

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Codes Used to Identify Dementia and Health Outcomes

ICD-9-CM Codes	Diagnoses
331.0	Alzheimer's disease
331.82	Dementia with Lewy bodies
290.0	Senile dementia, uncomplicated
290.10	Presenile dementia, uncomplicated
290.11	Presenile dementia with delirium
290.12	Presenile dementia with delusional features
290.13	Presenile dementia with depressive features
290.20	Senile dementia with delusional features
290.21	Senile dementia with depressive features
290.3	Senile dementia with delirium
290.40	Vascular dementia, uncomplicated
290.41	Vascular dementia, with delirium
290.42	Vascular dementia, with delusions
290.43	Vascular dementia, with depressed mood
294.0	Amnestic disorder in conditions classified elsewhere
294.10	Dementia in conditions classified elsewhere without behavioral disturbance
294.8	Other persistent mental disorders due to conditions classified elsewhere
331.11	Pick's disease
331.19	Other frontotemporal dementia
331.2	Senile degeneration of brain
331.7	Cerebral degeneration in diseases classified elsewhere
797	Senility without psychosis
410.X, 411.X, 413.X, 414.X, 429.X, V45.81, V45.82	Myocardial infarction, ischemic heart disease, or coronary ischemia

430.X, 431, 432.X, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 435.X	Stroke or transient ischemic attack
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eTable 2. Demographic Characteristics of Elderly Individuals With Dementia in MEPS

Calendar Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Unweighted Sample Size	68	134	98	78	79	119	148	121	132	158	179	142	131	159	146	126	147	135	130	
Sex																				
Male, % (N*)	23 (11)	23 (24)	25 (22)	40 (27)	34 (27)	28 (35)	30 (39)	26 (31)	34 (42)	30 (43)	30 (56)	39 (58)	36 (43)	27 (44)	36 (57)	44 (56)	41 (59)	38 (49)	34 (44)	
Female, % (N*)	78 (57)	78 (110)	75 (76)	60 (51)	66 (52)	72 (84)	70 (109)	74 (90)	66 (90)	70 (115)	70 (123)	61 (84)	65 (88)	73 (115)	64 (89)	56 (70)	59 (88)	62 (86)	66 (86)	
Age																				
Mean (SD)	83.2 (3.0)	82.8 (2.8)	81.9 (2.8)	83.4 (2.8)	82.3 (2.6)	81.2 (2.8)	80.4 (2.9)	80.3 (2.5)	80.8 (2.9)	81.2 (3.1)	81.4 (3.2)	81.8 (2.9)	81.0 (3.1)	80.4 (3.0)	81.2 (3.1)	81.5 (3.0)	81.5 (3.0)	80.5 (2.8)	80.7 (2.8)	
Minimum	66.0	65.0	65.0	66.0	65.0	66.0	65.0	65.0	65.0	65.0	65.0	66.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
25th percentile	79.2	78.0	78.1	79.7	77.5	77.7	75.8	76.6	77.4	78.0	78.6	79.3	78.9	76.3	78.5	78.4	78.7	77.6	77.0	
Median	83.3	83.7	81.5	84.3	82.9	83.6	81.5	81.3	83.0	82.4	82.7	83.9	82.3	82.2	83.1	83.9	84.1	83.2	83.8	
75th percentile	86.7	88.0	86.6	87.8	87.0	84.5	84.3	84.4	84.4	84.4	84.5	84.5	84.3	84.3	84.5	84.5	84.6	84.5	84.5	
Maximum	90.0	90.0	90.0	90.0	90.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	
Ethnicity																				
Hispanic, % (N*)	2 (4)	7 (19)	8 (15)	5 (8)	4 (10)	8 (21)	6 (24)	10 (29)	10 (32)	6 (25)	10 (40)	16 (35)	8 (17)	9 (21)	10 (19)	10 (22)	11 (36)	13 (37)	6 (19)	
Non-Hispanic, % (N*)	98 (64)	93 (115)	92 (83)	95 (70)	96 (69)	92 (98)	94 (124)	91 (92)	90 (100)	94 (133)	90 (139)	84 (107)	92 (114)	91 (138)	90 (127)	90 (104)	89 (111)	87 (98)	95 (111)	
Race																				
White, % (N*)	94 (61)	91 (114)	85 (75)	87 (61)	88 (68)	88 (100)	80 (110)	83 (92)	85 (105)	83 (118)	84 (140)	84 (108)	78 (85)	78 (102)	83 (102)	84 (90)	78 (102)	82 (93)	78 (79)	
Black, % (N*)	6 (7)	9 (19)	13 (20)	13 (17)	12 (11)	11 (17)	14 (30)	15 (26)	14 (24)	15 (35)	15 (36)	12 (27)	16 (35)	15 (46)	12 (36)	11 (28)	12 (30)	10 (24)	15 (37)	
Other % (N*)	NA	0 (1)	3 (3)	NA	NA	2 (2)	7 (8)	2 (3)	2 (3)	2 (5)	1 (3)	4 (7)	6 (11)	7 (11)	4 (8)	5 (8)	10 (15)	8 (18)	8 (14)	
MSA																				
Yes, % (N*)	73 (45)	70 (85)	75 (69)	77 (60)	75 (58)	67 (73)	72 (100)	78 (96)	82 (106)	77 (114)	72 (118)	83 (109)	77 (96)	76 (112)	72 (106)	76 (103)	81 (120)	NA	NA	
No, % (N*)	28 (23)	30 (49)	25 (29)	23 (18)	26 (21)	33 (46)	28 (48)	22 (25)	18 (26)	23 (44)	28 (61)	17 (33)	24 (35)	24 (47)	28 (40)	24 (23)	19 (27)	NA	NA	
Geographic region																				
Northeast, % (N*)	21 (17)	20 (28)	16 (15)	32 (20)	19 (15)	27 (23)	28 (29)	19 (18)	20 (23)	26 (28)	17 (22)	18 (20)	21 (25)	19 (24)	22 (24)	18 (19)	23 (28)	26 (29)	26 (24)	
Midwest, % (N*)	37 (22)	21 (27)	30 (25)	17 (17)	29 (18)	18 (21)	23 (27)	18 (17)	14 (20)	13 (16)	21 (29)	21 (26)	20 (26)	20 (29)	19 (31)	13 (17)	20 (25)	21 (18)	18 (24)	

