Risk factor: Incidence of Delirium

Consequence Dementia: Cognitive impairment[MMSE<24] - at discharge

Study Delirium Representa Cohort tiveness comparability of Ely 2004; adequate selected Fairly acceptable:

Prospective study

selected group eg specific operations

d Fairly acceptable:
g multivariate analysis
with nearly enough
ons patients (8-10 per
covariate)

63/12 sis h

covariate population exposure
63/12 (=5) Exposed/non- Unclear

Initial

exposed from same cohort

pts per source of

Loss to follow up

Inadequate: ≥34% loss to follow up; 128 tested for cognitive impairment of the 179 survivors at time of discharge; missing data for: 51/179 [28%]; in addition,

Overall Comments

Key RF: 2/3 (age, cognitive impairment [dementia]); Assuming the same 12 factors as in the mortality MV as not stated for what factors adjusted for; unclear how many patients with cognitive impairment/dementia at b/l; Cognitive impairment assessed with MMSE(<24= cognitive impairment)

Evidence quality: biased

Consequence Dementia: Cognitive dysfunction - 7 days postop

Study Delirium assessment

Rudolph 2008; Prospective study inadequate

somewhat representative of the community

Representa Cohort tiveness comparability

Confounding possible : not enough factors included

covariate population

e 265/4 Exposed/non
(=66) exposed

pts per source of

Exposed/nonexposed from same cohort Initial Loss to exposure follow up

Unclear

Acceptable: ≤20% loss to follow up; 143/1161 missing postop 7 day testing

Overall Comments

Key RF:2/3 (age; cognitive impairment-MMSE<23 excluded so constant); Patients were assessed with MMSE & medical records until postop day 3, supplemented by medical record & nurse charts; From day 4 until discharge, evaulation based on medical record or nurse chart; interviewer recorded presence or absence of delirium according to DSMIII

Evidence quality: biased

Risk factor: Incidence of Delirium

Consequence Dementia: Cognitive dysfunction - 3 months postop

Study Delirium assessment

inadequate somewhat representative of the

Representa Cohort comparability tiveness

community

included

Confounding possible 94/4 (=24) Exposed/non-: not enough factors

exposed from same cohort

pts per source of

covariate population

Initial Loss to exposure follow up Unclear

Acceptable: ≤20% loss to follow up: 112/1161 missed 3 month test in addition to 40 who missed 7 day test:

Overall Comments

Delirium was not systematically reassessed at 3 months. Key RF: 2/3 (age, cognitive impairment:constant)

Evidence quality: biased

Rudolph 2008:

Prospective

study

Consequence Dementia at 3 years

Study Delirium assessment

Evidence quality: moderate

Rockwood 1999; Prospective study

tiveness adequate

somewhat representative of the community

Representa Cohort comparability

> Confounding possible: not enough patients for multivariate analysis

pts per source of covariate population

32/4 (=8)

Exposed/nonexposed from same cohort

Initial Loss to follow up exposure

Some

Acceptable: ≤20% patients had loss to follow up: Information on outcome at start of study 25/164 missing; Of the 164,70 diedinformation on them obtained through

IQCODE

Overall Comments

Key RF: 2/3 (age, dementia). Dementia excluded from analysis: Cognition evaluated with MMSE, Blessed dementia and functional. Patients screening positive for cognitive impairment were examined by geriatrician to determine presence and type of dementia. The IQCODE was used to evaluate dementia status of patients who died or unaviable for clinical examination

Risk factor: Incidence of Delirium

Consequence New admission to institution - discharge

Study	Delirium assessment	Representa tiveness			source of population	Initial exposure	Loss to follow up	Overall Comments
Balas 2009; Prospective study		somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	35/13 (=3)	Exposed/non- exposed from same cohort	Some patients had outcome at start of study	Acceptable: ≤20% loss to follow up;	Key RF: 2/3 (age, ADL)
Evidence	quality: low							
Bourdel- Marchasson 2004; Prospective study		somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	117/12 (=10)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Patients deceased before discharge excluded from analysis= 55/847 [6.5%]	prevalent delirium patients ; Key RF: [2/3 (ADL,cognitive impairment)]
Bourdel- Marchasson 2004; Prospective study		somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	117/12 (=10)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Patients deceased before discharge excluded from analysis= 55/847 [6.5%]	Key RFs [2/3 (ADL,cognitive impairment)]

