A Randomized Pilot Trial of Intramuscular Ketamine and Crisis Response Planning for Suicide Prevention in the Emergency Department

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Introduction

The emergency department (ED) frequently serves as the first point of care for individuals experiencing acute suicidal crises. Reductions in funding have caused a decrease in inpatient psychiatric capacity, resulting in increased psychiatric boarding. These longer ED wait times may exacerbate patient distress and strain clinicians. While brief psychosocial interventions such as safety planning often yield modest effects, Crisis Response Planning (CRP), a brief, suicide focused intervention, has demonstrated more rapid reductions in suicidal ideation. Additionally, ketamine has emerged as a rapid-acting intervention for reducing suicidal ideation. Evidence for intramuscular (IM) administration in the ED remains limited and to date, no studies have examined the combined use of IM ketamine and CRP in this setting.

The objective of our pilot trial is to evaluate the feasibility, safety, and tolerability of combining a single dose of IM ketamine with CRP for patients presenting to University Hospital ED with acute suicidal ideation. In addition, the study will explore whether the combined intervention leads to greater short-term reductions in suicidal ideation compared with the standard of care provided to SI patients which includes observations, labs, and medications, as well as whether patient weight may influence response to the fixed ketamine dose.

Abstract

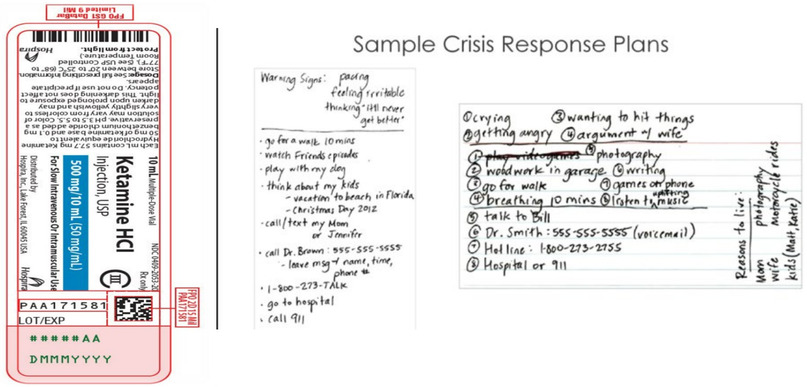
The impact of suicidal behaviors on the health care system is seen most acutely in ED settings. This pilot trial aims to determine feasibility, as well as to document the safety and tolerability of administering a combination of IM ketamine and CRP. Reductions in suicidal ideation have been observed using a one-time-encounter psychosocial intervention called Crisis Response Plan. In conjunction with this, a novel pharmacologic approach to reducing suicidal ideation is the use of ketamine in a single dose, may result in greater short-term reductions in suicidal ideation in adult patients who report acutely elevated suicide risk during an ED visit as compared with treatment as usual (TAU).

To date, little is known about the comparative and combinatorial effects of ketamine and Crisis Response Planning, as well as the feasibility of their use within the ED setting. This pilot trial will assess this gap.

Final analyses are pending completion of enrollment and study closeout.

Materials and Methods

Eligible patients receiving standard ED care provide informed consent and are randomized to either standard care alone or a single 100-mg IM dose of ketamine followed by CRP. Ketamine is administered by qualified ED clinicians, with 45-minute post-injection monitoring. CRP is delivered by a trained mental health professional and focuses on individualized coping strategies, protective factors, and crisis resources. Baseline weight is recorded to support exploratory dose-response analyses, and validated suicide-related measures are collected via surveys. Survey responses are collected at baseline, 2 hours after treatment, 3 days after treatment, and 30 days after treatment.



Results

Enrollment is nearing completion, with 17 subjects enrolled into the study of the planned 24 subjects in total to date. As the pilot trial is currently accruing subjects, no results can yet be statistically tabulated and reported. As of June 2026, a total of 12 subjects have completed all study measures, 7 of whom received the study interventions, and 10 of whom were in the study's control arm. A total of 5 participants were unable to complete the study procedures and therefore lost to follow up, 4 of which who were in the study's control arm and 1 who received the study interventions. No adverse events or serious adverse events associated with study procedures have been reported.

The study has demonstrated feasibility and successful integration within routine ED workflows. Participants have been identified, consented, randomized, and treated without disruption to clinical care.

Conclusion

These preliminary findings support the feasibility of conducting a larger multisite trial evaluating the combined intervention for acute suicidal idealization in the emergency department. A multisite expanded more complex trial is under regulatory review and pending University Hospital approval, positioning this work to inform scalable ED-based suicide prevention strategies. Findings reported are preliminary and derived from an ongoing pilot study. Final analyses are pending completion of enrollment and study closeout

Upcoming work/Next Phase/Future Outlook

This study will inform the feasibility, safety, and short-term effectiveness of two interventions for severe suicide risk—ketamine and Crisis Response Planning—in reducing suicidal ideation in patients treated in EDs prior to psychiatric hospitalization. In the following phase of this research, this preliminary data will support the execution of a multisite trial, evaluating the combined intervention for acute suicidal idealization in the emergency department. This will be a four-arm study, exploring the safety and efficacy of CRP and ketamine concomitantly as well as separately, in comparison to TAU. A multisite expanded more complex trial is under regulatory review and pending University Hospital approval, positioning this work to inform scalable ED-based suicide prevention strategies.

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