Calendar Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
West, % (N*)	31 (19)	42 (54)	40 (40)	27 (27)	35 (32)	32 (51)	30 (61)	38 (56)	41 (61)	38 (81)	43 (96)	41 (67)	37 (54)	39 (69)	37 (61)	41 (54)	38 (65)	40 (62)	41 (55)
South, % (N*)	11 (10)	17 (25)	14 (18)	24 (14)	17 (14)	24 (24)	20 (31)	25 (30)	24 (28)	23 (33)	19 (32)	20 (29)	22 (26)	23 (37)	22 (30)	29 (36)	19 (29)	13 (26)	15 (27)

Abbreviations: MEPS, Medical Expenditure Panel Survey; MSA, metropolitan statistical area.

*Unweighted sample sizes (N) provided; summary statistics have been weighted.

eTable 3. Demographic Characteristics of Elderly Individuals with Dementia in NAMCS/NHAMCS

Calendar Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Unweighted Sample Size	165	210	227	177	223	245	285	294	291	254	275	345	313	268	294	312	153	121	134
Sex																			
Female, % (N*)	50 (97)	65 (117)	67 (172)	60 (108)	59 (140)	55 (153)	67 (185)	62 (185)	65 (171)	73 (159)	68 (172)	62 (218)	61 (215)	68 (167)	64 (184)	62 (183)	62 (91)	59 (70)	65 (87)
Male, % (N*)	50 (68)	35 (93)	33 (55)	41 (69)	42 (83)	45 (92)	33 (100)	38 (109)	36 (120)	28 (95)	32 (103)	38 (127)	39 (98)	33 (101)	36 (110)	38 (129)	38 (62)	41 (51)	35 (47)
Age																			
Mean (SD)	79 (2)	81 (2)	81 (2)	79 (2)	82 (2)	79 (2)	81 (2)	80 (2)	80 (2)	81 (2)	80 (2)	81 (2)	82 (2)	82 (3)	82 (2)	83 (2)	82 (1)	82 (2)	83 (2)
Minimum	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
25th percentile	74	75	75	73	76	73	75	75	77	76	75	76	75	77	77	78	77	78	79
Median	80	80	81	80	81	77	80	80	80	81	80	81	81	82	81	83	82	82	84
75th percentile	84	85	86	84	86	83	85	85	84	85	84	86	87	86	88	87	87	86	88
Maximum	96	98	100	99	100	100	95	100	100	98	100	100	100	100	100	93	92	93	93
Ethnicity																			
Hispanic, % (N*)	12 (13)	6 (8)	2 (11)	8 (17)	2 (9)	5 (22)	14 (26)	3 (22)	7 (35)	4 (12)	6 (18)	8 (20)	9 (30)	15 (43)	8 (30)	5 (27)	5 (7)	7 (8)	14 (11)
Non-Hispanic, % (N*)	88 (152)	70 (172)	79 (162)	80 (134)	75 (168)	86 (192)	79 (237)	97 (272)	93 (256)	96 (242)	94 (257)	93 (325)	91 (283)	85 (225)	92 (264)	95 (285)	95 (146)	93 (113)	86 (123)
Race																			
White, % (N*)	85 (125)	77 (165)	90 (170)	93 (151)	94 (182)	93 (202)	95 (232)	71 (231)	90 (249)	93 (217)	86 (228)	88 (265)	87 (263)	92 (233)	85 (237)	84 (259)	92 (138)	86 (103)	89 (119)
Black, % (N*)	13 (35)	19 (42)	10 (51)	7 (25)	5 (32)	4 (34)	4 (42)	20 (51)	8 (36)	3 (25)	7 (31)	10 (68)	6 (32)	8 (25)	11 (45)	10 (37)	6 (11)	5 (10)	6 (11)
Other % (N*)	1 (5)	4 (3)	1 (6)	1 (1)	1 (9)	4 (9)	1 (11)	8 (12)	2 (6)	4 (12)	8 (16)	2 (12)	8 (18)	1 (10)	4 (12)	6 (16)	3 (4)	9 (8)	5 (4)
Region																			
Northeast, % (N*)	21 (44)	10 (34)	21 (74)	16 (44)	22 (43)	38 (92)	14 (59)	25 (72)	35 (85)	16 (54)	23 (53)	23 (89)	14 (90)	15 (77)	11 (63)	10 (63)	17 (6)	20 (5)	22 (2)
Midwest, % (N*)	27 (34)	29 (64)	28 (52)	21 (36)	39 (74)	8 (35)	21 (63)	22 (47)	20 (55)	25 (51)	24 (64)	18 (72)	24 (52)	31 (58)	30 (66)	17 (69)	20 (5)	21 (5)	25 (9)
South, % (N*)	29 (41)	41 (73)	36 (64)	44 (72)	23 (55)	38 (78)	34 (95)	29 (104)	21 (93)	37 (109)	34 (86)	39 (106)	39 (113)	44 (104)	27 (90)	54 (116)	19 (4)	35 (7)	42 (13)
West, % (N*)	23 (46)	20 (39)	15 (37)	19 (25)	16 (51)	16 (40)	31 (68)	25 (71)	24 (58)	22 (40)	20 (72)	20 (78)	23 (58)	10 (29)	32 (75)	19 (64)	44 (7)	25 (3)	11 (4)

Abbreviations: NAMCS, National Ambulatory Medical Care Survey; NHAMCS, National Hospital Ambulatory Medical Care Survey; SD, standard deviation.
*Unweighted sample sizes (N) provided; summary statistics have been weighted.

