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Esketamine for treatment-resistant depression: Comparing two maintenance schedules in an observational real-world study

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Abstract

Background: Treatment-resistant depression (TRD) is associated with substantial clinical and socioeconomic burden. Intranasal esketamine has shown efficacy for TRD in clinical trials and real-world studies. However, evidence on optimal maintenance scheduling is limited. We therefore investigated whether two maintenance schedules differing in their inter-dose intervals were associated with different depressive symptom trajectories.

Methods: We retrospectively analysed 65 patients with TRD undergoing intranasal esketamine treatment as part of routine outpatient care between January 2021 and April 2025. Treatment consisted of an induction phase of eight sessions over four weeks, followed by either a front-loaded or a spaced interval-extension maintenance schedule. Depressive symptoms were assessed using clinician-rated Montgomery-Åsberg Depression Rating Scale (MADRS) and the Beck Depression Inventory-II (BDI).

Results: Depressive symptoms decreased significantly during the induction phase on both MADRS (d = 1.03) and BDI (d = .72). During the maintenance phase, contrasts showed no significant differences between the two maintenance schedules on either outcome. By the end of maintenance, response rates were 35.3% on the MADRS and 26.0% on the BDI, while remission rates were 31.4% and 38.0%, respectively.

Conclusion: Esketamine was associated with significant reductions in depressive symptoms during the induction phase. No significant differences in depressive symptom trajectories were observed between the two maintenance schedules. This finding suggests that maintenance dosing intervals may be scheduled flexibly without loss of efficacy. Given the retrospective, observational design and the small sample size, results should be interpreted with considerable caution. Randomised trials with larger sample sizes are needed to confirm our findings.

Introduction

Treatment-resistant depression (TRD), defined as insufficient response to at least two antidepressant trials of adequate dose and duration within a major depressive episode, including augmentation therapy (1) affects more than one third of patients with major depression and is associated with higher hospitalization rates, elevated suicide risk, and substantial functional impairment (2, 3).

Intranasal esketamine, a non-competitive N-methyl-D-aspartate receptor antagonist, was approved in 2019 by the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA) for TRD in conjunction with an oral antidepressant. Its antidepressant efficacy was demonstrated in several trials (4, 5) and supported by meta-analytic evidence (6, 7). Continued esketamine treatment has been shown to significantly reduce relapse in patients achieving stable response or remission during induction (8). Recent evidence has confirmed the superiority of esketamine over quetiapine augmentation, with benefit maintained through the maintenance phase (9, 10) and durability of response supported by long-term open-label extension data (11). Translating these findings into routine clinical practice requires evidence

from heterogeneous patient populations. A growing body of real-world studies has demonstrated that intranasal esketamine produces clinically meaningful symptom reductions in patients with high psychiatric comorbidity, chronic illness courses and multiple prior treatment failures (12–15). Real-world data have further extended evidence from randomised controlled trials by characterizing the longer-term trajectories of treatment response. In contrast to early assumptions, several studies have documented a substantial proportion of late responders with response and remission rates approximately doubling between months 1 and 3 and a notable share of patients who remitted by month 3 had not shown a response after the induction pase alongside ongoing symptomatic improvement during maintenance treatment (14–16). Despite the expanding evidence, important questions regarding the optimal treatment duration and scheduling in clinical practice remain open. Label recommendations specify twice-weekly induction for four weeks, followed by once-weekly dosing and subsequently once-weekly or every-two-week maintenance dosing, individualized to the lowest frequency that maintains response (17). Real-world data indicate that maintenance scheduling across treatment centres is highly diverse (14, 18, 19). The optimal frequency and duration of maintenance esketamine remain unestablished (20) and the two, in practice commonly distinguishable maintenance strategies, weekly continuation versus extended-interval continuation (5) have yet to be systematically compared. Moreover, most observational studies have relied on either clinician-rated or self-report instruments alone, with only limited prior work directly integrating both perspectives within the same cohort (21, 22).

This study evaluates the real-world effectiveness of intranasal esketamine for TRD in adults treated under routine clinical conditions, assessed with the Montgomery-Asberg Rating Scale (MADRS) and the Beck Depression Inventory-II (BDI). Following an 8-session induction phase, patients received one of two maintenance schedules that differed in the temporal distribution of four sessions: a front-loaded schedule, concentrating sessions within the first 4 weeks, or a spaced schedule, distributing sessions across a 12-week-period. Comparing these schedules allowed us to evaluate whether the timing of maintenance dosing affected depressive symptom outcomes over the 16-week observation period. We hypothesized that the induction treatment would be effective and exploratorily examined the difference between maintenance schedules, without a predefined directional hypothesis.

Methods

Study Design

This was a single-centre, retrospective, observational study. All patients were treated in the outpatient clinic of the Psychiatric University Hospital Zurich (PUK), Switzerland. Ethical approval was granted by the Ethics Committee of the Canton of Zurich, Switzerland (BASEC-No. 2025 – 00559). The study was conducted in accordance with the principles of the Declaration of Helsinki and its amendments. All patients provided consent for the anonymised use of their clinical data for research purposes. This study draws on an overlapping patient sample described in Trenado et al. (23), which examined EEG-based biomarkers of treatment response. The current study is restricted to patients receiving intranasal esketamine and focuses on clinical outcome trajectories.

