

Introduction

- Individuals who present to the emergency department (ED) after motor vehicle collision (MVC) are often socioeconomically disadvantaged, have high past trauma burden, and are vulnerable to PTSD.
- The purpose of the **Written Exposure Therapy to Improve Lives after Stress Exposure (WISE) Trial** was to assess the feasibility and potential efficacy of a telehealth intervention to prevent and reduce PTSD among high risk ED MVC patients.

Methods

- MVC patients who presented to a participating ED and were at increased risk for PTSD (AURORA PTSD Risk Prediction Tool) completed pre-screening assessments and were randomized to five telehealth sessions of WISE vs. control.
- Evaluations included PTSD symptoms (PCL-5) and general mental health (SF-12 MCS) at 3 months.
- Protocol feasibility and point estimates of potential efficacy were assessed.

Table 1. Sample characteristics

	Overall (N = 41)	Per protocol (N = 26)
Age (Mean [SD])	32.7 (11.9)	33.4 (11.6)
Gender (n [%] female)	24 (58.5%)	15 (57.7%)
Race & Ethnicity		
Hispanic Black	1 (2.4%)	1 (3.8%)
Hispanic Other	1 (2.4%)	1 (3.8%)
Non-Hispanic Black	27 (65.85%)	18 (69.2%)
Non-Hispanic White	9 (21.95%)	6 (23.1%)
Non-Hispanic Multiracial	1 (2.44%)	0
Prefer not to answer	2 (4.87%)	0
Education		
HS, GED, or less	22 (53.7%)	15 (57.7%)
Some post-HS	12 (29.3%)	6 (23.1%)
Bachelor's degree	6 (14.6%)	5 (19.2%)
Income		
< \$35k	10 (24.4%)	6 (23.1%)
\$35k - \$75k	2 (4.9%)	1 (3.8%)
\$75k - \$100k	1 (2.4%)	19 (73.1%)
Did not respond	28 (68.3%)	
Lifetime PTSD		
PCL-5	45.63 (20.98)	47.7 (23.1)
PCL-5 Clinical Cut-off 33 (n [%])	29 (70.7%)	18 (69.2%)
PCL-5 Clinical Cut-off 31 (n [%])	30 (73.2%)	19 (73.1%)
DSM-5 PTSD Criteria met (n [%])	25 (61%)	16 (61.5%)

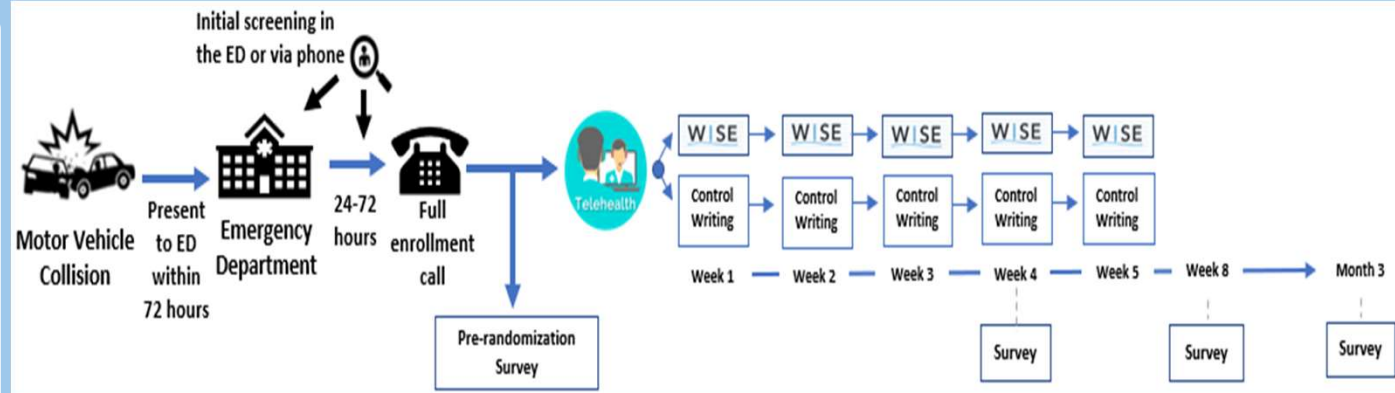


Table 2. Influence of WISE on PTSD symptom severity (PCL-5 score) at 3 months, controlling for age, sex, & one month

	Estimate	SE	t	p
Intercept	10.72	11.52	.93	.36
WISE treatment	-12.91	6.57	-1.96	.06
One Month PTSD	.43	.20	2.16	.04*
Male Sex	-10.91	6.87	-1.59	.13
Age	.37	.28	1.32	.20

Table 3. Influence of WISE on PTSD symptom severity (PCL-5 score) at 3 months, controlling for age, sex, and lifetime

	Estimate	SE	t	p
Intercept	13.37	12.63	1.06	.30
WISE treatment	-12.38	7.06	-1.75	.10
Lifetime PTSD	.20	.16	1.21	.24
Male Sex	-4.83	7.09	-.68	.50
Age	.34	.31	1.12	.28

Table 4. Influence of WISE on general mental health (SF-12 MCS) functioning at 3 months, controlling for age, sex, & baseline mental health functioning

	Estimate	SE	t	p
Intercept	27.39	12.72	2.15	.06
WISE treatment	7.44	5.41	1.38	.20
Pre-MVC Mental Health	.52	.26	1.99	.07
Male Sex	-6.70	6.80	-.99	.35
Age	-.21	.19	-1.10	.30

Results

- Most participants were Black (73%) and socioeconomically disadvantaged with HS education or less (Table 1).
- Twenty-six of 41 completed the 3-month follow-up (Table 1), these retention rates are consistent with other ED-based intervention studies of disadvantaged populations.
- After adjusting for age, sex, and 1 month PTSD score, the WISE group had 12.91 greater reduction in PCL-5 scores vs. controls ($p < .06$, trend-level significance, Table 2). Similar trend observed when controlling for lifetime PTSD (Table 3).
- WISE group also showed suggestion of clinically significant improvement in mental health functioning (Table 4, Cohen's $d = .63$).

Conclusions

- Past studies demonstrate that less than 1 in 6 ED patients developing PTSD after MVC receive mental health care.
- Trial results suggest that this intervention is feasible to deliver to disadvantaged high risk trauma survivors and potentially efficacious. Further studies are warranted.

References

Jones CW, An X, Ji Y, et al. Derivation and Validation of a Brief Emergency Department-Based Prediction Tool for Posttraumatic Stress After Motor Vehicle Collision. *Ann Emerg Med* 2023;81(3):249-261. DOI: 10.1016/j.annemergmed.2022.08.01