**Table S1.** Unit costs and sources of resource utilization data

|  |  |  |  |
| --- | --- | --- | --- |
| Resource use | Unit of measurement | Unit cost  (€; 2013 values) | Source |
| **Healthcare resource use** | | |
| *Nights in hospital* |  |  |  |
| Geriatric ward | Night | 292.15 | **Coduras, A. et al.** (2010). Prospective one-year cost-of-illness study in a cohort of patients with dementia of Alzheimer's disease type in Spain: the ECO study. *Journal of Alzheimer’s Disease* 19(2)**,** 601–615. doi: [10.3233/JAD-2010-1258](http://dx.doi.org/10.3233/JAD-2010-1258). |
| Psychiatric ward | Night | 292.15 | As above |
| Internal medicine ward | Night | 292.15 | As above |
| Surgical ward | Night | 292.15 | As above |
| Other | Night | 292.15 | Assumed to be the average of the wards above |
| *Emergency room visits* | Visit | 95.45 | Oblikue Database 2013.  <http://oblikue.com/bddcostes/>  Accessed 18th April 2014 |
| *Outpatient visits* | | |
| General practitioner | Visit | 12.31 | **Coduras, A. et al.** (2010). Prospective one-year cost-of-illness study in a cohort of patients with dementia of Alzheimer's disease type in Spain: the ECO study. *Journal of Alzheimer’s Disease* 19(2), 601–615. doi: [10.3233/JAD-2010-1258](http://dx.doi.org/10.3233/JAD-2010-1258). |
| Geriatrician | Visit | 125.92 | As above |
| Neurologist | Visit | 97.70 | As above |
| Psychiatrist | Visit | 56.38 | As above |
| Physiotherapist | Visit | 21.18 | Diario Oficial de Galicia, number 199 of 9 October 2009, pg 16005.  <http://www.xunta.es/dog/Publicados/2009/20091009/Anuncio30972_es.html>  Accessed 18th April 2014  Isolated treatment sessions (rehabilitation and physiotherapy) |
| Occupational therapist | Visit | 24.61 | As above  For each session of treatment |
| Social worker | Visit | 24.61 | Assumed to be the same as an occupational therapist |
| Psychologist | Visit | 34.68 | Diario Oficial de Galicia, number 199 of 9 October 2009, pg 16000.  <http://www.xunta.es/dog/Publicados/2009/20091009/Anuncio30972_es.html>  Accessed 18th April 2014  Cost of subsequent consultations after first consultation |
| Other healthcare professional | Visit | 49.67 | Assumed to be the average of above costs |
| *Community care services* | | | |
| District nurse | Visit/hour | 26.33 | Rates for billing services and healthcare professionals, Osakidetza 2012. Private in Spain in 2011.  <http://www.osakidetza.euskadi.net/r85-ekgnrl00/eu/contenidos/informacion/libro_tarifas/eu_libro/adjuntos/tarifas2012.pdf>  Accessed 18th April 2014  Page 68: Scheduled consultation |
| Home support worker | Visit/hour | 15.81 | Servicio de Ayuda a Domicilio (SAD). Mostoles.  <http://www.mostoles.es/PortalMayores/es/atencion-mayores/servicio-ayuda-domicilio-sad>  Accessed 24th April 2014  Price for public service delivery, home help |
| Home-delivered meals | Visit/hour | 4.82 | Servicio de Ayuda a Domicilio (SAD). Mostoles.  <http://www.mostoles.es/PortalMayores/es/atencion-mayores/servicio-comida-domicilio>  Accessed 24th April 2014  Price for public service delivery, food delivery (from September 2013) |
| Transportation | Visit/hour | 14.55 | Diario Oficial de Galicia, number 199 of 9 October 2009, pg 16007.  <http://www.xunta.es/dog/Publicados/2009/20091009/Anuncio30972_es.html>  Accessed 18th April 2014  For populations of up to 200,000 inhabitants, scheduled transportation |
| Day care | Visit/day | 80.85 | As above  Page 15999 |
| Other services | Visit | 28.47 | Estimated as average cost of other community care services |