Patients

We included 65 adults with TRD who received intranasal esketamine as part of routine outpatient care at the PUK between January 2021 and April 2025. Eligible patients were aged ≥ 18 years, met ICD-10 criteria for a depressive episode, and had shown inadequate response to at least two antidepressant trials of adequate dose and duration and augmentation with lithium or an atypical antipsychotic within the current episode (1).

Patients were excluded from treatment if any of the following contraindications were present: uncontrolled or inadequately treated arterial hypertension, prior stroke or myocardial infarction, known cerebral or vascular aneurysm, history of intracranial haemorrhage, pre-eclampsia or eclampsia, elevated intracranial pressure, inadequately treated hyperthyroidism, or documented hypersensitivity to esketamine. Patients who were pregnant, planning to become pregnant, or breastfeeding were also excluded.

Treatment procedure

Treatment comprised an induction phase followed by a maintenance phase with one of two maintenance schedules. During the induction phase, patients received eight intranasal esketamine sessions over four weeks. The first session consisted of 56 mg intranasal esketamine. From session two onward, the standard dose was 84 mg per session, in accordance with approved prescribing guidelines unless a dose reduction was clinically indicated due to acute adverse effects (24, 25). After eight treatment sessions clinical response was assessed using the Clinical Global Impression–Improvement scale (CGI-I) (26). Patients showing clinical benefit, defined as a reduction on the CGI-I score ≥ 2 points, were eligible for maintenance treatment. Allocation to one of the two maintenance schedules was based on clinical availability. Maintenance schedule 1 (MS1) comprised four additional esketamine sessions once per week (sessions 9–12), followed by a clinical follow-up assessment approximately two months after the final maintenance session (see Fig. 1). Maintenance schedule 2 (MS2) also comprised four additional esketamine sessions delivered at progressively increasing inter-dose intervals after one, two, three and six weeks, corresponding to a total duration of three months. Both schedules were informed by existing evidence on maintenance strategies (9–11) and practical considerations such as the duration of reimbursement approvals and clinical resources. All patients were offered individually planned clinical follow-ups. Concomitant SSRI/SNRI administration during esketamine treatment remained generally stable (Spravato Summary of Product Characteristics 2019).

Intranasal esketamine was self-administered under direct clinical supervision. Blood pressure was measured 5 min before administration and 20, 40 and 60 min after administration. Patients remained under nursing supervision for 2 hours, with scheduled check-ins every 20 min. Treatment sessions took place in a calm therapeutic environment, where patients could listen to a provided musical playlist.

Measures

Depressive symptom severity was evaluated using the self-rated BDI (29, 30) and the clinician-administered MADRS (31, 32). Assessments were conducted immediately before each esketamine administration. The MADRS was conducted as a structured interview by trained clinical staff. Across both instruments, response was defined as a ≥ 50% reduction from baseline, while remission was defined as a total score ≤ 12 on the MADRS (20, 33) and ≤ 13 on the BDI (27).

Statistical Analysis

Assessments were labelled as time points T0 to T12. Analyses were conducted separately for the induction phase (T0-T8) and maintenance phase (T9-T12). Across all analyses, T0 was defined as the closest assessment to the first esketamine treatment session. Statistical significance was set at a two-tailed $p < 0.05$. Analyses were conducted using all available data without imputation and were performed for both MADRS and BDI. Because no a priori sample size calculation was conducted and no preregistered analysis plan existed, all inferential analyses should be considered exploratory. All analyses were conducted using R (4.6.0). A summary of the tested assumptions can be found in the Supplement.

Induction phase

Changes in depressive symptom severity across the induction phase were examined descriptively using means and 95% confidence intervals (CIs) for each time point. To assess pre-post change, a paired-samples t-test was conducted between T0 and T8, with effect size quantified using Cohen's d. Response and remission rates were calculated at T8.

Maintenance phase

To assess whether maintenance schedules differed across the maintenance phase, we fitted a linear mixed-effects model with T8 through T11 (treated as a factor), maintenance schedule, and their interaction as fixed effects, and patients included as a random intercept. Fixed effects were evaluated using F-tests. Estimated marginal means from T8 through T11 for each schedule were contrasted between schedules to assess possible differences. Analyses used Satterthwaite degrees of freedom and 95% CIs. Contrasts were adjusted using the Holm method. As a sensitivity analysis, the linear mixed-effects model was refitted with patients who completed all maintenance sessions. Differences in attrition between the two maintenance schedules were assessed using Fisher's exact test. Attrition was operationalised as non-completion of the 12-week maintenance phase. In addition to the p-values, the relative risk and odds ratio for dropout in MS2 compared with MS1 were calculated with 95% CIs. Additionally, we reported the number of patients who newly responded, remitted, or relapsed during the maintenance period.

