

# Drivers of care costs and quality in the last three months of life among older people receiving palliative care: a multinational mortality follow-back survey across England, Ireland and the USA

## Online-Only Supplements

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e-Figure 1. Distribution of community care costs in the last three months of life among older patients who had access to specialist palliative care

**e-Table 1.** Comparison Age of Study Sample and National Population for the three countries (years)

Country	England	Ireland	USA
Sample	79.7	80.8	78.5
Population	83.0	83.3	81.9

*Source:* Office of National Statistics(1), Central Statistics Office(2), Centre for Disease Control and Prevention(3).

**e-Table 2.** Comparison of Place of Death for the Study Sample and National Populations for the three countries (unit: %)

		Place of death				
		Hospital	Hospice	Own home or relative's home	Care home	Other
England	Sample	62	9	22	7	0
	Population	55	5	21	18	1
Ireland	Sample	77	3	12	1	7
	Population	43	6	26	25	0
USA	Sample	48	27	17	3	5
	Population	37	8	30	19	6

*Source:* Centre for Disease Control and Prevention(3), Help the Hospice et al(4), Irish Hospice Foundation(5)

**e-Table 3. Specialist Palliative Care Service Profile in Participating Cities**

Specialist palliative care service	Participating cities		
	London	Dublin	New York
Hospital palliative care team(s) providing a consultative service	Medical Attendings/Consultants, fellows/trainee doctors, clinical nurse specialists/practitioners, psychosocial/social workers, administrative support	Medical Attendings/Consultants, fellows/trainee doctors, clinical nurse specialists/practitioners, psychosocial/social workers, administrative support	Medical Attendings/Consultants, fellows/trainee doctors, clinical nurse specialists/practitioners
Inpatient palliative care unit within service	No	No	Yes, 10 beds
Extended team	Chaplaincy, pharmacy	Pharmacy, physiotherapy, chaplaincy	Social workers, chaplaincy, fellows/trainee doctors, triage nurse
Outpatient clinics	Yes	Yes	Yes
Community palliative care team	Yes (part of catchment area)	No	Yes
On call for specialist advice and emergencies	Yes	Yes	Yes
On call weekend ward rounds	Yes	No	Yes
Co-operation with local hospices <sup>a</sup>	Yes	Yes	Yes
Funding	Paid for by a tariff specifically for activity as part of National Health Service within the hospitals, local inpatient services in hospices paid for by mix of charity and National Health Service. Additional charitable support for components.	Paid for as part of historic block grant allocation as part of National Health Service within the hospitals. Additional charitable support for components.	Program is funded through physician and advance practice nurse billing under Medicare Part B, the Mount Sinai Hospital through Medicare Part A revenues, and contributions from private sector philanthropy.
Annual referrals to services (all ages) at time of study, % >65 years, % with cancer.	1450 Annual referrals (KCH) 70% aged over 65 years 35% Cancer, 65% Non cancer	1370 Annual referrals (MMUH + Beaumont) 74% aged over 65 years 65% Cancer, 35% Non cancer	2175 Annual referrals (consultation service) 57% aged over 65 years 34% Cancer, 66% Non cancer

<sup>a</sup> Able to refer to external local hospices (i.e., inpatient care and day care, outpatient, community palliative care).

*Note.* Reprinted from “Social and clinical determinants of preferences and their achievement at the end of life: prospective cohort study of older adults receiving palliative care in three countries”, by Higginson IJ et al., 2017, BMC Geriatrics, 17:271. p4.

**e-Table 4.** Service use during the last three months of life among old patients with access to specialist palliative care.

	England (N=245)				Ireland (N=282)				US (N=240)			
	Cancer (N=146)		Non-cancer(N=96)		Cancer (N=134)		Non-cancer (N=147)		Cancer (N=93)		Non-cancer (N=147)	
	User (%)	Mean per user(s.d.)	User (%)	Mean per user(s.d.)	User (%)	Mean per user(s.d.)	User (%)	Mean per user(s.d.)	User (%)	Mean per user(s.d.)	User (%)	Mean per user(s.d.)
<b>Hospital care</b>												
Intensive care unit (days) <sup>abc</sup>	29(19.9)	7.7(5.4)	25(26.0)	14.8(22.2)	48(35.8)	17.3(22.2)	44(29.9)	19.9(26.3)	32(34.4)	14.7 (17.7)	82(55.8)	14.6(17.5)
Inpatient stay not ICU (days) <sup>a</sup>	122(83.6)	22.8(22.2)	75(78.1)	22.6(21.8)	94(70.1)	28.2(24.1)	123(83.7)	41.4(31.2)	79(84.9)	16.3(16.9)	111(75.5)	13.8(16.4)
Ambulance service (times) <sup>ac</sup>	98(67.1)	3.4(5.5)	72(75.0)	2.5(2.6)	66(49.3)	2.1(1.8)	105(71.4)	1.9(1.7)	48(51.6)	2.1(1.3)	101(68.7)	2.0(1.5)
Emergency room	90(61.6)	2.4(1.6)	63(65.6)	1.9(0.9)	88(65.7)	1.9(1.3)	106(72.1)	1.9(1.6)	58(62.4)	2.2(1.3)	83(56.5)	2.0(1.9)
Outpatient radiotherapy <sup>c</sup>	27(18.5)	6.0(6.4)	1(1.0)	7.0(n/a)	25(18.7)	6.6(8.0)	4(2.7)	7.3(11.0)	18(19.4)	8.5(8.1)	9(6.1)	7.7(7.5)
Outpatient chemotherapy <sup>c</sup>	42(28.8)	4.9(5.7)	0(0.0)		31(23.1)	7.4(8.3)	2(1.4)	2.0(1.4)	27(29.0)	7.0(6.0)	6(4.1)	11.0(5.2)
Outpatient visit <sup>3</sup>	92(63.0)	4.3(2.8)	30(31.3)	2.9(1.8)	68(50.7)	5.4(6.5)	45(30.6)	4.4(6.6)	49(52.7)	5.7(6.0)	53(36.1)	6.4(9.1)
<b>Community care</b>												
Nursing home (days) <sup>3</sup>	7(4.8)	59.6(36.0)	16(16.7)	41.5(32.0)	6(4.5)	32.5(40.1)	22(15.0)	53.8(36.5)	9(9.7)	22.7(27.0)	27(18.4)	26.1(33.7)
Residential home (days)	2(1.4)	23.0(22.6)	7(7.3)	70.0(28.3)	2(1.5)	92.0(n/a)	5(3.4)	92.0(n/a)	4(4.3)	25.5(20.5)	8(5.4)	32.6(29.4)
Doctor, face to face <sup>1</sup>	124(84.9)	4.5(3.7)	78(81.3)	3.9(3.6)	104(77.6)	6.1(9.1)	110(74.8)	4.9(9.8)	63(67.7)	6.4(13.0)	109(74.1)	6.0(12.2)
Doctor, telephone <sup>3</sup>	85(58.2)	4.4(3.9)	48(50.0)	2.9(1.5)	65(48.5)	5.5(5.2)	58(39.5)	3.6(2.8)	44(47.3)	5.2(4.6)	58(39.5)	7.1(13.0)
District nurse/home care aid <sup>abc</sup>	76(52.1)	12.2(20.0)	46(47.9)	14.6(22.9)	75(56.0)	15.7(26.1)	61(41.5)	8.1(13.6)	33(35.5)	36.8(36.7)	45(30.6)	41.8(38.9)
Nurse practitioner <sup>ab</sup>	0(0.0)		0(0.0)		6(4.5)	2.0(n/a)	6(4.1)	2.5(2.4)	29(31.2)	5.3(4.9)	42(28.6)	11.2(18.9)
Other nurses	1(0.7)	1.0()	3(3.1)	1.0(0.0)	0(0.0)		1(0.7)	1.0(n/a)	0(0.0)		0(0.0)	
Physiotherapy <sup>a</sup>	13(8.9)	2.3(1.2)	12(12.5)	11.4(28.4)	33(24.6)	2.9(2.5)	17(11.6)	4.8(6.0)	11(11.8)	6.1(3.3)	16(10.9)	9.1(12.1)
Occupational therapist <sup>a</sup>	21(14.4)	2.9(1.8)	13(13.5)	2.3(1.5)	45(33.6)	2.7(1.4)	33(22.4)	6.6(18.4)	17(18.3)	10.1(11.3)	33(22.4)	4.6(3.5)
Social worker <sup>ab</sup>	23(15.8)	3.4(2.8)	18(18.8)	9.0(23.9)	42(31.3)	2.4(1.9)	24(16.3)	3.4(4.5)	32(34.4)	3.3(3.1)	51(34.7)	2.8(2.5)
Spiritual care person <sup>a</sup>	28(19.2)	7.6(16.9)	17(17.7)	3.2(3.6)	46(34.3)	6.0(5.8)	46(31.3)	4.4(4.0)	30(32.3)	4.3(3.1)	37(25.2)	3.6(5.2)
Other professional	7(7.5)	56.7(80.5)	7(10.4)	23.0(38.9)	8(11.9)	0.0(16.8)	14(15.0)	24.9(40.2)	6(14.0)	12.2(4.6)	9(13.6)	4.5(3.8)
Paid carer <sup>c</sup>	27(18.5)	8.5(7.7)	27(28.1)	15.8(18.9)	26(19.4)	10.0(9.7)	42(28.6)	10.7(11.3)	23(24.7)	34.3(28.4)	47(32.0)	26.2(20.3)
<b>Palliative care</b>												
Inpatient and hospice (days) <sup>ab</sup>	23(15.8)	13.2(10.2)	2(2.1)	4.0(n/a)	20(14.9)	19.9(26.6)	4(2.7)	24.0(31.2)	33(35.5)	15.9(21.1)	57(38.8)	7.2(10.0)
Day-care <sup>ac</sup>	9(6.2)	5.7(4.9)	2(2.1)	2.0(n/a)	18(13.4)	9.2(12.9)	8(5.4)	15.4(24.5)	2(2.2)	16.0(19.8)	2(1.4)	1.0(n/a)
Marie curie nurse <sup>1)/ Irish Hospice Foundation nurse<sup>2)</sup></sup>	24(16.4)	4.6(3.7)	4(4.2)	7.8(4.6)	25(18.7)	4.4(3.9)	5(3.4)	2.0(1.0)	0(0.0)		0(0.0)	
Macmillan nurse <sup>3)</sup>	48(32.9)	8.9(18.7)	6(6.3)	10.5(8.5)	0(0.0)		0(0.0)		0(0.0)		0(0.0)	
Palliative care team <sup>bc</sup>	68(46.6)	9.4(20.2)	20(20.8)	4.4(2.9)	49(36.6)	11.4(17.2)	9(6.1)	16.9(30.6)	28(30.1)	10.6(11.5)	24(16.3)	3.7(4.0)

