



LEICESTERSHIRE
together

LEICESTERSHIRE JOINT STRATEGIC NEEDS ASSESSMENT



END OF LIFE CARE

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1. EXECUTIVE SUMMARY

The PCT has identified end of life care as a key strategy within its 5 year strategic plan. It is essential that people are supported to die with dignity in a place of their choosing. Throughout this report we have explored what we know about where people die and what people die from. This has been used to develop a model to plan for future end of life care needs.

Within this report we demonstrate that some groups of people are more likely to die in hospital than others. Inequity in choice of place of death is unacceptable and it is essential that the information within this report is used to understand the variation in place of death and to support changes in strategy to resolve this.

2. KEY FINDINGS

- In 2009 there were 5750 deaths registered to patients resident in Leicestershire County and Rutland PCT
- Two thirds of deaths occur after 75 years of age
- 1 in 3 deaths are caused by circulatory diseases, 1 in 3 are caused by cancer and 1 in 8 are caused by respiratory diseases
- In 2009 23% of deaths were classed as taking place at home. 54% took place in a hospital
- Factors that influence place of death include:
 - Age - deaths in hospital are highest in 75-84 year olds
 - Sex - men are more likely to die in hospital than women
 - Cause of death - people who die from cancer are less likely to die in hospital than people who die from cardiovascular disease or respiratory diseases
 - Geography – whilst there is no real pattern in deaths in hospital across districts it is possible to identify hotspots of activity at ward level
 - Socio-economic factors – there was no relationship identified when reviewing place of death by deprivation, however there was a number of mosaic groups that had higher rates of deaths at home
- In 2008/09 there were 542 people on GP palliative care registers
- Our aspiration is to have 2,000 patients (35% of annual deaths) on GP palliative care registers. This equates to three out of four people currently not being identified and put on registers.

3. INTRODUCTION

The Department of Health Working Paper on End of Life Care was published in 2007. This states that end of life care should encompass:

- Adults with advanced, progressive, incurable illness (eg. advanced cancer, heart failure, chronic obstructive pulmonary disease, stroke, chronic neurological conditions and dementia)
- Care given in all settings (eg. home, acute hospital, ambulance, residential/care home, nursing home, hospice, community hospital, prison or other institution)
- Care given in the last year of life
- Patients, carers and family members (including bereavement care)

There are three national drivers shaping the agenda for end of life care, the national end of life strategy, Our NHS, Our Future and NICE improving outcomes guidance for palliative and supportive care. The Next Stage Review clinical reference group for end of life care developed a 10-year vision for end of life (EOL) care which was summarised in Leicester, Leicestershire and Rutland "Excellence for all", published in June 2008. The findings of this report supported the prioritisation of end of life care as a world class commissioning priority.

More than 50 percent of people express a wish to die at home although currently only about 20 percent are actually supported to do this and 40 percent of deaths occur in hospital.

End of life care relates to people age 18 and over only. However, our end of life care trajectory is based on all people. Therefore this report looks at both people aged 18 and over and people of all ages.

The overall aim for Leicester, Leicestershire and Rutland is: **To enable people in LLR at End of Life to die in their preferred place of care**; Care at the end of life should be supported by standards and outcome measures to ensure it is effectively meeting the needs of the local population and helping to build and maintain public confidence in the services provided. The key outcome is to achieve a 'good enough' experience for all patients and their families/carers across LLR, during the last days, weeks and months of life.

Palliative Care Registers: End of Life care in the East Midlands will be characterised by an increasing emphasis on offering people and their families and carers a choice of place of death and honouring that choice. In the first instance, we will improve the registration of people deemed to be approaching the end of life and by 2013 all areas of the East Midlands will be recording a minimum of 35% of patients on palliative care registers v ONS deaths; by 2015 this figure will be 40%

The purpose of this report is to summarise the data that we have available on end of life care, to assess the health needs of our population in relation to end of life care and to identify areas of the PCT that have greater levels of health need than

other areas. This data will underpin the delivery of the PCTs end of life care strategy.

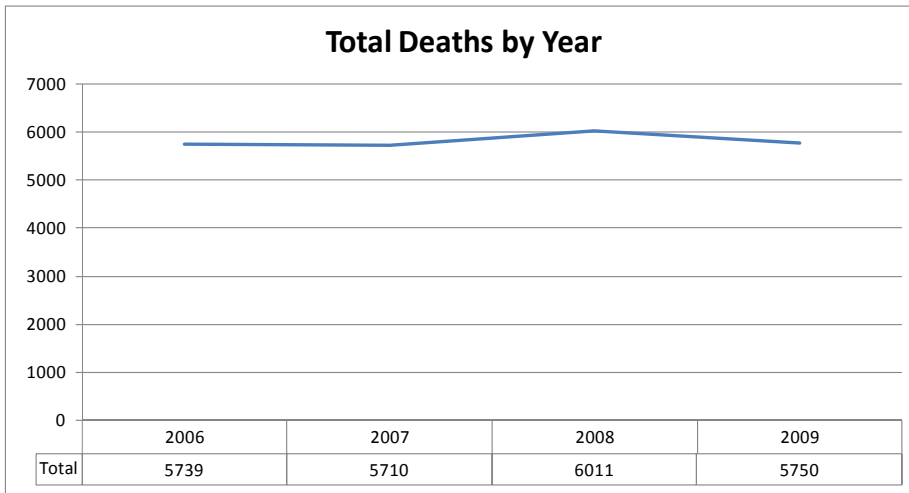
4. PROFILE OF DEATHS IN NHS LEICESTERSHIRE COUNTY AND RUTLAND

4.1 Numbers of deaths by year

In 2009 there were 5750 deaths registered¹ to patients resident² in Leicestershire county and Rutland PCT. 5714 of these were to people aged 18 years and over (99.4%)

Between 2006 and 2009 there were a total of 23,210 deaths across the PCT, an average of 5,800 per year. Numbers are generally in the region of 5,730 per year. There were a higher number of deaths in 2008, with a total of 6,011 deaths, the additional deaths were mainly in people aged 80 years and over.

Figure 1: Total deaths by year



Source: ONS Mortality data, analysed by PHIT,

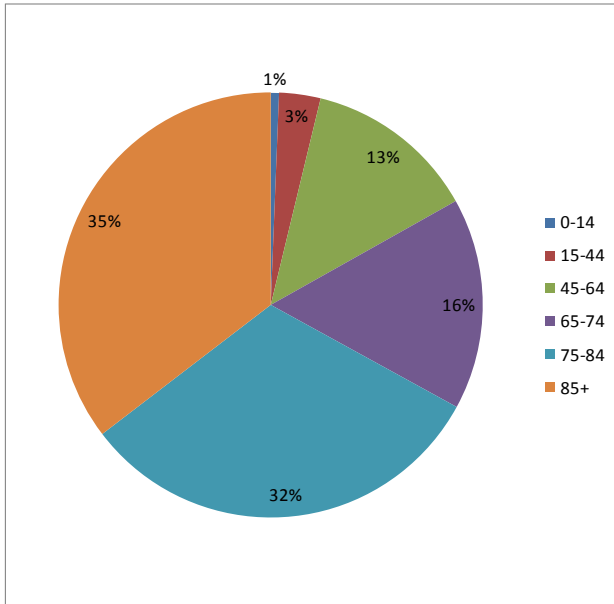
4.2 Age profile of deaths in Leicestershire County and Rutland

35% of deaths in Leicestershire County and Rutland are for people aged 85 years and over. 32% occur in 75-84 years olds. This means two thirds of deaths occur after 75 years. However, a third of deaths are regarded as premature ie. they occur before a person reaches 75 years of age.