MS1 T12 and MS2 T11 occurred at approximately the same time after the start of maintenance treatment. Thus, to compare outcomes after the same time had elapsed, we fitted an analysis of covariance (ANCOVA), with baseline scores as a covariate and maintenance schedule as the predictor of end-of-treatment scores.

Results

As shown in Fig. 1, 60 out of 65 patients who initiated esketamine treatment completed the induction phase. Upon CGI-I assessment, one patient was classified as a non-responder and therefore excluded from maintenance treatment. One patient discontinued after the eighth treatment session. The remaining 58 patients were allocated to MS1 (n = 39) or MS2 (n = 19). 51 completed all 11 esketamine sessions. Seven patients (MS1 = 3; MS2 = 4) did not complete maintenance treatment.

Most patients discontinued treatment for unknown reasons (n = 10), one patient discontinued due to an increase in panic attacks (after session 2), and one due to the reported development of acute suicidal ideation with a concrete plan (after session 5). One patient died by suicide five days after the tenth treatment session (MS 1). A full account of adverse events leading to treatment discontinuation is provided in the STROBE patient flow in the Supplement.

At treatment start, patients' mean age was 46.88 (SD = 13.74), and 53.8% (n = 35) were female. Their clinical burden was substantial, with a mean illness duration of 15.30 years (SD = 9.02) and a mean current depressive episode duration of 40 months (SD = 35.67). Out of all patients, 26 (41.9%) were in receipt of a disability pension, underscoring the considerable functional impairment associated with this population. A full overview of patients' baseline characteristics is provided in Table 1.

Induction phase

Descriptive assessment of both instruments across the induction phase revealed an overall downward trend, as depicted in Fig. 2. Scores, however, did not decrease at a uniform rate; on the MADRS, the largest reduction occurred between T0 (M = 26.65, SD = 7.86) and T1 (M = 23.45, SD = 8.26). While the most substantial decline occurred early in the treatment, the reduction in MADRS scores was consistent across sessions, with an exception between T5 (M = 19.75, SD = 9.25) and T6 (M = 19.77, SD = 9.06). On the BDI, the largest initial reduction also occurred between T0 (M = 31.48, SD = 9.39) and T1 (M = 28.34, SD = 10.43). However, from T5 to T8, the means were similar and CIs largely overlapped, suggesting a plateau in symptom reduction (T5: M = 24.41, 95% CI [21.69–27.13]; T8: M = 23.60, 95% CI [20.70–26.50]). Descriptives for all time points are provided in Supplementary Table S1.

The mean MADRS score significantly decreased from 25.46 (SD = 7.21) at baseline to 17.72 (SD = 7.84) at the end of the induction phase ($t(56) = 7.90$, $p < .001$; missing value n = 1). The mean reduction was 7.74 points, 95% CI [5.78–9.70], with a medium effect size (Cohen's d = 1.03, 95% CI [.71 − 1.]). BDI scores also significantly decreased from 30.97 (SD = 9.36) at baseline to 23.60 (SD = 10.93) at the end of

the induction phase (t(56) = 5.77, p < .001; missing value n = 1). The mean reduction was 7.37 points, 95% CI [4.81–9.93], with a medium effect size (Cohen's d = 0.72, 95% CI [.44 – 1.00]).

Of the 57 assessed at the end of the induction phase, 12 (21.1%) were classified as responders on the MADRS and 12 (21.1%) on the BDI. In total, 13 patients (22.8%) on the MADRS and 12 patients (21.1%) on the BDI met remission criteria at the end of the induction phase.

Maintenance phase

In total, 58 patients entered the maintenance phase, 39 patients received MS1 and 19 patients received MS2. To test whether there was a difference between the two maintenance schedules, a linear mixed-effects model was fitted.

On the MADRS, neither the main effect of time point (F(3, 163.34) = 0.46, p=.711), the main effect of maintenance schedule (F(1, 58.77) = 0.29, p=.593), nor the interaction effect was significant (F(3, 163.34) = 2.14, p=.098). Comparisons of estimated marginal means also showed no significant difference between maintenance schedules across T8 through T11. The largest difference between the two maintenance schedules was observed at T9 and favoured MS1 by 3.26 points (Table 2). CIs largely overlapped and both maintenance schedules followed a broadly parallel trajectory (Fig. 3a).

On the BDI, neither the main effect of time point (F(3, 162.11) = 0.90, p=.443), the main effect of maintenance schedule (F(1, 58.72) < 0.01, p=.954), nor the interaction effect was significant (F(3, 162.11) = 1.63, p=.184). Comparisons of estimated marginal means indicated no significant differences between the maintenance schedules across T8 through T11. The largest observed difference between the maintenance schedules was observed at T8, before the start of the maintenance phase and favoured MS2 by 2.17 points (Table 2). CIs largely overlapped and both maintenance strategies followed similar trajectories (Fig. 3b). Results of the complete-case analyses were consistent with the primary model on either instrument and are provided in Supplementary Tables S2 and S3.

