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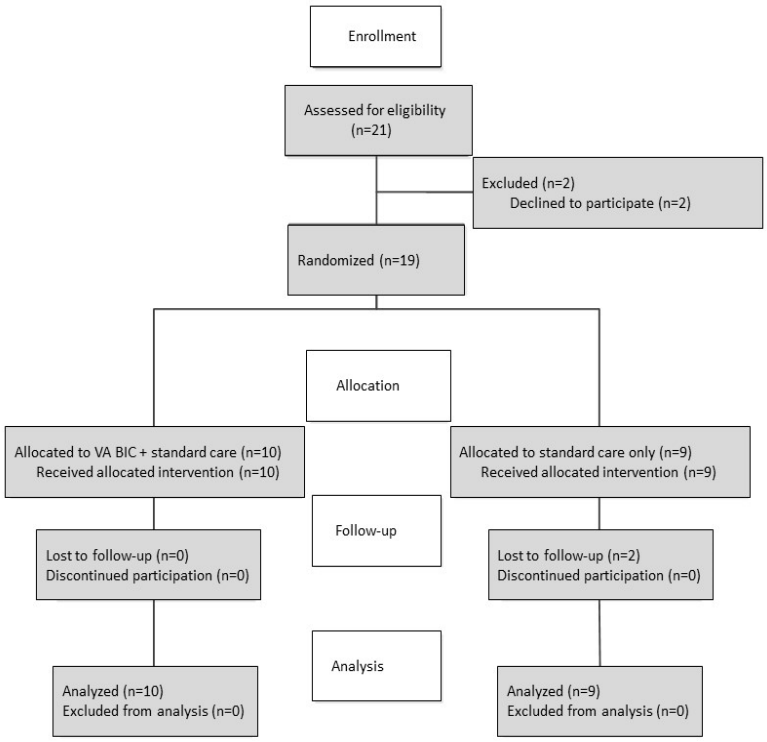
Patients were eligible if they were admitted to the inpatient mental health unit, were admitted due to acute risk for self-harm, were 18 years or older, were able to speak English and were a Veteran who was eligible to receive VA services. We excluded patients who were unable to provide informed consent, were prisoners, or were involuntarily committed.

The inpatient treatment team was familiar with study inclusion criteria and made the determination about whether to refer the patient to the study for eligibility screening. The study staff also met with the inpatient team daily to inquire about eligible patients. We aimed to recruit 20 patients in order to gather pilot data to address our study aims. Eligible patients were approached by study staff. If interested, study staff met with the patient and obtained written, informed consent.

As shown below, using fixed block randomization, we randomly assigned patients to VA BIC or control. Study personnel who were not otherwise involved in recruitment or assessment independently prepared allocation cards using sealed, opaque, sequentially numbered envelopes.



It was impossible to blind the interventionist or the patients to treatment allocation during the study. However, the assessor remained blind to study assignment throughout the trial. Patients were instructed not to reveal their study assignment to the assessor.

We involved in a single assessor in administering all study assessments. We trained the assessor prior to the start of the study and required them to complete several practice cases. The PI periodically joined assessment calls in order to ensure adequate completion of assessments.

The assessor met with the patient on the unit prior to discharge in order to conduct the baseline assessment. The assessor conducted follow-up assessments at one- and three- months after discharge. The assessments occurred over the phone or in-person depending on patient preference. After each assessment, the assessor was asked to guess the patient's group assignment. Using a Pearson chi-square test, we analyzed these data at the end of trial and found that blinding appeared to be adequate as the assessor's guess was no better than chance.

Control condition

Regardless of study assignment, all patients received standard VA psychiatric hospital discharge care including: 1) patients and their outpatient providers should be involved in discharge planning; 2) patients should be offered evidence-based treatments to address their mental health symptoms; 3) the inpatient team should work with the patient to complete a safety plan prior to discharge; and 4) the inpatient team should arrange a minimum of three follow-up care visits within 30 days of hospital discharge.

We collected socio-demographic data from the electronic medical record (EMR).

Baseline Characteristics

We assessed baseline psychiatric diagnosis using the MINI International Neuropsychiatric Interview (MINI).[1-2]

Outcomes

As described in our main paper, we measured several outcomes including suicidal ideation,

hopelessness, social connectedness, and treatment engagement. We defined social connectedness as a "the extent to which an individual is socially connected takes a multifactorial approach including 1) connections to others via the existence of relationships and their roles; 2) a sense of connection that results from actual or perceived support or inclusion; and 3) the sense of connection to others that is based on positive and negative qualities" (Holt-Lunstad *et al* 2017, pg. 521).[3] Within this definition, we chose a functional domain measure, namely perceived inclusion, as the design of the VA BIC may improve patient's sense of belongingness. To measure perceived inclusion, we used the validated Interpersonal Needs Questionnaire-15 because this measure has also been associated with suicide risk.[4]

We measured treatment engagement using two approaches. First, we measured patient activation using a measure of self-management called the Partners in Health Scale (PIH).[5] Second, we measured treatment engagement using healthcare utilization data. We looked at continuity of care including *continuity of treatment* and *intensity of treatment*.[6] We defined *continuity of treatment* as the proportion of patients who were seen by a mental health provider within seven and 30 days of discharge, reflecting Healthcare Effectiveness Data and Information Set (HEDIS) measures.[7] We defined *intensity of treatment* as the total number of mental health visits between index psychiatric discharge and the last study assessment. We abstracted utilization data from the EMR and asked patients to self-report on non-VA care.