eTable 4. Drug Listings for Each Pharmacological Class

Antipsychotics	Hypnotics	Antidepressants	Antiepileptics
Combination	Benzodiazepines	Amitriptyline (1977)	Carbamazepine (1968)
Olanzapine/fluoxetine (2009)	Alprazolam (1981)	Amoxapine (1992)	Clobazam (2011)
Perphenazine/amitriptyline (1969)	Chlordiazepoxide (1960)	Bupropion (1985)	Clonazepam (1997)
	Clonazepam (1975)	Citalopram (1988)	Diazepam (1963)
Conventional/typical	Clorazepate (1987)	Clomipramine (1989)	Divalproex sodium (1983)
Chlorpromazine (1957)	Diazepam (1963)	Desipramine (1964)	Ethosuximide (1974)
Fluphenazine (1960)	Estazolam (1997)	Desvenlafaxine (2008)	Ethotoin (1957)
Haloperidol (1967)	Flunitrazepam (??)	Doxepin (2010)	Ezogabine (2011)
Levomepromazine (??)	Flurazepam (1986)	Duloxetine (2004)	Felbamate (2015)
Loxapine (2012)	Lorazepam (1980)	Escitalopram (2002)	Fosphenytoin (1996)
Mesoridazine (1994)	Midazolam (2000)	Fluoxetine (1987)	Gabapentin (1993)
Molindone (1974)	Oxazepam (1988)	Fluvoxamine (2007)	Lacosamide (2008)
Perphenazine (1957)	Prazepam (1980)	Imipramine (20012)	Lamotrigine (1994)
Pimozide (1985)	Quazepam (1985)	Isocarboxazid (1959)	Levetiracetam (1999)
Promazine (1951)	Temazepam (1981)	Maprotiline (1988)	Lorazepam (1977)
Thioridazine (1986)	Triazolam (1982)	Mirtazapine (1996)	Oxcarbazepine (2000)
Thiothixene (1967)		Nefazodone (2003)	Phenobarbital (1994)
Trifluoperazine (1997)	Non-benzodiazepines	Nortriptyline (1977)	Phenytoin (1956)
Triflupromazine (1981)	Eszopiclone (2004)	Paroxetine (2001)	Pregabalin (2004)
	Ramelteon (2005)	Phenelzine (1961)	Primidone (2008)
Atypical	Zaleplon (1999)	Protriptyline (1973)	Rufinamide (2008)
Aripiprazole (2002)	Zolpidem (1992)	Selegiline (1997)	Tiagabine (1997)
Asenapine (2009)		Sertraline (1991)	Topiramate (1999)
Brexipiprazole (2015)	Barbiturates	Tranylcypromine (1961)	Valproate sodium (1983)
Clozapine (1989)	Allobarbitol (1963)	Trazodone (1981)	Valproic acid (2008)
Iloperidone (2009)	Alphenal (??)	Trimipramine (1979)	Vigabatrin (2009)
Lurasidone (2010)	Amobarbital (1958)	Venlafaxine (1997)	Zonisamide (2009)
Olanzapine (2003)	Aprobarbital (??)	Vilazodone(2011)	
Paliperidone (2009)	Barbital (1953)		
Quetiapine (1997)	Brallobarbitol (??)	Antidementia	Opioids
Risperidone (1993)	Henobarbital (??)	Donepezil (1996)	Codeine (1840)
Ziprasidone (2001)	Pentobarbital (1973)	Galantamine (2001)	Fentanyl (2005)
	Secobarbital (1973)	Memantine (2003)	Hydrocodone (1943)
		Rivastigmine (2000)	Hydromorphone (1984)
			Levorphanol (2000)