In total, 51 patients completed all treatment sessions. Of these, 18/51 (35.3%) met response criteria on the MADRS and 13/50 (26.0%) on the BDI. Additionally, 16/51 (31.4%) patients met remission criteria on the MADRS and 19/50 (38.0%) on the BDI. Response and remission rates fluctuated, with patients newly responding or remitting, but also relapsing during the maintenance period as outlined in Fig. 4. Attrition during the 12-week maintenance phase was low (7/58) with no statistically significant difference between schedules (7.7% vs. 21.1%; Fisher's exact test, p=.20). The relative risk of dropout in MS2 versus MS1 was 2.74, with a wide 95% CI (0.68–11.02), indicating substantial uncertainty around the estimate.

To compare the two maintenance schedules after the same amount of time had elapsed since the start of maintenance treatment, we fitted an ANCOVA using baseline scores and maintenance schedule as predictors of end-of-treatment scores. On the MADRS (n = 43), the ANCOVA indicated that maintenance schedules did not significantly differ (F(1, 40) < 0.01, p=.940), with comparable adjusted means of 18.60 for MS1 (SE = 1.64, 95% CI [15.28–21.91]) and 18.42 for MS2 (SE = 2.24, 95% CI [13.89–22.95]). On the BDI (n = 42), the ANCOVA model also showed that maintenance schedules did not significantly differ

(F(1, 39) = 0.01, p=.978), with comparable adjusted means of 22.87 for MS1 (SE = 1.87, 95% CI [19.08–26.67]) and 22.96 for MS2 (SE = 2.53, 95% CI [17.85–28.07]).

Discussion

This retrospective observational study examined the real-world effectiveness of intranasal esketamine in adults with TRD, using both MADRS and BDI, and compared two maintenance schedules differing in the timing of treatment sessions. Across the cohort, induction produced significant symptom reduction on both instruments, with a large effect size on the MADRS (d = 1.03) and a medium effect size on the BDI (d = 0.72). Symptom improvement was most pronounced in the early sessions, with subsequent gains occurring more gradually. This trajectory is consistent with esketamine`s well described rapid onset of action (4, 14).

Across both instruments, the two maintenance schedules produced similar outcomes, despite their markedly different treatment density. On the MADRS, we found small between-schedule differences in symptom severity in favour of the front-loaded schedule (MS1) at two time points and small and inconsistent differences in direction on BDI. No difference reached statistical significance, and neither schedule was consistently superior.

Response and remission rates during induction and maintenance

The four-week induction phase produced response rates of 21.1% on both instruments and remission rates of 22.8% (MADRS) and 21.1% (BDI) respectively, with mean reductions of 7–8 points, indicating clinically meaningful improvement. These rates lie at the lower end of previously published real-world cohorts cohorts (12, 13, 15, 28, 29)and should be read against our comparatively lower baseline severity. Lower baseline severity may also explain why remission exceeded response on the MADRS, since patients can meet the < 12 remission criterion without a > 50% reduction (30). MADRS scores declined across all sessions, whereas BDI scores plateaued from around session five, which is consistent with self-report scales being less sensitive than clinician ratings (31, 32).

Clinical benefits continued during maintenance. Among completers, MADRS responders rose from 21.1% at induction end to 35.3% at maintenance end, and remitters from 22.8% to 31.4%. Notably, response and remission rates peaked during maintenance rather than at its end, a pattern also reported in other real-world cohorts (14, 33). These data argue against premature termination of esketamine in partial responders and support completing a full maintenance course. At the same time, fluctuations in remission and relapse during maintenance highlight the dynamic course of TRD and underscore the need for ongoing symptom monitoring (1).

Strengths and limitations

This study had several strengths, including the use of two complementary depression instruments, the inclusion of an extended maintenance phase, and the evaluation of intranasal esketamine in routine clinical practice rather than a highly selected trial population.

Several limitations of the present study should also be acknowledged. First, the single-centre observational design and the absence of randomised allocation to schedules limit causal inference. Unassessed confounders, including concomitant medication and concurrent psychotherapy, may have influenced depressive symptom outcomes. Second, no a-priori power analysis was conducted, and the smaller sample in the MS2 (n = 19) reduced precision of the estimates. Therefore, the absence of significant between-schedule differences should not be interpreted as evidence of equivalence. Third, restricting maintenance-phase analysis to patients who entered maintenance introduces potential survivor bias and likely overestimates population-level-effectiveness. Fourth, the numerically higher attrition in MS2 warrants caution and should be examined in larger samples to determine whether it reflects random variation, patient selection, tolerability, adherence burden, or reduced perceived need for continued treatment. Finally, in MS2 the final treatment session (session 12) was administered only after the final assessment (T11). So by T12 patients in MS1 had received more cumulative esketamine. This represents a limitation to be kept in mind when interpreting the absence of final between-schedule differences.

Clinical implications

Taken together, our findings suggest that maintenance dosing might be timed in varying schedules without loss of effectiveness and may be guided by patients` preference, clinical needs as well as practical constraints (34). Furthermore, the results provide preliminary support for current routine practice, where dosing intervals are often progressively lengthened as patients stabilise reflecting titration to the minimum effective frequency. In the ELLIPSE cohort, more than 60% of patients had transitioned to less-than weekly dosing of maintenance (35, 36) and in a five-year observational cohort, all long-term continuers had converged to monthly dosing by year three while sustaining remission (15, 37). Our results give no indication of symptomatic worsening concluded in earlier real-world reports which has been linked to frequency reduction (38).

