Emergency admissions

Data briefing

Executive summary

- Emergency admissions to hospital for people in the last year of life are a substantial and often avoidable burden on the NHS.
- In 2016, there were over 1.6 million emergency admissions for people in the last year of their life, amounting to around 11 million days in hospital, costing the NHS £2.5 billion.
- While emergency admissions for people in the last year of life are sometimes necessary, they can often be avoided entirely if adequate care in the community is provided.
- New data shows that in England, the average number of admissions per person is nearly twice as high as in Scotland or Wales, suggesting that A&E services in England are under particularly acute pressure.
- Significant action must be taken to improve community services, to meet the needs of our ageing population. Otherwise, by 2041, our analysis suggests the cost to the NHS of emergency admissions for people in the last year of life is likely to as much as double, and up to 8,000 extra hospital beds could be needed.

Background

We asked NHS Scotland, NHS Wales and NHS Digital for data on the number and duration of emergency admissions for people in the last year of life.

Using this data, for the first time we can show the impact of emergency admissions at the end of life on health services. This includes numbers of hospital beds needed, as well as the cost to health services of caring for people in hospital rather than in the community. More important, of course, is the impact on those who are admitted as emergencies and their families.

Using at least the last four years of data for England, Scotland and Wales, we have calculated the trends in the average number of days someone spends in hospital as an emergency admission in their last year of life. Projecting these trends against the Office for National Statistics (ONS) projections for deaths over the next 25 years, we can show how changing demographics and ongoing efforts to reduce the incidence and duration of emergency admissions will impact on our health services in the future.

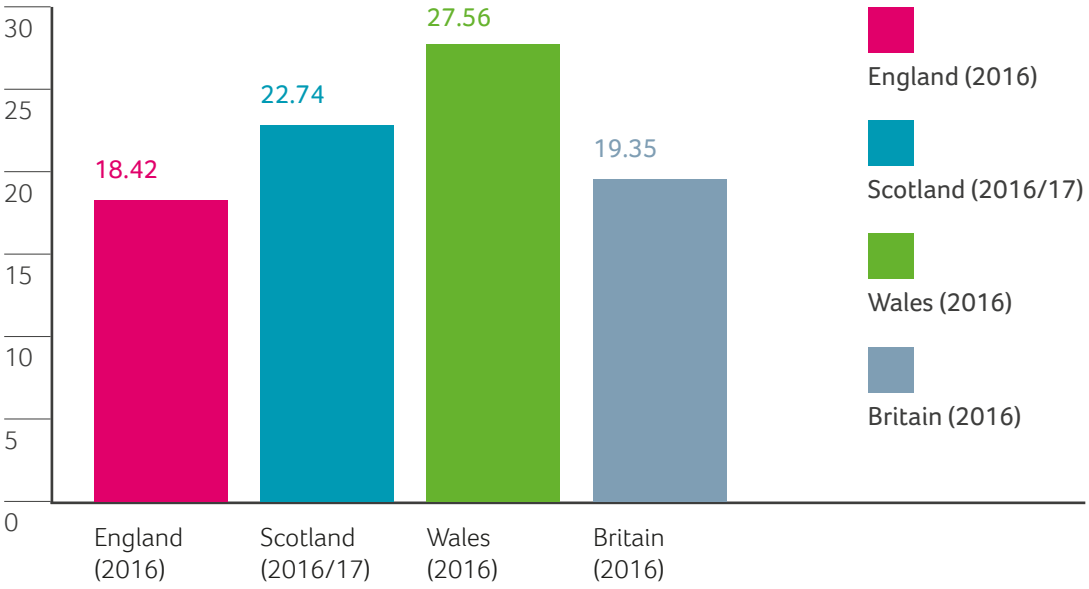
We have modelled three different scenarios for each nation. All have profound implications for our health services and show how care for people in the last year of life, improperly handled, will overwhelm our health services unless significant, prompt action is taken to properly fund social care and community services.

