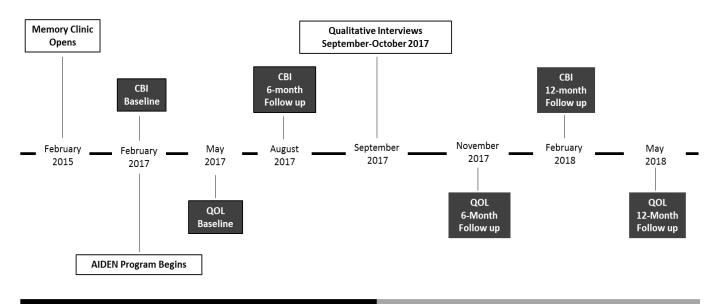
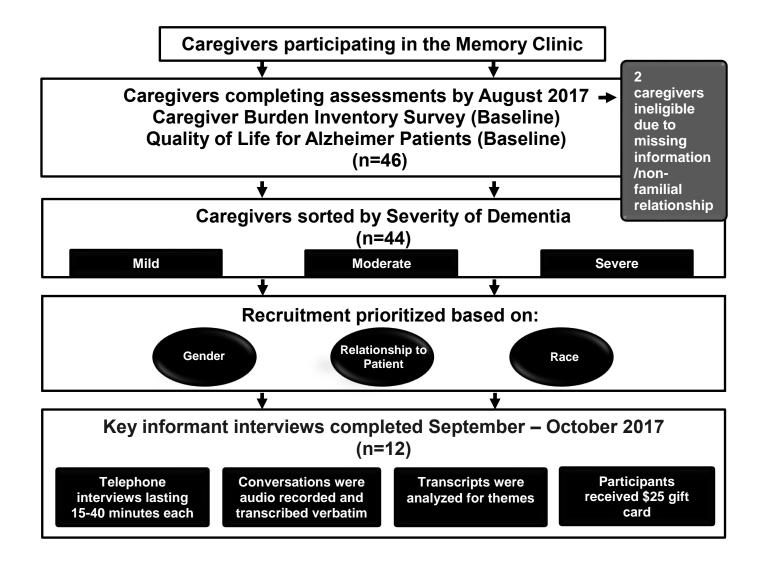
## Supplementary Figure S1. Project Timeline

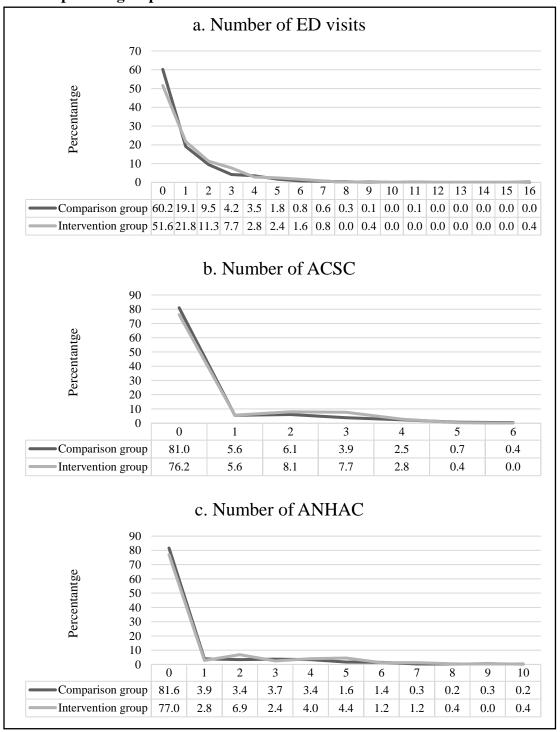


Intervention Group February 2015-September 2017

Healthcare Utilization Follow-Up September 2017-May 2018 Supplementary Figure S2. Selection of participants for key informant interviews with caregivers



## Supplementary Figure S3. Distribution of healthcare utilization between intervention and comparison group



ED, emergency department; ACSC, ambulatory care—sensitive conditions (PQI 6.0 from AHRQ); ANHAC, additional nursing home—specific avoidable conditions.

 $\begin{tabular}{ll} Supplementary \ Table \ S1. \ Demographics for dementia patients from the retrospective matched cohort \end{tabular}$ 

	Comparison Group	Intervention Group	Standardized Difference*
Total, n (%)	938 (79.8)	238 (20.2)	
Age, median (range)	81 (65-102)	81.5 (65-96)	0.10
Female, n (%)	691 (73.7)	173 (72.7)	0.02
Marital status, n (%)			0.02
Married	346 (36.9)	83 (34.9)	
Widowed	385 (41.0)	103 (43.3)	
Others	207 (22.1)	52 (21.8)	
Race/Ethnicity, n (%)			0.00
Caucasian	709 (75.6)	181 (76.1)	
African American	164 (17.5)	41 (17.2)	
Other	65 (6.9)	16 (6.7)	
Traumatic brain injury, n (%)	51 (5.4)	16 (6.7)	0.05
Down syndrome, n (%)	0 (0.0)	0 (0.0)	
Mental retardation, n (%)	3 (0.3)	1 (0.4)	0.02
Alcohol abuse, n (%)	19 (2.0)	8 (3.4)	0.08
Drug abuse, n (%)	10 (1.1)	4 (1.7)	0.05
High risk medication, n (%)	127 (13.5)	24 (10.1)	0.11
Charlson Comorbidity Index,	0 (0-12)	0 (0-12)	0.02
median (range) Unemployment rate, median (range)	8.4 (0.6-33.9)	7.9 (0.5-33.9)	0.04
Median household income in	53.3 (16.9-179.8)	54.5 (17.0-190.1)	0.01
thousands, median (range) Percentage with bachelor's degree, median (range) Baseline ED visit, median (range)	27.0 (2.6-84.5)	30.8 (2.6-86.7)	0.03
	0 (0-23)	0 (0-8)	0.02
Baseline ACSC, median (range)	0 (0-6)	0 (0-6)	0.02
Baseline ANHAC, median (range)	0 (0-9)	0 (0-6)	0.09

<sup>\*</sup>Standardized difference = difference in means or proportions divided by standard error; imbalance defined as value greater than 0.20 (small effect size)

 ${\bf Supplementary\ Table\ S2.\ Demographics\ for\ dementia\ patients\ and\ their\ caregivers\ who\ answered\ QoL-AD\ and\ CBI$ 

	Patient	Caregivers
Total	124	132
Age, median (range)	80 (54-94)	
Female, n (%)	96 (77.4)	96 (72.7)
Race/Ethnicity, n (%)		
Caucasian	89 (71.8)	96 (72.7)
African American	28 (22.6)	30 (22.7)
Other	7 (5.6)	7 (5.3)
Marital status, n (%)		
Married	57 (46.0)	
Widowed	53 (42.7)	
Other	14 (11.3)	
Dementia Severity, n (%)		
Mild Cognitive Impairment	8 (6.5)	
Mild Dementia	39 (31.5)	
Moderate Dementia	61 (49.2)	
Severe Dementia	16 (12.9)	
New Patient, n (%)	63 (50.8)	
Relation to the patient, n (%)		
Child		83 (62.9)
Spouse		39 (29.5)
Other		10 (7.6)
Baseline CBI, median (range)		27 (0-96)
Baseline QoL-AD, median (range)		31 (17-45)

CBI, caregiver burden inventory; QoL-AD, Quality of Life-Alzheimer's Disease