Notes: Statistical tests with Bonferroni correction were conducted to examine the differences in the proportion of users: a with cancer who used the service by country; b with non-cancer who used the service by country; c by cancer/non-cancer status. 1) Marie Curie nurse provides nursing care to patients with terminal illnesses as well as support

for family and friends in the UK. 2) Irish nurse is funded by the Irish Hospice Foundation to provide night care service for people dying with diseases other than cancer and families in the last days of their life. 3) Macmillan nurse is a specialist nurse who help with complex needs of cancer patients in hospitals or in other settings in the UK.

**e-Table 5.** Care costs during the last three months of life among old patients with access to specialist palliative care (unit: \$)

	England (N=245)				Ireland (N=282)				US (N=240)			
	Cancer (N=146)		Non-cancer (N=96)		Cancer (N=134)		Non-cancer (N=147)		Cancer (N=93)		Non-cancer (N=147)	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
<b><i>Hospital care</i></b>												
Intensive care unit	2,487	6,068	5,819	19,792	11,330	12,625	17,879	16,323	12,087	29,515	19,092	35,467
Inpatient stay not ICU (days)	7,713	7,672	7,133	7,640	6,659	16,775	6,428	18,479	8,208	8,875	6,286	7,958
Ambulance service	652	1,338	528	679	663	1,057	863	1,067	499	649	633	703
Emergency room	209	239	186	168	383	431	418	503	871	916	725	1,066
Outpatient radiotherapy	178	550	12	120	332	1,156	49	481	393	1,128	116	592
Outpatient chemotherapy	1,523	3,827	0	0	3,092	9,241	56	537	3,433	7,267	662	3,603
Outpatient visit	445	485	165	301	392	757	205	617	5,192	8,868	4,177	11,259
Subtotal	13,206	9,624	13,844	20,374	22,851	20,472	25,898	21,059	30,684	32,100	31,691	38,722
Of total	86%		83%		82%		88%		82%		85%	
<b><i>Community care</i></b>												
Nursing home	482	2,404	1,302	3,464	277	1,645	1,264	3,500	412	1,923	822	3,129
Residential home	36	377	532	2,007	229	1,869	522	2,793	314	1,597	333	1,799
Doctor, face to face	223	207	195	202	247	440	200	466	445	1,155	468	1,138
Doctor, telephone	92	125	59	71	67	114	40	66	158	263	178	569
District nurse/home care aid	278	994	218	561	196	496	81	231	1,262	2,782	1,154	2,603
Nurse practitioner	0	0	0	0	240	2,678	11	65	142	296	240	861
Other nurse	0	3	1	5	0	0	0	2	0	0	0	0
Physiotherapy	10	35	61	464	175	1,399	41	188	58	183	81	394
Occupational therapist	25	73	19	57	109	164	127	650	160	532	88	206
Social worker	40	120	117	777	65	113	40	132	75	156	70	136
Spiritual care person	65	376	28	90	44	94	33	70	106	208	72	229
Other professional	87	735	57	413	14	124	58	408	46	264	18	89
Paid carer	28	80	101	338	108	535	153	593	331	855	424	1,103
Subtotal	1,367	3,039	2,688	4,334	1,770	3,896	2,570	4,442	3,508	4,728	3,949	5,715
Of total	9%		16%		5%		8%		9%		11%	
<b><i>Palliative care</i></b>												
Inpatient and hospice	444	1,328	30	218	3,114	13,021	583	5,449	664	1,868	397	903
Day-care	87	451	13	92	548	2,493	198	1,551	57	518	1	14
Marie curie nurse/Irish												
Hospice Foundation nurse	23	64	8	42	334	964	35	197	0	0	0	0
Macmillan nurse	76	306	14	71	0	0	0	0	0	0	0	0
Palliative care team	145	493	35	78	447	1,273	127	1,009	172	440	42	130

Subtotal	775	1,635	99	285	4,444	14,330	943	5,741	3,058	7,973	1,737	3,852
Of total	5%		1%		13%		3%		8%		5%	
<b>Total</b>	15,347	9,802	16,631	20,743	29,065	27,428	29,411	21,069	37,250	32,658	37,376	39,968



**e-Table 6.** Logistic regression analysis of factors associated with being high cost patient

		Being the highest 10%	
		All	England and USA
Women (=1 if female)	$\beta$	-0.03	0.25
	$CI_L$	-0.57	-0.41
	$CI_U$	0.50	0.90
Age-80 (years)	$\beta$	<b>0.07***</b>	<b>0.07***</b>
	$CI_L$	0.03	0.03
	$CI_U$	0.10	0.11
White (=1 if white ethnicity)	$\beta$	0.01	0.61
	$CI_L$	-0.81	-0.15
	$CI_U$	0.82	1.38
Living with (=1 if with someone else)	$\beta$	-0.15	-0.23
	$CI_L$	-0.84	-1.11
	$CI_U$	0.53	0.66
Number of co-morbidities	$\beta$		0.18
	$CI_L$		-0.06
	$CI_U$		0.42
Marital status (base: Married/civil partnership)			
Never married	$\beta$	-0.31	-0.17
	$CI_L$	-1.46	-1.49
	$CI_U$	0.84	1.14
Widowed	$\beta$	0.05	-0.15
	$CI_L$	-0.68	-1.14
	$CI_U$	0.77	0.83
Divorced/separated	$\beta$	0.69	0.49
	$CI_L$	-0.26	-0.52
	$CI_U$	1.64	1.49
Primary carer (=1 if available)	$\beta$	-0.29	-0.01
	$CI_L$	-1.12	-1.11
	$CI_U$	0.53	1.09
Household income (base: Living comfortably) <sup>a</sup>			
Doing alright	$\beta$	0.36	0.42
	$CI_L$	-0.18	-0.26
	$CI_U$	0.91	1.10
Just about getting by	$\beta$	-0.19	0.28
	$CI_L$	-1.12	-0.65
	$CI_U$	0.74	1.21
Finding it quite difficult	$\beta$	0.57	1.11
	$CI_L$	-0.90	-0.81
	$CI_U$	2.03	3.03
Finding it very difficult	$\beta$	<b>1.92**</b>	<b>2.19***</b>
	$CI_L$	0.42	0.55
	$CI_U$	3.41	3.83
Number of carers	$\beta$	-0.16*	-0.05
	$CI_L$	-0.32	-0.25
	$CI_U$	0.01	0.14
Religion (=1 if religious)	$\beta$	-0.49	<b>-0.69*</b>
	$CI_L$	-1.27	-1.42
	$CI_U$	0.30	0.04
Diagnosis (base: Non-cancer circulatory) <sup>b</sup>			
Lung and respiratory cancer	$\beta$	-0.70	-0.28
	$CI_L$	-1.67	-1.42
	$CI_U$	0.28	0.87
Breast cancer	$\beta$	-0.90	-0.94
	$CI_L$	-2.54	-3.21
	$CI_U$	0.75	1.33
Genitourinary cancer	$\beta$	<b>-2.47***</b>	-1.16
	$CI_L$	-4.18	-2.56