Risk factor: Incidence of Delirium

Evidence quality: low

Consequence New admission to institution - discharge

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Inouye 1998 Prospective study	; adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	60/7 (=9)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 35/227 patients died in hospital;	Key RF: 2/3 (ADL, cognitive impairment[dementia]); Patients living in nursing home at baseline [4%] not included in the analysis
Evidence	quality: moderat	е						
Levkoff 1992 Prospective study	2; adequate	truly representative of the community eg, random	Confounding possible: not enough patients for multivariate analysis	30/5 (=6)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Unclear or not stated;	Key RF:1/3 (cognitive impairment); incident delirium only

Risk factor: Incidence of Delirium

adequate

Consequence New admission to institution - 3 months

Study Delirium assessment

Inouve 1998:

Prospective

study

somewhat representative of the

community

Representa Cohort tiveness comparability Acceptable:

confounders taken

into account in

77/7 (=11) Exposed/nonexposed from same analysis (multivariate) cohort

pts per source of

covariate population

Initial exposure No patients had

outcome at

No patients

outcome at

start of study

had

Acceptable: ≤20% loss to follow up: 127/727 (17%) start of study missing data at 3mo

Loss to

follow up

Overall Comments

Key RF: 2/3 (ADL. cognitive impairment):

Evidence quality: moderate

Consequence New admission to institution - 6 months

Study Delirium assessment

O'Keeffe 1997: adequate Prospective study

Representa Cohort tiveness

somewhat representative of the community

comparability

Confounding possible: not enough patients for multivariate analysis

pts per source of covariate population

35/7 (=5)

Exposed/nonexposed from same cohort

Initial Loss to follow up exposure

> Acceptable: ≤20% loss to follow up: Results reported for only 165/170 patients for this outcome

Overall Comments

Key RF 2/3 (ADL, cognitive impairment); Delirium assessed with DSM III, based solely on mental status history & exam; Criterion 5 not required ('evidence, from the history, physical examination, or laboratory tests of a specific organic factor judged to be etiologically related to the disturbance'); Report of pirmary caregiver or other informant used to identify symptoms that were new/ had worsened within week before

Risk factor: Incidence of Delirium

Consequence New admisson to institution - 2 years

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Pitkala 2005; Prospective study	; adequate	truly representative of the community eg, random	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	, ,	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Missing data on 1/200 patient living in own home at baseline	Key RF: 2/3 (ADL, cognitive impairment [dementia]); Analysis restricted to those not in institution at baseline

Risk factor: Incidence of Delirium

Consequence Mortality - in hospital

of the

community

patients for

multivariate analysis

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Inouye 1998 Prospective study	; adequate	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis		Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 3/3 (age, dementia, severity of illness)
Evidence	quality: moderat	e						
O'Keeffe 199 Prospective	97; adequate	somewhat representative	Confounding possible: not enough	22/7 (=3)	Exposed/non- exposed	No patients had	Adequate: all patients followed up;	Key RF: 3/3 (age, severity of illness, cognitive impairment [dementia]);

from same

cohort

outcome at

start of study

Evidence quality: low

study

Risk factor: Incidence of Delirium

Consequence Mortality - in ICU

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Lin 2004; Prospective study	adequate	selected group eg specific operations	Confounding possible : not enough factors included	40/7 (=6)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 7/109 patients who remained comatose were excluded from analysis	key RF: 1/3 (severity of illness). Patients with a history of chronic dementia excluded