			Meperidine (1942)
			Methadone (1947)
			Morphine (1830)
			Oxycodone (1939)
			Oxymorphone (1959)
			Pentazocine (1967)
			Tramadol (1995)

eTable 5. Annual Weighted Data from MEPS

Calendar Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Unweighted Sample Size	68	134	98	78	79	119	148	121	132	158	179	142	131	159	146	126	147	135	130
Medication Use, %																			
Antipsychotic	0.6	4.6	0.0	4.5	5.3	12.5	8.9	3.3	10.6	5.9	11.0	12.0	11.5	13.7	9.8	8.4	4.4	10.0	17.6
Atypical antipsychotic	0.0	1.6	0.0	4.5	4.6	12.5	8.2	3.3	10.6	5.1	9.0	11.5	11.0	12.2	7.8	6.8	3.9	9.7	15.4
Typical antipsychotic	0.6	3.0	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.8	2.0	1.0	1.6	1.9	2.0	2.2	0.5	0.3	2.2
Psychiatric meds/opioids	50.0	49.1	40.3	37.4	49.8	42.3	58.8	71.5	69.1	65.5	75.2	72.8	73.8	68.7	72.9	75.3	71.9	79.1	80.0
Hypnotic	23.5	22.0	14.6	17.6	7.2	14.3	18.0	20.8	15.2	10.5	11.1	15.3	9.3	9.1	12.6	10.4	6.7	10.2	9.5
Antidepressant	9.6	17.6	22.8	19.1	33.5	24.2	34.6	28.6	30.6	26.2	31.8	31.0	28.8	26.0	30.3	39.2	38.4	32.2	36.4
Antiepileptic	20.4	21.1	7.1	15.9	9.5	8.0	13.9	15.5	7.5	13.8	18.1	13.3	17.8	17.6	14.6	17.6	24.8	19.5	32.7
Antidementia	N/A	N/A	N/A	N/A	N/A	1.0	1.2	34.1	46.5	39.9	47.2	41.3	52.4	48.1	51.5	45.7	45.9	54.5	46.1
Opioid	27.8	23.3	12.9	7.7	18.2	16.4	19.8	17.7	15.6	17.4	15.3	22.7	15.1	17.0	25.0	26.1	25.0	24.1	27.6
Health Events, %																			
Cardiovascular	25.5	35.6	24.0	26.6	20.3	27.9	30.2	26.9	25.5	23.9	24.3	32.0	34.2	37.4	34.1	40.3	33.1	35.0	32.5
Cerebrovascular	0.0	0.0	0.0	0.0	0.5	1.6	1.7	3.6	6.9	4.7	3.2	4.8	2.0	1.1	0.7	0.3	3.4	0.0	0.0
Falls and/or fractures	19.3	19.7	21.5	15.5	19.1	12.5	12.7	10.3	7.6	8.6	10.7	8.5	4.8	8.7	8.1	6.8	4.7	4.0	11.4
Two-year mortality	25.1	7.7	8.4	9.5	7.9	6.7	6.0	7.4	9.1	5.5	10.3	6.9	8.8	4.6	5.0	14.1	8.3	7.5	10.1
Health-Related Quality of Life																			
SF-12 PCS, mean	N/A	N/A	N/A	N/A	30.8	31.2	30.8	32.6	32.4	32.9	33.6	32.6	33.3	32.2	32.1	30.3	30.3	30.8	34.8
SF-12 MCS, mean	N/A	N/A	N/A	N/A	41.1	43.5	42.6	44.2	43.5	43.6	41.9	43.1	42.8	43.3	44.7	45.1	43.7	44.6	44.2

Abbreviations: meds., medications; MEPS, Medical Expenditure Panel Survey; N/A, not available; MCS, mental component summary; PCS, physical component summary; SF-12, 12-Item Short-Form Health Survey.