	$CI_U$	-0.76	0.24
Lymphatic cancer	$\beta$	-0.01	0.01
	$CI_L$	-0.99	-1.13
	$CI_U$	0.97	1.16
Digestive cancer	$\beta$	-0.71	-0.68
	$CI_L$	-1.64	-1.76
	$CI_U$	0.23	0.40
Ill-defined cancer	$\beta$	-0.32	-1.57
	$CI_L$	-1.77	-3.83
	$CI_U$	1.13	0.70
Other cancer	$\beta$	-0.42	-0.76
	$CI_L$	-1.66	-2.51
	$CI_U$	0.82	0.99
Non-cancer respiratory	$\beta$	-0.19	0.01
	$CI_L$	-1.09	-1.14
	$CI_U$	0.70	1.16
Non-cancer CNS	$\beta$	-0.56	-0.53
	$CI_L$	-1.72	-2.02
	$CI_U$	0.60	0.95
Renal failure	$\beta$	0.46	<b>1.22*</b>
	$CI_L$	-0.68	-0.08
	$CI_U$	1.61	2.51
Other non-cancer	$\beta$	-0.44	-0.16
	$CI_L$	-1.37	-1.22
	$CI_U$	0.50	0.91
Country (base: England) <sup>c</sup>			
Ireland	$\beta$	<b>0.97***</b>	
	$CI_L$	0.32	
	$CI_U$	1.62	
USA	$\beta$	-0.11	-0.15
	$CI_L$	-0.87	-0.82
	$CI_U$	0.64	0.52
Constant	$\beta$	-1.00	<b>-1.80**</b>
	$CI_L$	-2.44	-3.48
	$CI_U$	0.43	-0.11
Log likelihood		-222.37	-158.68
Observations		642	411

Notes: a. Joint tests results were  $\chi^2(4, N = 642) = 8.36, p < 0.079$  and  $\chi^2(4, N = 642) = 8.17, p < 0.086$ . b. Joint tests results were  $\chi^2(11, N = 642) = 13.48, p < 0.263$  and  $\chi^2(11, N = 642) = 12.31, p < 0.341$ . c. Joint tests results were  $\chi^2(2, N = 642) = 0.19, p < 0.664$ . \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**e-Table 7.** Regression analysis of carer’s satisfaction with the service during the last stay in the caring places

	England (N=245)			Ireland (N=282)			US (N=240)		
	User	Satisfaction score		User	Satisfaction score		User	Satisfaction score	
	(n)	mean	s.d.	(n)	mean	s.d.	(n)	mean	s.d.
Care in hospital									
Hospital doctors	206	4.62	1.29	259	4.72	1.23	208	5.19	1.04
Hospital nurses	202	4.58	1.35	251	4.87	1.28	203	5.19	0.98
Palliative care team or Macmillan nurses	139	4.84	1.29	212	5.05	1.21	178	5.26	1.06
All the services <sup>1</sup>	200	4.39	1.42	255	4.73	1.26	208	5.21	1.05
Care at home									
GP	201	4.19	1.50	189	4.46	1.34	149	4.58	1.41
Nurses	112	4.59	1.33	113	4.88	1.18	56	4.64	1.31
Hospice, palliative care, Marie Curie, Macmillan nurse, other specialists	101	4.85	1.27	65	5.29	1.06	44	5.32	0.88
All the service	172	4.19	1.43	165	4.28	1.52	153	4.57	1.25
Care in palliative care and hospice unit (inpatient)									
Doctors	24	5.50	1.02	21	5.81	0.51	56	5.29	1.11
Nurses	25	5.52	0.96	24	5.88	0.34	64	5.28	1.03
All the services	24	5.63	0.77	24	5.75	0.61	67	5.34	1.11
Care in care homes									
Nurses	19	4.32	1.60	20	4.80	0.83	27	3.48	1.45
GPs	24	4.17	1.63	19	4.53	1.22	9	3.89	1.54
Hospice, palliative care, Marie Curie, Macmillan nurse, other specialists	14	4.50	1.79	7	4.71	0.76	6	4.83	2.04
Other nurses	7	4.86	1.35	5	4.80	0.84	3	6.00	0.00
All the services <sup>a</sup>	27	4.44	1.40	27	4.78	0.97	31	3.48	1.57

Notes: Satisfaction was converted into continuous value by assigning 1 to Very poor, 2 Poor, 3 Fair, 4 Good, 5 Very Good and 6 Excellent. a. ANOVA test with Bonferroni correction was conducted to examine the difference in the mean satisfaction scores across three countries and was statistically significant ( $p < 0.01$ ).