¹ Registered between 1/1/09 and 31/12/09, death may have occurred in 2008 or a death that took place in 2009 may have been registered in 2010

² Patients resident means patients normal address is within PCT boundary

Figure 2: Deaths by age band, 2009

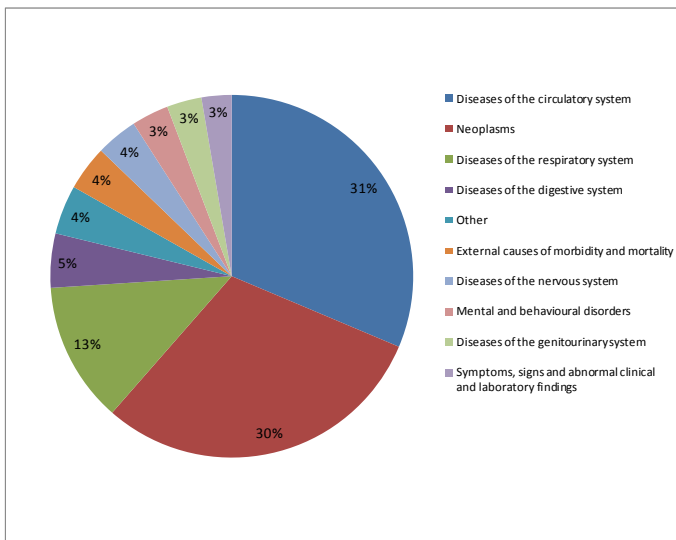


Source: ONS Mortality data, analysed by PHIT

4.3 Cause of death

1 in 3 deaths are caused by circulatory diseases, 1 in 3 are caused by cancer and 1 in 8 are caused by respiratory diseases. For people that die younger, ie. before they turn 75 years of age, the top 3 causes of death remain the same – circulatory diseases, cancer and respiratory diseases. However, the main cause of death in this age group is cancer with 43% of deaths, circulatory diseases accounts for 22% of deaths in this age group.

Figure 3: Deaths by cause, 2009



Source: ONS Mortality data, analysed by PHIT

4.3.1 Cause of death by district

Table 1 illustrates the number of deaths by cause of death for each district between 2005 and 2007.

Table 1: Proportion of deaths from each cause by district

Number of deaths from each cause 2005-07
 SWCIS ad hoc information request
 South West Cancer Intelligence Servi
 EOL Profile data

LA_name	Underlying	number
Rutland	Cancer	283
Blaby	Cancer	657
Charnwood	Cancer	1003
Harborough	Cancer	594
Hinckley and Bosworth	Cancer	763
Melton	Cancer	381
North West Leicestershire	Cancer	719
Oadby and Wigston	Cancer	461
Rutland	Cardiov	284
Blaby	Cardiov	654
Charnwood	Cardiov	1366
Harborough	Cardiov	628
Hinckley and Bosworth	Cardiov	849
Melton	Cardiov	440
North West Leicestershire	Cardiov	851
Oadby and Wigston	Cardiov	456
Rutland	Other	254
Blaby	Other	601
Charnwood	Other	1118
Harborough	Other	603
Hinckley and Bosworth	Other	832
Melton	Other	369
North West Leicestershire	Other	718
Oadby and Wigston	Other	447
Rutland	Resp	102
Blaby	Resp	299
Charnwood	Resp	621
Harborough	Resp	307
Hinckley and Bosworth	Resp	421
Melton	Resp	170
North West Leicestershire	Resp	336
Oadby and Wigston	Resp	248

Source: End of Life Care Profiles http://www.endoflifecare-intelligence.org.uk/profiles/Cause_of_Death/atlas.html

4.4 Deaths by place of death

In 2009 23% of deaths were classed as taking place at home. 54% took place in a hospital (Figure 4, Table 2). It is important to remember that whilst we are measured on the percentage of deaths that take place in a person's own home, many of the people that die in residential (9%) and nursing homes (9%) will be dying in their own home. 3% of the deaths took place in a hospice – again this is likely to be a good death experience, linked to the complex needs of the patient. The key to analysing place of death is in understanding a patient's choice in place of death. National studies show us that 56% of people would choose to die at home, 24% in a hospice

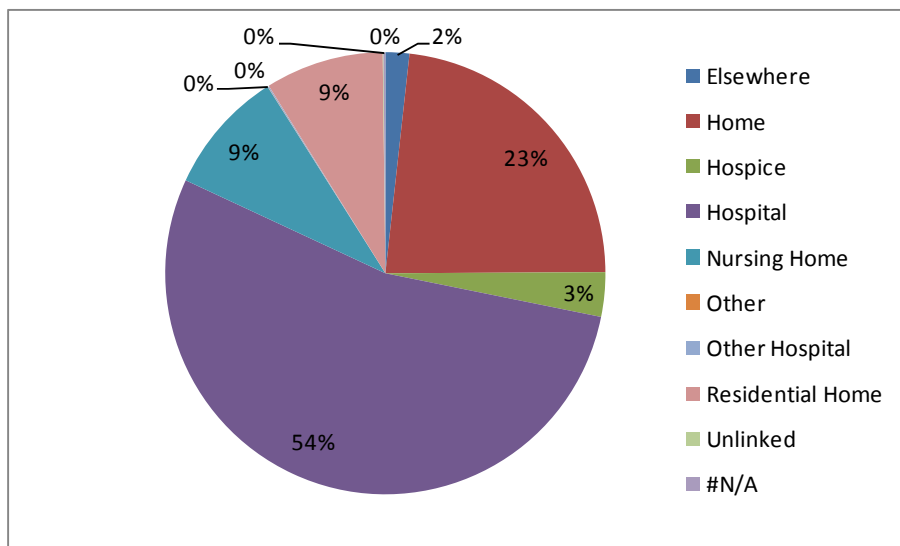
and 11% in a hospital. ³ With 54% of deaths occurring in hospital it is clear that there is a substantial gap between the death experience that patients have and the experience that they would choose.