An exploratory aim evaluated suicide attempts as measured using the research version -Columbia Suicide Severity Rating-Scale (C-SSRS).[8]

Analysis

We summarized baseline characteristics using simple, descriptive statistics. We evaluated whether there were significant differences in baseline covariates between study arms using a Fischer's exact or chi-square test for dichotomous measures and a two-sample t-test for continuous measures.

Our analysis was based on intention-to-treat. We chose a linear mixed-effects model in order to determine whether there were differences in scores between arms across time including at one and

three months after hospital discharge. We included treatment, time, and treatment-time interaction in the model. By using a mixed-effects models, we were able to account for missing follow-up data and adjust for any baseline differences in measures between study arms.[9] We used restricted maximum likelihood rather than maximum likelihood in order to minimize bias due to sample size.[10] Furthermore, because our groups were unbalanced, we applied the Kenward Roger method to our analysis.[10] There were a few patients who had missing item-level data on the BSS or BHS at baseline. We performed multiple imputation by chained equations (MICE) in R to impute these missing values.[11] We did not impute entries for those patients with no follow-up data. Because healthcare utilization data was available for all patients, we compared results across arms using two sample t-tests for continuous measures and Fischer's exact test for dichotomous measures. We defined a significant difference as a p value < 0.05.

We calculated effect sizes at each follow-up period. Because our sample size was small, we conservatively reported a Hedges' $g_{s.}$[12]

Except for the MICE,[11] we conducted all analyses using STATA, version 14 (Stata Corp, College Station, Tx).

Results

	VA BIC		Control		Between Group	
	N	**%**	**N**	**%**	**Estimate**	**Hedges' g_s**
Baseline Characteristics[a]						
Sex, female	2	20	0	0	-	-
Age in years (M±SD)	48.7 ±20.1		48.9 ±12.9		-	-
Caucasian Race	9	90	8	89	-	-
Black Race	1	10	1	11	-	-
MH disorders, 3 or less	2	20	2	22	-	-
MH disorders, 4 or more	8	80	7	78	-	-
Lifetime history of ≥1 SA	5	50	5	56	-	-
Suicidal ideation and related outcomes[b]						
Suicidal Ideation, BSS (M±SD)						
Baseline[a]	22.8±5.9		21.8 ±3.1		1.0	-
1 month	12.2±10.1		14.9 ±5.1		-3.8	0.45
3 month	13.9±8.9		11.0 ±10.1		1.9	-0.22
Hopelessness, BHS (M±SD)						
Baseline[a]	14.3±3.3		15.7 ±5.0		-1.4	-
1 month	9.6±5.9		12.8 ±3.7		-1.7	0.23
3 month	9.4±5.3		10.1 ±6.3		0.7	-0.09
Thwarted Belongingness, INQ-15 (M±SD)						
Baseline[a]	47.5±9.1		40.0 ±9.3		7.5	-
1 month	33.2±10.0		42.1 ±8.8		-16.1	**1.23***
3 month	35.9±10.2		39.7 ±13.4		-10.8	0.81
Perceived Burdensomeness, INQ-15 (M±SD)						
Baseline[a]	26.8 ±10.2		27.4 ±7.7		-0.6	-
1 month	18.7 ±8.0		22.3 ±7.2		-2.7	0.22
3 month	16.3 ±9.1		17.9 ±9.4		-0.5	0.04
Self-Management, PIH (M±SD)						
Baseline[a]	57.4 ±10.8		67.7 ±11.3		-10.3	-
1 month	70.4 ±14.4		74.0 ±8.6		6.6	0.45
3 month	64.4 ±11.3		72.4 ±11.5		1.6	0.11
Suicide Attempts	0	0	0	0	-	-
Outpatient MH utilization after discharge						
Total MH visits per patient (M±SD)[c]	20.4 ±12.1		15.0 ±6.1		5.4	0.53
MH appt ≤ 7 days post-discharge	6	60	6	67	-	-
MH appt ≤ 30 days post-discharge	10	100	9	100	-	-

Appt = appointment; N=Number; % = percent; INQ-15= Interpersonal Needs Questionnaire-15; MH = mental health; PIH= Partners in Health; SA = Suicide Attempt; SD = Standard Deviation;

[a]There were no statistically significant differences between groups at baseline.

[b] Scale Ranges; Beck Scale for Suicidal Ideation, Range 0 – 38 with higher scores indicating worse suicidal ideation; Beck Hopelessness Scale for Suicidal Ideation, Range 0 – 20 with higher scores indicating worse hopelessness including scores 0-3 (asymptomatic); scores 4-8 (mild), scores 9-14 (moderate), and scores >14 (severe); INQ15 -Thwarted belongingness, Range 9 – 63 with higher scores indicating greater thwarted belongingness; INQ15-Perceived Burdensomeness, Range 6 – 42 with higher scores indicating worse perceived burdensomeness; Partners in Health Scale, Range 0 – 96 with higher scores indicating better self-management.

[c]These visits do not include VA BIC follow-up contacts.
* p<.05

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