



# Technology-Enabled Dementia Care

## Leveraging Family Caregivers to Reduce Facility Utilization for Complex Patients with Dementia

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### EXECUTIVE SUMMARY

We are experts in caring for patients with dementia or cognitive impairment in the home. Patients living with Alzheimer’s Disease and other dementias (collectively “dementia”) utilize emergency departments (EDs), hospitals, and skilled nursing facilities 2-3 times more frequently than those without the condition.<sup>1</sup> Many of these facility utilizations are avoidable and do not benefit the person living with dementia; in fact, these admissions often contribute to further decline in cognitive functioning and overall functional status, thereby increasing future utilization.<sup>2</sup>

Based on claims data and related literature, higher healthcare costs for patients with dementia are driven by acute events that lead to higher facility utilization, which are the result of:

- Unmanaged chronic conditions, in particular diabetes, CHF, and COPD
- Conditions that could be prevented at home (e.g., UTIs, falls)
- Inexperienced family caregivers

Our framework for the progression of dementia highlights the importance of reducing the

frequency and intensity of the step-wise cognitive/functional declines associated with acute events.

Our technology-enabled dementia care program reduces facility utilization by (i) empowering informal/unpaid family caregivers (e.g., spouses or adult children) with knowledge, skills, confidence, and support and (ii) enabling remote daily monitoring of patient and caregiver status to support optimal patient care and avoid acute events.

*Ceresti's technology-enabled dementia care program creates new opportunities for payers and providers to reduce costs and improve care in a historically "forgotten" patient population.*

### Empowering family caregivers

We empower family caregiver by engaging them in a personalized education, support, and coaching program that is delivered via a tablet-based Health Station that we send to the home. We leverage our proven digital platform, remote coaches, evidence-based content and a proprietary "personalization engine" to help family caregivers understand their loved one's health challenges and develop the knowledge, skills and confidence required to take a more active role in managing their loved one's health. Family caregiver empowerment is the proactive element of our program that aims to prevent acute events.



### Remotely monitoring patients daily via their family caregivers

Ceresti coaches become trusted advisers who gain insights about new health challenges and social determinants in the home. This allows us to alert care managers about potentially avoidable events so they can intervene in real time to prevent an ED visit or a hospital admission. Our ability to remotely monitor patients for any condition that our coaches learn about optimizes and supplements client's care management programs by extending their reach into the home. Remote monitoring is the reactive element of our program that addresses



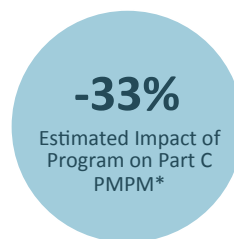
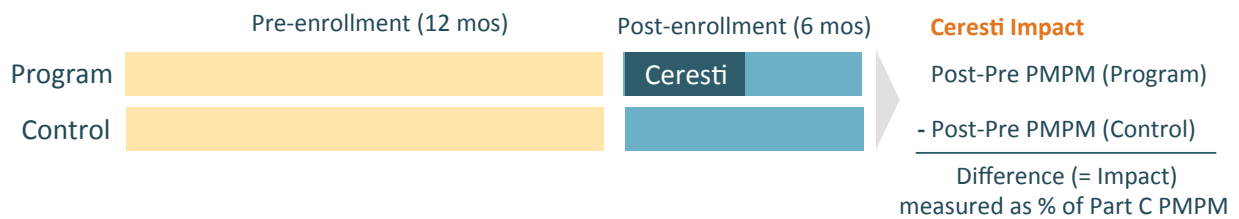
situations that are on the verge of becoming acute events, leading to appropriate medical interventions that avoid the need for ED or hospital care.

