Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Dementia/Cognitive impairment/cognitive dysfunction

Specifically: Dementia at 3 years

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Rockwood 1999; prospective cohort study in 164 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted OR	5.97 (1.83, 19.54)	Study included 203 patients [Delirium & dementia:22; delirium:16; prevalent dementia:17;no delirium or dementia:148]; results for delirium only vs no delirium/dementia group	cognition evaluated with MMSE, Blessed dementia and function. 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 decedents.	● Age: 79 years ● Cognitive impairment: Some patients with cognitive impairment; Authors stated that dementia diagnosis conformed to the Candian Study of Health and Aging dementia protocol-which is DSMIII-R. ● Gender[M:F]: 87:116. ● Comorbidity/Severity of Illness: Reported comorbid illness: 2 levels: moderate and severe.	Age(years), gender, comorbid illness (two levels)	● No.events/no. covariates = 32/4 = 8. ● Number key RFs: 2/3 (age; dementia [constant]). ● Number of pts with delirium : prevalent:6/164 (85%); ● No. pts developing outcome: Dementia (follow-up:3years): 32/164 (20%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   New admission to institution

Specifically: New admission to institution - discharge

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Balas 2009; prospective cohort study in 114 patients. Funding: Unclear/ Not stated. Setting: Hospital; ICU ward (orthopaedic surgery)	multivariate adjusted OR	7.2 (1.93, 26.82)			● Age: 75.4 (SD 6.3) ● Cognitive impairment: Some patients with cognitive impairment; IQCODE score ≥3.31: 21/114 (18.8%) ; Cut off score of 3.31 chosen for dementia based on sensitivity & specificity. ● Gender[M:F]: 68:46. ● Comorbidity/Severity of Illness: not reported. ● Other factors: Katz ADL <5 [dependent in 5 or more ADL]: 89/114 (78%)	MV: age,gender, hearing loss, pre-Katz ADL<5, IQCODE <3.31, mechanical ventilation use, complications, APACHE II, CCI, service [general,trauma,vascular,other; vascular= reference]	● No.events/no. covariates = 35/13 = 3. ● Number key RFs: 2/3 (Age, ADL). ● Number of pts with delirium : Patients with prevalent delirium excluded; incident: 29.8%: 34/114; ● No. pts developing outcome: New admissions to institutions: 109/114 [4 people in LTC at admission also included in MV analysis]
Bourdel-Marchasson 2004; prospective cohort study in 847 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted OR	3.19 (1.33, 7.64)	prevalent delirium patients	Patients usually living in an institution were excluded from analysis;	● Age: 85 years (78.4 to 92.4) ● Cognitive impairment: Some patients with cognitive impairment; 322/427 (75%) patients; based on family interviews and physicans; check if existed with respect to DSM IV criteria. ● Gender[M:F]: Ratio of M:F[discharged to institution]: 0.26. ● Comorbidity/Severity of Illness: comorbidities and other medications. ● Other factors: ADL score: 7.0 (SD 3.0) for those discharged to community	Age (for 1 year increase), gender, previously known cognitive impairment, dietary intake group[2 levels]; falls, stroke, haemoglobin; RFs for institutionalistion identified by UV analysis (p<0.1: ADL, weight, serum albumin,opiates)	● No.events/no. covariates = 117/12 = 10. ● Number key RFs: 2/3 (ADL, cognitive impairment). ● Number of pts with delirium : prevalent: 34/427 [8%]; ● No. pts developing outcome: New admission to institution [nursing home or residential care]: 13/117

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   New admission to institution

Specifically: New admission to institution - discharge

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:		factors adjusted for in multivariate analysis
Bourdel-Marchasson 2004; prospective cohort study in 847 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted OR	2.64 (0.83, 8.45)	incident delirium	Patients usually living in an institution were excluded from analysis;	● Age: 85 years (78.4 to 92.4) ● Cognitive impairment: Some patients with cognitive impairment; 322/427 (75%) patients; based on family interviews and physicans; check if existed with respect to DSM IV criteria. ● Gender[M:F]: Ratio of M:F[discharged to institution]: 0.26. ● Comorbidity/Severity of Illness: comorbidities and other medications. ● Other factors: ADL assessed with Katz ADL (range 0 to 14; 14=highly dependent); mean score: 7.0 (SD 3.0) -those discharged to community	Age (for 1 year increase), gender, previously known cognitive impairment, dietary intake group[2 levels]; falls, stroke, haemoglobin; RFs for institutionalistion identified by UV analysis (p<0.1: ADL, weight, serum albumin,opiates)	● No.events/no. covariates = 117/12 = 10. ● Number key RFs: 2/3 (ADL, cognitive impairment). ● Number of pts with delirium : incident: 15/427 (3.5%); ● No. pts developing outcome: New admission to institution [nursing home or residential care]: 117
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	3 (1.4, 6.2)		Defined as a new placement of a patient who had not been institutionalised at the time of hospital admission	● Age: 78.9 years (72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:19% met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5). ● Other factors: ADL & IADL: patient's status 2 weeks prior to hospital admission; ADL: mean (SD) across 3 sites: 5.1 (SD 1.4); IADL:4.9 (SD 2.2)	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 60/7 = 9. ● Number key RFs: 2/3 (ADL, cognitive impairment[dementia]). ● Number of pts with delirium : prevalent: 88/727 (12%) [in text]; 90/727 [in table]; ● No. pts developing outcome: New admission to institution [at discharge] : 60/692 (9%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   New admission to institution

Specifically: New admission to institution - discharge

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Levkoff 1992; prospective cohort study in 325 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	7.3 (2.6, 20.5)	incident delirium only; community dwelling sample only	Admision to institution (new) for those who were community dwelling.	● Age: mean 81.4 (73.7 to 89.1) ● Cognitive impairment: Some patients with cognitive impairment; 24% with preexisting cognitive impairment; assessment methods not reported (relied on medical chart review). ● Gender[M:F]: Patients with severe sensory impaiment excluded. ● Comorbidity/Severity of Illness: Sum of severity of scores assigned to 15 medical conditions to obtain a score based on presence &severity. Range:1(not likely to have any impact on the process of care) to 4(life threatening. Reviewed by internist/geriatrician. ● Other factors: No information on ADL or	age [<80 vs >80], sex, preexisting cognitive impairment (presence/absence), and illness severity	● No.events/no. covariates = 30/5 = 6. ● Number key RFs: 1/3 (cognitive impairment). ● Number of pts with delirium : prevalent: 34/325 (11%) ; incident:91; ● No. pts developing outcome: New admission to institution :30/203(15%)

Outcome measure   New admission to institution

Specifically: New admission to institution - 3 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	3 (1.5, 6)		Defined as any new placement from the time of hospital admission until the 3 month followup (among survivors only)	● Age: 78.9 years (72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:19% met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5). ● Other factors: ADL & IADL: patient's status 2 weeks prior to hospital admission; ADL: mean (SD) across 3 sites: 5.1 (SD 1.4); IADL:4.9 (SD 2.2)	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 77/7 = 11. ● Number key RFs: 2/3 (ADL, cognitive impairment). ● Number of pts with delirium : prevalent: 88/727 (12%) [in text]; 90/727 [in table]; ● No. pts developing outcome: New admission to institution [3 months]: 77/600 (16%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   New admission to institution