Risk factor: Incidence of Delirium

Evidence quality: low

Consequence Mortality- in ICU & hospital

Study	Delirium	Representa	Cohort	pts per	source of	Initial	Loss to	Overall Comments
	assessment	tiveness	comparability of	covariate	population	exposure	follow up	
Lin 2008; Prospective study	adequate	somewhat representative of the community	Confounding possible : not enough factors included	59/10 (=6)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up;	key RF: 1/3 (age)
Evidence	quality: low							
Thomason 2 Prospective study	005; adequate	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	32/7 (=5)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 1/260 patient with persistent coma unable to assess for delirium	Key RF: 2/3 included (Age, severity of illness)

cohort

from same

outcome at

start of study

Incidence of Delirium Risk factor:

Consequence Mortality - 1 month

specific

operations

Study	Delirium assessment	Representa tiveness	Cohort comparability	I I	source of population	Initial exposure	Loss to follow up	Overall Comments
Marcantonio 2000;	adequate	selected group eg	Biased	3/5 (=1)	Exposed/non- exposed	No patients had	Adequate: all patients followed up;	Key RFs: 2/3 (age, cognitive impairment); Patients comprised of intervention and

Evidence quality: biased

Prospective

study

Consequence Mortality - 6 weeks

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Drame 2008 Prospective study	; adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	135/12 (=11)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 58/1306 excluded because of missing data	Key RF: 2/3 (age, cognitive impairment [dementia]);

Evidence quality: moderate

control groups in RCT; intervention group

received proactive acute geriatrics consultation: Intervention status not taken

into account in MV

Risk factor: Incidence of Delirium

Consequence Mortality - 3 months

Study **Delirium** assessment

Inouye 1998;

Prospective

study

somewhat adequate representative of the community

comparability tiveness Acceptable: confounders taken

into account in

Representa Cohort

98/7 (=14) Exposed/nonexposed from same analysis (multivariate) cohort

pts per source of

covariate population

Initial exposure

No patients had outcome at start of study Loss to follow up

Acceptable: ≤20% loss to follow up: 47/727 (6.5%)lost to follow-up at 3mocould not be located. Missing group did not differ sig

Overall Comments

Key RF: 3/3 (age, cognitive impairment [dementia], severity of illness)

Risk factor: Incidence of Delirium

Consequence Mortality - 6 months

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Ely 2004; Prospective study	adequate	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis	69/12 (=6)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 51/275 patients excluded because persistent coma and	Key RF: 3/3 (age, severity of illness,cognitive impairment[dementia]);
Evidence	quality: moderat	e					could not determine delirium	
Francis 1990 Prospective study); adequate	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	24/6 (=4)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; missing data on 13/229 patients	Key RF: 2/3 (cognitive impairment, severity of illness)
Evidence	quality: low							
Holmes 2000 Prospective study	D; adequate	somewhat representative of the community	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	195/22 (=9)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 3/3 (Age, cognitive impairment [dementia], physical illness)
Evidence	quality: moderat	e						

Risk factor: Incidence of Delirium

Consequence Mortality - 6 months

Study	Delirium assessment	Representa tiveness			source of population	Initial exposure	Loss to follow up	Overall Comments
evkoff 1992; Prospective study	adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	59/5 (=12)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Unclear or not stated;	Key RF: 3/3 (age, cognitive impairment, severity of illness);
Evidence	quality: moderate	е						
Marcantonio 2000; Prospective study	adequate	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis	15/5 (=3)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	2/3 (age, cognitive impairment); Patier comprised of intervention and control gr in RCT; intervention group recd proactiv acute geriatrics consultation;Intervention status not taken into account in MV;
Evidence	quality: low							
O'Keeffe 199 Prospective study	7; adequate	somewhat representative of the community	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	49/7 (=7)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Unclear or not stated;	Mortality-6mo; 3/3 (age, severity of illne cognitive impairment [dementia])

Risk factor: Incidence of Delirium

Consequence Mortality - 1 year

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Leslie 2005; Prospective study	adequate	truly representative of the community eg, random	Acceptable: confounders taken into account in analysis (multivariate	208/6 (=35)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 14/919 people who died during the index hospitalisation were not included in the	Key RF: 1/3 (age); Cohort was part of an prevention intervention programme; (Inouye1999); intervention status was included in the initial model;
Evidence	quality: low						models.	
Pitkala 2005 Prospective study	; adequate	truly representative of the community eg, random	Acceptable: confounders taken into account in analysis (multivariate	106/7 (=15)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 2/3 (age, cognitive impairment [dementia])

