ValidationInstitute

2021 Validation Report

Review for: Ceresti Health

Validation Achieved: Level 1 - Savings

Valid through: December 2022

Company Profile

Category: Disease Management

Website: https://www.ceresti.com/

Year Established: 2013

Public or Private: Private

CEO: Dirk Soenksen

Company contact: dirk.soenksen@ceresti.com

Description:

Ceresti Health is the leader in virtual care for patients with conditions that require high levels of family caregiver support, starting with Alzheimer's Disease and other dementias. The company has developed a scalable Digital Caregiver Empowerment Program that utilizes personalized education, proactive coaching, remote monitoring and predictive analytics to upskill family caregivers on how to best care for a loved one (i.e., the patient).

Claim Assertion for Validation

Patients with Alzheimer's Disease or other dementias had lower total medical costs than similar patients when their family caregiver enrolled in Ceresti's Digital Caregiver Empowerment Program.

Method / Calculation / Examples

A total of 164 family caregivers (and their care-recipient patients) enrolled in the Ceresti Digital Caregiver Empowerment Program (DCEP). This program provides a family caregiver with a single-purpose tablet computer, personalized education and one-on-one remote coaching. The DCEP also monitors the patient's health status, via risk assessments voluntarily completed by their family caregiver.

Caregiver-patient dyads were included in the analysis if they met the following criteria:

- The patient's caregiver was enrolled in the DCEP for at least 45 days
- Patient claims data was available for at least 6 months pre-index
- The patient did not die during the 6 months studied
- Of the initial 164 enrolled caregiver-patient dyads, 131 dyads were included in the analysis. The remaining 33 dyads did not meet the criteria.
- Patients whose caregivers enrolled in the DCEP were matched to similar patients (whose caregivers were not enrolled). The following factors were used for matching patients: age, gender, geographic region, and the following during the 6 month pre-index period: Charlson Comorbidity Index; number of medical claims with a diagnosis of Alzheimer's Disease or other Dementia; the presence of a skilled nursing facility claim emergency department (ED) visits and costs; inpatient hospital admissions and costs; and costs for nursing or assisted living, office visits and other outpatient services, and other costs.

Findings & Validation

The evaluation compares changes in patient outcomes (post-index minus pre-index) between program enrollees and a matched comparison group using the "difference-in-differences" approach. The index date for program enrollee patients is their DCEP start date. For matched comparison group patients, the index date is the program start date of the enrollee to whom the comparison group member is matched.

Total medical and total inpatient costs were calculated during the 6 months pre-index period for both DCEP patients and for matched non-DCEP patients.

Similarly, the frequency of ED visits, inpatient admissions, and 30-day readmissions was calculated per patient per month. The same measures were calculated > 30 days post-index through the end of the study (6.24 months on average), and for the same time period for the matched non-DCEP patients.

The change in costs and visit frequency that DCEP patients incurred > 30 days post-index to the end of the study was then compared to the change experienced by the matched non-DCEP patients. The relative differences were tested for statistical significance to determine whether the change was due to chance.

Findings & Validation

Aligning the index dates of the matched comparison group patients exactly with the index dates of enrolled patients was important, to ensure that claims runout (claims payment lag) would be the same between cohorts. Additionally, the analysis methodology Winsorized (truncated) outlier cost values at the 98th percentile rather than excluding patients with outlier costs in order to get a better estimate of total costs and to avoid reducing the sample size of the study.

Findings & Validation

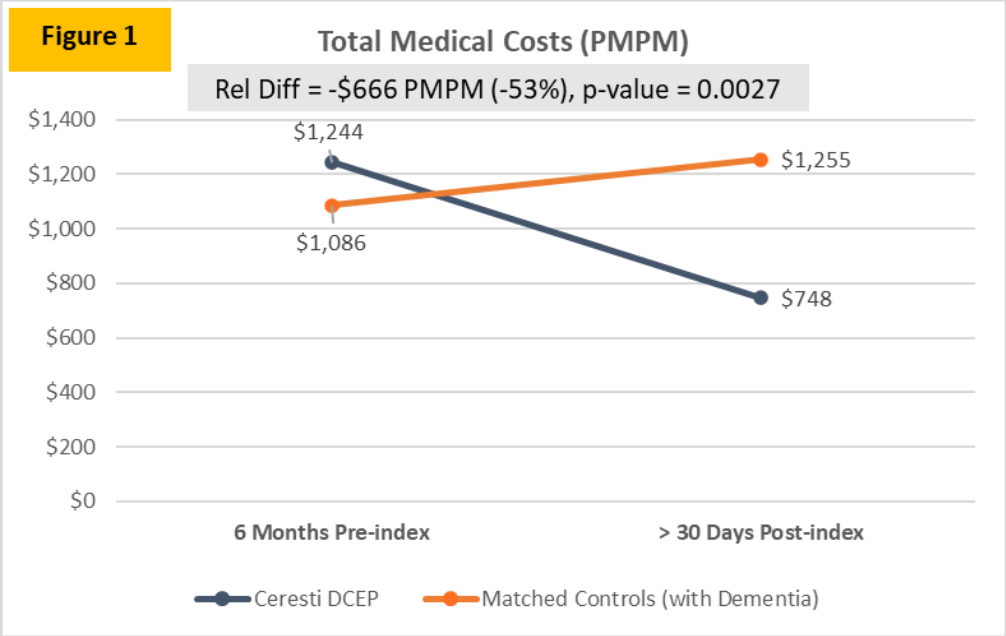

Figure 1 shows the DCEP group's total medical costs per member per month (PMPM) for the 6 months before the program began (pre-index), and for the 6.24 months > 30 days post-index. DCEP patient's total medical costs decreased by $496 PMPM, while the matched comparison group's costs increased by $169 PMPM; the relative difference between the two groups was $666 PMPM (-53%) and was statistically significant ($p<0.05$).