The current picture

In 2016, the headline figures for emergency admissions in Britain (excluding Northern Ireland) were:

- Total anticipated deaths (excluding sudden or violent): 573,135
- Total emergency admissions in last year of life: 1,675,677
- Cost of emergency admissions in last year of life: £2,462,265,506[1]
- Beds occupied by emergency admissions in last year of life: 30,387

Fig 1 **Average days spent in hospital following emergency admissions in last year of life**

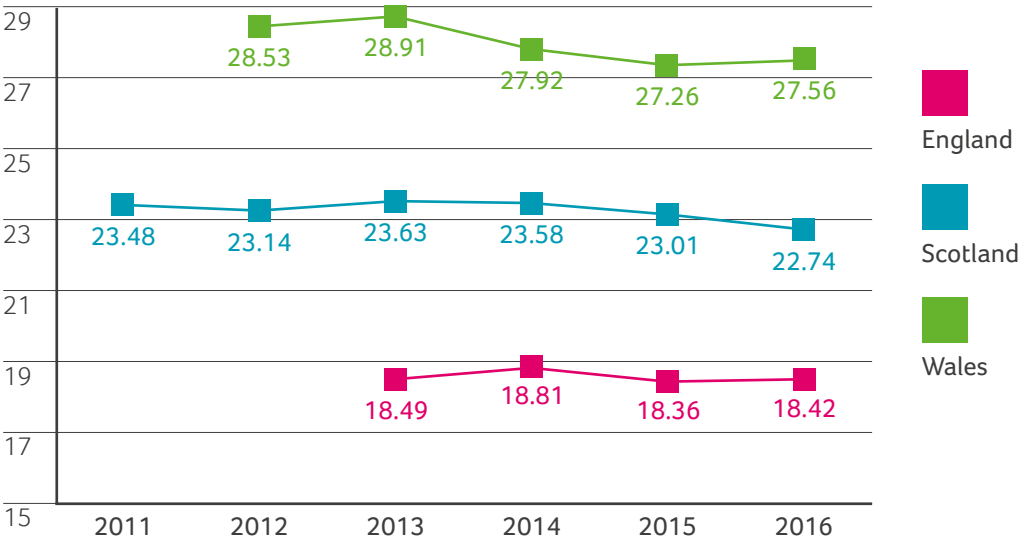


The table above shows the average number of days a person spends in an emergency bed in the last year of life for each nation.

The picture across the nations is a varied one with Wales reporting 50% more than England.

1 Costs calculated using NICE estimate of care in an acute bed costing on average of £222 per day.

Fig 2 **Average days spent in hospital following emergency admissions in last year of life, 2011-2016**



However, while Wales and Scotland appear to be performing worse than England in absolute numbers, their trends over the last few years show a significant decline in the average number of emergency bed days in the last year of life, whereas in England the trend is almost flat.

While the trend in each of the nations is one of declining total number of emergency bed days, the average number of total emergency admissions in the last year of life tells a different story (see figure 3).

In Wales the number has remained virtually constant, in Scotland it has risen a little but in England there has been a rise of 8%. The average number of admissions in England is nearly twice as many as in Scotland and Wales, and existing research has shown that total emergency admissions for dying people in England are on the rise[2]. Therefore while in England people in their last year of life may be spending less time in hospital, they are being admitted more often. This also mirrors recent findings from the National Audit Office[3].

2 Bone AE, Gomes B, Etkind SN, Verne J, Murtagh FE, Evans CJ et al. (2017) What is the impact of population ageing on the future provision of end-of-life care?: Population-based projections of place of death. Palliative Medicine. Published Online First, Oct 10.

3 National Audit Office (2018), Reducing emergency admissions, available at: https://www.nao.org.uk/wp-content/uploads/2018/02/Reducing-emergency-admissions.pdf