### Alerts Support Care Managers in Being More Proactive in Reducing Utilization

We personalize how we integrate our program into care management team workflows by jointly developing protocols and procedures for sending alerts. Ceresti coaches have a higher frequency of engagement that conventional care management approaches can achieve through outbound telephone interactions, at arbitrary intervals. Our engagement emphasizes caregiver empowerment by delivering education in small doses with periodic reinforcement by a Ceresti coach using techniques like teach-back and motivational interviewing. Our **focus on building a trusted relationship with the family caregiver** enables anticipatory guidance and contingency plans for at-risk events and likely complications, allowing care managers to be more proactive in reducing utilization.

### Our Outcomes

The estimated impact of Ceresti’s program was a 33% reduction in Part C PMPM (monthly Medicare Advantage costs) in a 2017-2018 pilot study<sup>3</sup> with Landmark Health, a leading at-risk provider. The program impact was calculated for the six month period post-enrollment by comparing the pre/post difference in Landmark members whose family caregivers enrolled in a 3-month version of the Ceresti program to the pre/post difference in a control group who did not receive the program.



PMPM = Medicare costs per member (Part C), excluding prescriptions

OUTCOMES MEASURED BY CERESTI

LANDMARK'S IMPACT ANALYSIS

#### Notes

- The **Program group** comprised 11 of 16 members with dementia plus a polychronic disease profile (6+ chronic conditions) who completed the Ceresti program where claims data was available
- The **Control group** comprised 79 members who were selected according to the same eligibility criteria (6+ chronic conditions including diagnosis for dementia, 1 admission to ED, hospital or SNF in prior 12 months)
- \*While directionally positive, the sample was too small to make the results statistically significant

Caregivers of high-need Medicare Advantage patients with dementia also reported high program satisfaction (NPS=92) and reduced caregiver burden, a measure of their willingness to “keep going” in the job of caregiving. Those who completed our program completed an average of 89% of all assigned tasks, daily assessments and coaching call.

### **Prevalence of Dementia**

5.3 million Americans are currently diagnosed with Alzheimer’s Disease (AD), representing about 11.5% of seniors over the age of 65. Dementia is highly correlated with age, with 13.6% of those in the 75-84 years age group having dementia, and 34.6% of those older than 85 years having the condition. The condition also disproportionately affects Blacks (13.8%) and Hispanics (12.2%). For those diagnosed with dementia, over 70% are older than 80 years, and 67% are women.<sup>4</sup>

An additional 10% of those aged 65+ have mild cognitive impairment (MCI) and are at risk of developing AD. Our rapidly aging population and rising Medicare and Medicaid costs (projected to exceed \$500 billion/year by 2040) make a strong case for developing population health approaches for patients with dementia and those with cognitive impairment who are likely to develop the disease in the future.<sup>5</sup>

### **Identifying Patients Dementia**

Patients with dementia can be identified in multiple ways from claims and other data. Approaches include (i) ICD-9 codes (290, 294, 331, 797), taking care to look at all available diagnostic field, (ii) patients who are prescribed cognitive enhancers (e.g., Namenda, Aricept, etc.), (iii) episode grouping software (e.g. Optum ETG), (iv) facility authorization and utilization data, and (v) cognitive assessment data (e.g., MMSE or MoCA). Taking a superset of multiple approaches will help identify all those who can benefit from Ceresti’s technology-enabled dementia care program, or other specialized dementia care programs.

## REFERENCES

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<sup>1</sup> Callahan CM, Arling G, Tu W, Rosenman B, Counsell SR, Stump TE, Hendrie HC. Transitions in Care among Older Adults with and without Dementia. *J Am Geriatr Soc.* 2012 May; 60(5): 813–820

<sup>2</sup> Mathews SB, Arnold SE, Epperson CN. Hospitalization and cognitive decline: Can the nature of the relationship be deciphered? *Am J Geriatr Psychiatry.* 2014 May;22(5):465-80

<sup>3</sup> unpublished results, contact Ceresti for more details

<sup>4</sup> Salber PR, Selecky CE, Soenksen D, Wilson T. Impact of Dementia on Costs of Modifiable Comorbid Conditions. *Am J Manag Care.* 2018; 24(11):e344-e351

<sup>5</sup> Alzheimer's Association. Facts and Figure 2018