eTable 6. Annual Weighted Data from NAMCS/NHAMCS

Calendar Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Unweighted Sample Size	165	210	227	177	223	245	285	294	291	254	275	345	313	268	294	312	153	121	134
Medication Use, %																			
Antipsychotic	19.8	15.7	16.4	11.7	5.9	15.0	18.6	10.0	18.4	14.9	16.4	17.0	7.1	17.9	6.1	12.8	9.2	8.0	17.0
Atypical antipsychotic	1.4	9.3	3.4	5.8	4.1	9.3	16.3	9.0	18.2	14.8	16.2	16.5	6.4	16.7	5.5	12.4	9.2	8.0	15.3
Typical antipsychotic	18.5	6.4	13.0	5.9	1.9	5.7	2.3	1.3	0.2	0.3	0.6	0.7	0.8	1.2	0.7	0.8	0.1	0.0	1.7
Psychiatric meds/opioids	33.3	53.6	41.7	47.7	47.6	45.2	52.6	54.1	65.4	48.8	65.9	56.4	62.8	71.7	63.9	66.4	61.4	48.0	67.6
Hypnotic	14.5	18.2	12.4	8.1	14.6	13.7	18.2	10.5	13.0	15.6	12.6	11.3	16.7	17.1	19.5	15.1	18.0	10.0	10.2
Antidepressant	9.1	26.5	19.3	25.8	16.1	13.1	20.3	26.6	30.4	15.6	29.0	21.4	27.2	25.7	22.2	26.0	29.8	24.3	32.4
Antiepileptic	6.9	12.6	4.1	9.4	7.2	11.1	6.9	5.2	13.7	3.1	10.1	12.4	11.9	17.8	16.7	15.3	13.2	7.7	17.9
Antidementia	10.4	13.4	11.0	28.9	25.5	21.7	27.1	28.2	47.1	37.8	46.1	33.3	42.1	51.2	42.6	42.8	45.1	30.8	50.9
Opioid	2.5	8.2	0.8	2.4	2.0	4.3	4.7	4.9	5.9	3.6	8.8	5.9	6.2	4.0	5.1	6.4	14.2	12.0	7.3
Health Events, %																			
Cardiovascular	4.8	0.6	4.1	0.2	1.6	5.2	2.8	2.7	0.9	0.8	8.9	1.6	1.0	3.9	5.9	7.4	4.8	17.3	8.0
Cerebrovascular	0.3	1.7	0.7	5.6	1.8	0.3	1.2	1.0	0.0	0.7	4.4	1.1	2.9	0.7	1.3	0.6	3.1	7.2	0.6
Falls and/or fractures	5.4	2.1	1.6	1.0	0.8	1.6	0.5	1.1	1.1	0.3	0.8	0.2	0.2	0.7	1.8	1.4	4.2	0.9	2.4

Abbreviations: meds., medications; NAMCS, National Ambulatory Medical Care Survey; NHAMCS, National Hospital Ambulatory Medical Care Survey.