**e-Table 8.** Regression analysis of carer's satisfaction with care and proportion of care costs among total costs

		Carer's satisfaction with care					
		In hospital	At home	In hospital	At home	In hospital	At home
		(1)	(2)	(3)	(4)	(5)	(6)
<b>Proportion of total costs</b>							
Hospital care	$\beta$	0.09	<b>-0.84***</b>				
	$CI_L$	-0.46	-1.36				
	$CI_U$	0.63	-0.31				
Community care	$\beta$			0.16	<b>0.69**</b>		
	$CI_L$			-0.52	0.00		
	$CI_U$			0.84	1.38		
Palliative care	$\beta$					-0.53	<b>1.34***</b>
	$CI_L$					-1.44	0.41
	$CI_U$					0.38	2.28
Women (=1 if female)	$\beta$	0.11	0.24	0.11	0.24	0.11	<b>0.26*</b>
	$CI_L$	-0.12	-0.05	-0.12	-0.06	-0.12	-0.03
	$CI_U$	0.34	0.54	0.34	0.53	0.34	0.55
Age-80 (years)	$\beta$	-0.00	-0.01	0.00	-0.01	-0.00	-0.01
	$CI_L$	-0.01	-0.03	-0.01	-0.03	-0.01	-0.03
	$CI_U$	0.01	0.01	0.02	0.01	0.01	0.01
White (=1 if white ethnicity)	$\beta$	-0.01	-0.06	0.00	-0.05	-0.01	-0.05
	$CI_L$	-0.33	-0.47	-0.32	-0.46	-0.33	-0.45
	$CI_U$	0.32	0.34	0.32	0.36	0.31	0.36
Living with (=1 if with someone else)	$\beta$	-0.14	0.08	-0.14	0.09	-0.13	0.05
	$CI_L$	-0.42	-0.30	-0.42	-0.29	-0.42	-0.33
	$CI_U$	0.15	0.46	0.15	0.47	0.15	0.43
Marital status (base: Married/civil partnership)							
Never married	$\beta$	-0.21	0.06	-0.21	0.03	-0.22	0.13
	$CI_L$	-0.67	-0.58	-0.66	-0.62	-0.68	-0.52
	$CI_U$	0.25	0.70	0.25	0.68	0.24	0.77
Widowed	$\beta$	<b>-0.43***</b>	-0.16	<b>-0.44***</b>	-0.17	<b>-0.43***</b>	-0.14
	$CI_L$	-0.74	-0.54	-0.74	-0.55	-0.74	-0.52
	$CI_U$	-0.13	0.21	-0.14	0.21	-0.13	0.23
Divorced/separated	$\beta$	-0.22	<b>-0.60**</b>	-0.22	<b>-0.62**</b>	-0.21	<b>-0.59**</b>
	$CI_L$	-0.67	-1.15	-0.68	-1.17	-0.67	-1.14
	$CI_U$	0.24	-0.05	0.24	-0.06	0.25	-0.04
Primary carer (=1 if available)	$\beta$	0.06	0.14	0.06	0.12	0.07	0.21
	$CI_L$	-0.34	-0.50	-0.34	-0.53	-0.33	-0.43
	$CI_U$	0.46	0.78	0.46	0.76	0.47	0.85
Household income (base: Living comfortably) <sup>1)</sup>							
Doing alright	$\beta$	-0.11	-0.23	-0.11	-0.22	-0.10	-0.24
	$CI_L$	-0.35	-0.54	-0.35	-0.53	-0.34	-0.54
	$CI_U$	0.13	0.07	0.13	0.08	0.14	0.07
Just about getting by	$\beta$	-0.12	<b>-0.57**</b>	-0.13	<b>-0.53**</b>	-0.11	<b>-0.59**</b>
	$CI_L$	-0.49	-1.04	-0.50	-1.00	-0.48	-1.06
	$CI_U$	0.25	-0.09	0.24	-0.05	0.26	-0.11
Finding it quite difficult	$\beta$	-0.13	-0.64	-0.13	-0.66	-0.14	-0.65
	$CI_L$	-0.91	-1.64	-0.91	-1.67	-0.91	-1.65
	$CI_U$	0.65	0.36	0.65	0.35	0.64	0.35
Finding it very difficult	$\beta$	-0.28	0.18	-0.29	0.19	-0.27	0.13
	$CI_L$	-1.07	-0.92	-1.07	-0.92	-1.06	-0.97
	$CI_U$	0.50	1.28	0.50	1.30	0.51	1.23
Number of carers	$\beta$	<b>-0.06*</b>	-0.02	-0.06	-0.01	<b>-0.06*</b>	-0.03
	$CI_L$	-0.12	-0.10	-0.12	-0.10	-0.12	-0.11
	$CI_U$	0.01	0.07	0.01	0.07	0.01	0.06
Religion (=1 if religious)	$\beta$	0.13	-0.06	0.12	-0.04	0.13	-0.02
	$CI_L$	-0.24	-0.54	-0.24	-0.53	-0.23	-0.50
	$CI_U$	0.49	0.43	0.48	0.45	0.49	0.47

Diagnosis (base: Non-cancer circulatory)<sup>2)</sup>

Lung and respiratory cancer	$\beta$	-0.30	0.29	-0.30	0.41	-0.26	0.22
	$CI_L$	-0.72	-0.26	-0.72	-0.14	-0.69	-0.34
	$CI_U$	0.12	0.84	0.12	0.95	0.16	0.78
Breast cancer	$\beta$	0.14	0.28	0.13	0.36	0.17	0.26
	$CI_L$	-0.51	-0.55	-0.52	-0.47	-0.48	-0.58
	$CI_U$	0.79	1.11	0.78	1.20	0.82	1.09
Genitourinary cancer	$\beta$	-0.08	0.18	-0.09	0.26	-0.05	0.15
	$CI_L$	-0.53	-0.39	-0.53	-0.32	-0.50	-0.42
	$CI_U$	0.36	0.76	0.36	0.83	0.39	0.73
Lymphatic cancer	$\beta$	-0.35	-0.05	-0.34	-0.02	-0.34	-0.09
	$CI_L$	-0.81	-0.66	-0.81	-0.63	-0.80	-0.70
	$CI_U$	0.12	0.56	0.12	0.59	0.13	0.52
Digestive cancer	$\beta$	<b>-0.67***</b>	-0.06	<b>-0.67***</b>	0.05	<b>-0.64***</b>	-0.10
	$CI_L$	-1.07	-0.58	-1.07	-0.46	-1.04	-0.63
	$CI_U$	-0.26	0.46	-0.27	0.57	-0.23	0.43
Ill-defined cancer	$\beta$	0.02	<b>-1.23***</b>	0.02	<b>-1.19***</b>	0.05	<b>-1.23***</b>
	$CI_L$	-0.63	-2.13	-0.64	-2.09	-0.61	-2.12
	$CI_U$	0.68	-0.34	0.67	-0.29	0.70	-0.33
Other cancer	$\beta$	-0.35	0.56	-0.35	0.61	-0.33	0.56
	$CI_L$	-0.91	-0.22	-0.92	-0.17	-0.90	-0.22
	$CI_U$	0.22	1.33	0.21	1.39	0.24	1.34
Non-cancer respiratory	$\beta$	<b>-0.41**</b>	0.06	<b>-0.41**</b>	0.09	<b>-0.41**</b>	0.10
	$CI_L$	-0.80	-0.45	-0.80	-0.42	-0.81	-0.42
	$CI_U$	-0.02	0.58	-0.02	0.61	-0.02	0.61
Non-cancer CNS	$\beta$	-0.04	0.49	-0.07	0.52	-0.05	<b>0.58*</b>
	$CI_L$	-0.54	-0.17	-0.58	-0.16	-0.55	-0.08
	$CI_U$	0.47	1.16	0.44	1.19	0.45	1.25
Renal failure	$\beta$	0.15	-0.03	0.16	-0.01	0.15	-0.06
	$CI_L$	-0.40	-0.79	-0.39	-0.77	-0.40	-0.82
	$CI_U$	0.70	0.72	0.71	0.75	0.70	0.70
Other non-cancer	$\beta$	-0.10	0.08	-0.09	0.09	-0.09	0.09
	$CI_L$	-0.50	-0.46	-0.49	-0.45	-0.49	-0.44
	$CI_U$	0.30	0.61	0.31	0.62	0.30	0.62
Country							
Ireland	$\beta$	<b>0.30**</b>	0.05	<b>0.30**</b>	0.03	<b>0.31**</b>	-0.01
	$CI_L$	0.03	-0.30	0.03	-0.32	0.04	-0.36
	$CI_U$	0.58	0.40	0.58	0.39	0.59	0.33
USA	$\beta$	<b>0.78***</b>	<b>0.36*</b>	<b>0.76***</b>	<b>0.37*</b>	<b>0.79***</b>	<b>0.40**</b>
	$CI_L$	0.48	-0.02	0.46	-0.00	0.49	0.03
	$CI_U$	1.08	0.73	1.06	0.75	1.09	0.78
Constant	$\beta$	<b>4.78***</b>	<b>4.85***</b>	<b>4.85***</b>	<b>4.01***</b>	<b>4.85***</b>	<b>4.02***</b>
	$CI_L$	3.94	3.79	4.17	3.09	4.18	3.10
	$CI_U$	5.62	5.90	5.52	4.94	5.52	4.94
Observations		577	436	577	436	577	436
R-squared		0.12	0.13	0.12	0.11	0.12	0.12

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**e-Table 9.** Regression analysis of carer's satisfaction with care and proportion of care costs among total costs, adjusting for co-morbidities (England and USA data only)