| *AD medications (defined daily dose)* | | | |
| Donepezil (7.5 mg) | Day | 1.75 | Bot Plus - Base de Datos del Medicamento del Consejo General de Colegios Farmacéuticos.  <https://botplusweb.portalfarma.com>  Accessed 21st May 2014 |
| Galantamine (16 mg) | Day | 1.66 | As above |
| Memantine (20 mg) | Day | 2.59 | As above |
| Rivastigmine (9 mg) | Day | 2.29 | As above |
| Other AD medication | Day | 2.07 | Assumed as average of AD medications above |
| *Psychiatric/hypnotic medications* | | | |
| Antidepressants | Day | 0.24 | Bot Plus - Base de Datos del Medicamento del Consejo General de Colegios Farmacéuticos.  <https://botplusweb.portalfarma.com>  Accessed 30th May 2014  The most common drugs for the disease were selected based on IMS MIDAS quarterly sales data 2013 |
| Antipsychotics | Day | 1.59 | As above |
| Anxiolytics | Day | 0.11 | As above |
| Benzodiazepines | Day | 0.08 | As above |
| Hypnotics and sedatives | Day | 0.19 | As above |
| Mood stabilizers | Day | 1.59 | As above |
| *Medications for other disorders* | | | |
| Hypertension | Day | 0.38 | Bot Plus - Base de Datos del Medicamento del Consejo General de Colegios Farmacéuticos.  <https://botplusweb.portalfarma.com>  Accessed 30th May 2014  The most common drugs for the disease were selected based on IMS MIDAS quarterly sales data 2013 |
| Hypercholesterolemia | Day | 0.42 | As above |
| Depression | Day | 0.24 | As above |
| Diabetes mellitus | Day | 1.45 | As above |
| Urinary tract disorder | Day | 1.26 | As above |
| Ischemic heart disease | Day | 0.15 | As above |
| Obstructive pulmonary disease | Day | 0.30 | **Masa, J.F. et al.** (2004). [Costs of chronic obstructive pulmonary disease in Spain. Estimation from a  population-based study]. *Archivos de Bronconeumología* 40(2), 72–79. doi: 10.1016/S1579-2129(06)60198-5.  Cost per patient per year: Usual drug therapy: €46.89, Drug therapy for exacerbations: €25.61 (1997 cost)  Thus, annual cost of ‘usual drug therapy + drug therapy for exacerbations = €72.50, giving a cost per day of €0.199  (€72.50/365 days) in 1997. The increase in the consumer price to 2013 was 1.52, giving a daily cost in 2013 of €0.30  (0.199 x 1.52) |
| Epilepsy | Day | 0.87 | Bot Plus - Base de Datos del Medicamento del Consejo General de Colegios Farmacéuticos.  <https://botplusweb.portalfarma.com>  Accessed 30th May 2014  The most common drugs for the disease were selected based on IMS MIDAS quarterly sales data 2013 |
| Stroke | Day | 0.27 | As above |
| *Neuropsychological assessment* | Assessment | 54.36 | **Coduras, A.** et al. (2010). Prospective one-year cost-of-illness study in a cohort of patients with dementia of Alzheimer's disease type in Spain: the ECO study. *Journal of Alzheimer’s Disease* 19(2), 601–615. doi: [10.3233/JAD-2010-1258](http://dx.doi.org/10.3233/JAD-2010-1258). |
| **Caregiver informal care** | | | |
| Caregiver time: lost production | Hour | 15.43 | Instituto Nacional de Estadística  <http://www.ine.es/>  Accessed 18th April 2014  Average gross wage for Spain  Average annual wage, full-time, hourly rate in 2011 |
| Caregiver time: lost leisure | Hour | 5.40 | As above  Taken as 35% of average gross wage |
| Caregiver missing work | Hour | 15.43 | As above  Taken as average gross wage |
| Untrained nurse | Hour | 9.64 | Sindicato de Trabajadores y Trabajadores de Administración y Servicios de Castilla la Mancha  <http://www.stes.es/adpu/stas_laborales09.pdf>  Accessed 24th April 2014  Nursing assistant base salary, assuming 36 hours/week |