Risk factor: Incidence of Delirium

Consequence Mortality - 2 years

Study	Delirium assessment	Representa tiveness			source of population	Initial exposure	Loss to follow up	Overall Comments
Dolan 2000; Prospective study	inadequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	369/6 (=62)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Missing data for 7/682 patients.	Key RFs: 2/3 (age, cognitive impairment[constant]) Patients with cognitive impairment were not included- treating it as a constant.
Evidence	quality: biased							
Francis 1992 Prospective study	e; adequate	somewhat representative of the community	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	55/4 (=14)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Of 229 patients, followup information avail for 205 cases. % rates for mortality	Key RF: 1/3 [cognitive impairment];
Evidence	quality: low						given for 182 patients in total, still just about 20% loss	
Nightingale 2001; Prospective study	adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate)	347/10 (=35)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 3/3 (Age, dementia, physical illness)
Evidence	quality: high							

Risk factor: Incidence of Delirium

Consequence Mortality - 2 years

Representa Cohort Study **Overall Comments Delirium** pts per source of Initial Loss to comparability covariate population follow up assessment tiveness exposure Pitkala 2005: Acceptable: 198/7 Exposed/non-No patients Unclear or not Key RF: 2/3 (age, cognitive adequate truly Prospective representative confounders taken (=28)exposed had stated: impairment[dementia]) study of the from same into account in outcome at community analysis (multivariate) cohort start of study eg, random

Evidence quality: moderate

Consequence Mortality - 3 years

Study	Delirium assessment	Representa tiveness		I I .	source of population	Initial exposure	Loss to follow up	Overall Comments
Rockwood 1999; Prospective study	adequate	somewhat representative of the community	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per	101/9 (=11)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 2/3 (age, cognitive impairment [dementia])

covariate)

Risk factor: Incidence of Delirium

Consequence Length of stay-hospital [early discharge]

Study	Delirium assessment	Representa tiveness	Cohort comparability	pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Holmes 2000 Prospective study); adequate	somewhat representative of the community	Comparable at baseline apart from study risk factor	731/22 (=33)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 2/3 (age, physical illness)

Risk factor: Incidence of Delirium

Consequence Length of stay- hospital

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Ely 2004; Prospective study	adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	224/12 (=19)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 51/275 excluded from analysis; patients were comatose	3/3 (age, severity of illness,comorbidity)
Evidence	quality: high						comatose	
Francis 1990 Prospective study); adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	229/6 (=38)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; Missing data on 13/229 patients	Key RF: 1/3 (severity of illness)
Evidence	quality: low							
Levkoff 1992 Prospective study	2; adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	114/5 (=23)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Unclear or not stated;	Key RF:2/3 (age, severity of illness)
Evidence	quality: high							

Risk factor: Incidence of Delirium

Consequence Length of stay- hospital

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
O'Keeffe 199 Prospective study	. ,	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	225/7 (=32)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 3/3 (age, illness severity, comorbid disease)
Evidence	quality: high							
Thomason 2 Prospective study	,	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	260/7 (=37)	Exposed/non- exposed from same cohort	Unclear	Acceptable: ≤20% loss to follow up; 1 patient with persistent coma not assessed	Key RF: 3/3 (age, comorbidity, severity of illness)

Risk factor: Incidence of Delirium

Consequence Length of stay - ICU

Overall Comments Study Representa Cohort Delirium pts per source of Initial Loss to comparability covariate population follow up assessment tiveness exposure Thomason 2005; adequate Acceptable: 260/7 Exposed/non-No patients Acceptable: ≤20% Key RF: 3/3 (age, comorbidity, severity of somewhat exposed loss to follow up; Prospective representative confounders taken (=37)had 1/261 patient with study of the from same into account in outcome at community analysis (multivariate) cohort start of study persistent coma not assessed