As demonstrated in other real-world cohorts (11, 14, 33, 38), our data further supports that esketamine, should not be discontinued prematurely in patients showing partial response at the end of induction (16). It emphasises, however, the relevance of structured and repeated symptom monitoring also during maintenance, as patients with TRD may show fluctuating trajectories over time (1). Besides maintenance, our findings may also inform tapering protocols for esketamine treatment, suggesting that dosing frequency may be reduced flexibly. It should, however, be noted, that this concerns treatment distribution rather than the decision to discontinue, since stopping esketamine in stabilized patients is known to be associated with an increased relapse risk (8).

Conclusion

In this real-world TRD sample, intranasal esketamine produced significant and clinically meaningful symptom reduction during the induction phase, with response and remission rates continuing to increase throughout maintenance. We did not observe significant outcome differences in the two schedules investigated, despite their differing temporal distributions. This finding is hypothesis-generating and, if confirmed, would support individualised or stratified strategies that align session timing with patient needs and clinical resources. Prospective, randomised studies with longer follow-up are needed to confirm our results and establish substantial evidence to establish optimal maintenance strategies for routine-care intranasal esketamine treatment.

Declarations

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Conflicts of interest

B.P. has received honoraria for lectures from SGIP-SSPI, Johnson & Johnson and Lundbeck. S.P. has received speaker honoraria from Beltz Verlag. M.S. has received travel grants from AOP Orphan Pharmaceuticals, Jannsen and Austroplant, speaker honoraria from Austroplant and workshop participation from Eliy Lilly. E. Strickler received honoraria for one talk and one advisory board participation from Janssen Switzerland. E. Seifritz has received honoraria for educational lectures, consulting fees and unrestricted educational grants from Angelini, Boehringer Ingelheim, Lundbeck, Mepha, OM Pharma, Otsuka, Ricordati, Roche Pharma, Sandoz, Schwabe Pharma, Janssen Cilag, Servier, Sunovion, Takeda and Vifor. S.O. received honoraria for lectures and advisory board participation from Janssen Switzerland and honoraria for talks from Schwabe Pharma and Indorsia. S.O. is co-founder of DeepPsy AG. J.J. received honoraria for lectures and advisory board participation from Janssen Switzerland and honoraria for a talk from Schwabe Pharma. All other authors declare no conflict of interest.

Supplementary Material

For supplementary material accompanying this paper, visit cambridge.org/EPA.

Author Contributions (CRediT taxonomy)

SW: Methodology, Formal Analysis (lead), Visualization, Writing – Original Draft (lead). YE-S: Data Curation, Methodology, Formal Analysis, Visualization, Writing – Original Draft (lead), Investigation, Therapeutic Intervention; BP: Investigation, Writing – Review & Editing; SP: Investigation, Writing –

Review & Editing; MS: Writing – Review & Editing; LA: Investigation, Writing – Review & Editing, NN: Data Curation, Writing – Review & Editing; E Strickler: Investigation, Writing – Review & Editing; RK: Writing – Review & Editing; E Seifritz: Writing – Review & Editing; SO: Conceptualization, Supervision, Investigation, Therapeutic Intervention, Writing – Review & Editing. JJ: Conceptualization, Methodology, Study Design (lead), Data Curation, Formal Analysis, Investigation, Therapeutic Intervention, Writing – Original Draft, Visualization.

Declaration of use of artificial intelligence (AI)

OpenAI ChatGPT (models GPT-5.2 to GPT-5.5; accessed from February 2026 to June 2026) was used for the improvement of the paper`s scientific language, assistance in the initial literature review, and to support the statistical workflow (such as troubleshooting R code). The content, ideas, structure, argumentation, and selection of the literature originate entirely from the authors. The authors take full responsibility for the text and the work as a whole. All AI-assisted passages were critically reviewed, revised, source-verified and approved by the authors. No patient data were entered into any AI system.

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Tables

Table 1 and 2 are available in the Supplementary Files section.