Specifically: New admission to institution - 6 months

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
O'Keeffe 1997; prospective cohort study in 225 patients. Funding: Unclear/ Not stated. Setting: Hospital; Medical ward	multivariate adjusted OR	2.8 (1.3, 6.1)	incident delirium only	55 patients had been admitted from long term care but not included in the analysis.	● Age: 82 years (76 to 88) ● Cognitive impairment: Some patients with cognitive impairment; 60/225(27%)with chronic cognitive impairment based on Blessed Dementia Rating score ≥4 or if cog impairment interfered with social fx of at least6mo. ● Gender[M:F]: 79:146. ● Comorbidity/Severity of Illness: Severity of illness[delirium vs no delirium]: Mild:23:50; Moderate:29:59; Severe:42:22; Severity rating made by study physician. ● Other factors: ADL:Disability score based on the number of six ADLs patient required assistance; Mean(SD):3 (1.8): 2.3 (1.7), for the	age, severity of illness[2 levels], comorbid disease, disability score, chronic cognitive impairment	● No.events/no. covariates = 35/7 = 5. ● Number key RFs: 2/3 (ADL, cognitive impairment). ● Number of pts with delirium : 41/225 (18%) at admission; evaluated within 48hrs; incident: 53 patients; ● No. pts developing outcome: New admission to institution: 6mo: 35/165 (21%)

Outcome measure   New admission to institution

Specifically: New admisson to institution - 2 years

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Pitkala 2005; prospective cohort study in 425 patients. Funding: Grant-other. Setting: Mixed; Other ward	multivariate adjusted OR	2.45 (1.2, 4.9)		Determined from medical records and central registers. Those living in a nursing home at baseline were not included in the analysis.	● Age: Age over 85 years: 59% [250/425] ● Cognitive impairment: Some patients with cognitive impairment; Clinical Dementia Rating Scale & criteria of dementia according to DSM IV, prior diagnoses of dementia & medical records for consensus by geriatrician. ● Gender[M:F]: 78:347. . ● Other factors: ADL: assessed by CDR class ≥1 'personal care'; 89/106:234/319 patients dependent in ADL functioning in the delirious and non delirious groups, respectively.	age, gender, education, dementia, comorbidity and ADL dependence	● No.events/no. covariates = 72/7 = 10. ● Number key RFs: 2/3 (ADL, cognitive impariment [dementia]). ● Number of pts with delirium : prevalent:106/425 (24.9%); ● No. pts developing outcome: New admission to institution [2 years] : 72/201 (36%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Specifically: Mortality - in hospital

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	0.7 (0.2, 2.5)		Not stated	● Age: 78.9 years (72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:138 patients [19%] met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5).	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 35/7 = 5. ● Number key RFs: 3/3 (age, dementia, severity of illness). ● Number of pts with delirium : prevalent: 88/727 (12%) [in text]; 90/727 [in table 2]; ● No. pts developing outcome: Mortality (in hospital): 35/727 (5%); Mortality (3mo.): 98/680 (14%)
O'Keeffe 1997; prospective cohort study in 225 patients. Funding: Unclear/ Not stated. Setting: Hospital; Medical ward	multivariate adjusted OR	2.6 (0.7, 6.2)		Not stated	● Age: 82 years (76 to 88) ● Cognitive impairment: Some patients with cognitive impairment; 60/225(27%)with chronic cognitive impairment based on Blessed Dementia Rating score ≥4 or if CI interfered with social functioning at least 6mo. ● Gender[M:F]: 79:146. ● Comorbidity/Severity of Illness: Severity of illness[delirium vs no delirium]: Mild:23:50; Moderate:29:59; Severe:42:22; Severity rating made by study physician.	age, severity of illness[2 levels], comorbid disease, disability score, dementia	● No.events/no. covariates = 22/7 = 3. ● Number key RFs: 3/3 (age, severity of illness, cognitive impairment[dementia]). ● Number of pts with delirium : 41/225 (18%) at admission; evaluated within 48hrs; incident: 53 /225 (24%); ● No. pts developing outcome: Mortality(hospitalisation): 22/225 (10%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality

Specifically: Mortality - in ICU

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Lin 2004; prospective cohort study in 102 patients. Funding: Unclear/ Not stated. Setting: Hospital; ICU ward	multivariate adjusted OR	13 (2.69, 62.91)		Death from all causes were taken as outcome	● Age: 73.6 years (70 to 77) ● Cognitive impairment: No patients with cognitive impairment; Patients with history of chronic dementia excluded. ● Gender[M:F]: 54:48. ● Comorbidity/Severity of Illness: APACHE III score rated by chart review ; data obtained within 24 hours of ICU admission;.	APACHE III score, delirium, diabetes mellitus, chronic airway disease, congestive heart failure, shock, elevated serum level of urea nitrogen; UV: Also included Age, Gender, disease (hypertension, stroke, ischemic heart disease, sepsis, arrhythmia), hypoxemia, hypercarpnia, hypoalbuminemia, hyponatremia, elevated serum level of creatinine, elevated serum level of bilirubin	● No.events/no. covariates = 40/7 = 6. ● Number key RFs: 1/3 (severity of illness). ● Number of pts with delirium : prevalent: 22/102 (22%); ● No. pts developing outcome: Mortality (ICU w/in 5days): 40/102 (39.2%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure

Specifically: Mortality- in ICU & hospital

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Lin 2008; prospective cohort study in 143 patients. Funding: Unclear/ Not stated. Setting: Hospital; ICU ward	multivariate adjusted HR	2.69 (1.45, 5.1)		Death from all causes were taken as outcome	● Age: 76 years (IQR 64 to 85.5) ● Cognitive impairment: No patients with cognitive impairment; Patients with history of chronic dementia excluded. ● Gender[M:F]: 54:48. .	MV: Age, gender, mean arterial pressure, arterial pH value, PaO2/FiO2, white blood cell count, preexisting medical conditions, sepsis and shock.	● No.events/no. covariates = 59/10 = 6. ● Number key RFs: 1/3 (age). ● Number of pts with delirium : prevalent: 31/143 (22%); ● No. pts developing outcome: Mortality (ICU w/in 5 days): 59/143 (41%)
Thomason 2005; prospective cohort study in 261 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.27 (0.54, 2.98)	p=0.58;		● Age: 52.5 years (32 to74) ● Cognitive impairment: Unclear or Not stated; Not stated. ● Gender[M:F]: 129:132. ● Comorbidity/Severity of Illness: Charlson comorbidity: median (IQR): 4(2-7): 3 (1-6); APACHE II [range 0 to 71; 0=best]score: 15 (10-21): 11(6-16).	Age, gender, race, APACHE II score, Charlson co-morbidity index, coma status, delirium; For the mortality analysis: age, gender,race,APACHE II score and Charlson was pooled using principal component analysis	● No.events/no. covariates = 32/7 = 5. ● Number key RFs: 2/3 (age, severity of illness). ● Number of pts with delirium : 125/261 (48%) at least 1 episode [not all at baseline]; ● No. pts developing outcome: Mortality (ICU & hospital): 32/260 (12%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Mortality

