

# Appendix 1. Dementia Diagnosis and Cognitive Impairment Cohorts

	Diagnosis of dementia in ICD-10 codes (excluding mild cognitive impairment)		
Moderate to severe cognitive impairment (OASIS)	No	Yes	Total
No	4,628 (75.2%)	136 (2.2%)	4764
Yes	860 (13.9%)	529 (8.6%)	1389
Total	5488	665	6,153

# Appendix 2: Sample Characteristics by Dementia Diagnosis and Cognitive Impairment Cohorts

Variable	Entire Sample (6,153)	Dementia Diagnosis and Cognitive Impairment Cohorts				p-value
		No Dementia Diagnosis		Dementia Diagnosis		
		No Cognitive Impairment	Cognitive Impairment	No Cognitive Impairment	Cognitive Impairment	
		4628	860	136	529	
Age, mean (S.D.)	80.1 (9.47)	78.7 (9.23)	82.6 (9.49)*	85.3 (7.93)*	87.0 (7.15)*	<0.0001
Total number of diagnoses, mean (S.D.)	9.2 (3.46)	9.0 (3.48)	9.4 (3.38)	10.4 (3.12)*	9.9 (3.38)*	<0.0001
Composite ADL limitation score, mean (S.D.)	4.1 (1.28)	3.9 (1.18)	4.7 (1.34)*	4.0 (1.34)	4.9 (1.37)*	<0.0001
Total number of medications, mean (S.D.)	13.0 (5.61)	13.2 (5.58)	12.8 (5.86)	12.7 (5.91)	11.5 (5.28)*	<0.0001
Days of index home health admission (median, Q <sub>1</sub> , Q <sub>3</sub> )	29 (17, 48)	28 (17, 46)	31 (18, 50)	33 (16, 53.5)	30 (18, 51)	0.627
Female, N(%)	3555 (58%)	2638 (57%)	491 (57%)	82 (60%)	344 (65%)	0.005
Race/ethnicity, N(%) <ul style="list-style-type: none"><li>• Caucasian</li><li>• African American</li><li>• Hispanics</li><li>• Other</li></ul>	5323 (86.5%) 654 (10.6%) 100 (1.6%) 76 (1.2%)	3985 (86.1%) 519 (11.2%) 71 (1.5%) 53 (1.2%)	755 (87.8%) 78 (9.1%) 16 (1.9%) 11 (1.3%)	115 (84.5%) 16 (11.8%) 2 (1.5%) 3 (2.2%)	468 (88.5%) 41 (7.8%)	0.225
Married, N(%)	2721 (44%)	2128 (46%)	354 (41%)	46 (34%)	193 (36%)	<0.001
Living arrangement, N(%) <ul style="list-style-type: none"><li>• Living with others</li><li>• Living alone</li><li>• Aggregated settings</li></ul>	3728 (60%) 1761 (29%) 664 (11%)	2893 (63%) 1453 (31%) 282 (6%)	505 (59%) 228 (27%) 127 (15%)	70 (51%) 29 (21%) 37 (27%)	260 (49%) 51 (10%) 218 (41%)	<0.001
Depressive symptoms, N(%)	2876 (46%)	1957 (43%)	511 (59%)	68 (50%)	340 (64%)	<0.001
Obesity, N(%)	1368 (22%)	1102 (23.8%)	184 (21.4%)	21 (15.4%)	61 (11.5%)	<0.001
Current Smoking, N(%)	1150 (19%)	902 (19.5%)	179 (20.8%)	22 (16.2%)	47 (8.9%)	<0.001
Daily interfering pain, N(%)	4334 (70%)	3374 (72.9%)	580 (67.4%)	84 (61.8%)	296 (55.9%)	<0.001
Heart Failure, N(%)	1208 (20%)	937 (20.3%)	164 (19.1%)	27 (19.9%)	80 (15.1%)	0.044
Diabetes without complications, N(%)	1094 (18%)	837 (18.1%)	163 (18.9%)	20 (14.7%)	74 (14.0%)	0.066
Diabetes with complications, N(%)	815 (13%)	645 (13.9%)	107 (12.4%)	14 (10.3%)	49 (9.3%)	0.013

COPD, N (%)	1104 (18%)	854 (18.5%)	177 (20.6%)	19 (14.0%)	54 (10.2%)	<0.001
Receiving daily caregiver ADL assistance, N(%)	5129 (83%)	3772 (81.5%)	735 (85.5%)	115 (84.6%)	507 (95.8%)	<0.001
Referral source						
• Following acute hospitalization	3829 (62.2%)	3096 (66.9%)	470 (54.6%)	58 (42.6%)	205 (38.7%)	
• Following post-acute care	768 (12.5%)	542 (11.7%)	145 (16.9%)	17 (12.5%)	64 (12.1%)	
• Community	1556 (25.3%)	990 (21.4%)	245 (28.5%)	61 (44.9%)	260 (49.2%)	<0.001
Index home health admission > 60 days	628 (10.2%)	479 (10.4%)	81 (9.4%)	16 (11.8%)	52 (9.8%)	0.77
Index home health admission > 120 days	165 (2.7%)	132 (2.8%)	19 (2.2%)	4 (2.9%)	10 (1.9%)	0.47
Hospitalization, N(%)	878 (14%)	665 (14.4%)	158 (18.4%)	23 (16.9%)	63 (11.9%)	0.004
Nursing home admission, N(%)	15 (0.2%)	7 (0.2%)	3 (0.4%)	0	5 (1.0%)	0.005
Inpatient rehabilitation facility admission, N(%)	27 (0.4%)	15 (0.3%)	7 (0.8%)	2 (1.5%)	3 (0.6%)	0.053
Composite outcome, N(%)	920 (14.9%)	659 (14.2%)	165 (19.2%)	25 (18.4%)	71 (13.4%)	0.001
Median Survival Time without Facility Admission (Number of days since Home Health Admission)	192	219	123	304	124	/

Note: Groups with significant difference from the reference group (no dementia diagnosis, no cognitive impairment) in ANOVA with post-hoc Tukey HSD test for continuous variables and logistic regression analysis for categorical variables (\*p<0.05, +p<0.01, ++p<0.001).