Figures

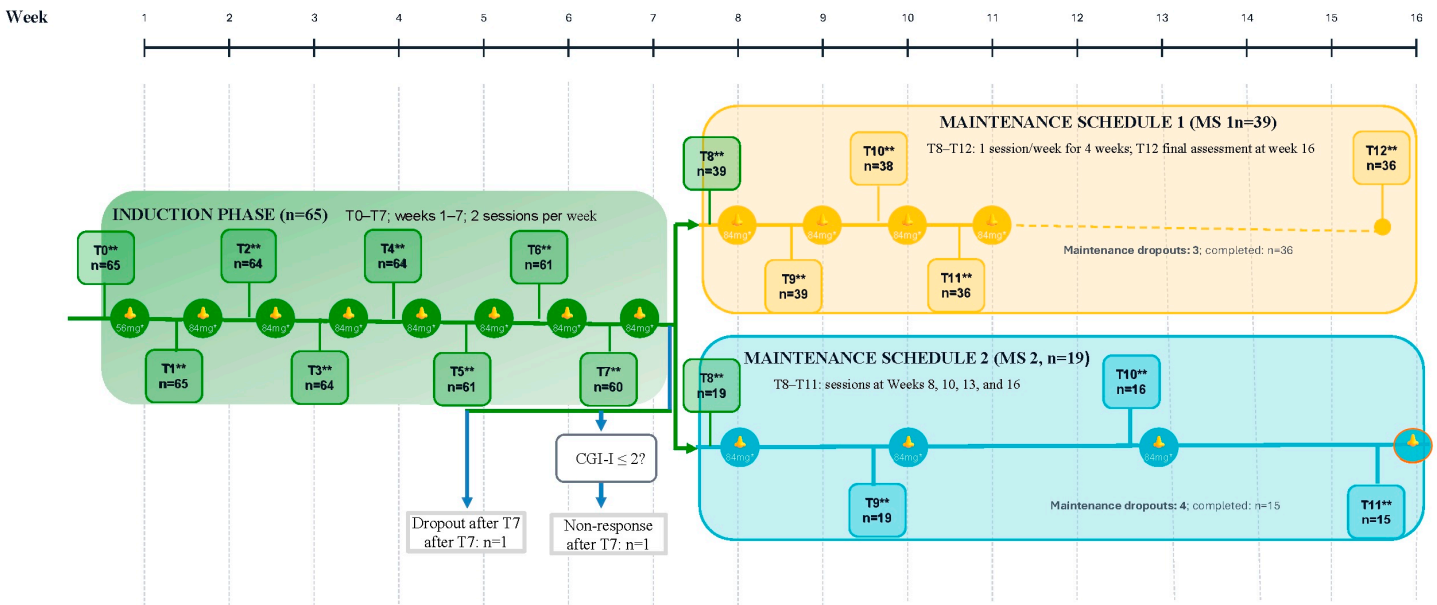
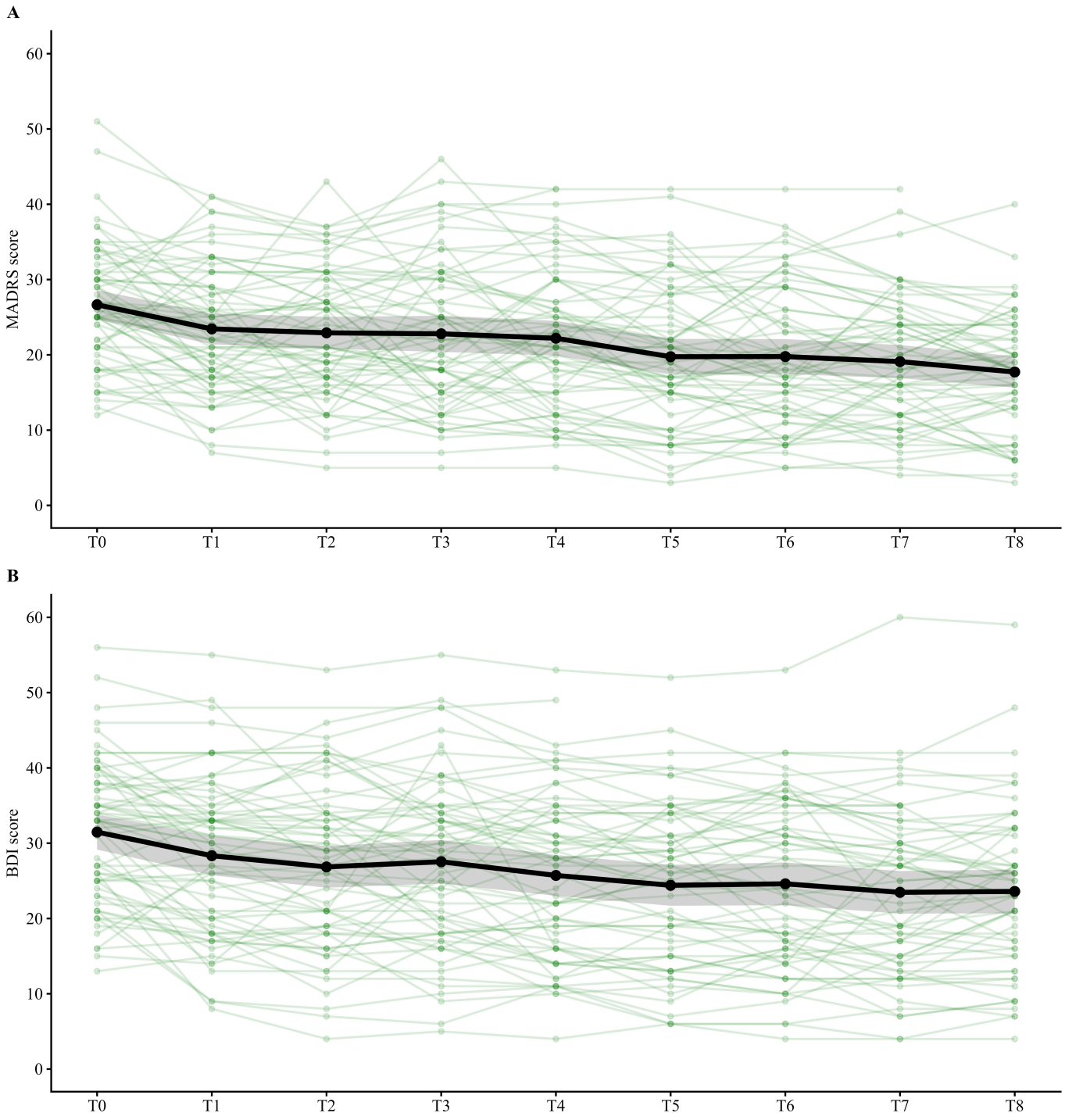