Specifically: Mortality - 6 weeks

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Drame 2008; prospective cohort study in 1306 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.7 HR (1.2, 2.5)	p=0.006	Mortality at 6 weeks. Any cause of death.	● Age: 85.0 years (75 to 103) ● Cognitive impairment: Some patients with cognitive impairment; 589/1296 (45%); presence of a diagnosis of dementia in medical records or by assessment of senior practitioner. ● Gender[M:F]: 461:845. ● Comorbidity/Severity of Illness: Charlson index used to define three levels of comorbidity (low:0 to 1; medium 2 to 4; high 5).	Age, gender, ADL [moderately dependent vs independent, severely dependent vs independent], malnutrition risk, dementia, delirium	● No.events/no. covariates = 135/12 = 11. ● Number key RFs: 2/3 (age, cognitive impairment [dementia]). ● Number of pts with delirium : prevalent: 261/1296 (20%); ● No. pts developing outcome: Mortality(6 weeks): n=135/1248 (11%)

Outcome measure Mortality

Specifically: Mortality - 3 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward	multivariate adjusted OR	1.6 (0.8, 3.2)		Not stated	● Age: 78.9 years (72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:19% met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5).	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 98/7 = 14. ● Number key RFs: 3/3 (age, cognitive impairment [dementia], severity of illness). ● Number of pts with delirium : prevalent: 88/727 (12%) [in text]; 90/727 [in table 2]; ● No. pts developing outcome: Mortality (3mo.): 98/680 (14%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality

Specifically: Mortality - 6 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Ely 2004; prospective cohort study in 224 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	3.2 HR (1.4, 7.7)	p=0.008	Patients were censored at the time of last contact alive or at 6mo from enrollment, which ever was first. Survivors were followed up using hospital's electronic system, monthly phone calls, and in-person visits for survival status	● Age: 55 years (37 to 73) ● Cognitive impairment: Cognitive impairment deduced from scores; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6) for the delirious and non delirious groups, respectively.	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 69/12 = 6. ● Number key RFs: 3/3 (age, severity of illness, cognitive impairment[dementia]). ● Number of pts with delirium : prevalent: 89/275 (32.4%); incident : 183/224, of whom 123 were in coma; ● No. pts developing outcome: Mortality (6 mo): 69/224 (31%);
Francis 1990; prospective cohort study in 229 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted RR	1.8 RR (0.8, 4.2)			● Age: 78 years ● Cognitive impairment: Some patients with cognitive impairment; Blessed's Dementia Rating Scale ≥4 indicating significant chronic cognitive impairment): 33/226. ● Gender[M:F]: 37% Males. ● Comorbidity/Severity of Illness: Reported: 'house-staff severity rating': mild: 74/226; moderate: 101/226; severe: 15/226.	ADL status, illness severity [2 levels], prior cognitive impairment and fever ; Unclear what factors adjusted for in the MV analysis for mortality, therefore factors for reported for length of stay was used.	● No.events/no. covariates = 24/6 = 4. ● Number key RFs: 2/3 (cognitive impairment, severity of illness). ● Number of pts with delirium : prevalent:36/229 (16%) incident: 14/229 (15%);; ● No. pts developing outcome: Mortality: 6 months; 10.5%: 24/229 [6 died in hospital]

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Mortality

Specifically: Mortality - 6 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Holmes 2000; prospective cohort study in 731 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (hip fracture surgery)	multivariate adjusted RR	2.88 (1.76, 4.72)			● Age: 82.1 years (65 to 99) ● Cognitive impairment: Some patients with cognitive impairment; Study reported 402/731 (55%) had cognitive impairment of which 40.2% was dementia [assessed with MMSE] and 14.8% delirium. ● Gender[M:F]: 129:602. ● Comorbidity/Severity of Illness: Physical illness assessed on the Burkill scale; (range:0 to 6, with 0 representing no physical illness and 6 representing severe chronic physical illness).none: 146/731; mild:322/731; moderate 232/731; severe: 31/731.	Age, gender, fracture [3 types] vs intertrochanteric, living arrangements [3 levels:family, residential,other] vs alone, social deprivation [3 levels:medium,high,unknown] vs low, physical illness [3 levels:mild,moderate,severe] vs none, physical drugs [2 levels:1to3,>3] vs none, albumin [normal or low] vs not done, psychiatric diagnosis [4 levels: dementia, delirium,depression,other] vs none	● No.events/no. covariates = 195/22 = 9. ● Number key RFs: 3/3: age, cognitive impairment (dementia), physical illness. ● Number of pts with delirium : prevalent:108/731 (15%); ● No. pts developing outcome: Mortality (6 months): 195/731 (27%)
Levkoff 1992; prospective cohort study in 325 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	1.3 (0.63, 2.8)		Mortality for patients in community and institutions.	● Age: 81.4 years (73.7 to 89.1) ● Cognitive impairment: Some patients with cognitive impairment; 24% with preexisting cognitive impairment; assessment methods not reported (relied on medical chart review). ● Gender[M:F]: Patients with severe sensory impaiment excluded. ● Comorbidity/Severity of Illness: Sum of severity of scores assigned to 15 medical conditions to obtain a score based on presence &severity. Range:1(not likely to have any impact on the process of care) to 4 (life threatening). Reviewed by internist/geriatrician.	age [<80 vs >80], gender, preexisting cognitive impairment (presence/absence), and illness severity	● No.events/no. covariates = 59/5 = 12. ● Number key RFs: 3/3 (age, cognitive impairment,severity of illness). ● Number of pts with delirium : prevalent: 34/325 (11%); incident:91/325 (28%); ● No. pts developing outcome: Mortality (6 months):50/291 (17%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality

Specifically: Mortality - 6 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Marcantonio 2000; prospective cohort study in 126 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	1.1 (0.3, 3.9)		Not stated	● Age: 79 years (71-87) ● Cognitive impairment: Some patients with cognitive impairment; 50/126(40%) with cognitive impairment ; based on proxy interview using Blessed score of ≥ 4; Mean: (5 SD5). ● Gender[M:F]: 27:99. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126).	MV: Age (<80 vs ≥ 80 years), baseline cognitive impairment, ADL functional impairment, medical comorbidity [1 level: e.g. <3 vs ≥ 4 OR 2 levels: 0-1 vs 4; 2-3 vs 4]-treating as 1 level	● No.events/no. covariates = 15/5 = 3. ● Number key RFs: 2/3 (age, cognitive impairment). ● Number of pts with delirium : incident: 52/126 (41%); ● No. pts developing outcome: Mortality : 6mo: 15/123(12%)
O'Keeffe 1997; prospective cohort study in 225 patients. Funding: Unclear/Not stated. Setting: Hospital; Medical ward	multivariate adjusted OR	1.4 (0.7, 2.8)		Not stated	● Age: 82 years (76 to 88) ● Cognitive impairment: Some patients with cognitive impairment; 60/225(27%)with chronic cognitive impairment based on Blessed Dementia Rating score ≥4 or if cog impairment interfered with social fx of at least6mo. ● Gender[M:F]: 79:146. ● Comorbidity/Severity of Illness: Severity of illness[delirium vs no delirium]: Mild:23:50; Moderate:29:59; Severe:42:22; Severity rating made by study physician.	age, severity of illness[2 levels], comorbid disease, disability score, dementia	● No.events/no. covariates = 49/7 = 7. ● Number key RFs: 3/3 (age, severity of illness, dementia). ● Number of pts with delirium : prevalent: 41/225 (18%) evaluated within 48hrs; incident: 53 patients; ● No. pts developing outcome: Mortality (6mo): 49/203(22%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality

Specifically: Mortality - 1 year

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Leslie 2005; prospective cohort study in 919 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.62 (1.13, 2.33)			● Age: 80 years (73.5 to 86.5) ● Cognitive impairment: Some patients with cognitive impairment; Assessed with MMSE (<24) 44%: [406/919] and Blessed Score. ● Gender[M:F]: 365:554. ● Comorbidity/Severity of Illness: Charlson comorbidity index socre of >1: 643/919;.	Age, male, delirium, ADL impairment, Charlson comorbidity index score [2 levels]	● No.events/no. covariates = 208/6 = 35. ● Number key RFs: 1/3 (age). ● Number of pts with delirium : incident: 115/919 [13%]; ● No. pts developing outcome: Mortality: 208/919 (23%)
Pitkala 2005; prospective cohort study in 425 patients. Funding: Grant-other. Setting: Mixed; Other ward	multivariate adjusted OR	1.86 (1.1, 3.1)		Determined from medical records and central registers	● Age: Age over 85 years: 59% [250/425] ● Cognitive impairment: Some patients with cognitive impairment; Clinical Dementia Rating Scale & criteria of dementia according to DSM IV, prior diagnoses of dementia & medical records for consensus by geriatrician. ● Gender[M:F]: 78:347. ● Comorbidity/Severity of Illness: Charlson Comorbidity index: 2.3 (SD 1.6): 2.2(SD 1.5) for the delirious and non delirious groups, respectively..	age, gender, education, dementia, comorbidity and ADL dependence	● No.events/no. covariates = 106/7 = 15. ● Number key RFs: 2/3 (age, cognitive impairment [dementia]). ● Number of pts with delirium : prevalent: 106/425 (24.9%); ● No. pts developing outcome: Mortality (1yr): 106/425 (25%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality
Specifically: Mortality - 2 years

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Francis 1992; prospective cohort study in 229 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted RR	1.4 (0.8, 2.5)			● Age: 78 years (72 to 85) ● Cognitive impairment: Some patients with cognitive impairment; Blessed's Dementia Rating Scale(>=4indicating significant chronic cognitive impairment): 33/226. ● Gender[M:F]: 79:126. ● Comorbidity/Severity of Illness: Severity of illness-clinician based rating scale (1=not ill to 9=moribund) on how severly ill patient is on admission; (%): mild: 24:60; moderate:67:37; sever 9:3;.	initial cognitive impairment (DRS score), baseline ADL, cancer; [age, gender, race,marital stauts and severity of illness univariate only]	● No.events/no. covariates = 55/4 = 14. ● Number key RFs: 1/3 (cognitive impairment). ● Number of pts with delirium : prevalent:36/229 (16%) incident: 14/229 (15%);; ● No. pts developing outcome: Mortality: 54/205 (26%)
Nightingale 2001; prospective cohort study in 731 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (hip fracture surgery)	multivariate adjusted HR	2.404 (1.859, 3.484)			● Age: 82.1 years ● Cognitive impairment: Some patients with cognitive impairment; Study reported 402/731 (55%) had cog impariment of which 40.2% was dementia [assessed with MMSE] and 14.8% delirium. ● Gender[M:F]: 129:602. ● Comorbidity/Severity of Illness: Physical illness recorded with Burvill scale.	Age, gender, hospital,Daily activities (per unit increase), physical illness (3 levels: mild, moderate, severe vs none], psychiatirc diagnosis [3 levels: dementia, delirium, depression vs well]	● No.events/no. covariates = 347/10 = 35. ● Number key RFs: Key RF: 3/3 (Age, cognitive impairment (dementia), physical illness). ● Number of pts with delirium : prevalent:108/731 (15%); ● No. pts developing outcome: Mortality (2 years): 347/731 (48%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality

Specifically: Mortality - 2 years

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Pitkala 2005; prospective cohort study in 425 patients. Funding: Grant-other. Setting: Mixed; Other ward	multivariate adjusted OR	1.76 (1.1, 2.8)		Determined from medical records and central registers	● Age: Age over 85 years: 59% [250/425] ● Cognitive impairment: Some patients with cognitive impairment; Clinical Dementia Rating Scale & criteria of dementia according to DSM IV, prior diagnoses of dementia & medical records for consensus by geriatrician. ● Gender[M:F]: 78:347. ● Comorbidity/Severity of Illness: Severity: Charlson Comorbidity index: 2.3 (SD 1.6): 2.2(SD 1.5) for the delirious and non delirious groups, respectively..	age, gender, education, dementia, comorbidity and ADL dependence	● No.events/no. covariates = 198/7 = 28. ● Number key RFs: 2/3 (age, cognitive impairment [dementia]). ● Number of pts with delirium : prevalent: 106/425 (24.9%); ● No. pts developing outcome: Mortality (2yr): 198/415(47%); [cumulative mortality]

Outcome measure   Mortality

Specifically: Mortality - 3 years

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Rockwood 1999; prospective cohort study in 164 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.71 (1.02, 2.87)			● Age: 79 years ● Cognitive impairment: Some patients with cognitive impairment; Authors stated that dementia diagnosis conformed to the Candian Study of Health and Aging dementia protocol- which is DSMIII-R. ● Gender[M:F]: 87:116. ● Comorbidity/Severity of Illness: Reported comorbid illness: 2 levels: moderate and severe. ● Other factors: Frailty: baseline Barthel index: median 90 (IQR 50 to 100); In MV analysis defined as <99 on BI 2 weeks prior to admission	Age(years), gender, comorbid illness (two levels), frailty, dementia, marital status, living arrangements	● No.events/no. covariates = 101/9 = 11. ● Number key RFs: 2/3 (age, cognitive impairment [dementia]). ● Number of pts with delirium : prevalent: 16 [delirium/no dementia]; 22 [delirium & dementia]; ● No. pts developing outcome: Mortality (median follow up 32.5 months)): 101/203 (50%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure

Specifically: Length of stay-hospital [early discharge]

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Holmes 2000; prospective cohort study in 731 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (hip fracture surgery)	multivariate adjusted RR	0.53 (0.41, 0.68)	Study reported risk of being discharged soon, ie. Increased risk of remaining in hospital		● Age: 82.1 years (65 to 99) ● Cognitive impairment: Some patients with cognitive impairment; Study reported 402/731 (55%) had cognitive impairment of which 40.2% was dementia [assessed with MMSE] and 14.8% delirium. ● Gender[M:F]: 129:602. ● Comorbidity/Severity of Illness: Burvill physical illness : (range:0 to 6, with 0 representing no physical illness and 6 representing severe chronic physical illness).none: 146/731; mild:322/731; moderate 232/731; severe: 31/731.	Age, gender, fracture [3 types] vs intertrochanteric, living arrangements [3 levels:family, residential,other] vs alone, social deprivation [3 levels:medium,high,unknown] vs low, physical illness [3 levels:mild,moderate,severe] vs none, physical drugs [2 levels:1to3,>3] vs none, albumin [normal or low] vs not done, psychiatric diagnosis [4 levels: dementia, delirium,depression,other] vs none	● No.events/no. covariates = 731/22 = 33. ● Number key RFs: 2/3: age, physical illness). ● Number of pts with delirium : prevalent:108/731 (15%); ● No. pts developing outcome: Earlier discharge (6 months): LoS 3 to 190 days (median 23 days)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Length of stay