VARIABLES	Carer's satisfaction with care						
		In hospital (1)	At home (2)	In hospital (3)	At home (4)	In hospital (5)	At home (6)
<b>Proportion among total costs</b>							
Hospital care	$\beta$	-0.03	-0.58*				
	$CI_L$	-0.70	-1.16				
	$CI_U$	0.64	0.00				
Community care	$\beta$			0.11	0.59*		
	$CI_L$			-0.55	-0.10		
	$CI_U$			0.78	1.28		
Palliative care	$\beta$					0.05	0.67
	$CI_L$					-1.13	-0.45
	$CI_U$					1.24	1.79
Number of co-morbidities	$\beta$	0.04	0.11*	0.04	0.11*	0.04	0.12*
	$CI_L$	-0.07	-0.02	-0.07	-0.02	-0.07	-0.02
	$CI_U$	0.15	0.25	0.15	0.25	0.15	0.25
Women (=1 if female)	$\beta$	0.13	0.45**	0.13	0.46**	0.13	0.46**
	$CI_L$	-0.17	0.10	-0.17	0.11	-0.17	0.10
	$CI_U$	0.43	0.81	0.43	0.82	0.43	0.81
Age-80 (years)	$\beta$	0.00	0.00	0.00	-0.00	0.00	-0.00
	$CI_L$	-0.01	-0.02	-0.01	-0.02	-0.01	-0.02
	$CI_U$	0.02	0.02	0.02	0.02	0.02	0.02
White (=1 if white ethnicity)	$\beta$	0.12	-0.08	0.12	-0.08	0.12	-0.07
	$CI_L$	-0.21	-0.47	-0.21	-0.47	-0.21	-0.46
	$CI_U$	0.46	0.32	0.46	0.32	0.46	0.33
Living with (=1 if with someone else)	$\beta$	-0.08	-0.09	-0.08	-0.10	-0.08	-0.13
	$CI_L$	-0.47	-0.54	-0.47	-0.55	-0.46	-0.58
	$CI_U$	0.30	0.36	0.30	0.35	0.31	0.32
Marital status (base: Married/civil partnership)							
Never married	$\beta$	-0.40	-0.19	-0.40	-0.22	-0.40	-0.14
	$CI_L$	-1.00	-0.93	-1.00	-0.96	-1.00	-0.89
	$CI_U$	0.19	0.55	0.19	0.52	0.19	0.60
Widowed	$\beta$	-0.27	-0.10	-0.27	-0.12	-0.27	-0.08
	$CI_L$	-0.69	-0.57	-0.69	-0.59	-0.69	-0.55
	$CI_U$	0.15	0.37	0.15	0.35	0.15	0.39
Divorced/separated	$\beta$	-0.24	-0.86***	-0.24	-0.88***	-0.24	-0.85***
	$CI_L$	-0.76	-1.44	-0.75	-1.46	-0.75	-1.43
	$CI_U$	0.27	-0.29	0.27	-0.31	0.27	-0.27
Primary carer (=1 if available)	$\beta$	0.17	0.56	0.17	0.54	0.17	0.63*
	$CI_L$	-0.35	-0.14	-0.35	-0.17	-0.35	-0.08
	$CI_U$	0.70	1.26	0.70	1.24	0.70	1.33
Household income (base: Living comfortably) <sup>1)</sup>							
Doing alright	$\beta$	-0.14	-0.24	-0.14	-0.23	-0.14	-0.24
	$CI_L$	-0.45	-0.61	-0.45	-0.60	-0.45	-0.61
	$CI_U$	0.17	0.12	0.17	0.14	0.17	0.12
Just about getting by	$\beta$	0.19	-0.56**	0.19	-0.54**	0.19	-0.57**
	$CI_L$	-0.24	-1.09	-0.24	-1.07	-0.24	-1.10
	$CI_U$	0.62	-0.02	0.62	-0.00	0.62	-0.03
Finding it quite difficult	$\beta$	0.20	-0.78	0.20	-0.81	0.20	-0.84
	$CI_L$	-0.87	-2.14	-0.87	-2.17	-0.87	-2.20
	$CI_U$	1.26	0.58	1.26	0.55	1.27	0.52
Finding it very difficult	$\beta$	-0.44	-0.63	-0.44	-0.65	-0.44	-0.67
	$CI_L$	-1.37	-1.88	-1.37	-1.90	-1.37	-1.92
	$CI_U$	0.50	0.62	0.50	0.60	0.50	0.59
Number of carers	$\beta$	-0.04	-0.05	-0.04	-0.05	-0.04	-0.06
	$CI_L$	-0.13	-0.16	-0.13	-0.15	-0.13	-0.16

	$CI_U$	0.05	0.05	0.05	0.05	0.05	0.05
Religion (=1 if religious)	$\beta$	0.06	0.04	0.06	0.05	0.06	0.08
	$CI_L$	-0.31	-0.43	-0.31	-0.42	-0.31	-0.40
	$CI_U$	0.43	0.51	0.43	0.52	0.43	0.55
Diagnosis (base: Non-cancer circulatory) <sup>2)</sup>							
Lung and respiratory cancer	$\beta$	-0.50*	0.13	-0.50*	0.22	-0.50*	0.11
	$CI_L$	-1.03	-0.52	-1.02	-0.44	-1.04	-0.56
	$CI_U$	0.03	0.79	0.03	0.87	0.03	0.78
Breast cancer	$\beta$	0.02	-0.29	0.02	-0.24	0.02	-0.26
	$CI_L$	-0.89	-1.27	-0.89	-1.22	-0.89	-1.25
	$CI_U$	0.93	0.69	0.93	0.74	0.93	0.72
Genitourinary cancer	$\beta$	-0.05	0.29	-0.05	0.34	-0.05	0.29
	$CI_L$	-0.60	-0.38	-0.60	-0.33	-0.61	-0.38
	$CI_U$	0.50	0.96	0.50	1.01	0.51	0.97
Lymphatic cancer	$\beta$	-0.21	0.15	-0.21	0.18	-0.22	0.12
	$CI_L$	-0.77	-0.53	-0.77	-0.51	-0.77	-0.56
	$CI_U$	0.34	0.84	0.35	0.86	0.34	0.81
Digestive cancer	$\beta$	-0.64**	-0.02	-0.64**	0.05	-0.64**	-0.00
	$CI_L$	-1.13	-0.61	-1.12	-0.53	-1.13	-0.60
	$CI_U$	-0.15	0.57	-0.15	0.63	-0.15	0.60
Ill-defined cancer	$\beta$	-0.28	-1.07**	-0.28	-1.04**	-0.29	-1.05**
	$CI_L$	-1.07	-1.99	-1.07	-1.97	-1.08	-1.98
	$CI_U$	0.51	-0.14	0.51	-0.11	0.51	-0.12
Other cancer	$\beta$	-0.80**	0.66	-0.79**	0.73	-0.80**	0.66
	$CI_L$	-1.56	-0.31	-1.55	-0.24	-1.56	-0.31
	$CI_U$	-0.03	1.62	-0.03	1.69	-0.03	1.64
Non-cancer respiratory	$\beta$	-0.35	0.06	-0.35	0.08	-0.35	0.11
	$CI_L$	-0.89	-0.58	-0.89	-0.56	-0.89	-0.53
	$CI_U$	0.19	0.70	0.19	0.72	0.19	0.75
Non-cancer CNS	$\beta$	0.19	0.88**	0.19	0.88**	0.19	0.96**
	$CI_L$	-0.47	0.10	-0.48	0.10	-0.46	0.18
	$CI_U$	0.85	1.66	0.86	1.67	0.85	1.74
Renal failure	$\beta$	0.22	-0.16	0.21	-0.13	0.21	-0.16
	$CI_L$	-0.45	-1.01	-0.46	-0.98	-0.46	-1.01
	$CI_U$	0.88	0.69	0.89	0.71	0.88	0.69
Other non-cancer	$\beta$	0.08	0.35	0.08	0.36	0.08	0.38
	$CI_L$	-0.41	-0.26	-0.41	-0.25	-0.41	-0.23
	$CI_U$	0.58	0.95	0.58	0.96	0.58	0.99
USA (=1 if USA)	$\beta$	0.72***	0.32*	0.72***	0.32*	0.72***	0.35*
	$CI_L$	0.40	-0.05	0.41	-0.05	0.41	-0.01
	$CI_U$	1.03	0.69	1.03	0.69	1.03	0.72
Constant	$\beta$	4.54***	4.14***	4.51***	3.57***	4.51***	3.54***
	$CI_L$	3.50	2.97	3.69	2.56	3.70	2.53
	$CI_U$	5.58	5.31	5.33	4.58	5.33	4.56
Observations		365	293	365	293	365	293
R-squared		0.16	0.18	0.16	0.18	0.16	0.17

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**e-Table 10.** Regression analysis of factors associated with care costs in the last three months of life