eTable 7. Three-Year Moving Averages from MEPS

Midpoint Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Medication Use, %																	
Antipsychotic	1.7	3.0	3.3	7.4	8.9	8.2	7.6	6.6	9.2	9.6	11.5	12.4	11.7	10.6	7.5	7.6	10.7
Atypical antipsychotic	0.5	2.0	3.0	7.2	8.4	8.0	7.4	6.3	8.2	8.5	10.5	11.6	10.3	8.9	6.2	6.8	9.7
Typical antipsychotic	1.2	1.0	0.3	0.3	0.5	0.2	0.2	0.3	0.9	1.3	1.5	1.5	1.8	2.0	1.6	1.0	1.0
Psychiatric meds/opioids	46.5	42.3	42.5	43.2	50.3	57.5	66.5	68.7	69.9	71.2	73.9	71.8	71.8	72.3	73.4	75.4	77.0
Hypnotic	20.0	18.1	13.1	13.0	13.2	17.7	18.0	15.5	12.3	12.3	11.9	11.2	10.3	10.7	9.9	9.1	8.8
Antidepressant	16.7	19.8	25.1	25.6	30.8	29.1	31.3	28.5	29.5	29.7	30.5	28.6	28.4	31.8	36.0	36.6	35.7
Antiepileptic	16.2	14.7	10.8	11.1	10.5	12.5	12.3	12.3	13.1	15.0	16.4	16.2	16.7	16.6	19.0	20.6	25.7
Antidementia	N/A	N/A	N/A	N/A	N/A	12.1	27.3	40.2	44.5	42.8	47.0	47.3	50.7	48.4	47.7	48.7	48.8
Opioid	21.3	14.6	12.9	14.1	18.1	18.0	17.7	16.9	16.1	18.5	17.7	18.3	19.0	22.7	25.4	25.1	25.7
Health Events, %																	
Cardiovascular	28.4	28.7	23.6	24.9	26.1	28.3	27.5	25.4	24.6	26.7	30.2	34.5	35.23	37.7	35.8	36.1	33.5
Cerebrovascular	0.0	0.0	0.2	0.7	1.3	2.3	4.1	5.1	4.9	4.2	3.3	2.6	1.27	0.7	1.5	1.2	1.1
Falls and/or fractures	20.2	18.9	18.7	15.7	14.8	11.8	10.2	8.8	9.0	9.3	8.0	7.3	7.20	7.7	6.5	5.2	6.7
Two-year mortality	13.7	8.5	8.6	8.0	6.9	6.7	7.5	7.3	8.3	7.6	8.7	6.8	6.13	7.9	9.1	10.0	8.6
Health-related Quality of Life																	
SF-12 PCS, mean	N/A	N/A	N/A	N/A	30.9	31.5	31.9	32.6	33.0	33.0	33.1	32.7	32.5	31.6	30.9	30.5	32.0
