

IMPROVING DEMENTIA CARE THROUGH DIGITAL CAREGIVER EMPOWERMENT: A PRAGMATIC REAL-WORLD TRIAL

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INTRODUCTION / BACKGROUND

Patients living with Alzheimer’s Disease and other dementias (ADOD) frequently rely on family caregivers (spouses, adult children) to manage changes in their condition, yet most family caregivers are stressed, and lack the knowledge, skills and confidence required to provide effective care for a loved one.

OBJECTIVES

The Ceresti Digital Caregiver Empowerment Program (DCEP) was deployed to 164 family caregivers of Medicare Advantage patients living with ADOD.

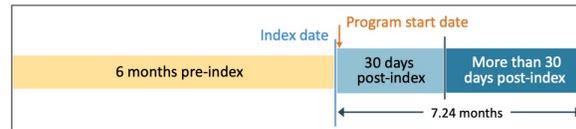
The primary objective of this pragmatic trial was to demonstrate that more knowledgeable, skilled and confident family caregivers (e.g., spouses, adult children) can reduce avoidable hospitalizations and costs.

METHODS

Enrolled patients were included in the claims analysis if their caregiver was enrolled in the DCEP for at least 45 days. Patient outcomes were compared to outcomes from a 3:1 propensity matched comparison group, post-index, from the DCEP start date to the end of claims. Comparison group members were matched to enrollees on demographics, pre-index utilization and costs, and other factors, including the patient’s frailty index. The first 30-days post-index were deemed a “transition”

period. The impact of the DCEP was determined by comparing the 6-month pre-index averages to outcomes from the 30-day post-index period using the “difference-in-differences” approach (Figure 1).

Figure 1. Claims Analysis Methodology



The index date for program enrollees was their DCEP start date. For matched comparison group patients, the index date was the program start date of the enrollee to whom the comparison group member is matched. The DCEP was personalized for each caregiver/patient dyad using predictive models applied to claims data.

RESULTS

Patient Outcomes

Table 1 summarizes statistically significant (p-values < 0.05) reductions in utilization for patients enrolled > 45 days. High utilizers are patients with at least one hospitalization or two emergency department visits in the prior 24 months.

Caregiver Outcomes

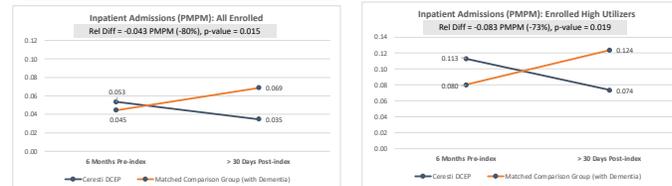
The number of mental unhealthy days reported by caregivers on the CDC-developed Healthy Days assessments, administered throughout the DCEP, declined from 6.4 days to 3.3 day. Average engagement was 40 minutes per week.

Table 1

Outcomes for Enrollees vs Comparison Group, more than 30 days post-index, to end of claims data	ALL ENROLLED (N=131, Eligibility = 7.24 mos)			ENROLLED HIGH UTILIZERS (N=62, Eligibility = 7.12 mos)		
	Relative Diff.	P-value	% Relative Diff.	Relative Diff.	P-value	% Relative Diff.
Medical Costs PMPM	-666	0.00	-53%	-1,433	0.00	-64%
Inpatient Costs PMPM	-491	0.00	-96%	-985	0.002	-91%
Inpatient Admissions PMPM	-0.043	0.02	-80%	-0.083	0.02	-73%
ED Visits PMPM	-0.035	0.03	-42%	-0.093	0.003	-56%
30 Day Readmissions Rate	-30%	0.02	-73%	-30%	0.02	-73%
Drug Costs PMPM	\$53	0.05	17%			

The following plots highlight patient outcomes versus the matched comparison group.

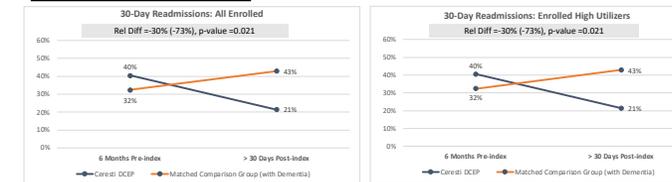
Inpatient Admissions PMPM



Medical Costs PMPM



30 Day Readmission



DISCUSSION

Further research is needed to evaluate the durability of these outcomes beyond the 6-month study period. In addition, further segmentation of outcomes by caregiver type (spouse versus adult child) and caregiver social style would provide insights into which caregivers may benefit more from this type of intervention. Integrating knowledge about social determinants of health that impact caregivers and patients in their homes would provide a more complete understanding about the underlying mechanisms of action of the DCEP.

CONCLUSION

These statistically significant results demonstrate that upskilling family caregivers:

- improves patient care by reducing patient hospitalizations
- reduces health care costs
- improves the mental health of caregivers.

In addition, empowering caregivers changes the rate at which low-utilizer patients become high-utilizers, thus reducing the risk trajectory of a population of patients with ADOD.