		Total		Hospital care		Community care		Palliative care	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Carer's satisfaction with care									
Hospital	$\beta$	0.01		0.01		0.02		-0.22*	
	$CI_L$	-0.04		-0.05		-0.08		-0.44	
	$CI_U$	0.06		0.07		0.13		0.00	
Home	$\beta$		-0.01		-0.03		0.11*		0.08
	$CI_L$		-0.06		-0.09		-0.01		-0.08
	$CI_U$		0.04		0.03		0.23		0.24
Women (=1 if female)	$\beta$	-0.00	-0.12	-0.03	-0.10	0.16	-0.13	-0.24	-0.53**
	$CI_L$	-0.15	-0.28	-0.18	-0.30	-0.15	-0.51	-0.93	-1.05
	$CI_U$	0.14	0.05	0.13	0.09	0.46	0.24	0.45	-0.02
Age-80 (years)	$\beta$	0.02***	0.02***	0.02***	0.02***	-0.02**	-0.01	-0.02	-0.03*
	$CI_L$	0.01	0.01	0.01	0.01	-0.04	-0.03	-0.06	-0.06
	$CI_U$	0.03	0.03	0.03	0.03	-0.00	0.01	0.01	0.00
White (=1 if white ethnicity)	$\beta$	0.06	0.20*	0.10	0.21	-0.18	0.22	-0.18	-0.05
	$CI_L$	-0.13	-0.01	-0.11	-0.04	-0.61	-0.27	-1.11	-0.71
	$CI_U$	0.26	0.41	0.32	0.46	0.25	0.71	0.76	0.62
Marital status (base: Married/civil partnership)									
Never married	$\beta$	-0.12	0.00	-0.06	0.03	-0.14	0.19	-1.81***	-0.58
	$CI_L$	-0.41	-0.34	-0.37	-0.37	-0.71	-0.56	-3.15	-1.82
	$CI_U$	0.16	0.34	0.26	0.43	0.43	0.93	-0.47	0.66
Widowed	$\beta$	-0.13	-0.10	-0.09	-0.12	-0.22	-0.11	-0.37	-0.09
	$CI_L$	-0.32	-0.30	-0.30	-0.36	-0.60	-0.54	-1.27	-0.72
	$CI_U$	0.06	0.11	0.11	0.13	0.16	0.32	0.53	0.53
Divorced/separated	$\beta$	0.20	0.14	0.24	0.15	0.01	0.12	-0.51	0.43
	$CI_L$	-0.09	-0.16	-0.07	-0.21	-0.61	-0.59	-1.69	-0.58
	$CI_U$	0.49	0.44	0.56	0.50	0.63	0.82	0.68	1.44
Primary carer (=1 if available)	$\beta$	-0.07	0.04	-0.11	0.01	-0.27	0.19	1.20**	0.16
	$CI_L$	-0.32	-0.29	-0.38	-0.39	-0.81	-0.63	0.07	-0.85
	$CI_U$	0.18	0.38	0.16	0.41	0.27	1.00	2.34	1.18
Household income (base: Living comfortably)									
Doing alright	$\beta$	0.09	0.05	-0.09	-0.16	0.19	0.16	1.13***	0.47*
	$CI_L$	-0.05	-0.11	0.23	0.22	-0.13	-0.20	0.44	-0.01
	$CI_U$	0.24	0.21	-0.02	-0.08	0.51	0.53	1.82	0.95
Just about getting by	$\beta$	0.02	-0.01	-0.27	-0.39	0.33	0.31	0.33	0.24
	$CI_L$	-0.21	-0.27	0.22	0.22	-0.18	-0.27	-0.63	-0.52



	$CI_U$	0.24	0.25	0.02	0.13	0.84	0.90	1.29	1.00
Finding it quite difficult	$\beta$	-0.05	0.05	-0.51	-0.50	0.12	-0.04	-0.35	-0.39
	$CI_L$	-0.53	-0.49	0.55	0.76	-0.90	-1.22	-2.27	-1.91
	$CI_U$	0.43	0.58	0.52*	0.25	1.14	1.15	1.58	1.14
Finding it very difficult	$\beta$	0.50**	0.23	-0.01	-0.43	0.23	-0.16	1.55	0.80
	$CI_L$	0.02	-0.35	1.04	0.94	-0.83	-1.46	-0.42	-0.93
	$CI_U$	0.98	0.81	-0.00	0.02	1.29	1.13	3.52	2.54
Number of carers	$\beta$	-0.02	0.01	-0.05	-0.04	-0.03	0.01	-0.11	0.06
	$CI_L$	-0.06	-0.03	0.04	0.07	-0.13	-0.10	-0.29	-0.08
	$CI_U$	0.03	0.06	-0.09	-0.30*	0.06	0.12	0.07	0.20
Religion (=1 if religious)	$\beta$	-0.05	-0.26**	-0.33	-0.60	0.32	0.03	0.21	0.48
	$CI_L$	-0.27	-0.51	0.15	0.01	-0.15	-0.55	-0.80	-0.33
	$CI_U$	0.17	-0.00	-0.09	-0.16	0.80	0.61	1.23	1.30
Diagnosis (base: Non-cancer circulatory)									
Lung and respiratory cancer	$\beta$	-0.15	-0.11	-0.24	-0.26	-0.18	0.17	1.98***	2.32***
	$CI_L$	-0.41	-0.40	-0.52	-0.60	-0.74	-0.52	0.81	1.39
	$CI_U$	0.11	0.18	0.05	0.08	0.38	0.86	3.15	3.24
Breast cancer	$\beta$	0.08	-0.17	-0.18	-0.30	0.46	0.18	3.27***	1.79***
	$CI_L$	-0.32	-0.60	-0.61	-0.81	-0.37	-0.82	1.48	0.44
	$CI_U$	0.47	0.26	0.26	0.21	1.30	1.18	5.05	3.14
Genitourinary cancer	$\beta$	-0.13	0.02	-0.20	-0.13	-0.18	0.08	1.91***	2.51***
	$CI_L$	-0.41	-0.29	-0.50	-0.48	-0.76	-0.60	0.66	1.44
	$CI_U$	0.14	0.32	0.09	0.23	0.39	0.76	3.16	3.59
Lymphatic cancer	$\beta$	0.04	-0.02	0.05	-0.05	-0.19	-0.28	0.52	0.97*
	$CI_L$	-0.25	-0.35	-0.27	-0.43	-0.80	-1.03	-0.70	-0.02
	$CI_U$	0.33	0.30	0.36	0.33	0.41	0.46	1.74	1.97
Digestive cancer	$\beta$	-0.16	-0.16	-0.21	-0.28*	-0.08	-0.16	1.31**	1.82***
	$CI_L$	-0.41	-0.43	-0.48	-0.60	-0.64	-0.82	0.24	0.92
	$CI_U$	0.09	0.11	0.06	0.04	0.48	0.50	2.38	2.71
Ill-defined cancer	$\beta$	-0.12	-0.17	-0.27	-0.40	-0.24	0.29	3.30***	1.98**
	$CI_L$	-0.53	-0.65	-0.71	-0.96	-1.11	-0.81	1.36	0.45
	$CI_U$	0.28	0.31	0.17	0.17	0.63	1.39	5.25	3.51
Other cancer	$\beta$	-0.02	-0.19	-0.09	-0.29	0.19	0.37	1.28*	2.16***
	$CI_L$	-0.37	-0.60	-0.47	-0.77	-0.58	-0.58	-0.22	0.79
	$CI_U$	0.33	0.21	0.29	0.18	0.96	1.32	2.78	3.54
Non-cancer respiratory	$\beta$	-0.01	0.01	0.01	-0.02	0.14	0.38	-1.14**	-0.27
	$CI_L$	-0.25	-0.26	-0.25	-0.33	-0.37	-0.25	-2.23	-1.14
	$CI_U$	0.23	0.28	0.28	0.30	0.66	1.01	-0.06	0.61
Non-cancer CNS	$\beta$	0.01	-0.11	-0.15	-0.24	0.94***	0.65	-0.77	-0.14