Table 2: Place of death by year, 2006-2009

Year	Place of death:							Grand Total
	Elsewhere	Home	Hospice	Hospital	Nursing Home	Other	Residential Home	
2006	94	1041	208	3507	426	1	462	5739
2007	108	1157	221	3198	463	10	553	5710
2008	115	1328	208	3275	521	15	549	6011
2009	100	1326	187	3110	520	12	495	5750
Grand Total	417	4852	824	13090	1930	38	2059	23210

Source: ONS Mortality data, analysed by PHIT

Figure 4: Deaths in 2009 by place of death (age 18 and over)

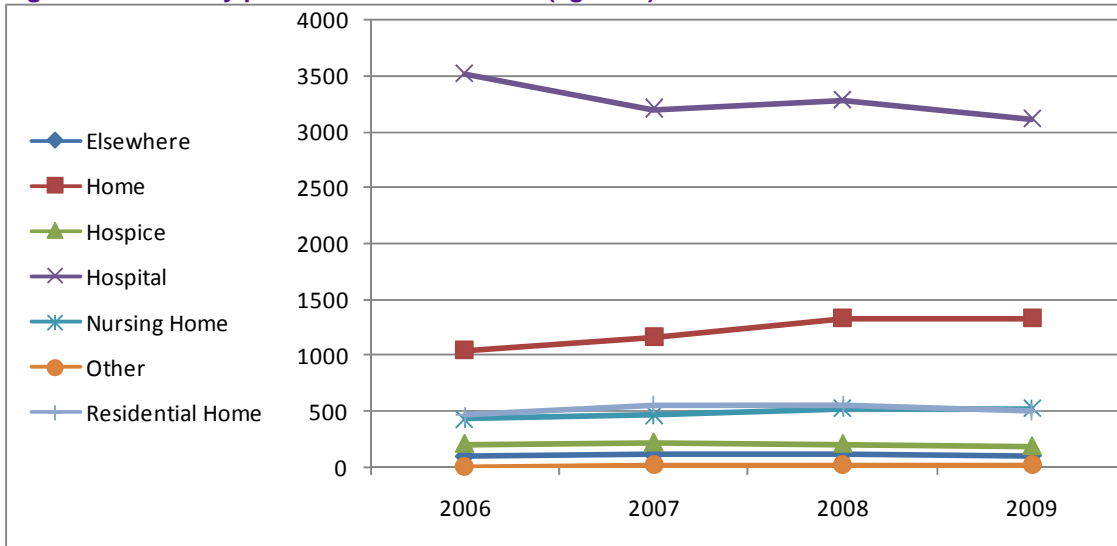


Source: ONS Mortality data, analysed by PHIT

Figure 5 illustrates the trend in place of death between 2006 and 2009. In this period there has been a decrease in deaths in hospital and an increase in the numbers of deaths that take place at home. However the rate that deaths in hospital are reducing is slow and after a reasonable drop between 2006 and 2007 there was an increase in 2008.

³ This is taken from the Nottingham model – ask Karen for a more detailed reference

Figure 5: Deaths by place of death 2006-2009 (age 16+)



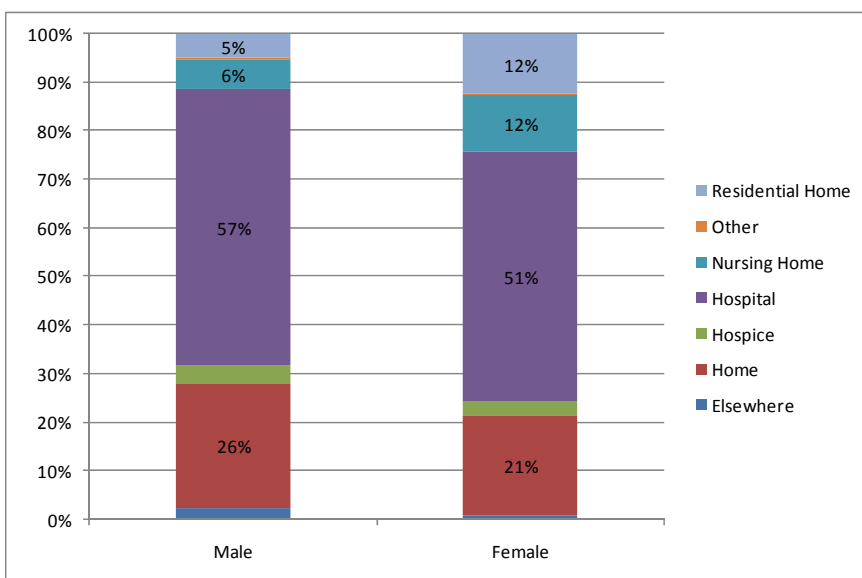
Source: ONS Mortality data, analysed by PHIT

4.4.1 Place of death by sex

- 57% of men die in hospital and 51% of women die in hospital.
- 26% of men die at home and 21% of women die at home
- 11% of men die in nursing and residential homes and 24% of women die in nursing and residential homes

The key issue for men and women is the gap between the proportion of men that die in hospital and the proportion of women that die in hospital.

Figure 6: Place of death by sex, 2009

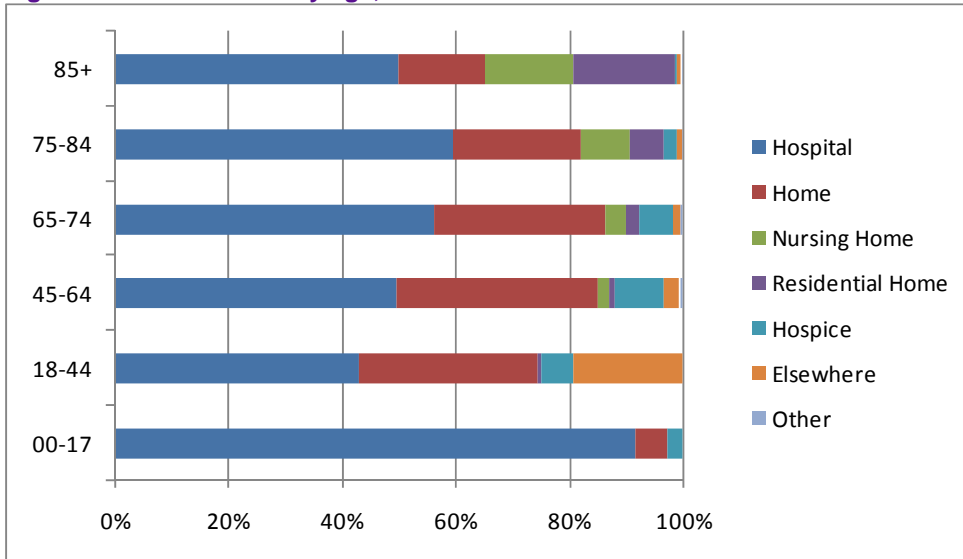


Source: ONS Mortality data, analysed by PHIT

4.4.2 Place of death by age group

Figure 7 illustrates place of death by age band. Children have the highest proportion of deaths in hospital. People aged 18-44 years have a significant proportion of deaths elsewhere – this will reflect a higher proportion of deaths linked to external causes in this age group, such as road traffic accidents. Of the older age groups, people aged 75-84 have a higher proportion of deaths at home. People aged 85 years and over have the lowest proportion of deaths at home but they also have the highest proportion of deaths in nursing and residential homes.