SF-12 MCS, mean	N/A	N/A	N/A	N/A	42.4	43.4	43.5	43.8	43.0	42.9	42.6	43.1	43.6	44.3	44.5	44.5	44.2

Abbreviations: meds., medications; MCS, mental component summary; MEPS, Medical Expenditure Panel Survey; N/A, not available; PCS, physical component summary; SF-12, 12-Item Short-Form Health Survey.

eTable 8. Three-Year Moving Averages from NAMCS/NHAMCS

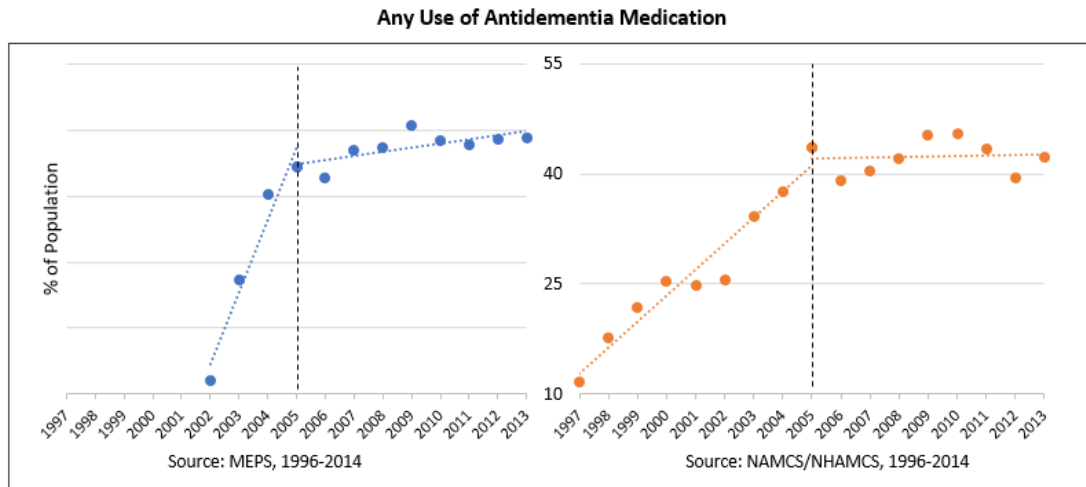
Midpoint Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Medication Use, %																	
Antipsychotic	17.3	14.6	11.3	10.9	13.2	14.5	15.7	14.4	16.6	16.1	13.5	14.0	10.4	12.3	9.4	10.0	11.4
Atypical antipsychotic	4.7	6.2	4.4	6.4	9.9	11.5	14.5	14.0	16.4	15.8	13.0	13.2	9.5	11.5	9.0	9.9	10.8
Typical antipsychotic	12.6	8.4	6.9	4.5	3.3	3.1	1.3	0.6	0.4	0.5	0.7	0.9	0.9	0.9	0.5	0.3	0.6
Psychiatric meds/opioids	42.9	47.7	45.7	46.8	48.5	50.6	57.4	56.1	60.0	57.0	61.7	63.6	66.1	67.3	63.9	58.6	59.0
Hypnotic	15.0	12.9	11.7	12.1	15.5	14.1	13.9	13.0	13.7	13.2	13.5	15.0	17.8	17.2	17.5	14.4	12.7
Antidepressant	18.3	23.9	20.4	18.3	16.5	20.0	25.8	24.2	25.0	22.0	25.9	24.8	25.0	24.6	26.0	26.7	28.8
Antiepileptic	7.9	8.7	6.9	9.2	8.4	7.7	8.6	7.3	9.0	8.5	11.5	14.0	15.5	16.6	15.1	12.1	12.9
Antidementia	11.6	17.8	21.8	25.4	24.8	25.7	34.1	37.7	43.7	39.1	40.5	42.2	45.3	45.5	43.5	39.6	42.3
Opioid	3.8	3.8	1.7	2.9	3.7	4.6	5.2	4.8	6.1	6.1	7.0	5.4	5.1	5.2	8.6	10.9	11.2
Health Events, %																	
Cardiovascular	3.2	1.6	2.0	2.3	3.2	3.6	2.1	1.5	3.5	3.8	3.8	2.2	3.6	5.7	6.0	9.8	10.0
Cerebrovascular	0.9	2.7	2.7	2.6	1.1	0.8	0.7	0.6	1.7	2.1	2.8	1.6	1.6	0.9	1.7	3.6	3.6
Falls and/or fractures	3.0	1.6	1.1	1.1	1.0	1.1	0.9	0.8	0.7	0.4	0.4	0.4	0.9	1.3	2.5	2.2	2.5