	$CI_L$	-0.30	-0.47	-0.49	-0.66	0.27	-0.15	-2.21	-1.25
	$CI_U$	0.32	0.25	0.19	0.19	1.61	1.46	0.67	0.97
Renal failure	$\beta$	0.53***	0.05	0.59***	0.01	-0.04	0.11	-0.60	0.10
	$CI_L$	0.19	-0.35	0.21	-0.45	-0.78	-0.80	-2.01	-1.10
	$CI_U$	0.87	0.44	0.96	0.47	0.70	1.03	0.81	1.30
Other non-cancer	$\beta$	-0.01	-0.13	0.02	-0.14	-0.19	0.04	0.21	-0.20
	$CI_L$	-0.25	-0.41	-0.25	-0.47	-0.72	-0.62	-0.92	-1.12
	$CI_U$	0.23	0.15	0.28	0.19	0.35	0.70	1.34	0.73
Living with (=1 if with someone else)	$\beta$	-0.11	-0.05	-0.06	-0.03	-0.44**	-0.33	-0.19	0.50
	$CI_L$	-0.28	-0.25	-0.25	-0.27	-0.78	-0.76	-0.97	-0.18
	$CI_U$	0.07	0.15	0.14	0.20	-0.09	0.11	0.60	1.18
Country									
Ireland	$\beta$	0.56***	0.57***	0.53***	0.55***	0.21	0.12	1.99***	1.09***
	$CI_L$	0.39	0.38	0.34	0.33	-0.16	-0.32	1.26	0.50
	$CI_U$	0.73	0.75	0.72	0.78	0.58	0.55	2.72	1.67
USA	$\beta$	0.81***	1.02***	0.75***	0.92***	1.14***	1.48***	2.97***	1.83***
	$CI_L$	0.63	0.82	0.55	0.69	0.74	1.03	1.96	1.15
	$CI_U$	0.99	1.21	0.94	1.15	1.55	1.94	3.97	2.51
Constant	$\beta$	9.87***	9.64***	9.75***	9.71***	7.49***	6.34***	4.75***	3.54***
	$CI_L$	9.38	9.14	9.22	9.11	6.43	5.20	2.47	1.57
	$CI_U$	10.36	10.15	10.29	10.31	8.54	7.49	7.03	5.52
Log likelihood		-6472.54	-4786.89	-6376.85	-4703.65	-4996.89	-3759.63	-4485.52	-3404.45
Observations		577	436	577	436	577	436	577	436

Notes: Generalised linear model with gamma family and log link was estimated.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**e-Table 11.** Regression analysis of factors associated with care costs in the last three months of life, adjusting for co-morbidities (English and USA data only)

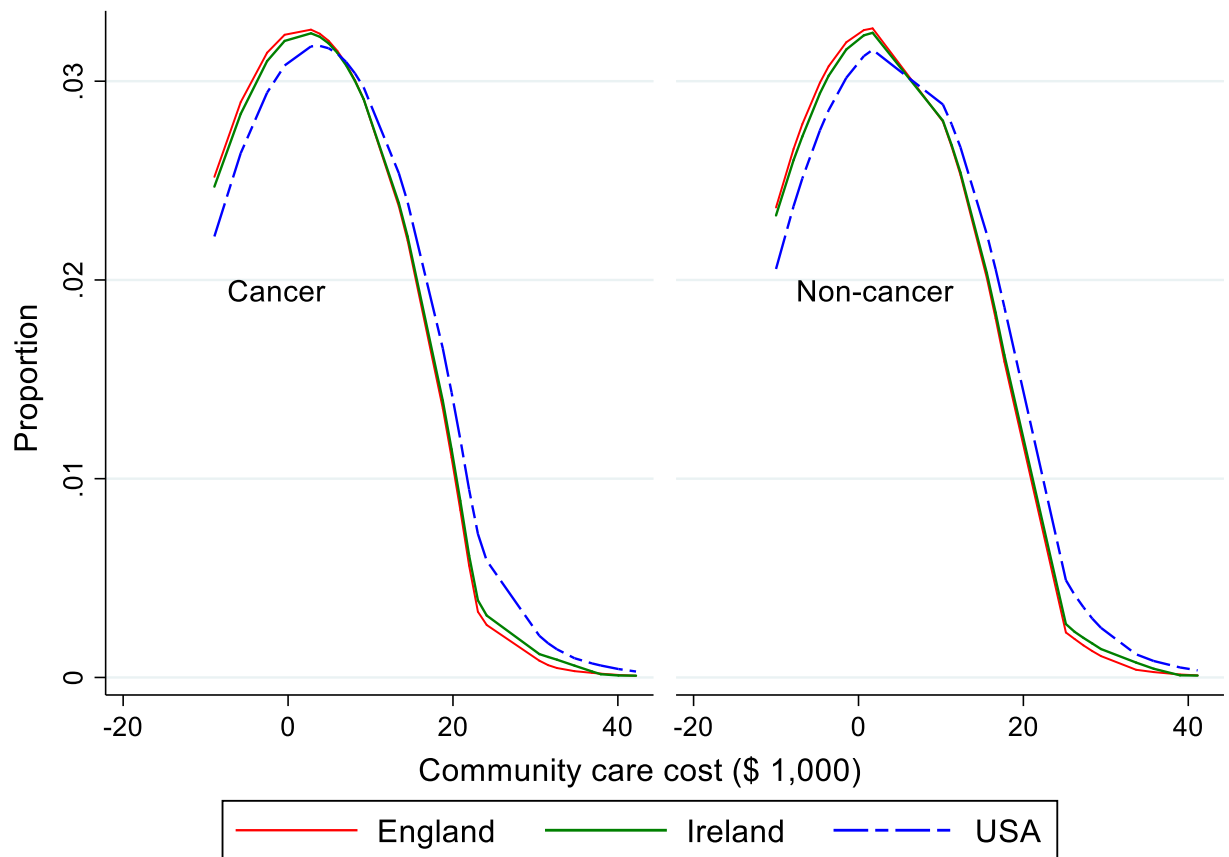
		Total		Hospital care		Community care		Palliative care	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Carer's satisfaction with care									
Hospital	$\beta$	-0.02		-0.02		-0.01		-0.15	
	$CI_L$	-0.08		-0.10		-0.14		-0.36	
	$CI_U$	0.05		0.05		0.12		0.06	
Home	$\beta$		0.01		-0.00		0.15**		-0.04
	$CI_L$		-0.06		-0.09		0.00		-0.21
	$CI_U$		0.08		0.08		0.30		0.13
Women (=1 if female)	$\beta$	0.14	-0.09	0.12	-0.12	0.08	-0.27	-0.25	0.28
	$CI_L$	-0.05	-0.31	-0.09	-0.38	-0.30	-0.74	-0.92	-0.26
	$CI_U$	0.33	0.13	0.34	0.15	0.46	0.21	0.42	0.83
Age-80 (years)	$\beta$	0.02***	0.02***	0.03***	0.03***	-0.03**	-0.00	-0.04**	-0.04***
	$CI_L$	0.01	0.01	0.02	0.01	-0.05	-0.03	-0.07	-0.07
	$CI_U$	0.03	0.03	0.04	0.04	-0.01	0.02	-0.00	-0.01
White (=1 if white ethnicity)	$\beta$	0.12	0.17	0.14	0.18	0.13	0.26	-0.10	-0.15
	$CI_L$	-0.08	-0.05	-0.09	-0.09	-0.32	-0.25	-0.83	-0.76
	$CI_U$	0.33	0.40	0.37	0.45	0.57	0.76	0.64	0.46
Marital status (base: Married/civil partnership)									
Never married	$\beta$	-0.05	0.01	0.04	0.05	-0.17	0.35	-1.08	-0.56
	$CI_L$	-0.41	-0.41	-0.38	-0.45	-0.89	-0.59	-2.44	-1.86
	$CI_U$	0.31	0.43	0.46	0.55	0.55	1.28	0.29	0.75
Widowed	$\beta$	-0.21	-0.15	-0.18	-0.13	-0.26	-0.17	-0.61	-0.90**
	$CI_L$	-0.47	-0.44	-0.49	-0.49	-0.76	-0.75	-1.40	-1.60
	$CI_U$	0.06	0.14	0.13	0.22	0.24	0.40	0.18	-0.20
Divorced/separated	$\beta$	0.14	0.21	0.19	0.27	0.18	0.23	-0.32	-0.12
	$CI_L$	-0.19	-0.14	-0.19	-0.15	-0.50	-0.55	-1.32	-1.08
	$CI_U$	0.47	0.56	0.57	0.69	0.86	1.02	0.68	0.84
Primary carer (=1 if available)	$\beta$	0.11	0.00	0.11	-0.07	0.18	0.35	0.36	0.08
	$CI_L$	-0.22	-0.41	-0.27	-0.57	-0.52	-0.55	-0.74	-0.93
	$CI_U$	0.44	0.41	0.48	0.43	0.88	1.25	1.46	1.08
Household income (base: Living comfortably)									
Doing alright	$\beta$	0.07	0.02	0.01	-0.02	0.04	0.07	0.96***	0.67**
	$CI_L$	-0.13	-0.20	-0.22	-0.29	-0.37	-0.40	0.30	0.15
	$CI_U$	0.26	0.24	0.23	0.25	0.44	0.53	1.62	1.19
Just about getting by	$\beta$	0.04	-0.09	0.01	-0.13	0.32	0.10	0.52	0.16
	$CI_L$	-0.22	-0.40	-0.29	-0.50	-0.27	-0.59	-0.33	-0.62

