

## **Additional supplementary data: Appendix 1: Inclusion criteria and search strategy**

### ***Criteria for inclusion: Types of studies\****

**Participants:** People with acquired cognitive impairment of any age including people with dementia, as well as people who are chronically cognitively impaired but do not fulfil the accepted criteria for the classification of dementia; for example, those living in nursing and residential care where research has confirmed a high level of undiagnosed dementia. *Setting: Any care environment was included in the review (for example, home, hospital, other institution).*

**Interventions:** Advance directive(s); living will; advance care planning; power of attorney; intervention; completion; advance statement; advance refusal of treatment; preferred place of care; values history.

**Comparator:** Usual care

**Outcome measures:** Type of outcome measure was not used as an inclusion or exclusion criteria. Possible outcomes included (but were not restricted to) measures of: rate of ACP completion, level of comprehension of ACP terms, patient and carer satisfaction with ACP and healthcare outcomes, such as number of hospital admissions.

**Study designs:** i) Efficacy review: randomised controlled trials (RCTs), non-RCTs, controlled before-and-after studies (CBAs) and interrupted time series analyses (ITS) with at least three data points before and after the intervention ii) Barriers and facilitators: Qualitative studies search also. \* *Only studies published in the English language up to January 2010 were considered*

**Search strategy:** Electronic searches: Cochrane Database of Systematic Reviews (Cochrane Library January 2010); Database of Abstracts of Reviews of Effectiveness (Cochrane Library January 2010); Cochrane Central Register of Controlled Trials (Cochrane Library January 2010); NHS Economic Evaluations Database ((Cochrane Library January 2010); MEDLINE (Ovid) 1950- Jan wk 2 2010; EMBASE (Ovid) 1950-2010 wk 03; CINAHL (EBSCO) 1981- Jan 2010; PsycINFO (Ovid) 1806- Jan wk 3 2010; Ageline (Ovid) 1978- Jan 2010; Social Science Citation Index (Web of Knowledge) 1970-Jan 2010;

Science Citation Index (Web of Knowledge) 1970-Jan 2010; ERIC (CSA) 1966- Jan 2010;

ASSIA (CSA) 1987- Jan 2010; Social Services Abstracts (CSA) 1970- Jan 2010; Sociological Abstracts (CSA) 1952- Jan 2010; ISI conference proceedings (Web of Knowledge) 1970- Jan 2010;

Index to Theses <http://www.theses.com/> searched 27/1/2010; EThOS <http://ethos.bl.uk/> searched 27/1/2010; Bandolier <http://www.medicine.ox.ac.uk/bandolier/> searched 27/1/2010; NIHR CRN Portfolio <http://public.ukcrn.org.uk/search/> searched 27/1/2010; Current Controlled Trials <http://www.controlled-trials.com/> searched 27/1/2010.

Search terms: Three concepts were defined for the purposes of identifying key terms:

A: Advance care planning

B: Dementia

C: Setting: care homes or nursing homes

The search was run in the form A AND (B OR C) to retrieve relevant literature; there was no restriction of the search by study design.

## Appendix 2: Sample characteristics and assessment of capacity

Study	Sample Characteristics				Mental Capacity		
	Participants n	Age Mean years (range)	Sex % Female	Level of cognition Mean MMSE score	Formal assessment of capacity	Assessment of capacity process	Participants with capacity n/N (%)
Caplan 2006	Intervention (I): 1,344 Control (C): 523	I: NR (NR) C: NR (NR)	I: NR C: NR	I: NR C: NR	Yes	-Professional assessment (Nurse) & MMSE score ≥16 -Decisional Aid for Scoring Competency to Complete an Advance Directive (Darzins et al, 2000)	I: 5/63 (11) C: NR
Hanson 2005	I: 345 C: 113	I: 82 (22-102) C: 78 (30-98)	I: 81 C: 71	I: NR C: NR	No	NR	I: NR (NR) C: NR (NR)
Molloy 2000	I: 527 C: 606	I: 81.9 (78-85) C: 84.2 (82-86)	I: 68 C: 78	I: 23.12 C: 24.52	Yes	-Professional opinion & SMMSE -Validated instrument specific to Let Me Decide (Molloy et al, 1996)	I: 228 (36) C: 267 (41)
Morrison 2005	I: 43 C: 96	I: 87 (75-100) C: 86 (65-102)	I: 84 C: 84	I: NR C: NR	Yes	-Professional assessment (Social worker)	-To make all healthcare decisions I: 0 (0) C: 9 (9) -To appoint a healthcare proxy I: 5 (12) C: 36 (38)

NR = not reported, MMSE = Mini Mental State Examination, SMMSE = Standardised Mini Mental State Examination, MDSCS = Minimum Data Set Cognition Score .

\*MMSE reported as a ratio of numerator to denominator; conversion calculated by review authors

**Appendix 3. Quality criteria results for included studies.**

Author, year	Sequence generation	Allocation Concealment	Baseline outcomes		Baseline characteristics	Complete outcome data		Blinding		Protected against contamination	Full outcome reporting	No other sources of bias
			ACP outcomes	Healthcare outcomes		ACP outcomes	Healthcare outcomes	ACP outcomes	Healthcare outcomes			
Caplan, 2006	No	No	N/A	Yes	Unclear	N/A	Yes	N/A	Yes	Yes	No	No
Hanson, 2005	Unclear	Yes	Unclear	Yes	No	Unclear	Unclear	Unclear	Unclear	Yes	No	No
Molloy, 2000	Unclear	Yes	Yes	Yes	No	Unclear	Yes	No	Yes	Yes	Unclear	Yes
Morrison, 2005	Unclear	Yes	Yes	Unclear	No	Unclear	Yes	No	No	Unclear	Yes	No

N/A= Not Applicable