Specifically: Length of stay- hospital

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis
Ely 2004; prospective cohort study in 275 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	2 (1.4, 3)	p<0.001;Median[IQR]: 21 (19 to 25): 11 (17 to 14) for the delirious and non delirious groups, respectively	Censoring for LoS analyses occurred at time of death.Survivors were followed up using hospital's electronic system, monthly phone calls, and in-person visits for survival status	● Age: 55 years (37 to 73) ● Cognitive impairment: Unclear or Not stated; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6); Comorbidity: Charlson comorbidity index: Mean(SD): 3.2 (SD2.8).	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 224/12 = 19. ● Number key RFs: 3/3 (age, severity of illness,comorbidity). ● Number of pts with delirium : prevalent: 89/275 (32.4%); incident delirium: 183/224, of whom 123 were in coma; ● No. pts developing outcome: Length of Stay (6 mo.): median (IQR): Delirium: no delirium: 21 (19 to 25): 11 (7 to 14)
Francis 1990; prospective cohort study in 229 patients. Funding: Grant-other. Setting: Hospital; Medical ward	----	0 (0, 0)	12.1 days vs 7.2 days for the delirious and non delirious patients, respectively. P<0.001;		● Age: 78 years ● Cognitive impairment: Some patients with cognitive impairment; Blessed's Dementia Rating Scale ≥4 indicating significant chronic cognitive impairment): 33/226. ● Gender[M:F]: 37% Males. ● Comorbidity/Severity of Illness: Reported: 'house-staff severity rating': mild: 74/226; moderate: 101/226; severe: 15/226.	ADL status, illness severity [2 levels], prior cognitive impairment and fever ;	● No.events/no. covariates = 229/6 = 38. ● Number key RFs: 1/3 (severity of illness). ● Number of pts with delirium : prevalent:36/229 (16%) incident: 14/229 (15%);; ● No. pts developing outcome: Length of stay-hospital:229

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Length of stay

Specifically: Length of stay- hospital

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	*factors adjusted for in multivariate analysis*	
Levkoff 1992; prospective cohort study in 325 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	----	0 (0, 0)	community: 30.9 days vs 7.4 days for the delirious and non delirious groups, respectively; t=4.03, p=.0001;institution: 10.6 days vs 6.9 days for the delirious and non delirious groups, respectively;	Hospital stay for both community and institutional sample	● Age: mean 81.4 (73.7 to 89.1) ● Cognitive impairment: Some patients with cognitive impairment; 24% with preexisting cognitive impairment; assessment methods not reported (relied on medical chart review). ● Gender[M:F]: Patients with severe sensory impaiment excluded. ● Comorbidity/Severity of Illness: Sum of severity of scores assigned to 15 medical conditions to obtain a score based on presence &severity. Range:1(not likely to have any impact on the process of care) to 4(life threatening. Reviewed by internist/geriatrician.	age [<80 vs >80], sex, preexisting cognitive impairment (presence/absence), and illness severity	● No.events/no. covariates = 114/5 = 23. ● Number key RFs: 2/3 (age, severity of illness). ● Number of pts with delirium : prevalent: 34/325 (11%) ; incident:91; ● No. pts developing outcome: Length of stay-hospital community: 211; institution:114
O'Keeffe 1997; prospective cohort study in 225 patients. Funding: Unclear/ Not stated. Setting: Hospital; Medical ward	----	0 (0, 0)	21 days vs 11 days (p<0.001) for the delirious patients and non delirious patients, respectively; t=4.8, p<.001	55 patients had been admitted from long term care but not included in the analysis.	● Age: 82 years (76 to 88) ● Cognitive impairment: Some patients with cognitive impairment; 60/225(27%)with chronic cognitive impairment based on Blessed Dementia Rating score ≥4 or if cog impairment interfered with social fx of at least6mo. ● Gender[M:F]: 79:146. ● Comorbidity/Severity of Illness: Severity of illness[delirium vs no delirium]: Mild:23:50; Moderate:29:59; Severe:42:22; Severity rating made by study physician; Charlson Comorbidity index: 2.1 (SD 1.8): 1.8(SD 1.8) for the delirious & non delirious groups, respectively.	age, severity of illness[2 levels], comorbid disease, disability score, dementia	● No.events/no. covariates = 225/7 = 32. ● Number key RFs: 3/3 (age, illness severity, comorbid disease). ● Number of pts with delirium : 41/225 (18%) at admission; evaluated within 48hrs; incident: 53 patients; ● No. pts developing outcome: Length of stay-hospital: 225

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Length of stay

Specifically: Length of stay- hospital

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Thomason 2005; prospective cohort study in 261 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.41 (1.05, 1.89)	p=0.023; Median (IQR): 5 days (IQR 2 to 8) and 3 days (2 to 6) for the delirious and non delirious groups, respectively.	Length of Stay in hospital	● Age: 52.5 years (32 to74) ● Cognitive impairment: Unclear or Not stated; Not stated. ● Gender[M:F]: 129:132. ● Comorbidity/Severity of Illness: Charlson comorbidity: median (IQR): 4(2-7): 3 (1-6); APACHE II score: 15 (10-21): 11(6-16).	Age, gender, race, APACHE II score, Charlson co-morbidity index, coma status, delirium	● No.events/no. covariates = 260/7 = 37. ● Number key RFs: 3/3 (age, comorbidity, severity of illness). ● Number of pts with delirium : 125/261 (48%) at least 1 episode [not all at baseline]; ● No. pts developing outcome: Length of stay in hospital= 260

Outcome measure Length of stay

Specifically: Length of stay - ICU

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Thomason 2005; prospective cohort study in 261 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.29 (0.98, 1.69)	p=0.07; Median (IQR): 4 days (3 to 5) and 3 days (2 to 4) for the delirious and non delirious groups, respectively	Length of Stay in ICU	● Age: 52.5 years(32 to74) ● Cognitive impairment: Unclear or Not stated; Not stated. ● Gender[M:F]: 129:132. ● Comorbidity/Severity of Illness: Charlson comorbidity: median (IQR): 4(2-7): 3 (1-6); APACHE II score: 15 (10-21): 11(6-16).	Age, gender, race, APACHE II score, Charlson co-morbidity index, coma status, delirium	● No.events/no. covariates = 260/7 = 37. ● Number key RFs: 3/3 (age, comorbidity, severity of illness). ● Number of pts with delirium : 125/260(48%) at least 1 episode [not all at baseline]; ● No. pts developing outcome: Length of stay in ICU: 260 patients

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Length of stay
Specifically: Length of stay - post ICU

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Ely 2004; prospective cohort study in 275 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.6 HR (1.1, 2.3)	p=0.002;each additional day an ICU patient spent in delirium and the associated risk of remaining in the hospital; Median (IQR): 7 (4 to 15.5) : 5 (2 to 7) for the delirious and non delirious groups,	For each additional day an ICU patient spent in delirium	● Age: 55 years (37 to 73) ● Cognitive impairment: Unclear or Not stated; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6); Comorbidity: Charlson comorbidity index: Mean(SD): 3.2 (SD2.8).	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 196/12 = 16. ● Number key RFs: 3/3(age, comorbidity, severity of illness). ● Number of pts with delirium : prevalent:89/275 (32.4%); incident delirium: 183/224, of whom 123 were in coma; ● No. pts developing outcome: Length of Stay: details on outcome for 196 patients

