Table S1 – Delirium prevalence and recognition at participating sites

	Delirium prevalence - % (N)	Delirium recognition - % (N)
Hospital 1	22.6 (7/31)	57.1 (4/7)
Hospital 2	16.7 (2/12)	0.0 (0/2)
Hospital 3	9.1 (3/33)	33.3 (1/3)
Hospital 4	26.7 (4/15)	25.0 (1/4)
Hospital 5	19.2 (5/26)	40.0 (2/5)
Hospital 6	31.4 (11/35)	72.7 (8/11)
Hospital 7	14.7 (5/34)	40.0 (2/5)
Hospital 8	27.8 (5/18)	20.0 (1/5)
Hospital 9	23.8 (5/21)	40.0 (2/5)
Hospital 10	25.9 (7/27)	85.7 (6/7)
Hospital 11	23.1 (3/13)	66.7 (2/3)
Hospital 12	14.0 (6/43)	66.7 (4/6)
Hospital 13	19.0 (4/21)	75.0 (3/4)
Hospital 14	13.8 (4/29)	50.0 (2/4)
Hospital 15	3.8 (1/26)	100.0 (1/1)
Hospital 16	27.6 (8/29)	37.5 (3/8)
Hospital 17	38.5 (10/26)	60.0 (6/10)
Hospital 18	14.3 (2/14)	50.0 (1/2)
Hospital 19	29.6 (8/27)	75.0 (6/8)
Hospital 20	14.3 (3/21)	66.7 (2/3)
Hospital 21	16.7 (1/6)	0.0 (0/1)
Hospital 22	14.3 (3/21)	66.7 (2/3)
Hospital 23	33.3 (5/15)	80.0 (4/5)
Hospital 24	37.5 (6/16)	83.3 (5/6)
Hospital 25	28.0 (7/25)	28.6 (2/7)
Hospital 26	8.7 (2/23)	0.0 (0/2)
Hospital 27	26.3 (5/19)	100.0 (5/5)

Table S2 – Logistic regression of variables predictive of delirium presence

The presence of dementia and increasing frailty were associated with increased likelihood of delirium. Admission under other surgery specialties was associated with reduced likelihood of delirium as compared to acute medicine.

		Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
							Lower	Upper	
Age		0.02	0.01	1.61	1	1.02	0.99	1.05	0.205
Gender		-0.43	0.22	3.77	1	0.66	0.43	1.00	0.052
Dementia		0.92	0.25	13.19	1	2.51	1.53	4.13	<0.001*
Frailty c.f. 1-3				12.77	2				0.002*
	4-6	0.96	0.34	8.07	1	2.61	1.35	5.05	0.004*
	7-9	1.40	0.39	12.72	1	4.04	1.88	8.71	<0.001*
				12.76	6				0.047

Specialty c.f. Acute medicine	Geriatric medicine	0.12	0.30	0.16	1	1.13	0.63	2.01	0.691
	Stroke	-2.15	1.06	4.14	1	0.12	0.02	0.92	0.042
	Other medicine	-0.25	0.32	0.61	1	0.78	0.42	1.45	0.433
	Other surgery	-2.34	1.05	4.98	1	0.10	0.01	0.75	0.026
	General surgery	-0.55	0.51	1.15	1	0.58	0.21	1.58	0.284
	Orthopaedic surgery	-0.56	0.47	1.40	1	0.57	0.23	1.44	0.237

Table S3 – Logistic regression of variables predictive of screening for delirium being performed

		Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
							Lower	Upper	
Age		0.03	0.01	4.67	1	1.03	1.00	1.05	0.031*
Gender		<0.01	0.19	<0.01	1	1.00	0.70	1.45	0.982
Dementia		0.49	0.24	4.06	1	1.63	1.01	2.61	0.044*
Frailty c.f. 1-3				7.10	2				0.029*
	4-6	0.20	0.23	0.74	1	1.22	0.77	1.94	0.389
	7-9	-0.51	0.33	2.32	1	0.60	0.31	1.16	0.128
Specialty c.f. Acute medicine				20.59	6				0.002*
	Geriatric medicine	0.44	0.27	2.76	1	1.55	0.92	2.61	0.097*
	Stroke	-0.49	0.49	1.00	1	0.61	0.24	1.59	0.315
	Other medicine	-0.58	0.28	4.26	1	0.56	0.33	0.97	0.039*
	Other surgery	-0.35	0.42	0.67	1	0.71	0.31	1.62	0.412
	General surgery	-0.88	0.44	4.00	1	0.41	0.18	0.98	0.045*
	Orthopaedic surgery	-0.55	0.38	2.04	1	0.58	0.27	1.23	0.153

Increasing age and admission under geriatric medicine as compared to acute medicine were associated with increased likelihood of screening for delirium being performed.

Table S4 – Logistic regression of the association of delirium with inpatient mortality

	Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
						Lower	Upper	
Delirium unadjusted	1.56	0.31	24.56	1	4.74	2.56	8.76	<0.001
Delirium adjusted¥	1.19	0.35	11.53	1	3.27	1.65	6.48	<0.001

The presence of delirium was associated with an increased likelihood of death within 30 days of admission in both univariable and multivariable analysis.

¥ Delirium adjusted for age, gender, dementia status, frailty, and specialty

Table S5 – Logistic regression for the association of delirium with discharge to a new care home

The presence of delirium was associated with increased chance of discharge to a new care home in univariable by not multivariable analysis (including frailty and dementia status).

	Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
						Lower	Upper	
Delirium unadjusted	0.95	0.44	4.55	1	2.57	1.08	6.14	0.033
Delirium adjusted¥	0.23	0.50	0.22	1	1.26	0.48	3.36	0.639

¥ Delirium adjusted for age, gender, dementia status, frailty, and specialty

Table S6 – General linear model for the impact of delirium on $\log^{10}$ length of stay in multivariable analysis

Only frailty independently impacted upon length of stay.

Source	Type III Sum of squares	Freedom	Mean square	F	p value
Corrected model	5.58	12	0.47	4.29	<0.001
Intercept	3.23	1	3.23	29.78	<0.001
Delirium	0.37	1	0.37	3.37	0.067
Gender	0.03	1	0.03	0.28	0.600
Specialty	1.35	6	0.23	2.08	0.054
Dementia	0.06	1	0.06	0.59	0.444
Frailty	1.05	2	0.53	4.84	0.008
Age	0.06	1	0.06	0.57	0.450
Error	61.19	564	0.11		
Total	520.55	577			

Corrected total	66.77	576			

Table S7 – Comparison of main effects for delirium status and log^{10} length of stay

The presence of delirium did not significantly impact upon length of stay

Delirium status (a)	Delirium status (b)	Mean difference (b-a)	S.E.	p value	Confidence interval	
					Lower	Upper
No delirium	Delirium	0.07	0.04	0.067	-0.01	0.14

Table S8 – Logistic regression for the impact of recognition of delirium upon inpatient mortality

Recognition of delirium did not impact upon likelihood of inpatient mortality.

	Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
						Lower	Upper	
Recognition unadjusted	-0.53	0.45	1.34	1	0.59	0.24	1.44	0.247
Recognition adjusted¥	-0.50	0.51	0.97	1	0.61	0.22	1.64	0.324
Recognition adjusted‡	-0.56	0.55	1.05	1	0.57	0.20	1.67	0.305

¥ Recognition adjusted for age, gender, dementia status, frailty, and specialty

‡ Recognition adjusted for variables above, duration, and subtype

Table S9 – Logistic regression for the impact of recognition of delirium upon likelihood of discharge to a new care home

Recognition of delirium did not impact upon the likelihood of discharge to a new care home. The odds ratios represent the likelihood of discharge to a new care home compared to previous residence in home own home in recognised delirium compared to unrecognised delirium.

	Beta	S.E.	Wald	Freedom	OR	Confidence Interval		p value
						Lower	Upper	
Recognition unadjusted	1.55	1.10	2.00	1	4.73	0.55	40.84	0.158
Recognition adjusted¥	1.50	1.25	1.43	1	4.47	0.38	52.07	0.232
Recognition adjusted‡	0.95	1.41	0.45	1	2.59	0.16	41.43	0.501

¥ Recognition adjusted for age, gender, dementia status, frailty, and specialty

‡ Recognition adjusted for variables above, duration, and subtype

Table S10 – General linear model for the impact of recognition of delirium upon log^{10} length of stay

Recognition of delirium was not associated with length of stay. Delirium duration was associated with length of stay.

Source	Type III Sum of squares	Freedom	Mean square	F	p value	Partial Eta squared
Corrected model	4.49	16	0.28	4.38	<0.001	0.44
Intercept	0.44	1	0.44	6.86	0.010	0.07
Recognition	<0.01	1	<0.01	0.03	0.860	<0.01
Gender	0.12	1	0.12	1.79	0.184	0.02
Specialty	0.53	6	0.09	1.39	0.23	0.09
Dementia	<0.01	1	<0.01	0.22	0.639	<0.01
Subtype	0.09	3	0.03	0.47	0.703	0.01
Age	<0.01	1	<0.01	0.03	0.860	<0.01
Duration	2.94	1	2.94	45.81	<0.001	0.337
Error	5.77	90	0.06			
Total	115.32	107				
Corrected total	10.26	106				

Table S11 – Comparison of main effects for recognition of delirium and log^{10} length of stay

There was no significant difference in length of stay between those with recognised and unrecognised delirium.

Recognition status (a)	Recognition status (b)	Mean difference (b-a)	S.E.	p value	Confidence interval	
					Lower	Upper
Recognised	Unrecognised	0.01	0.06	0.860	-0.10	0.12

Table S12 – General linear model for the impact of delirium recognition upon log^{10} delirium duration

Recognition was associated with log^{10} delirium duration in multivariable analysis. No other variables impacted upon delirium duration.

Source	Type III Sum of squares	Freedom	Mean square	F	p value	Partial Eta squared
Corrected model	3.74	15	0.25	1.68	0.065	0.18
Intercept	0.28	1	0.28	1.91	0.170	0.02
Recognition	0.97	1	0.97	6.51	0.013	0.05
Gender	0.11	1	0.11	0.77	0.383	0.01
Specialty	1.13	6	0.19	1.27	0.28	0.06

Dementia	0.08	1	0.08	0.55	0.459	0.01
Subtype	0.54	3	0.19	1.26	0.288	0.02
Age	0.01	1	0.01	0.09	0.764	<0.01
Error	16.92	114	0.15			
Total	90.61	130				
Corrected total	20.66	129				

Table S13 – Comparison of main effects for impact of recognition upon log^{10} delirium duration

Unrecognised delirium was associated with a reduced mean log^{10} delirium duration compared to recognised delirium.

Recognition status (a)	Recognition status (b)	Mean difference (b-a)	S.E.	p value	Confidence interval	
					Lower	Upper
Recognised	Unrecognised	-0.19	0.07	0.013	-0.34	-0.04