AD, Alzheimer’s disease

**Supplementary Table 2.** Caregiver characteristics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Characteristic | AD dementia severity | | | | Overall population |
| Mild | Moderate | MS/S | *p*-valuea |
| No. of caregivers | 116 | 118 | 146 |  | 380 |
| Age, years (mean [SD]) | 63.4 (13.2) | 60.8 (12.2) | 62.5 (13.6) | 0.328 | 62.2 (13.1) |
| Gender, n (%) female | 74 (63.8) | 71 (61.2) | 94 (64.8) | 0.829 | 239 (63.4) |
| Marital status, n (%) married/cohabiting | 101 (87.1) | 91 (78.4) | 116 (80.0) | 0.589b | 308 (81.7) |
| No. of children (mean [SD]) | 0.7 (1.2) | 0.6 (0.9) | 0.7 (1.0) | 0.761 | 0.7 (1.0) |
| Caregiver relationship to patient, n (%) |  |  |  | 0.144 |  |
| Spouse | 69 (59.5) | 57 (49.1) | 75 (51.7) |  | 201 (53.3) |
| Child | 33 (28.4) | 49 (42.2) | 58 (40.0) |  | 140 (37.1) |
| Otherc | 14 (12.1) | 10 (8.6) | 12 (8.3) |  | 36 (9.5) |
| Caregiver lives with patient, n (%) yes | 87 (75.0) | 88 (75.9) | 113 (77.9) | 0.847 | 288 (76.4) |
| No. of additional caregivers involved (% of caregivers) |  |  |  | 0.021 |  |
| 0 | 60 (51.7) | 47 (40.5) | 53 (36.6) |  | 160 (42.4) |
| 1 | 30 (25.9) | 40 (34.5) | 43 (29.7) |  | 113 (30.0) |
| 2 | 10 (8.6) | 15 (12.9) | 30 (20.7) |  | 55 (14.6) |
| 3 | 9 (7.8) | 10 (8.6) | 12 (8.3) |  | 31 (8.2) |
| 4 or more | 7 (6.0) | 4 (3.4) | 7 (4.8) |  | 18 (4.8) |
| Caregiver medical conditions, n (%) |  |  |  |  |  |
| Hypertension | 44 (37.9) | 33 (28.0) | 47 (32.2) | 0.265 | 124 (32.6) |
| Hypercholesterolemia | 23 (19.8) | 32 (27.1) | 40 (27.4) | 0.304 | 95 (25.0) |
| Depression | 18 (15.5) | 24 (20.3) | 30 (20.5) | 0.528 | 72 (18.9) |
| Diabetes mellitus | 14 (12.1) | 10 (8.5) | 23 (15.8) | 0.202 | 47 (12.4) |
| Urinary tract disorder | 12 (10.3) | 9 (7.6) | 12 (8.2) | 0.738 | 33 (8.7) |
| Ischemic heart disease | 5 (4.3) | 7 (5.9) | 11 (7.5) | 0.554 | 23 (6.1) |
| Cancer | 7 (6.0) | 5 (4.2) | 10 (6.8) | 0.660 | 22 (5.8) |
| Obstructive pulmonary disease | 4 (3.4) | 8 (6.8) | 6 (4.1) | 0.440 | 18 (4.7) |
| Epilepsy | 3 (2.6) | 4 (3.4) | 4 (2.7) | 0.926 | 11 (2.9) |
| Stroke | 1 (0.9) | 4 (3.4) | 4 (2.7) | 0.416 | 9 (2.4) |

AD, Alzheimer’s disease; ANOVA, analysis of variance; MMSE, Mini-Mental State Examination; MS/S, moderately severe/severe; SD, standard deviation.

a*p-*value for comparison between AD dementia severity groups (ANOVA for continuous variables and Cochran–Mantel–Haenszel test for categorical variables).

b*p*-value for comparison between AD dementia severity groups for marital status (all categories, including married/cohabiting, never married, divorced/separated and widowed).

cPercentages for this category were calculated by adding numbers in the 'Friend' and 'Other' categories and dividing by the number of respondents in that group.

Percentages calculated based on total number in severity group with available data.

‘Mild’ AD dementia = MMSE score of 21–26 points; ‘Moderate’ AD dementia = MMSE score of 15–20 points; ‘MS/S’ AD dementia = MMSE score of <15 points.