Outcome measure   Hospital acquired complications
Specifically: Hospital acquired complications

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
O'Keeffe 1997; prospective cohort study in 225 patients. Funding: Unclear/Not stated. Setting: Hospital; Medical ward	multivariate adjusted OR	2.3 (1.7, 5)		Urinary incontinence: recorded as a complication of hospitalistion if new onset or worsening of loss of urine was noted after admission to hospital. Patients wirth frequent incontinence or catheter on admission were excluded from analysis (19/225);	● Age: 82 years (76 to 88) ● Cognitive impairment: Some patients with cognitive impairment; 60/225(27%)with chronic cognitive impairment based on Blessed Dementia Rating score ≥4 or if cog impairment interfered with social fx of at least6mo. ● Gender[M:F]: 79:146. ● Comorbidity/Severity of Illness: Severity of illness[deliriumvs no delirium]: Mild:23:50; Moderate:29:59; Severe:42:22; Severity rating made by study physician.	age, severity of illness[2 levels], comorbid disease, disability score, chronic cognitive impairment, length of stay	● No.events/no. covariates = 222/7 = 32. ● Number key RFs: 2/5 (age, cognitive impairment). ● Number of pts with delirium : 41/225 (18%) at admission; evaluated within 48hrs; incident: 53 patients; ● No. pts developing outcome: Hospital acquired complications: Falls: 28/225; Pressure sores: 8/202; urinary incontinence: 86/206;any complication:100/225

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Mortality or new admission to institution

Specifically: Mortality or new admission to institution - discharge

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	2.1 (1.1, 4)		Defined as a new placement of a patient who had not been institutionalised at the time of hospital admission	● Age: 78.9 years (72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:19% met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5). ● Other factors: ADL & IADL: patient's status 2 weeks prior to hospital admission; ADL: mean (SD) across 3 sites: 5.1 (SD 1.4); IADL:4.9 (SD 2.2)	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 95/7 = 14. ● Number key RFs: 4/5 (ADL, age cognitive impairment[dementia], severity of illness). ● Number of pts with delirium : Prevalent:88/727 (12%) [in text]; 90/727 [in table]; ● No. pts developing outcome: Mortality or new admission to institution [at discharge] : 95/727(12%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Mortality or new admission to institution

Specifically: Mortality or new admisson to institution - 1 month

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Givens 2008; prospective cohort study in 126 patients. Funding: Unclear/ Not stated. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted mean	4.26 (1.49, 12.16)	p=0.007; The CI was calculated from the standard error which was determined on a trial/error basis based on the reported p-value.	Not stated	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 50/126(40%) with cognitive impairment; based on proxy interview using Blessed score of ≥ 4 [range 0 to 28]; Mean: (5 SD5). ● Gender[M:F]: 27:99. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126).	Age, gender, race intervention status, number of medical comorbidities, ADL	● No.events/no. covariates = 33/7 = 5. ● Number key RFs: 3/5 (age, ADL, comorbidity). ● Number of pts with delirium : Incident:52/126 (41%); ● No. pts developing outcome: Mortality or new admission to institution (1mo.):26%
Marcantonio 2000; prospective cohort study in 126 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	3 (1.1, 8.4)		Not stated	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 50/126(40%) with cognitive impairment; based on proxy interview using Blessed score of >= 4 [range 0 to 28]; Mean: (5 SD5);. ● Gender[M:F]: 27:99. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126).	Age, baseline cognitive impairment, ADL functional impairment, medical comorbidity [1 level]	● No.events/no. covariates = 33/5 = 7. ● Number key RFs: 4/5 (age, cognitive impairment, ADL, comorbidity). ● Number of pts with delirium : Incident:52/126 (41%); ● No. pts developing outcome: Mortality or new admission to institution (1mo.):33/126(26%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality or new admission to institution

Specifically: Mortality or new admission to institution - 3 months

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:		factors adjusted for in multivariate analysis
Inouye 1998; prospective cohort study in 727 patients. Funding: Grant-other. Setting: Hospital; Mixed: Medical/Surgical ward (unclear/not stated surgery)	multivariate adjusted OR	2.6 (1.4, 4.5)	Mortality/new admission - 3months	Defined as a new placement of a patient who had not been institutionalised at the time of hospital admission	● Age: 78.9 years(72 to 85.8) ● Cognitive impairment: Some patients with cognitive impairment; Cognitive impairment:19% met criteria for dementia; assessed with MMSE; Mean MMSE(across the 3 sites): 23.5(SD5.4). ● Gender[M:F]: 291:436. ● Comorbidity/Severity of Illness: Severity of illness: APACHE II (admission); Mean across three study sites: 12.4 (SD 4.5). ● Other factors: ADL & IADL: patient's status 2 weeks prior to hospital admission; ADL: mean (SD) across 3 sites: 5.1 (SD 1.4); IADL:4.9 (SD 2.2)	Age, gender, dementia, APACHE II, ADL score & IADL score	● No.events/no. covariates = 165/7 = 24. ● Number key RFs: 4/5 (ADL, age cognitive impairment[dementia], severity of illness). ● Number of pts with delirium : Prevalent:88/727 (12%) [in text]; 90/727 [in table]; ● No. pts developing outcome: Mortality or new admission to institution [3 months] : 165/663(25%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality or new admission to institution

Specifically: Mortality or new admission to institution - 6 month

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:		factors adjusted for in multivariate analysis
Givens 2008; prospective cohort study in 126 patients. Funding: Unclear/ Not stated. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	2.17 (0.73, 6.49)	p=0.17; The CI was calcuated form the standard error which was determined on a trial/error basis based on the reported p-value.	Not stated	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 50/126(40%) with cognitive impairment; based on proxy interview using Blessed score of ≥ 4 [range 0 to 28]; Mean: 5 (SD5). ● Gender[M:F]: 27:99. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126).	Age, gender, race intervention status, number of medical comorbidities, ADL	● No.events/no. covariates = 28/7 = 4. ● Number key RFs: 3/5 (age, ADL, comorbidity). ● Number of pts with delirium : Incident:52/126 (41%); ● No. pts developing outcome: Mortality or new admission to institution (1mo.):11%
Marcantonio 2000; prospective cohort study in 126 patients. Funding: Grant-other. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	1.8 (0.6, 5.1)		Not stated	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 50/126(40%) with cognitive impairment; based on proxy interview using Blessed score of >= 4 [range 0 to 28]; Mean: (5 SD5);. ● Gender[M:F]: 27:99. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126).	Age, baseline cognitive impairment, ADL functional impairment, medical comorbidity [1 level]	● No.events/no. covariates = 28/5 = 6. ● Number key RFs: 4/5 (age, cognitive impairment, ADL, comorbidity). ● Number of pts with delirium : Incident:52/126 (41%); ● No. pts developing outcome: Mortality or new admssion to institution (3mo.):28/126(22%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure Mortality or new admission to institution