Figure 7: Place of death by age, 2009

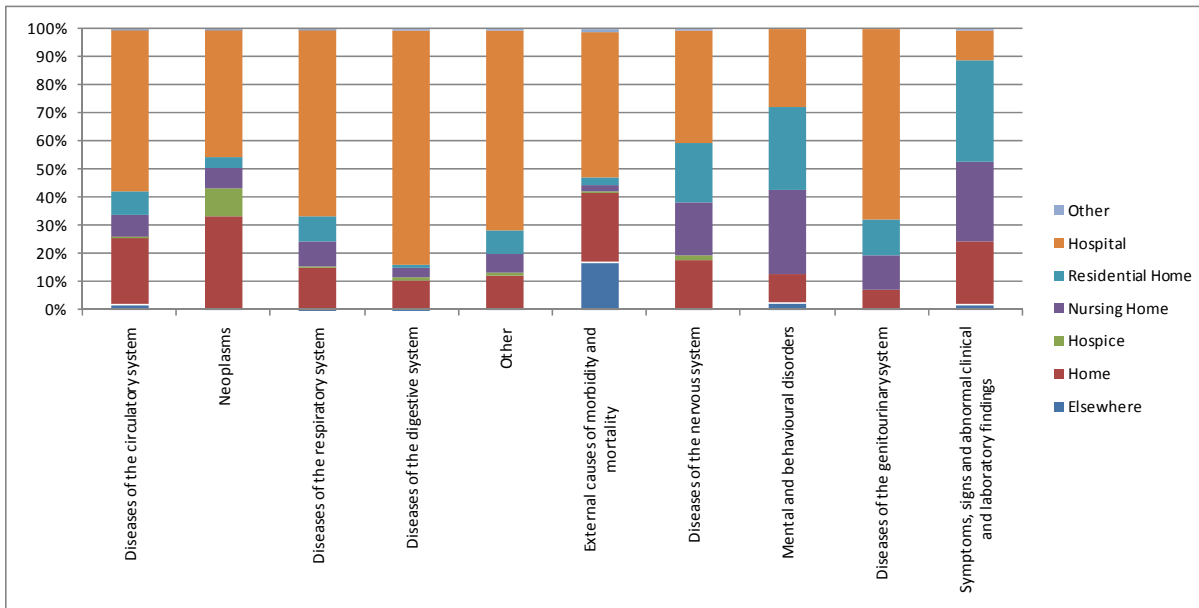


Source: ONS Mortality data, analysed by PHIT

4.4.3 Place of death by cause

Figure 8 illustrates place of death by cause. People dying from cancer are less likely to die in hospital (45%) than people dying from cardiovascular disease or respiratory disease. 58% of deaths from cardiovascular disease and 66% of deaths from respiratory disease take place in hospital.

Figure 8: Deaths by cause and place of death



Source: ONS Mortality data, analysed by PHIT

4.5 Segmentation of need based on socio-demographic factors

It is important to understand the way in which different populations are affected by different health issues. Within this report the issues we have reviewed are the ones for which we have robust data – within this section we have considered geography, deprivation and population groups using Mosaic classifications.

Within this section we have focused on deaths in hospital rather than the deaths at home. This is because the official definition of deaths at home excludes patients who die in a nursing or residential home where this is the patients normal home.

4.5.1 Geography – analysis by local authority district

Table 3 illustrates deaths in hospital by district using local analysis and compares the proportion of deaths in hospital across Leicestershire County and Rutland. There is no statistical difference between the districts of Leicestershire County and Rutland for the percentage of deaths that take place in hospital.

Table 3: Place of death by district, 2009

District	Deaths in Hospital	Total Deaths	Percentage deaths in hospital	Lower Confidence Limit	Upper Confidence Limit	Deaths at home (trajectory definition)
Rutland	156	325	48.0%	42.6%	53.4%	25.8%
Blaby	412	738	55.8%	52.2%	59.4%	22.4%
Charnwood	724	1276	56.7%	54.0%	59.4%	21.8%
Harborough	360	691	52.1%	48.4%	55.8%	22.3%
Hinckley & Bosworth	495	898	55.1%	51.9%	58.3%	23.1%
Melton	202	398	50.8%	45.9%	55.6%	23.4%
North West Leicestershire	458	834	54.9%	51.5%	58.3%	25.7%
Oadby & Wigston	267	550	48.5%	44.4%	52.7%	23.3%
Leicestershire County and Rutland	3074	5710	53.8%	52.5%	55.1%	23.2%

Source: ONS Mortality data, analysed by PHIT

Appendix 1 compares the proportion of deaths in each district by place of death against a national average. This is an extract from the national end of life care profiles.⁴

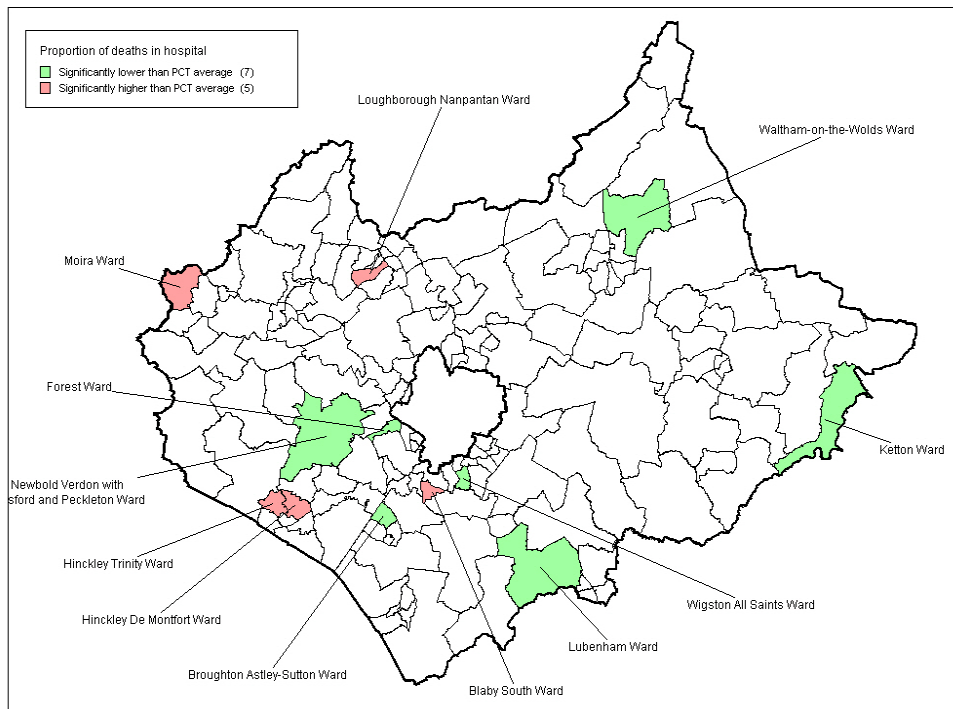
4.5.2 Geography – analysis by electoral ward

The previous section showed that there is no statistical variation in the proportion of deaths that take place in hospital at a district level. However, there is some variation in the rates at an electoral ward level. The map presented below (Figure 9) illustrates 6 hotspot wards where the proportion of deaths that take place in hospital are higher than the PCT average.