Abbreviations: meds., medications; NAMCS, National Ambulatory Medical Care Survey; NHAMCS, National Hospital Ambulatory Medical Care Survey.

eAppendix. Interrupted Time-Series Analyses

The interrupted time-series analyses were performed by fitting a series of multiple regression equations of the form $\bar{Y}_t = \beta_0 + \beta_1 T_t + \beta_2 X_t + \beta_3 T_t X_t + \varepsilon_t$, where \bar{Y}_t is the 3-year moving average, centered on t , of the weighted annual summary values of outcome Y ; T is the number of years since the start of the series (ie, since 1997); X indicates that an observation occurred before ($X = 0$) or after ($X = 1$) the FDA warning in 2005; t represents indexes years (from 1997 to 2013); and ε_t is an autocorrelated idiosyncratic error term. The impact of the 2005 warning can be derived from β_1 , which is the prewarning annual rate of change (ie, slope) in \bar{Y} ; β_2 , which is the immediate change (ie, level change) in \bar{Y} due to the intervention; and $\beta_1 + \beta_3$, which is the postwarning annual rate of change (slope) in \bar{Y} (β_3 is, therefore, the difference between the rates of change). Newey-West standard errors (and, therefore, confidence intervals) of the coefficients were estimated to account for autocorrelation; the standard errors for $\beta_1 + \beta_3$ were estimated using the delta method.

eFigure. Proportion of Elderly Individuals with Dementia Who Have Used Antidementia Medications (MEPS) and Proportion of Visits for AD Recording Use of Antidementia Medications (NAMCS/NHAMCS)



Abbreviations: MEPS, Medical Expenditure Panel Survey; NAMCS, National Ambulatory Medical Care Survey; NHAMCS, National Hospital Ambulatory Medical Care Survey.

Values represent 3-year moving averages.

NOTE: MEPS obtains data on health conditions at multiple points during a 30-month period while NAMCS/NHAMCS obtains data from medical records corresponding to a sampled visit.