Findings & Validation

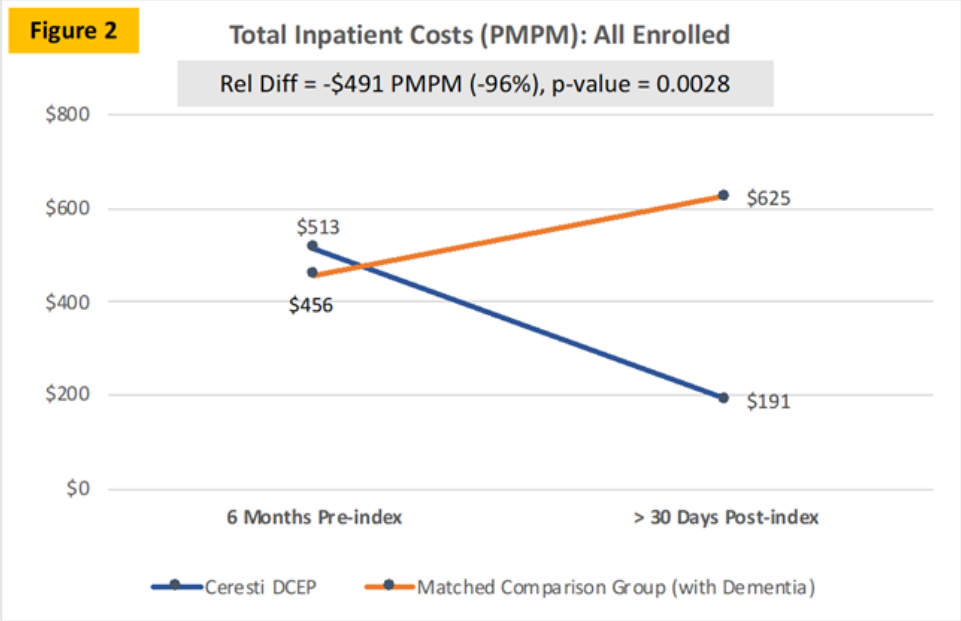

Figure 2 shows total inpatient costs PMPM. The DCEP group's inpatient costs decreased by $322 PMPM, while the matched comparison group's costs increased by $169 PMPM. The relative difference between the two groups was $491 PMPM (-96%) and was statistically significant ($p<0.05$).

Findings & Validation

	DCEP Group		Matched Comparison Group		Relative Difference	Relative Difference %
	Baseline	Post	Baseline	Post		
ED visits PMPM	0.084	0.045	0.070	0.066	-0.035	-42%
Inpatient Admissions PMPM	0.053	0.035	0.045	0.069	-0.043	-80%
30-day Readmission %	40.5%	21.4%	32.4%	42.9%	-29.6%	-73%

Table 1. Other Patient Outcomes for All DCEP Enrollees

Table 1 summarizes ED visits, inpatient admissions, and 30-day readmissions for the DCEP patient enrollees and the matched comparison group (non-DCEP) patients. All of these differences were statistically significant.

Findings & Validation

	High Utilizers from the DCEP Group		High Utilizers from the Matched Comparison Group		Relative Difference	Relative Difference %
	Baseline	Post	Baseline	Post		
Medical Costs PMPM	$2,256	$1,196	$1,669	$2,042	-$1,433	-64%
ED visits PMPM	0.164	0.076	0.110	0.115	-0.093	-56%
Inpatient Admissions PMPM	0.113	0.074	0.080	0.124	-0.083	-73%

Table 2. Other Patient Outcomes for High Utilizer DCEP Enrollees

Table 2 summarizes outcomes of a subset of DCEP patient enrollees with high utilization in the prior two years (>=1 inpatient admission or >=2 emergency department visits) relative to patients from the matched comparison group with high utilization in the prior two years. All of these differences were statistically significant ($p<0.05$).

Limitations

As for all observational cohort studies, the matched comparison group may differ from the DCEP group in ways that were not accounted for in the matching process or in factors that cannot be measured. These unmeasurable and omitted factors may explain some of the outcomes.

Validation and Credibility Guarantee

Ceresti Health's Caregiver Empowerment Program achieved level 1 validation for Savings. Validation Institute is willing to provide up to a $25,000 guarantee as part of their Credibility Guarantee Program. To learn more, visit https://validationinstitute.com/credibility-guarantee/.

Level 1 – Savings
Can reduce health care spending per case/participant or for the plan/purchaser overall.

Level 2 – Outcomes
Product/solution has measurable moved the needle on an outcome (risk, hba1c, events, employee retention, etc.) of importance.

Level 3 – Metrics
Credible sources and valid assumptions create a reasonable estimate of a program's impact.

Level 4 - Contractual Integrity
Vendor is willing to put a part of their fees "at risk" as a guarantee.

VALIDATION INSTITUTE
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Woburn, MA 01801

Validation Expiration: December 2022

CERTIFICATE OF VALIDATION

Applicant:	**Ceresti Health** 2888 LOKER AVE E, STE 209, CARLSBAD, California 92010, US
Product:	Caregiver Empowerment Program
Claim:	Patients with Alzheimer's Disease or other dementias had lower total medical costs than similar patients when their family caregiver enrolled in Ceresti's Digital Caregiver Empowerment Program.
Validation Achieved:	**Level 1 – Validated for Savings**
Validation Award Date:	December 2021

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About Validation Institute

Validation Institute is a professional community that advocates for organizations and approaches that deliver better health value - stronger health outcomes at lower cost. We connect, train, and certify health care purchasers, and we validate and connect providers delivering superior results. Founded in 2014, the mission of the organization has consistently been to help provide transparency to buyers of health care.