Fig 3 **Average emergency admissions in last year of life, 2011-2016**

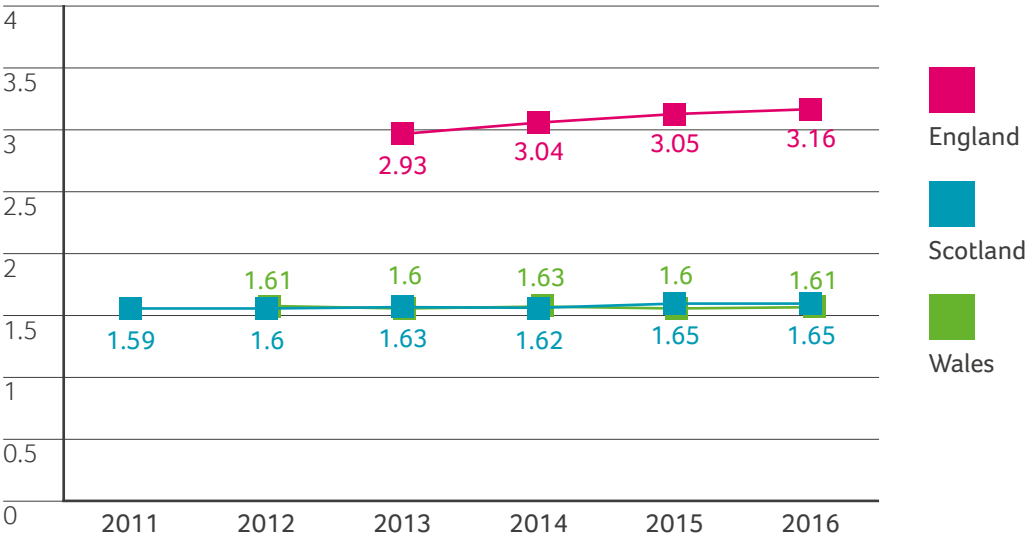
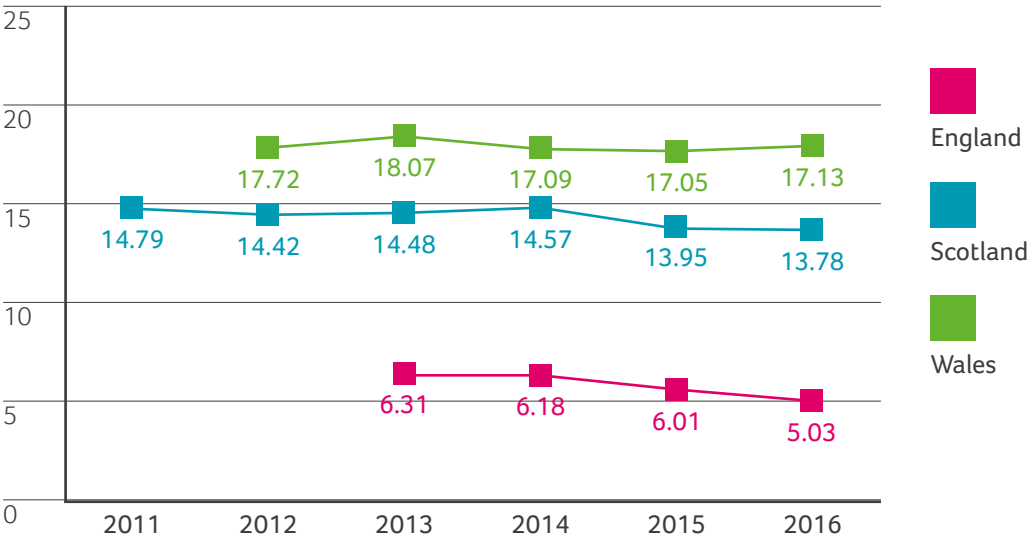


Fig 4 **Average length of stay per emergency admission in last year of life, 2011-2016**



Projecting the future of emergency admissions in the final year of life

The implications of these trends, based on ONS projections for the number of deaths over the coming years, are extremely troubling. All costs referred to are calculated as subject to yearly inflation at a conservative estimate of 2% a year.

What the projections tell us

- In the last four to six years England, Scotland and Wales have all seen the average number of days a person spends in an emergency bed in the last year of their life ('average days') fall. Wales and Scotland have a significantly higher number of average days than England but have been improving more rapidly.

- If each nation continues to improve at their current rate, by 2041 we can expect Wales to reduce average days by more than a week, while England and Scotland will have achieved more modest reductions of 1.7 days and 2.7 days respectively.

- Even if Wales continues its current trend rate, people in the last year of their life in Wales will still be spending more days on average in an emergency bed in 2041 than people in England were in 2016. In the same period, deaths are projected to increase across Britain, with England seeing the largest proportional increase and Scotland the smallest.

- Looking at the projections on number of deaths together with the average days trends, we can see the implications for the number of beds required and potential cost. In England, over 4,000 more hospital beds will be needed to accommodate growing need, at an additional cost of £1.6bn. In Scotland, there will only be a very slight increase in need, whereas Wales will actually need fewer beds compared to its current position.