There are also a number of wards where the percentage of deaths in hospital is significantly lower than the PCT average.

⁴ National end of life care profiles: national End of Life Care Intelligence Network: http://www.endoflifecare-intelligence.org.uk/profiles/Cause_of_Death/atlas.html

Figure 9: Place of death by ward, 2009

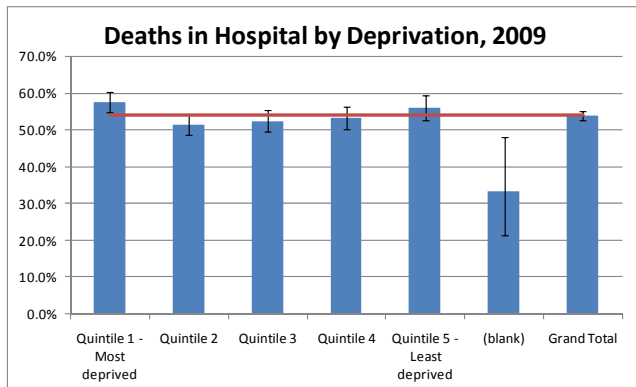


Source: ONS Mortality data, analysed by PHIT

4.5.3 Analysis by socio-economic deprivation

Figure 10 illustrates the proportion of deaths that take place in hospital by quintile of deprivation using the indices of deprivation 2007. This shows us that there is no relationship between socio-economic deprivation and choice in place of death using the IMD 2007 to define deprivation. People living in both the most and the least deprived areas of Leicestershire County and Rutland are equally likely to die in hospital.

Figure 10: Deaths in hospital by quintile of deprivation, 2009



Source: ONS Mortality data, analysed by PHIT, Indices of Deprivation 2007

Table 4 illustrates the proportion of people that die in hospital by Mosaic classification.⁵ The analysis by Mosaic type provides a far more interesting picture than the analysis by socio-economic group with a number of Mosaic groups identified with above average proportion of deaths taking place in hospital. The three Mosaic types with significantly high rates of deaths in hospital are:

- Type J Owner occupiers in older-style housing in ex-industrial areas
- Type K Residents with sufficient incomes in right-to-buy social housing
- Type M Elderly people reliant on state support

Further analysis by mosaic group is available in Appendix 2.

Table 4: Place of death by Mosaic 2009 Classification

Sum of Deaths Row Labels	Hospital		Percentage deaths in hospital		
	Hospital	Grand Total	LCL	UCL	
A Residents of isolated rural communities	83	170	48.8%	41.4%	56.3%
B Residents of small and mid-sized towns with strong local roots	565	1054	53.6%	50.6%	56.6%
C Wealthy people living in the most sought after neighbourhoods	55	126	43.7%	35.3%	52.4%
D Successful professionals living in suburban or semi-rural homes	488	974	50.1%	47.0%	53.2%
E Middle income families living in moderate suburban semis	297	555	53.5%	49.4%	57.6%
F Couples with young children in comfortable modern housing	101	208	48.6%	41.9%	55.3%
G Young, well-educated city dwellers	29	64	45.3%	33.7%	57.4%
H Couples and young singles in small modern starter homes	47	91	51.6%	41.5%	61.6%
I Lower income workers in urban terraces in often diverse areas	105	203	51.7%	44.9%	58.5%
J Owner occupiers in older-style housing in ex-industrial areas	404	684	59.1%	55.3%	62.7%
K Residents with sufficient incomes in right-to-buy social housing	230	373	61.7%	56.6%	66.5%
L Active elderly people living in pleasant retirement locations	248	474	52.3%	47.8%	56.8%
M Elderly people reliant on state support	349	567	61.6%	57.5%	65.5%
N Young people renting flats in high density social housing	13	22	59.1%	38.7%	76.7%
O Families in low-rise social housing with high levels of benefit need	28	46	60.9%	46.5%	73.6%
U Unclassified	17	54	31.5%	20.7%	44.7%
(blank)	15	45	33.3%	21.4%	47.9%
Grand Total	3074	5710	53.8%	52.5%	55.1%

5. DEATHS IN HOSPITAL

From hospital activity data in 2009/10 we are able to analyse hospital activity relating to people who died in hospital. For NHS LCR there is data on 2518 patients who died whilst in hospital as an inpatient. The initial results of this analysis shows:

- Of the deaths in hospital there were an equal number of deaths to patients with a main diagnosis of respiratory disease and diseases of the circulatory system (605 each). An additional 387 patients had a main diagnosis of cancer.
- 1436 patients were aged 85 years and over. 2208 patients were aged 65 years and over.

⁵ Mosaic Public Sector is a profiling tool that uses more than 440 data elements about individuals, to classify them into groups with similar characteristics. At a postcode level it provides the predominate group in that area enabling better understanding of the characteristics of individual groups and areas. Further information on Mosaic Public Sector can be found here: <http://guides.business-strategies.co.uk/mosaicpublicsector2009/html/visualisation.htm?011122>

- For 861 patients this was the only hospital admission in the 365 days preceding death. 1,657 patients had at least one additional admission in the 12 months prior to the admission that preceded their death.⁶
- 826 patients had a length of stay of 0-3 days; 196 patients died on the day they were admitted. 642 patients had a length of stay of 4-9 days. 1050 patients stayed for 10 days or more.

Additional analysis needs to be undertaken on this dataset and this has been included within the recommendations.

6. PREVALENCE OF PALLIATIVE CARE

Palliative Care Registers: End of Life care in the East Midlands will be characterised by an increasing emphasis on offering people and their families and carers a choice of place of death and honouring that choice. In the first instance, we will improve the registration of people deemed to be approaching the end of life and by 2013 all areas of the East Midlands will be recording a minimum of 35% of patients on palliative care registers versus ONS deaths; by 2015 this figure will be 40%

