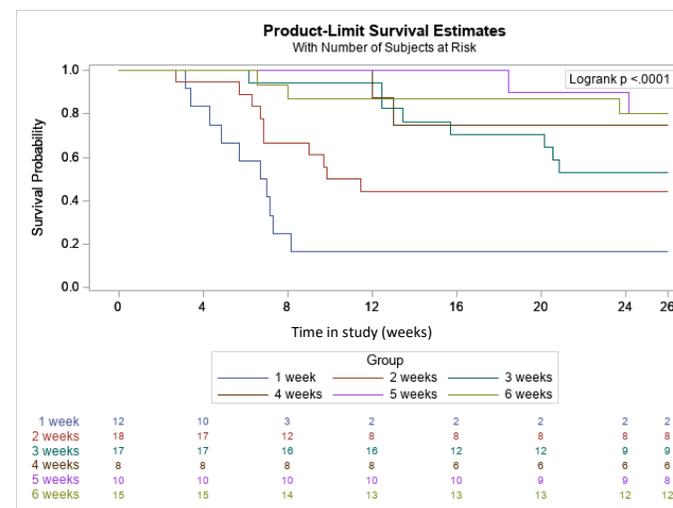
Conclusion

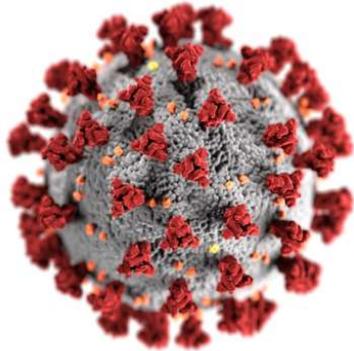
- Higher risk of relapse
 - Diagnosis of psychotic disorder *compared to patients with mood disorders*
 - Shorter interval between M-ECT treatments *at the time of discontinuation*



Conclusion

- Before considering discontinuation of M-ECT
 - Ensure sufficiently solid clinical **stability**
 - Gradually **increase intervals**
- After withdrawal of M-ECT
 - **Monitor** closely
 - **Rescue ECT** at early signs of relapse





Conclusion

Electroconvulsive Therapy During COVID-19 *An Essential Medical Procedure—Maintaining Service Viability and Accessibility*

Randall T. Espinoza, MD, MPH,
Charles H. Kellner, MD,† and William V. McCall, MD, MS‡*

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