Figure 1. Participant flow.
Induction phase comprised 8 treatment sessions. Due to pre-session assessment, T8 assessment took place before the first session of the respective maintenance phase (MS).
For MS 1 T12 took place as assesment only, for MS 2 T11 took place before treatment session 12 (final session). Of the 65 patients at T0 n=6 discontinued during the induction phase (1 each after session 2, session 5, session 6, session 7; 2 after session 8). One patient was classified as non-responder (CGI-I > 2) after session 7. 58 patients entered maintenance phase (Schedule 1, n = 39; Schedule 2, n = 19). Three and four patients did not complete MS 1 and MS 2, yielding 36 (S1) and 15 (S2) completers (=51 total; attrition 14/65, 21.5%). ** pre-session assessment via Montgomery-Åsberg Depression Rating Scale (MADRS) and Beck Depression Inventory-II (BDI).

Figure 1

See image above for figure legend

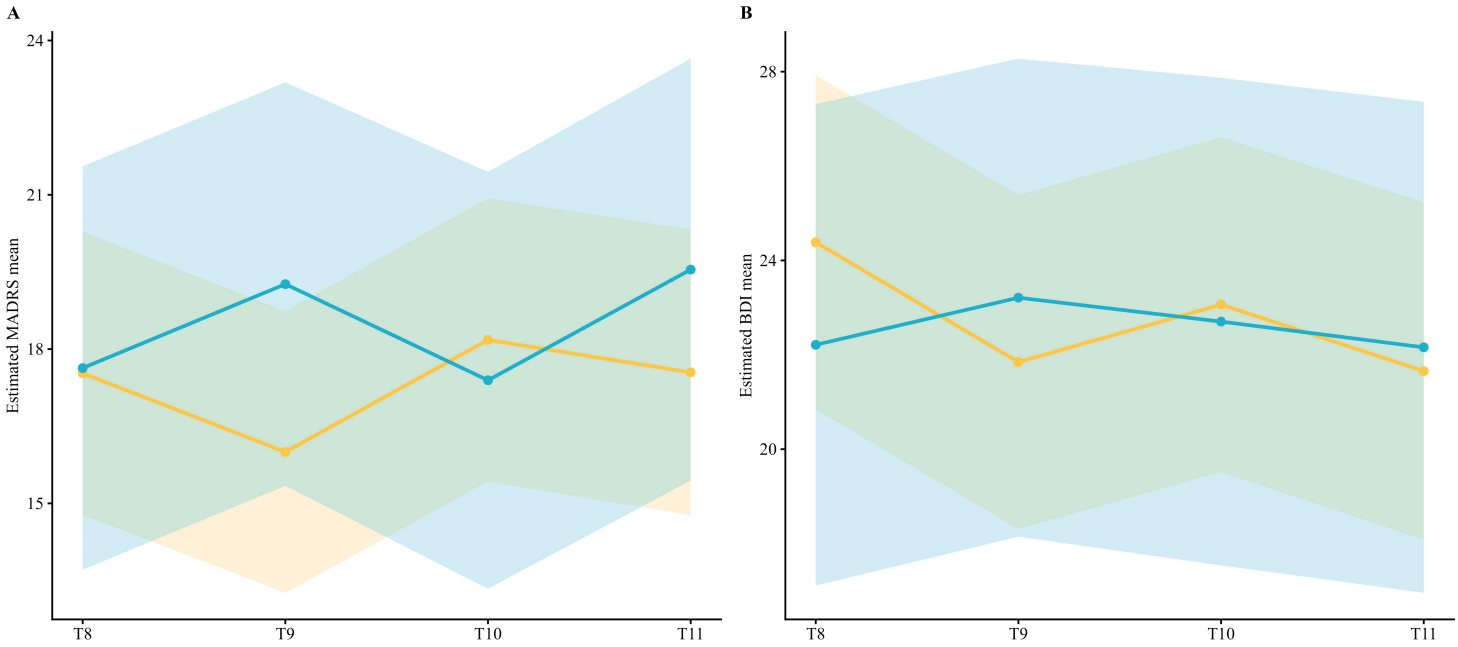
Figure 2. Induction phase trajectories with 95% CIs



(A) MADRS scores across induction. (B) BDI scores across induction. TX = Time point X. Black dots represent means, grey bands represent 95% CIs, and green dots represent individual patient scores.