Specifically: Mortality or new admission to institution -1 year

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
McAvay 2006; prospective cohort study in 637 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	2.64 (1.6, 4.35)	Delirium at discharge vs never delirious	Nursing home placement or death; Admission to nursing homes determined using medicare claims, state registry, follow-up interveiw. Mortality status determined form follow-up interviews, Social Security Death Index and local obituraies.	● Age: 80 years (70 to 99) ● Cognitive impairment: Some patients with cognitive impairment; 12.2% (53/433)Patients with profound dementia excluded; MMSE <24: 189/433 (44%).. ● Gender[M:F]: 172:261. ● Comorbidity/Severity of Illness: Charlson comorbidity index (n): 0: 50; 1: 90; ≥2:293.	Age (continuous), marital status, dementia, Geriatric Depression Scale score ≥7, any activity of daily living impairment, Charlson Comorbidity Index[2 levels:0 vs 1; 0 vs 2], delirium [2 levels]	● No.events/no. covariates = 198/9 = 22. ● Number key RFs: 4/5 (ADL, age, comorbidity,cognitive impairment[dementia]). ● Number of pts with delirium : incident: 339/1874 (18.1%); Delirium(discharge): 24/433; ● No. pts developing outcome: Mortality or New admission to nursing home: 198/402
McAvay 2006; prospective cohort study in 637 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.53 (0.96, 2.43)	Delirium resolved vs never delirious	Nursing home placement or death; Admission to nursing homes determined using medicare claims, state registry, follow-up interveiw. Mortality status determined form follow-up interviews, Social Security Death Index and local obituraies.	● Age: 80 years (70 to 99) ● Cognitive impairment: Some patients with cognitive impairment; 12.2% (53/433)Patients with profound dementia excluded; MMSE <24: 189/433 (44%).. ● Gender[M:F]: 172:261. ● Comorbidity/Severity of Illness: Charlson comorbidity index (n): 0: 50; 1: 90; ≥2:293.	Age (continuous), marital status, dementia, Geriatric Depression Scale score ≥7, any activity of daily living impairment, Charlson Comorbidity Index[2 levels:0 vs 1; 0 vs 2], delirium [2 levels]	● No.events/no. covariates = 198/9 = 22. ● Number key RFs: 4/5 (ADL, age, comorbidity,cognitive impairment[dementia]). ● Number of pts with delirium : incident: 339/1874 (18.1%); Delirium(discharge): 24/433; ● No. pts developing outcome: Mortality or New admission to nursing home: 198/402

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Incidence of Delirium**

Outcome measure   Mortality or new admission to institution

Specifically: Mortality or new admission to institution -1 year

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
McAvay 2006; prospective cohort study in 637 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.73 (0.92, 3.26)	Delirium discharged vs delirium resolved	Nursing home placement or death; Admission to nursing homes determined using medicare claims, state registry, follow-up interveiw. Mortality status determined form follow-up interviews, Social Security Death Index and local obituraies.	● Age: 80 years (70 to 99) ● Cognitive impairment: Some patients with cognitive impairment; 12.2% (53/433)Patients with profound dementia excluded; MMSE <24: 189/433 (44%).. ● Gender[M:F]: 172:261. ● Comorbidity/Severity of Illness: Charlson comorbidity index (n): 0: 50; 1: 90; ≥2:293.	Age (continuous), marital status, dementia, Geriatric Depression Scale score ≥7, any activity of daily living impairment, Charlson Comorbidity Index[2 levels:0 vs 1; 0 vs 2], delirium [2 levels]	● No.events/no. covariates = 198/9 = 22. ● Number key RFs: 4/5 (ADL, age, comorbidity,cognitive impairment[dementia]). ● Number of pts with delirium : incident: 339/1874 (18.1%); Delirium(discharge): 24/433; ● No. pts developing outcome: Mortality or New admission to nursing home: 198/402

Outcome measure

Specifically: Mortality or residing in institution- 2 years

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Pitkala 2005; prospective cohort study in 425 patients. Funding: Grant-other. Setting: Mixed; Other ward	multivariate adjusted OR	2.81 (1.4, 5.8)		Determined from medical records and central registers. Those living in a nursing home at baseline were excluded for admission to long term care	● Age: Age over 85 years: 59% [250/425] ● Cognitive impairment: Some patients with cognitive impairment; Clinical Dementia Rating Scale & criteria of dementia according to DSM IV, prior diagnoses of dementia & medical records for consensus by geriatrician. ● Gender[M:F]: 78:347. ● Comorbidity/Severity of Illness: Severity: Charlson Comorbidity index: 2.3 (SD 1.6): 2.2(SD 1.5). ● Other factors: ADL: assessed by CDR class ≥1 'personal care'; 89/106:234/319 patients dependent in ADL functioning in the delirious and non delirious groups, respectively.	age, gender, education, dementia, comorbidity and ADL dependence	● No.events/no. covariates = 336/7 = 48. ● Number key RFs: 4/5 (age,ADL, dementia,comorbidity). ● Number of pts with delirium : prevalent: 106/425 (24.9%); ● No. pts developing outcome: Mortality or New admission to institution (new): 336/425 (79%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Duration of delirium**

Outcome measure Mortality

Specifically: Mortality - 6 months

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	*factors adjusted for in multivariate analysis*	
Ely 2004; prospective cohort study in 224 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.1 HR (1, 1.3)	p=0.03; Associated risk of an additional day an ICU patient spent in delirium	For each additional day an ICU patient spent in delirium and the risk of mortality	● Age: 55 years (37 to 73) ● Cognitive impairment: Unclear or Not stated; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6).	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 69/12 = 6. ● Number key RFs: 3/3 (age, dementia,severity of illness). ● Number of pts with delirium : Duration of delirium: not report89/275 (32.4%); incident delirium: 183/224, of whom 123 were in coma; ● No. pts developing outcome: Mortality-6mo : 69/224

Outcome measure Length of stay

Specifically: Length of stay- hospital

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	*factors adjusted for in multivariate analysis*	
Ely 2004; prospective cohort study in 224 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.2 (1.1, 1.3)		For each additional day an ICU patient spent in delirium and the associated increased risk of remaining in the hospital	● Age: 55 years (37 to 73) ● Cognitive impairment: Unclear or Not stated; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6).	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 224/12 = 19. ● Number key RFs: 3/3 (age, severity of illness, comorbidity). ● Number of pts with delirium : Prevalent89/275 (32.4%); incident delirium: 183/224, of whom 123 were in coma; ● No. pts developing outcome: Length of stay (ICU): 224

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Duration of delirium**

Outcome measure   Length of stay

Specifically: Length of stay - post ICU

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Ely 2004; prospective cohort study in 224 patients. Funding: Grant-other. Setting: Hospital; ICU ward	multivariate adjusted HR	1.1 (1, 1.2)		For each additional day an ICU patient spent in delirium and the associated increased risk of remaining in the ward	● Age: 55 years (37 to 73) ● Cognitive impairment: Unclear or Not stated; modified Blessed Dementia Rating Scale (range 0-17) - measures patient's baseline likelihood of dementia; Mean mBDRS 0.23(0.8):0.14(SD 0.6). ● Gender[M:F]: 113:111. ● Comorbidity/Severity of Illness: Severity of illness: assessed with APACHE II, most abnormal value during first 24h of ICU stay used to calculate severity of illness; 25.6 (SD8.1):23.2(9.6).	Age at enrollment, Charlson Comorbidity Index, mBDRS score, APACHE II score, SOFA score, admitting diagnoses of sepsis or acute respiratory distress syndrome, sedative & analgesic medications (lorazepam, propofol,morphine,fentanyl), time-dependent coma variable	● No.events/no. covariates = 196/12 = 16. ● Number key RFs: 3/3 (age, severity of illness, comorbidity). ● Number of pts with delirium : Prevalent:89/275 (32.4%); incident delirium: 183/224, of whom 123 were in coma; ● No. pts developing outcome: Length of stay (post ICU):196