Evidence quality: high

Consequence Length of stay - post ICU

Study	Delirium assessment	Representa tiveness	Cohort comparability	pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Ely 2004; Prospective study	adequate	selected group eg specific operations	Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)	196/12 (=16)	Exposed/non- exposed from same cohort	Unclear	Possible bias: 21- 33% loss to follow up; 79/275 missing data [51 persistent coma + 28 died in ICU]	3/3 (age, severity of illness, comorbidity);

Risk factor: Incidence of Delirium

Consequence Hospital acquired complications

Representa Cohort Study Delirium Initial **Overall Comments** pts per source of Loss to follow up assessment tiveness comparability covariate population exposure

O'Keeffe 1997: Prospective study

adequate

somewhat representative of the community

Acceptable: confounders taken into account in analysis (multivariate)

222/7 (=32) Exposed/nonexposed from same cohort

Some patients had outcome at start of study

Adequate: all patients followed up:

Key RF: 2/5 [age, cognitive impairment]; Patient with frequent incontinence or a cathether on admission and patients with grade 2 pressure sores on admission were excluded. History of falls not reported.

Evidence quality: low

Consequence Mortality or new admission to institution - discharge

Study Delirium Representa Cohort Initial **Overall Comments** pts per source of Loss to comparability covariate population follow up assessment tiveness exposure

Inouye 1998; Prospective study

adequate

somewhat representative of the community

Fairly acceptable: multivariate analysis with nearly enough patients (8-10 per covariate)

95/7 (=14) Exposed/nonexposed from same cohort

No patients had outcome at start of study Adequate: all patients followed up:

Key RF: 4/5 (age, ADL, cognitive impairment, severity of illness)

Risk factor: Incidence of Delirium

Consequence Mortality or new admisson to institution - 1 month

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Givens 2008 Prospective study	; adequate	somewhat representative of the community	Confounding possible: some factors not comparable at baseline	33/7 (=5)	Non- exposed from different cohort (e.g.	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF: 3/5 (age, ADL, comorbidity)
Evidence	quality: low				gen popn)			
Marcantonio 2000; Prospective study	adequate	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	33/5 (=7)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF:4/5 (age, cognitive impairment, ADL, comorbidity)

Risk factor: Incidence of Delirium

Consequence Mortality or new admission to institution - 3 months

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Inouye 1998; Prospective study	; adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	165/7 (=24)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 47/727 missing data	4/5 (ADL, age cognitive impairment[dementia], severity of illness)

Risk factor: Incidence of Delirium

Consequence Mortality or new admission to institution - 6 month

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Givens 2008 Prospective study	; adequate	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis	28/7 (=4)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF:3/5 (age, ADL, comorbidity)
Evidence	quality: low							
Marcantonio 2000; Prospective study	adequate	somewhat representative of the community	Confounding possible: not enough patients for multivariate analysis	28/5 (=6)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Key RF:4/5 (age, cognitive impairment, ADL, comorbidity)

Risk factor: Incidence of Delirium

Consequence Mortality or new admission to institution -1 year

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
McAvay 2006 Prospective study	s; adequate	somewhat representative of the community	Acceptable: confounders taken into account in analysis (multivariate	198/9 (=22)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Adequate: all patients followed up;	Number of MVs: 7 variables + 2 levels for delirium (delirium at discharge, delirium resolved, never delirious); Key RF: 4/5 [age, ADL, cognitive impairment [dementia], comorbidity, severity of illness]

Evidence quality: high

Consequence Mortality or residing in institution- 2 years

Study	Delirium assessment	Representa tiveness		I I	source of population	Initial exposure	Loss to follow up	Overall Comments
Pitkala 2005; Prospective study	adequate	truly representative of the community eg, random	Acceptable: confounders taken into account in analysis (multivariate	336/7 (=48)	Exposed/non- exposed from same cohort	No patients had outcome at start of study	Unclear or not stated;	Key RF:4/5 (age,ADL, dementia,comorbidity)

Risk factor: Duration of delirium

Consequence Mortality - 6 months

Representa Cohort Study Delirium Initial pts per source of Loss to follow up assessment tiveness comparability covariate population exposure

Ely 2004; Prospective study

adequate

selected group eg specific operations Confounding possible: not enough patients for multivariate analysis

69/12 (=6) Exposed/nonexposed from same cohort

No patients had outcome at start of study Acceptable: ≤20% loss to follow up: 51/275 patients with persistent coma experienced mortality after a median of 3days (IQR 1 to 5), not included in any

outcome analysis.