6.1 GP registrations

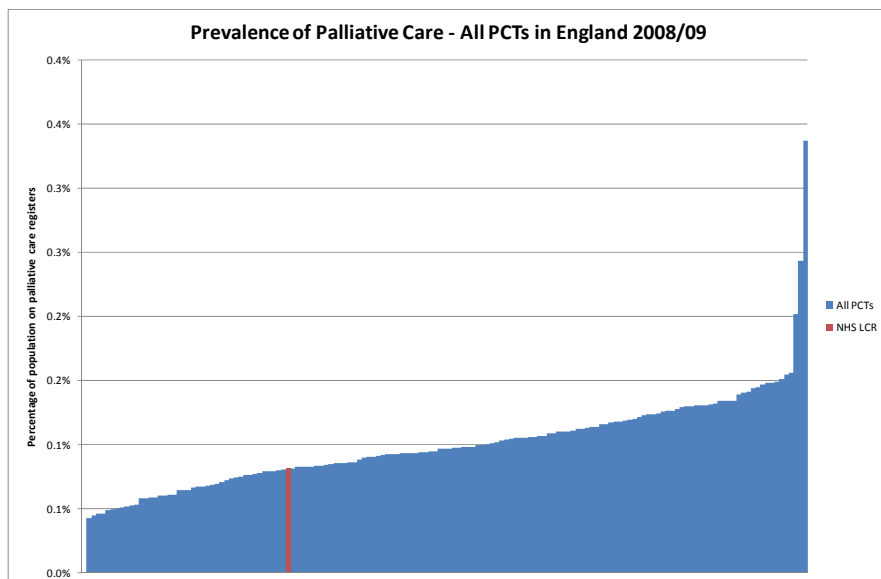
In 2008/09 there were 542 people on GP palliative care registers in NHS Leicestershire County and Rutland. This is 0.08% of the population. This is significantly lower than the England average of 0.10%. This is a reduction on the numbers of people on palliative registers in 2007/08 when there were 706 patients on registers, 0.11%.

Figure 11 illustrates the prevalence of the population on palliative care registers in all PCTs in the country. NHS LCR ranks 44 out of 152 PCTs (where 1 = lowest and 152 = highest). It is important to recognise that variation in prevalence of people on palliative care registers will be reflective of local GP practice rather than of the underlying population health needs.

One of the palliative care aims is to identify 35% of patients that die as suitable for inclusion on GP palliative care registers. In 2008/09 there were 542 people on palliative care registers against a total of 6011 deaths in 2008. This equates to only 9% of all deaths linked to the palliative care registers. This is clearly a long way from the target of 35% of deaths by 2013/14.

⁶ Calculated as length of time between discharge from earlier spell to admission for death spell

Figure 11: Palliative Care Registers by PCT



Source: NHS Information Centre: QOF 2008/09 summary tables

Table 5 details palliative care prevalence by practice based commissioning localities. A practice analysis is available on request. Across the practice based commissioning localities palliative care ranges from a prevalence of 0.06% to 0.11%. Melton, Rutland and Harborough have the highest prevalence and this is significantly higher than the PCT average. However, it must be noted that this is likely to be a reflection of local recording practice rather than increased needs.

Table 5: Palliative Care Registers by Pbc Localities

Locality	Variable Name	Sum of Practice List Size	Sum of Number on disease register	Prevalence	Lower confidence limit	Upper confidence limit
Oadby + Wigston	Palliative Care	66788	58	0.09%	0.07%	0.11%
Melton Rutland and Harborough	Palliative Care	151573	166	0.11%	0.09%	0.13%
Charnwood South	Palliative Care	71931	46	0.06%	0.05%	0.09%
North West Leicestershire	Palliative Care	100429	96	0.10%	0.08%	0.12%
Charnwood North	Palliative Care	81182	45	0.06%	0.04%	0.07%
Blaby + Lutterworth	Palliative Care	90849	55	0.06%	0.05%	0.08%
Hinckley + Bosworth	Palliative Care	108544	76	0.07%	0.06%	0.09%
Grand Total		671296	542	0.08%	0.07%	0.09%

Source: NHS Information Centre: QOF 2008/09 summary tables

6.2 Estimated prevalence

It is estimated that 35% of the people that die in a year will be eligible for inclusion on palliative care registers. In 2009 there were 5710 deaths to people aged 18 and over. If 35% of these deaths were eligible for inclusion on GP palliative care registers we would anticipate 2,000 people to be included.

This equates to approximately 1 in 4 of the patients eligible for palliative care registers being identified and recorded.

6.3 Projections of need

The 2008 ONS based sub national projections for Leicestershire show that there will be very little increase in the future numbers of deaths in Leicestershire between 2009 and 2014. The increase in need will be generated by increasing GP recording on palliative care registers and the corresponding workload that will be required once patients have been identified.

Closing the gap between met and unmet needs will be a challenge for future resources. The aim is to have 35% of the people that die in a 12 month period on GP registers by 2014 – this will be an increase of 1,500 people eligible for palliative care registers.

7. END OF LIFE CARE TRAJECTORY

The PCT has prioritised end of life care through its 5 year strategy. For end of life care we will increase the proportion of people dying in their own homes from 21 percent to 23.5 percent by providing greater choice and enhanced community based services. Focusing on the activity under the end of life pathway will contribute to the reduction of hospital admissions, ensure a ‘good death’ (as identified in the national end of life strategy) and provide patients and carers with support to ensure that their preferred place of care can be met.

Table 6: Trajectory for end of life care

Outcome 8: Increasing choice in place of death for end of life care (% of deaths at home)	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
	21%	21.5%	22%	22.5%	23%	23.5%

Source: PCT Strategic Plan 2009/10-2013/14

8. DELIVERY OF THE END OF LIFE CARE TRAJECTORY – PREDICTIVE MODEL

The PCT has estimated the changes in activity that will be required to meet the recording of 35% deaths on palliative care registers by 2014. It has also predicted the changes that would be required to allow patients to have the death experience of their choosing in line with this change in recording. The predictive model that has been used in this analysis is taken from the Nottingham end of life care model and adapted for use in NHS Leicestershire County and Rutland.

The total deaths are baseline for the PCT in 2008 and 2009 and estimates using the ONS sub-national projections are allocated for 2009-2014.

The model assumes that a proportion of deaths across 4 cause groups are eligible for inclusion on GP palliative care registers. The proportion increases in each year of the model to deliver an overall proportion of 35%. The actual numbers of deaths by cause in 2009 are used to apportion out LCR deaths. The assumptions that have been used have been presented in Table 7.

The model is summarised in appendix 3 and the detail is available in appendix 4.

Table 7: End of life care assumptions – proportion of deaths anticipated to be captured on GP registers

	2008 - baseline	2014 - projection
Cancer	23%	67%
Ischaemic Heart Disease	10%	20%
Chronic Obstructive Pulmonary Disease	10%	67%
Other	5%	20%
Total	11%	35%

9. THE 6 EQUALITY STRANDS

This report has reviewed data related to end of life care by age and sex. The report has not reviewed data relating to disability, ethnicity, religion and belief or sexual orientation.

It is important to recognise that people that are disabled, from a black and minority ethnic group, who have specific beliefs or are lesbian, gay, tran-sexual or bi-sexual may have different patterns of need than other sectors of the population. However, we do not have data stratified in a way that allows us to review their health needs.

10. CONCLUSIONS

Currently NHS Leicestershire County and Rutland has 23% of all deaths taking place at home. Nationally we are told that 50% of people express a wish to die at home. It is essential that we recognise the gap between a patients choice in where to die and the reality of their death experience.

This report examines a number of factors that will influence a persons death experience – age, sex, cause of death and geography are the main factors that have been considered.

