

Optimization of a Pragmatic, Cluster-Randomized Multifactorial Trial to Transform Care of Persons Living With Dementia in the Emergency Department

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BACKGROUND

Emergency Departments Leading the Transformation of Alzheimer’s and Dementia Care (ED-LEAD) is a pragmatic, cluster-randomized multifactorial study across 79 US EDs testing three interventions in persons living with dementia during and following an ED visit: emergency care redesign (ECR), community paramedic-led transitions intervention (CPTI), and nurse-led telephonic care (NLTC), individually and in combination.

We optimized the interventions for feasibility and acceptability and describe lessons learned.

METHODS

Optimization occurred within two academic hospital EDs in different communities between November 2024 and May 2025. Clinicians received synchronous and asynchronous trainings, and the implementation team tracked completion. Both EDs tested workflow and handoff procedures for all interventions.

- Clinical decision support identified eligible ED patients 66+ living with dementia. All care was documented in the electronic health record.
- ✓ ED clinicians performed introductory and discharge huddles and integrated care partners in the visit for 3 months
 - ✓ Community paramedics coached the dyad for 30 days after the ED visit.
 - ✓ Nurses provided 20 dyads telephonic support over 6 months.

Acceptability was defined as clinician training rates >75%.

Feasibility for ECR required completion of huddles and collection of care partner information, for CPTI this required a home visit, and for NLTC, an initial assessment.

We report on ECR and CPTI program implementation data. Interviews were conducted with ED-LEAD staff and leadership at both sites to reflect on key challenges, adaptations, and lessons learned.

Table 1. Site Characteristics

Site	Location	Inpatient Beds	Annual Admissions	ED Visits	Full-time emergency medicine providers*	Full-time emergency medicine nurses
Site 1	New York City	400	26,671	66,371	56	128
Site 2	Wisconsin	58	18,477	70,498	71	199

*Providers: Physicians, Physician Assistant, Nurse Practitioner

RESULTS: ACCEPTABILITY AND FEASIBILITY

Table 2. Training Completion

	Site	
	Site 1	Site 2
Healthcare worker type	N (%)	N (%)
Physician/PA/NP	54 (96%)	65 (92%)
Nurse	97 (76%)	146 (73%)
Paramedic Coach	3 (100%)	5 (100%)
Telephonic Nurse	1 (100%)	2 (100%)
PA; Physician Assistant, NP; Nurse Practitioner		

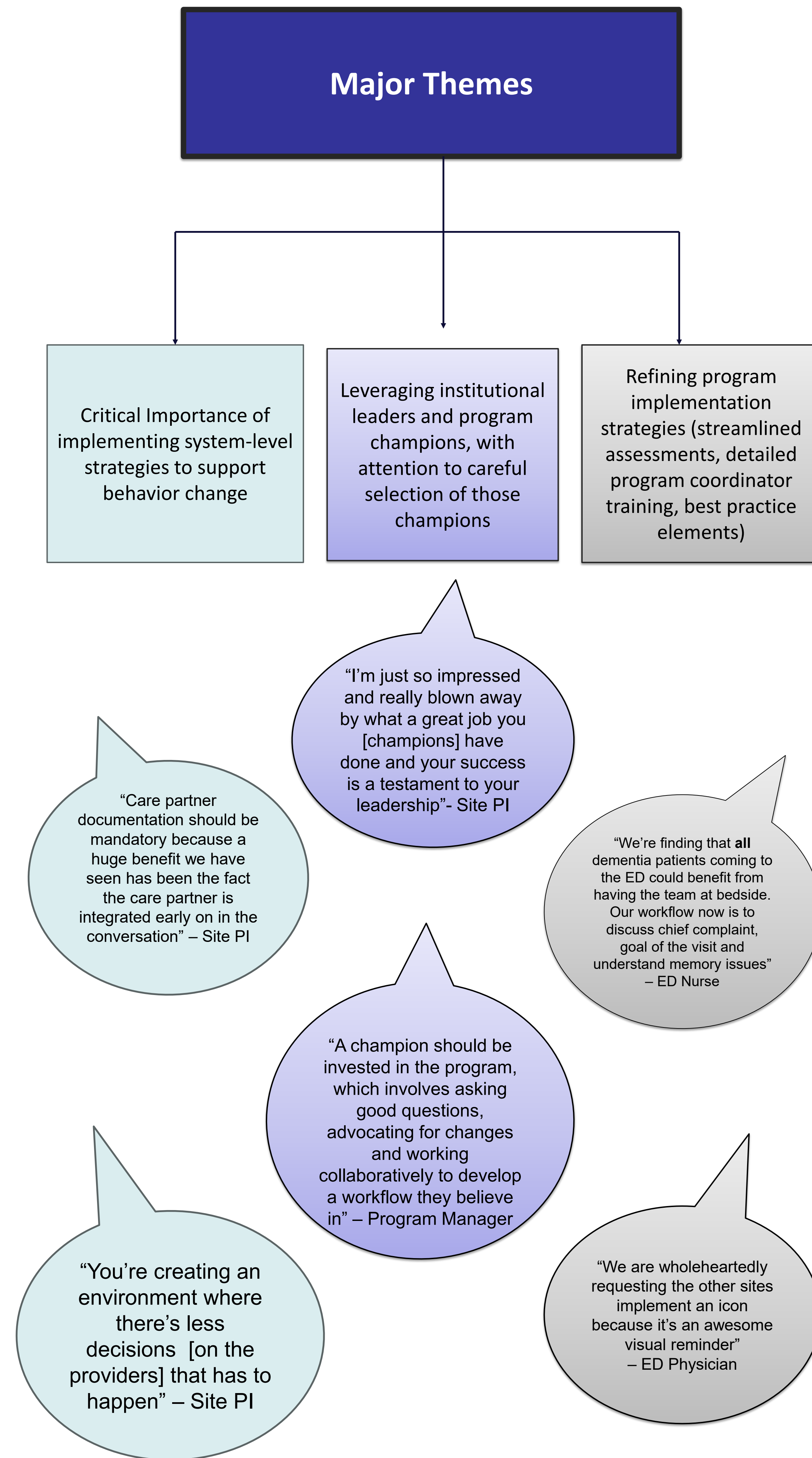
Clinicians generally found the training acceptable (Table 2).

Table 3. Program Implementation

	Site	
	Site 1	Site 2
	N (%)	N (%)
ED Disposition		
Discharged	178 (39%)	279 (57%)
Admitted	262 (58%)	214 (43%)
Died	4 (1%)	-
Other	8 (2%)	-
ECR		
Introductory Huddle Occurred	14 (8%)	237 (83%)
Care Partner Identified	14 (8%)	235 (82%)
Discharge Huddle Occurred	4 (2%)	208 (72%)
CPTI		
Home Visit: Complete	38 (40%)	31 (39%)
Follow-up 1 Call: Complete	28 (30%)	20 (25%)

The proportion of persons living with dementia discharged home were similar, but feasibility of the interventions *varied* considerably by site (Table 3).

RESULTS: LESSONS LEARNED



CONCLUSION

ED-LEAD was acceptable to clinicians and all three interventions were feasible to incorporate into current ED workflow. The optimization period highlights the importance of iterative feedback and collaborator engagement to identify challenges and address them before rollout of the full trial.

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