Figure 2

Figure 3. Estimated means across the maintenance phase

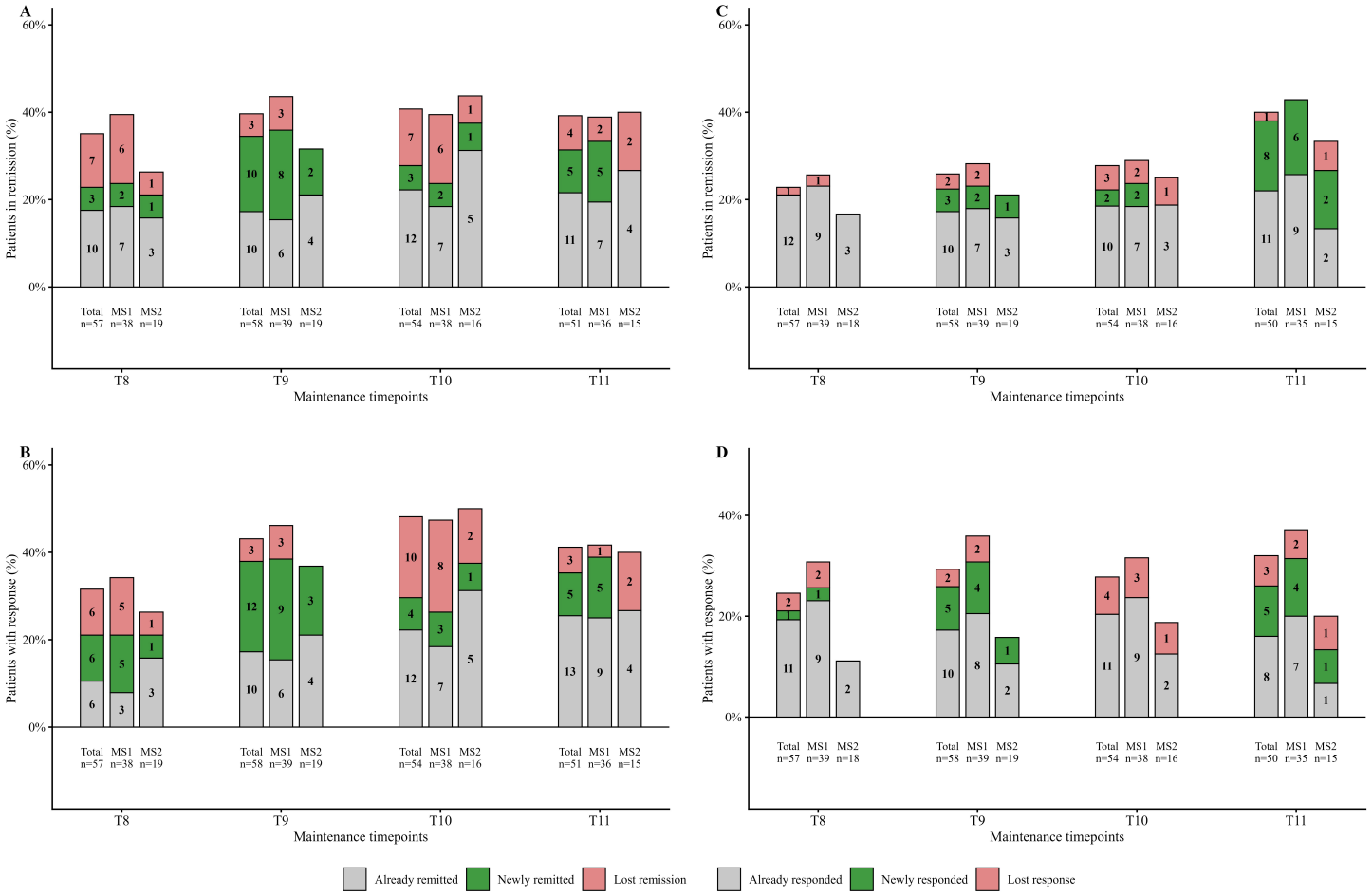


(A) Estimated MADRS means across maintenance. (B) Estimated BDI means across maintenance. Yellow lines represent maintenance schedule 1, light blue lines represent maintenance schedule 2, and the shaded areas indicate 95% confidence intervals.TX = Time point X.

Figure 3

See image above for figure legend

Figure 4. Transitions in remission and response status across maintenance



(A) Remission MADRS. (B) Response MADRS. (C) Remission BDI. (D) Response BDI.Bars show percentages of observed patients at each maintenance time point. MS1 = maintenance schedule 1; MS2 = maintenance schedule 2. Grey segments indicate patients who had already met the respective criterion at the previous observed assessment and still met it at the current assessment. Green segments indicate patients newly meeting the criterion.

Figure 4

See image above for figure legend

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Table1Baselinecharacteristics.jpg
- Table2ContrastMaintenanceSchedules.jpg
- EsketamineforTRDsupplement.docx