	<i>CI<sub>U</sub></i>	0.31	0.22	0.30	0.24	0.90	0.78	1.38	0.93
Finding it quite difficult	$\beta$	0.31	0.32	0.42	0.45	-0.20	-0.55	-0.37	-0.37
	<i>CI<sub>L</sub></i>	-0.35	-0.47	-0.33	-0.50	-1.53	-2.24	-2.59	-2.40
	<i>CI<sub>U</sub></i>	0.96	1.10	1.18	1.39	1.12	1.14	1.84	1.66
Finding it very difficult	$\beta$	0.55*	0.44	0.57*	0.54	0.43	-0.08	1.80*	0.23
	<i>CI<sub>L</sub></i>	-0.01	-0.28	-0.08	-0.32	-0.74	-1.60	-0.00	-1.59
	<i>CI<sub>U</sub></i>	1.12	1.16	1.21	1.40	1.61	1.43	3.61	2.04
Number of carers	$\beta$	-0.02	0.00	-0.01	0.01	0.00	0.04	0.06	0.10
	<i>CI<sub>L</sub></i>	-0.07	-0.06	-0.08	-0.07	-0.12	-0.10	-0.13	-0.06
	<i>CI<sub>U</sub></i>	0.04	0.07	0.05	0.08	0.13	0.18	0.25	0.25
Religion (=1 if religious)	$\beta$	-0.02	-0.29**	-0.07	-0.33**	0.28	0.08	0.03	0.50
	<i>CI<sub>L</sub></i>	-0.25	-0.56	-0.33	-0.66	-0.18	-0.52	-0.81	-0.26
	<i>CI<sub>U</sub></i>	0.20	-0.01	0.19	-0.00	0.75	0.68	0.86	1.26
Diagnosis (base: Non-cancer circulatory)									
Lung and respiratory cancer	$\beta$	-0.26	-0.09	-0.35*	-0.56	0.05	0.68	2.49***	2.32***
	<i>CI<sub>L</sub></i>	-0.58	-0.47	-0.72	-1.25	-0.79	0.05	1.26	1.25
	<i>CI<sub>U</sub></i>	0.07	0.29	0.03	0.12	0.89	-0.79	3.71	3.39
Breast cancer	$\beta$	-0.28	-0.34	-0.37	0.09	-0.16	0.89	1.45	0.74
	<i>CI<sub>L</sub></i>	-0.84	-0.90	-1.00	-1.02	-1.39	-0.16	-0.58	-0.71
	<i>CI<sub>U</sub></i>	0.27	0.22	0.26	1.21	1.07	-1.39	3.49	2.20
Genitourinary cancer	$\beta$	-0.21	-0.09	-0.33*	-0.00	0.15	1.07	2.56***	2.44***
	<i>CI<sub>L</sub></i>	-0.55	-0.47	-0.72	-0.68	-0.67	0.15	1.26	1.21
	<i>CI<sub>U</sub></i>	0.13	0.29	0.05	0.68	0.98	-0.67	3.86	3.67
Lymphatic cancer	$\beta$	-0.01	0.01	-0.05	-0.18	-0.38	0.98	1.01*	1.36**
	<i>CI<sub>L</sub></i>	-0.36	-0.38	-0.46	-0.87	-1.24	-0.38	-0.07	0.27
	<i>CI<sub>U</sub></i>	0.34	0.41	0.35	0.51	0.48	-1.24	2.08	2.44
Digestive cancer	$\beta$	-0.20	-0.17	-0.28	-0.03	-0.10	0.48	1.78***	1.77***
	<i>CI<sub>L</sub></i>	-0.50	-0.51	-0.63	-0.68	-0.90	-0.10	0.72	0.72
	<i>CI<sub>U</sub></i>	0.10	0.17	0.06	0.62	0.69	-0.90	2.85	2.83
Ill-defined cancer	$\beta$	-0.41*	-0.06	-0.57**	-0.08	0.44	0.69	2.23***	1.64**
	<i>CI<sub>L</sub></i>	-0.90	-0.60	-1.12	-1.06	-0.74	0.44	0.54	0.20
	<i>CI<sub>U</sub></i>	0.08	0.48	-0.01	0.89	1.63	-0.74	3.92	3.09
Other cancer	$\beta$	-0.07	-0.15	-0.24	0.38	0.13	1.63	2.10***	2.44***
	<i>CI<sub>L</sub></i>	-0.53	-0.70	-0.77	-0.65	-1.08	0.13	0.58	0.93
	<i>CI<sub>U</sub></i>	0.40	0.40	0.29	1.41	1.34	-1.08	3.62	3.95
Non-cancer respiratory	$\beta$	-0.02	-0.03	-0.00	-0.35	-0.07	1.34	-1.13*	-0.01
	<i>CI<sub>L</sub></i>	-0.36	-0.39	-0.38	-1.03	-0.86	-0.07	-2.29	-1.03
	<i>CI<sub>U</sub></i>	0.31	0.34	0.38	0.33	0.72	-0.86	0.03	1.01
Non-cancer CNS	$\beta$	0.01	-0.13	-0.23	1.20***	0.63	0.72	-0.58	-0.11

	$CI_L$	-0.40	-0.60	-0.70	0.36	-0.42	0.63	-2.10	-1.38
	$CI_U$	0.42	0.34	0.24	2.05	1.68	-0.42	0.93	1.15
Renal failure	$\beta$	0.60***	0.11	0.61**	0.22	0.24	1.68	0.07	0.66
	$CI_L$	0.18	-0.37	0.14	-0.62	-0.80	0.24	-1.16	-0.58
	$CI_U$	1.01	0.59	1.08	1.06	1.27	-0.80	1.31	1.89
Other non-cancer	$\beta$	-0.06	-0.19	-0.10	-0.11	0.14	1.27	0.44	0.07
	$CI_L$	-0.36	-0.54	-0.44	-0.75	-0.64	0.14	-0.57	-0.94
	$CI_U$	0.24	0.17	0.25	0.53	0.92	-0.64	1.46	1.07
Number of co-morbidities	$\beta$	0.03	-0.06	0.03	0.06	0.03	0.92	0.15	-0.02
	$CI_L$	-0.04	-0.14	-0.04	-0.09	-0.15	0.03	-0.15	-0.24
	$CI_U$	0.10	0.02	0.11	0.22	0.21	-0.15	0.45	0.20
Living with (=1 if with someone else)	$\beta$	-0.12	0.05	-0.06	-0.34	-0.40	0.21	0.13	0.18
	$CI_L$	-0.36	-0.20	-0.34	-0.82	-0.96	-0.40	-0.68	-0.58
	$CI_U$	0.11	0.31	0.21	0.14	0.16	-0.96	0.93	0.93
USA (=1 if USA)	$\beta$	0.80***	0.98***	0.70***	1.21***	1.55***	1.55***	2.87***	1.77***
	$CI_L$	0.60	0.77	0.48	0.80	1.09	1.09	1.98	1.13
	$CI_U$	0.99	1.20	0.91	1.63	2.02	2.02	3.75	2.42
Constant	$\beta$	9.74***	9.70***	9.69***	6.84***	5.98***	5.98***	4.17***	4.08***
	$CI_L$	9.15	9.09	9.02	5.68	4.50	4.50	1.93	1.96
	$CI_U$	10.33	10.30	10.36	8.00	7.46	7.46	6.41	6.20
Log likelihood		-4083.10	-3209.77	-4021.76	-3149.48	-3193.61	-2571.41	-2754.27	-2242.05
Observations		365	293	365	293	365	293	365	293

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**e-Figure 1.** Distribution of community care costs in the last three months of life among older patients who had access to specialist palliative care



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