Cause of death is a key issue and it is important to recognise that planning for end of life care needs to focus on the patients for which the end of life care pathway is appropriate. The East Midlands End of Life Clinical Reference Group has set an aspirational target that 35% of all patients that die should be identified on GP palliative care registers. In 2008/09 NHS Leicestershire County and Rutland had accounted for approximately one in four of these patients on their GP registers. The challenge facing the PCT will be linked to understanding the levels of unmet need in the population and addressing this for the future.

The end of life care predictive model has taken the PCTs base data and estimated the impact of improving recording of end of life care patients on palliative care registers in the end of life care pathway. This illustrates that improving the identification of end of life care and developing the pathway to ensure that people

are properly supported to die in a place of their choosing will support the delivery of the end of life care trajectory.

11. RECOMMENDATIONS

It is recommended that more work is needed to understand the reasons for the following patterns in place of death:

- Why are men more likely to die in hospital than women
- What are the reasons for the variation in place of death across the districts when compared with national data
- Further analysis is required of the deaths in hospital data to further understand this
- The assumptions developed around end of life care need to be reviewed and agreed with a relevant clinician

Janine Dellar
Public Health Intelligence
July 2010

Appendix 1: End of life Care Profiles – Place of death by district

Percentage of deaths from each cause

SWCIS ad hoc information request

South West Cancer Intelligence Service

EOL Profile data

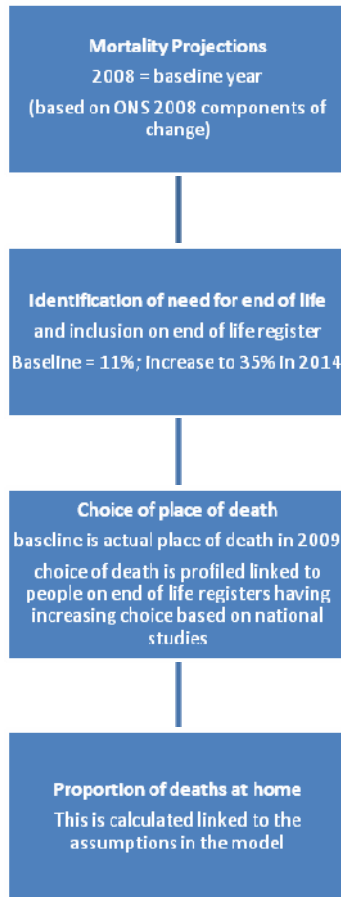
LA_name	Place_of_Death	LA_rate	Lower confidence limit	upper confidence limit	number	significance
Blaby	Old peoples Homes	7.78	6.73	8.97	172	
Blaby	Own Residence	19.9	18.29	21.62	440	
Blaby	Elsewhere	1.54	1.1	2.14	34	
Blaby	Hosp	60.38	58.32	62.4	1335	
Blaby	Hospice	5.61	4.72	6.65	124	
Blaby	Nursing Homes	4.79	3.98	5.77	106	Low
Charnwood	Old peoples Homes	7.77	6.99	8.62	319	High
Charnwood	Own Residence	18.45	17.3	19.67	758	
Charnwood	Elsewhere	2.12	1.72	2.6	87	
Charnwood	Hosp	60.52	59.01	62	2486	High
Charnwood	Hospice	4.09	3.53	4.74	168	Low
Charnwood	Nursing Homes	7.06	6.32	7.88	290	Low
Harborough	Old peoples Homes	12.57	11.23	14.05	268	High
Harborough	Own Residence	18.95	17.34	20.67	404	
Harborough	Elsewhere	1.74	1.26	2.38	37	
Harborough	Hosp	60.18	58.08	62.24	1283	
Harborough	Hospice	2.95	2.32	3.76	63	Low
Harborough	Nursing Homes	3.61	2.9	4.49	77	Low
Hinckley and Bosworth	Old peoples Homes	7.54	6.63	8.56	216	
Hinckley and Bosworth	Own Residence	18.29	16.92	19.75	524	
Hinckley and Bosworth	Elsewhere	1.15	0.82	1.61	33	Low
Hinckley and Bosworth	Hosp	63.28	61.5	65.03	1813	High
Hinckley and Bosworth	Hospice	3.56	2.94	4.3	102	Low
Hinckley and Bosworth	Nursing Homes	6.18	5.35	7.12	177	Low
Melton	Old peoples Homes	7.5	6.22	9.02	102	
Melton	Own Residence	21.91	19.79	24.19	298	High
Melton	Elsewhere	2.13	1.49	3.05	29	
Melton	Hosp	57.21	54.56	59.81	778	
Melton	Hospice	1.1	0.67	1.81	15	Low
Melton	Nursing Homes	10.15	8.65	11.87	138	
North West Leicestershire	Old peoples Homes	6.82	5.92	7.85	179	
North West Leicestershire	Own Residence	19.51	18.04	21.07	512	
North West Leicestershire	Elsewhere	2.02	1.55	2.63	53	
North West Leicestershire	Hosp	61.66	59.79	63.5	1618	High
North West Leicestershire	Hospice	2.02	1.55	2.63	53	Low
North West Leicestershire	Nursing Homes	7.96	6.99	9.06	209	
Oadby and Wigston	Old peoples Homes	8	6.78	9.43	129	
Oadby and Wigston	Own Residence	15.69	14	17.55	253	Low
Oadby and Wigston	Elsewhere	0.87	0.52	1.45	14	Low
Oadby and Wigston	Hosp	59.31	56.89	61.68	956	
Oadby and Wigston	Hospice	4.47	3.56	5.59	72	
Oadby and Wigston	Nursing Homes	11.66	10.19	13.32	188	High
Rutland	Old peoples Homes	12.89	10.88	15.21	119	High
Rutland	Own Residence	22.86	20.27	25.68	211	High
Rutland	Elsewhere	3.25	2.29	4.6	30	High
Rutland	Hosp	51.46	48.24	54.67	475	Low
Rutland	Hospice	2.06	1.32	3.19	19	Low
Rutland	Nursing Homes	7.48	5.95	9.35	69	

Source: End of Life Care Profiles http://www.endoflifecare-intelligence.org.uk/profiles/Cause_of_Death/atlas.html