Outcome measure   Mortality or functional decline

Specifically: Mortality or functional decline- discharge

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Andrew 2005; prospective cohort study in 77 patients. Funding: No funding. Setting: Mixed; Mixed: Medical/Surgical ward	multivariate adjusted OR	1.1 (1, 1.2)		Mortality or functional decline decline (at hospital discharge)	● Age: 78.5 years (64 to 93) ● Cognitive impairment: Some patients with cognitive impairment; Dementia assessed with DSM III criteria;/ cognitive status:medical record. ● Gender[M:F]: 34:43. . ● Other factors: Barthel Index Score: Premorbid: 86.6 (42 to 100); At discharge: 78.9 (0 to 100); At 6mo. Follow up: 78.2 (6 to 100)	Age, sex, frailty (Geriatric Status Score)	● No.events/no. covariates = 32/4 = 8. ● Number key RFs: 1/3(age). ● Number of pts with delirium : 100%; Duration of delirium:6.3 days(SD6.1);Cause of delirium was due to meds/alcohol:39%; ● No. pts developing outcome: Mortality or functional decline: 26/71 (37%); Mortality: 6/71 (30%)

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Duration of delirium**

Outcome measure

Specifically: Mortality or functional decline- 6 months

Study name	*Outcome*	*Sum stats (95%CI)*	*comments:*	*consequences details:*	*other details:*	*factors adjusted for in multivariate analysis*	
Andrew 2005; prospective cohort study in 77 patients. Funding: No funding. Setting: Mixed; Mixed: Medical/Surgical ward	multivariate adjusted OR	1.2 (1, 1.4)		Mortality or functional decline decline (at hospital discharge)	● Age: 78.5 years (64 to 93) ● Cognitive impairment: Some patients with cognitive impairment; Dementia assessed with DSM III criteria; cognitive status:medical record. ● Gender[M:F]: 34:43. . ● Other factors: Barthel Index Score: Premorbid: 86.6 (42 to 100); At discharge: 78.9 (0 to 100); At 6mo. Follow up: 78.2 (6 to 100)	Age, sex, frailty (Geriatric Status Score)	● No.events/no. covariates = 48/4 = 12. ● Number key RFs: 1/3(age). ● Number of pts with delirium : 77/77 (100%); Duration of delirium:6.3days(SD 6.1); ● No. pts developing outcome: Mortality or functional decline: 48/71 (68%);

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Severity of delirium**

Specifically: Mortality - 1 year

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Leslie 2005; prospective cohort study in 919 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.62 (1.21, 2.17)	Less severe delirium:n= 80		● Age: 80 years (73.5 to 86.5) ● Cognitive impairment: Some patients with cognitive impairment; Assessed with MMSE (<24) 44%: [406/919] and Blessed Score. ● Gender[M:F]: 365:554. ● Comorbidity/Severity of Illness: Charlson comorbidity index socre of >1: 643/919;.	Age, male, delirium[2 levels], ADL impairment, Charlson comorbidity index score [2 levels]	● No.events/no. covariates = 208/7 = 30. ● Number key RFs: 1/3 (age). ● Number of pts with delirium : incident: 115/919 [13%]; ● No. pts developing outcome: Mortality: 208/919 (23%); Less severe delirium: 80; More severe delirium:16
Leslie 2005; prospective cohort study in 919 patients. Funding: Grant-other. Setting: Hospital; Medical ward	multivariate adjusted HR	1.89 (1.21, 2.17)	More severe delirium n=16		● Age: 80 years (73.5 to 86.5) ● Cognitive impairment: Some patients with cognitive impairment; Assessed with MMSE (<24) 44%: [406/919] and Blessed Score. ● Gender[M:F]: 365:554. ● Comorbidity/Severity of Illness: Charlson comorbidity index socre of >1: 643/919;.	Age, male, delirium[2 levels], ADL impairment, Charlson comorbidity index score [2 levels]	● No.events/no. covariates = 208/7 = 30. ● Number key RFs: 1/3 (age). ● Number of pts with delirium : incident: 115/919 [13%]; ● No. pts developing outcome: Mortality: 208/919 (23%); Less severe delirium: 80; More severe delirium:16

Appendix F: Multivariate risk factors: Consequences of delirium

Risk factor: **Severity of delirium**

Outcome measure   Mortality or new admission to institution

Specifically: Mortality or new admisson to institution - 1 month

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Marcantonio 2002; prospective cohort study in 122 patients. Funding: Unclear/ Not stated. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	1.9 (0.5, 8)		Not stated	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 31/49 (63%) with cognitive impairment in the mild and severe delirium groups ; based on proxy interview using Blessed score of ≥4; Mean: 5 (SD5). ● Gender[M:F]: 26:96. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126). ● Other factors: ADL impariment: 19/49; ADL decline was defined as a full decline from independent to dependent in one or more ADLs or patial decline in 2 or more ADLs from	ADL, cognitive impairment	● No.events/no. covariates = 22/3 = 7. ● Number key RFs: 2/5 (ADL, cognitive impairment). ● Number of pts with delirium : incident: 49/126 (40%); ● No. pts developing outcome: Mortality/Admission to new institution : 1 mo: 22/49(44%)

Outcome measure   Mortality or new admission to institution

Specifically: Mortality or new admission to institution - 6mo

Study name	Outcome	Sum stats (95%CI)	comments:	consequences details:	other details:	factors adjusted for in multivariate analysis	
Marcantonio 2002; prospective cohort study in 122 patients. Funding: Unclear/ Not stated. Setting: Hospital; Surgical ward (orthopaedic surgery)	multivariate adjusted OR	4.4 (0.9, 21.1)		New nursing home placement defined as living in a nursing home at time of follow-up interview for patients who had been community dwelling before hospital admission.	● Age: 79 years (71 to 87) ● Cognitive impairment: Some patients with cognitive impairment; 31/49 (63%) with cognitive impairment in the mild and severe delirium groups ; based on proxy interview using Blessed score of ≥4; Mean: 5 (SD5);. ● Gender[M:F]: 26:96. ● Comorbidity/Severity of Illness: Charlson comorbidity: 0-1: 29% (29/126); 2-3: 41% (52/126); 4 or more: 36% (45/126). ● Other factors: ADL impariment: 19/49; ADL decline was defined as a full decline from independent to dependent in one or more ADLs or patial decline in 2 or more ADLs from	ADL, cognitive impairment	● No.events/no. covariates = 17/3 = 6. ● Number key RFs: 2/5 (ADL, cognitive impairment). ● Number of pts with delirium : incident:49/126 (40%); ● No. pts developing outcome: Mortality/Admission to new institution : 6 mo: 17/49(35%)