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Introduction

- Depression is the most common psychological problem among end-stage renal disease (ESRD) patients undergoing hemodialysis. It is estimated that about 1/3 of all ESRD patients experience depression.¹⁻³
- Depression has been associated with increased hospitalizations and mortality among ESRD patients.³⁻⁶ Depression is also associated with missed dialysis sessions, which in turn are related to poorer outcomes.⁷
- Symptom Targeted Intervention (STI) was developed as a means of addressing depression among ESRD patients.¹ STI incorporates cognitive restructuring, behavioral activations, relaxation techniques, and mindfulness activities during dialysis to reduce anxiety and depression.
- Studies have demonstrated that nephrology social workers can use STI to improve quality-of-life scores and decrease depression scores with in-center hemodialysis patients.⁸⁻¹⁰

Objective

The following evaluation reports on implementation and outcomes of an expanded version of STI to decrease missed treatments within a large dialysis organization (LDO).

Methods

- A 90-day STI intervention was conducted among those patients with the highest missed treatment rates in selected clinics within the LDO. Two groups (based on geography) were studied.
- Group 1 consists of 4 divisions in southern California, Nevada, and Arizona
- Group 2 is an unaligned, stand alone division within the LDO.
- The intervention period occurred in 2014, and was followed by 3 months of post-intervention analysis.
- 85 social workers within the selected dialysis clinics were equipped through in-person training, resource materials, weekly training calls, and tracking tools to intervene with 1-4 dialysis patients at each selected clinic.
- Primary analysis assessed the rate of missed sessions both pre- and post-STI treatment.
- Secondary analysis assessed the impact of STI on patients' CES-D 10 scores.

Symptom Targeted Intervention Decreased Missed Treatments in Hemodialysis Patients

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Results

Table 1. Number and Type of Symptom Targeted Intervention **Coaching Sessions That Patients Received During the Intervention**

	Group 1				Group 2	Total
	Div A	Div B	Div C	Div D	Div E	
Behavioral	436	250	391	632	206	1915
Cognitive	222	209	255	420	135	1241
Mindfulness	30	43	65	70	14	222
Modules	596	480	640	897	322	2924
Total	1284	982	1352	2019	666	6302

Abbreviations: Div, division

Table 2. Missed Sessions and Missed Session Rates Pre- and **Post-Symptom Targeted Intervention**

	Group 1				Group 2	Total	
	Div A	Div B	Div C	Div D	Div E		
3 Months Prior to STI							
Expected Sessions	1183	1052	712	1498	2468	6913	
Missed Sessions	210	220	133	278	421	1262	
Missed Session Rate	17.8%	20.9%	18.7%	18.6%	17.1%	18.3%	
3 Months Post-STI							
Expected Sessions	664	1075	412	1047	1967	5165	
Missed Sessions	111	186	68	167	279	811	
Missed Session Rate	16.7%	17.3%	16.5%	16.0%	14.2%	15.7%	

Abbreviations: Div, division; STI, Symptom Targeted Intervention

- During the 90-day STI clinical program, 182 patients received approximately 6300 intervention coaching sessions (Table 1).
- The most frequently used interventions were modules (2924 sessions) and behavioral (1915 sessions).
- Three months postgraduation from the STI program, the intervention cohort displayed a decrease of nearly 3 percentage points, or a 14% decrease, in missed dialysis treatment rates (missed treatment rate: pre-STI, 18.3%; post-STI, 15.7%) (Table 2).
- Average CES-D 10 scores improved by 3.0 points among Group 1 patients and by 1.7 points among Group 2 patients (Table 3).

Figure 1. Pre- and Post-Symptom Targeted Intervention Missed **Session Rates**



Abbreviations: STI, Symptom Targeted Intervention

Table 3. Average CES-D 10 Scores Pre- and Post-Treatment

Group	Avg Pre- CES-D 10 Score	Avg Post- CES-D10 Score	Avg Improvement
Group 1	11.7	8.7	3.0
Group 2	10.4	8.7	1.7

Conclusions

Results suggest that implementation of a social worker-based STI clinical program targeting improved quality of life for in-center hemodialysis patients results in additional health improvements due to increased adherence to the prescribed dialysis treatment regimen among the least compliant patients.

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