Appendix E:Cohort studies - methodological quality- Pharmacolgoical Risk factors

Study	*Delirium assessment*	*Representativeness*	*Cohort comparability*	*pts per covariate*	*source of population*	*Initial exposure*	*Loss to follow up*	*Overall Comments*
Agostini 2001; Prospective study	Partly inadequate	somewhat representative of the community	Comparable at baseline apart from study risk factor	122/4 (=30)	Exposed/non-exposed from same cohort	No patients haddelirium at start of study	Not stated	Cohort comparable on age, gender, ethnicity, being admitted from either home or nursing home, APACHE II and MMSE score; mean number of medications Key RF: 1/3 (age); patients with profound dementia excluded
Evidence quality: low								
Centorrino 2003; Retrospective study	inadequate (e.g.retrospective chart review)	selected group eg specific operations	Confounding possible : not enough factors included	/ (=)	Unclear	Unclear	Not stated	In patients with more than one admission within the study period, one entry was randomly selected for analysis without knowledge fo delirium; univariate analysis only
Evidence quality: biased								
Dubois 2001; Prospective study	partly adequate (e.g.MMSE)	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	38/7 (=5)	Exposed/non-exposed from same cohort	No patients haddelirium at start of study	Acceptable: ≤20% loss to follow up; 9 patients with delirium were excluded form MV analysis	Key RF: none
Evidence quality: biased								

Study	*Delirium assessment*	*Representa tiveness*	*Cohort comparability*	*pts per covariate*	*source of population*	*Initial exposure*	*Loss to follow up*	*Overall Comments*
Foy 1995; Prospective study	adequate (e.g. CAM/DSM IV validated)	no description of the derivation of the cohort or unclear	Acceptable: confounders taken into account in analysis (multivariate)	21/12 (=2)	Unclear	No patients haddelirium at start of study	Not stated; Not reported	Key RF:1/3 (age); Designed to recruit 400 patients and would give a power of 98% to detect a relative risk of 4 for the development of cognitive impairment
Evidence quality: low								
Holroyd 1994; Retrospective study	not stated/ Unclear	selected group eg specific operations	Confounding possible : not enough factors included	/ (=)	Unclear	Unclear	Not stated	univariate analysis only.
Evidence quality: biased								
Leung 2006; Prospective study	adequate (e.g. CAM/DSM IV validated)	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	90/5 (=18)	Exposed/non-exposed from same cohort	Unclear	Not stated	one key risk factor taken into account: age
Evidence quality: moderate								

Appendix E:Cohort studies - methodological quality- Pharmacolgoical Risk factors

Study	*Delirium assessment*	*Representa tiveness*	*Cohort comparability*	*pts per covariate*	*source of population*	*Initial exposure*	*Loss to follow up*	*Overall Comments*
Morrison 2003; Prospective study	partly adequate (e.g.MMSE)	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	87/16 (=5)	Exposed/non-exposed from same cohort	No patients haddelirium at start of study	Adequate: all patients followed up	Key RF: 2/3 (age, cognitive impairment)
Evidence quality: moderate								
Pandharipande 2006; Prospective study	adequate (e.g. CAM/DSM IV validated)	somewhat representative of the community	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	118/17 (=7)	Exposed/non-exposed from same cohort	Some patients had delirium at start of study	Not stated	Key RF: 3/3 (age, sensory impairment, dementia); ratio ranging from : 4 [66/17] to 7 [118/17]
Evidence quality: moderate								
Pisani 2007; Prospective study	adequate (e.g. CAM/DSM IV validated)	selected group eg specific operations	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	214/24 (=9)	Exposed/non-exposed from same cohort	Unclear	Acceptable: ≤20% loss to follow up; 5 patients who had persistent coma during their ICU stay excl from analysis; 26% missing databilirub	ratio of events/covariate is 9; 2/4 key RFs (dementia, polypharmacy)
Evidence quality: moderate								

Appendix E:Cohort studies - methodological quality- Pharmacolgoical Risk factors

Study	Delirium assessment	Representativeness	Cohort comparability	pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Pisani 2009; Prospective study	adequate (e.g. CAM/DSM IV validated)	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	304/10 (=30)	Exposed/non-exposed from same cohort	Unclear	Not stated	Key RF: 1/3 (dementia); dementia: IQCODE score >3.3

Evidence quality: low

| Shulman 2005; Retrospective study | not stated/ Unclear | somewhat representative of the community | Confounding possible : not enough factors included | 282/4 (=70) | Unclear | Unclear | Not stated; no details | 3 groups similar mean age, gender, hearing impairment, visual impairment retrospecitve and method of assessment unclear ; |

Evidence quality: biased