Overall Comments

Key RF: 3/3 (age, dementia, severity of illness); Same key risk factors applied as for the incidence of delirium

Evidence quality: moderate

Consequence Length of stay- hospital

Study Delirium Representa Cohort pts per source of Initial Loss to **Overall Comments** comparability covariate population follow up assessment tiveness exposure

Ely 2004; Prospective study

adequate

somewhat representative of the community

Acceptable: confounders taken into account in analysis (multivariate)

224/12 (=19)

Exposed/nonexposed from same cohort

No patients had outcome at start of study Acceptable: ≤20% loss to follow up; 51/275 missing data:

Key RF: 3/3 (age, severity of illness, comorbidity); Same key risk factors applied as for the incidence of delirium

Risk factor: Duration of delirium

Consequence Length of stay - post ICU

Representa Cohort Study Delirium Initial **Overall Comments** pts per source of Loss to comparability covariate population follow up assessment tiveness exposure Ely 2004; Fairly acceptable: 196/12 Exposed/non-No patients Possible bias: 21adequate somewhat

Prospective study

representative of the community

multivariate analysis with nearly enough patients (8-10 per covariate)

(=16)

exposed had from same outcome at cohort start of study

33% loss to follow up: 79/275 missing data

Key RF: 3/3 [age, severity of illness, comorbidity]; Same key risk factors applied as for the incidence of delirium

Evidence quality: moderate

Consequence Mortality or functional decline- discharge

Study Delirium Representa Cohort Initial Loss to **Overall Comments** pts per source of comparability covariate population follow up assessment tiveness exposure

Andrew 2005: Prospective study

adequate

somewhat representative of the community

Acceptable: confounders taken into account in analysis (multivariate)

32/4 (=8) Exposed/nonexposed from same cohort

Some patients had outcome at start of study Acceptable: ≤20% loss to follow up: 6/77 patients lost to

follow up

Key RF: 1/3 [age]

Risk factor: Duration of delirium

Consequence Mortality or functional decline- 6 months

Representa Cohort **Overall Comments** Study **Delirium** pts per source of Initial Loss to comparability covariate population follow up assessment tiveness exposure adequate

Andrew 2005; Prospective study

somewhat representative of the

community

Acceptable: confounders taken into account in analysis (multivariate)

48/4 (=12) Exposed/nonexposed from same cohort

Some patients had outcome at start of study Acceptable: ≤20% loss to follow up; 6/77 missing data

Key RF: 1/3(age)

Risk factor: Severity of delirium

Consequence Mortality - 1 year

Representa Cohort **Overall Comments** Study **Delirium** pts per source of Initial Loss to comparability covariate population follow up assessment tiveness exposure Leslie 2005; adequate somewhat Acceptable: 208/7 Exposed/non-No patients Adequate: all Key RF: 1/3 (age) Prospective representative confounders taken (=30)exposed had patients followed up: study of the into account in from same outcome at community analysis (multivariate) cohort start of study

Evidence quality: low

Consequence Mortality or new admisson to institution - 1 month

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Marcantonio 2002; Prospective study	adequate	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis		Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 4/122 patients lost to follow up because of lack of severity data.	Key RF: 2/5 (ADL, cognitive impairment)

Risk factor: Severity of delirium

Consequence Mortality or new admission to institution - 6mo

Study	Delirium assessment	Representa tiveness		pts per covariate	source of population	Initial exposure	Loss to follow up	Overall Comments
Marcantonio 2002; Prospective study	'	selected group eg specific operations	Confounding possible: not enough patients for multivariate analysis		Exposed/non- exposed from same cohort	No patients had outcome at start of study	Acceptable: ≤20% loss to follow up; 4/122 patients lost to follow up because of lack of severity data.	Key RF:2/5 (ADL, cognitive impairment)