Appendix 2: Mosaic by Type

Sum of Deaths Row Labels	Hospital	Grand Total	Percentage deaths in hospital		
			LCL	UCL	
A Residents of isolated rural communities	83	170	48.8%	41.4%	56.3%
B Residents of small and mid-sized towns with strong local roots	565	1054	53.6%	50.6%	56.6%
C Wealthy people living in the most sought after neighbourhoods	55	126	43.7%	35.3%	52.4%
D Successful professionals living in suburban or semi-rural homes	488	974	50.1%	47.0%	53.2%
E Middle income families living in moderate suburban semis	297	555	53.5%	49.4%	57.6%
F Couples with young children in comfortable modern housing	101	208	48.6%	41.9%	55.3%
G Young, well-educated city dwellers	29	64	45.3%	33.7%	57.4%
H Couples and young singles in small modern starter homes	47	91	51.6%	41.5%	61.6%
I Lower income workers in urban terraces in often diverse areas	105	203	51.7%	44.9%	58.5%
J Owner occupiers in older-style housing in ex-industrial areas	404	684	59.1%	55.3%	62.7%
J45 Low income communities reliant on low skill industrial jobs	90	145	62.1%	54.0%	69.6%
J46 Residents in blue collar communities revitalised by commuters	143	263	54.4%	48.3%	60.3%
J47 Comfortably off industrial workers owning their own homes	171	276	62.0%	56.1%	67.5%
K Residents with sufficient incomes in right-to-buy social housing	230	373	61.7%	56.6%	66.5%
K48 Middle aged couples and families in right-to-buy homes	60	86	69.8%	59.4%	78.5%
K49 Low income older couples long established in former council estates	7	10	70.0%	39.7%	89.2%
K50 Older families in low value housing in traditional industrial areas	63	118	53.4%	44.4%	62.1%
K51 Often indebted families living in low rise estates	100	159	62.9%	55.2%	70.0%
L Active elderly people living in pleasant retirement locations	248	474	52.3%	47.8%	56.8%
M Elderly people reliant on state support	349	567	61.6%	57.5%	65.5%
M56 Older people living on social housing estates with limited budgets	155	276	56.2%	50.3%	61.9%
M57 Old people in flats subsisting on welfare payments	24	33	72.7%	55.8%	84.9%
M58 Less mobile older people requiring a degree of care	86	127	67.7%	59.2%	75.2%
M59 People living in social accommodation designed for older people	84	131	64.1%	55.6%	71.8%
N Young people renting flats in high density social housing	13	22	59.1%	38.7%	76.7%
O Families in low-rise social housing with high levels of benefit need	28	46	60.9%	46.5%	73.6%
U Unclassified	17	54	31.5%	20.7%	44.7%
(blank)	15	45	33.3%	21.4%	47.9%
Grand Total	3074	5710	53.8%	52.5%	55.1%

Appendix 3: Planning for end of life care



Appendix 4

Planning for End of Life Care

STEP ONE - MORTALITY PROJECTIONS

	2008	6011	2009	5750	2010	6000	2011	5900	2012	5975	2013	6050	2014	6100
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Source: ONS 2008 Based SNP

STEP TWO - IDENTIFICATION OF END OF LIFE (tab-step 2)

	2008	2009	2010	2011	2012	2013	2014							
Neoplasm	6.5%	389	6.5%	372	13.9%	837	13.9%	823	15.3%	916	16.7%	1012	18.7%	1140
IHD	1.5%	91	1.5%	87	3.1%	187	3.1%	184	3.1%	186	3.1%	189	3.1%	190
COPD	0.4%	24	0.4%	23	1.9%	113	1.9%	111	2.1%	123	2.3%	136	2.5%	153
Other	2.6%	159	2.6%	152	2.6%	158	5.3%	311	8%	473	7.9%	479	11%	644
Total	11.0%	662	11.0%	633	22%	1295	24%	1429	28%	1699	30%	1816	35%	2127

STEP THREE - CHOICE OF PLACE OF DEATH

	Predicted	2008	2009	2010	2011	2012	2013	2014
Home	56%	371	355	725	800	951	1017	1191
Hospice	24%	159	152	311	343	408	436	510
C. Home	4%	26	25	52	57	68	73	85
Hospital	11%	73	70	142	157	187	200	234
Sp. Unit	0%	0	0	0	0	0	0	0
Other	5%	33	32	65	71	85	91	106
Total	100%	662	633	1295	1429	1699	1816	2127
No choice		5349	5117	4705	4471	4276	4234	3973

Assumption: all those who are identified express a choice according to national predictions

Baseline a	2009
23.1%	1326
3.3%	187
17.7%	1015
54.0%	3105
0.0%	
2.0%	117
100%	5750

2008 assumptions:	23% of Ca patients in last year of life are identified and placed on register 10% IHD patients in last year of life are identified and placed on register 10% COPD patients in last year of life are identified and placed on register 5% other patients in last year of life are identified and placed on register
2009 assumptions:	As 2008
2010 assumptions:	50% Ca patients in last year of life are identified and placed on register 20% IHD patients in last year of life are identified and placed on register 50% COPD patients in last year of life are identified and placed on register 5% other patients in last year of life are identified and placed on register
2011 assumptions:	50% Ca patients in last year of life are identified and placed on register 20% IHD patients in last year of life are identified and placed on register 50% COPD patients in last year of life are identified and placed on register 10% other patients in last year of life are identified and placed on register
2012 assumptions:	55% Ca patients in last year of life are identified and placed on register 20% IHD patients in last year of life are identified and placed on register 55% COPD patients in last year of life are identified and placed on register 10% other patients in last year of life are identified and placed on register
2013 assumptions:	60% Ca patients in last year of life are identified and placed on register 20% IHD patients in last year of life are identified and placed on register 60% COPD patients in last year of life are identified and placed on register 15% other patients in last year of life are identified and placed on register
2014 assumptions:	67% Ca patients in last year of life are identified and placed on register 67% IHD patients in last year of life are identified and placed on register 20% COPD patients in last year of life are identified and placed on register 20% other patients in last year of life are identified and placed on register

2008 assumptions:	
2009 assumptions:	Base data
2010 assumptions:	two thirds of those who express a choice achieve this all others follow baseline trends - B
2011-14 assumptions:	three quarters of those who express a choice achieve this all others follow baseline trends - B

STEP FIVE - TOTAL BY PLACE OF DEATH

	2008	inc on 07	2009	inc on 08	2010	inc on 09	2011	inc on 10	2012	inc on 11	2013	inc on 12	2014	inc on 13
Home	0	1326	1742	1789	416	1789	48	1877	88	1926	48	2018	92	
Hospice	0	187	352	389	165	389	38	431	42	451	19	498	47	
C. Home	0	1015	941	-74	895	-46	881	-14	882	1	859	-23		
Hospital	0	3105	2869	-236	2725	-144	2679	-47	2681	3	2608	-73		
Sp. Unit	0	0	22	22	25	2	28	3	29	1	32	3		
Other	0	117	74	-43	76	2	80	4	82	2	86	4		
Total	0	5750	6000	250	5900	-100	5975	75	6050	75	6100	50		

Assumptions: national prediction 24% hospice choice includes 6% requiring specialist unit care

Assumptions: 50% of those in the 'other' category will be supported to die at home

STEP SIX - PROPORTION OF DEATHS AT HOME

	2008	2009	2010	2011	2012	2013	2014
VSC15_01	Number of deaths at home	1326	1742	1,789	1,877	1,926	2,018
VSC15_02	Number of total deaths reg	5750	6000	5,900	5975	6050	6100
VSC15_03	Proportion of deaths at home	23.1%	29.0%	30.3%	31.4%	31.8%	33.1%

Increase in pts receiving CC fast track							
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