- However, this analysis assumes that both Scotland and Wales will continue to improve at their current rate. In reality, maintaining their current trend lines over such an extended period may not be feasible. We know that admissions rates for dementia have been increasing, for example, which suggests that improvement is unlikely to continue at its current rate.[4]

- We have modelled two alternate scenarios for each nation to explore what will happen if the current trends do not continue – all result in significant cost increases and all but one (one of the Wales scenarios) require many more hospital beds to be created.

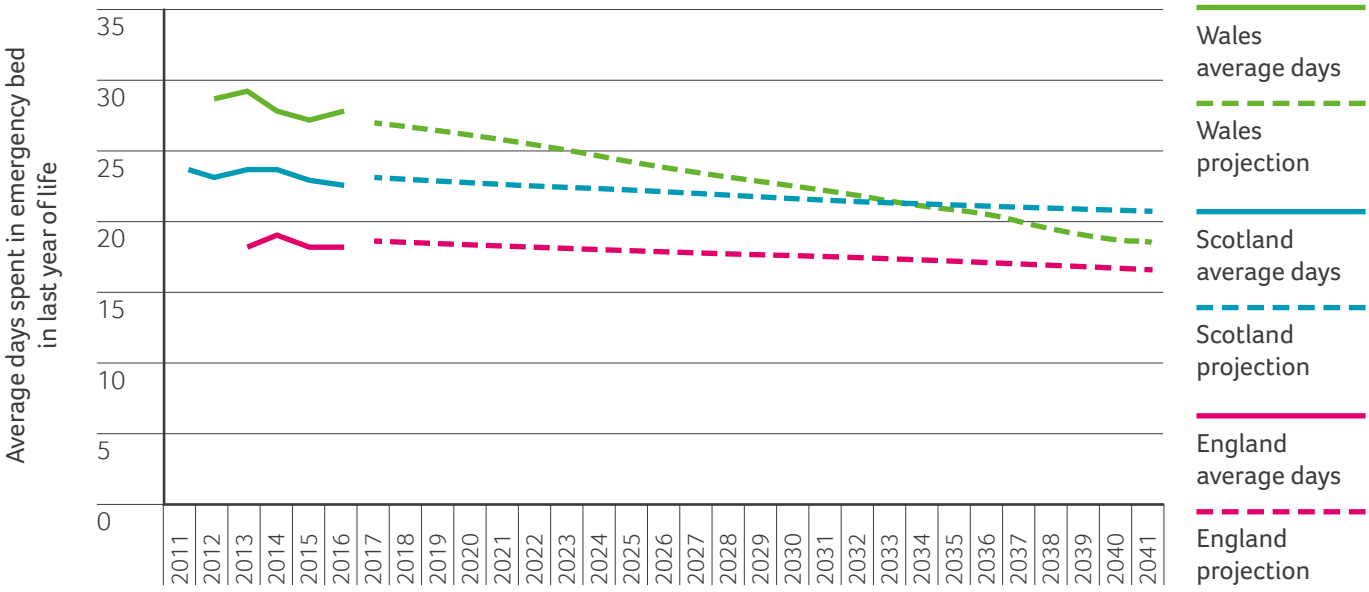
Projections – detailed view

Figure 5 shows the trend over the past four to six years for the average days spent in an emergency bed in the last year of life[5]. We have then projected this trend forward by 25 years, to 2041.

4 Sleeman, Katherine E. et al. (2017) 'Predictors of emergency department attendance by people with dementia in their last year of life: Retrospective cohort study using linked clinical and administrative data'. Alzheimer's & Dementia: The Journal of the Alzheimer's Association, Volume 14, Issue 1, pp.20-27

5 Data available for the last six years to 2016 in Scotland, but only five in Wales and four in England.

Fig 5 **Average days spent in an emergency bed in the last year of life**



The following three sections contain two graphs for each nation. The first shows ONS projections of deaths through to 2041. The second shows three different scenarios and their impact on the total emergency bed days expected for people in the last year of life. The first shows the continuation of the recent trend, as seen in the graph above. The second is based on falling 10% below the identified trend and the third is based on only achieving the average of the last five years, rather than assuming a trend.

National projections – Wales

Fig 6a **Wales – Projected deaths per year**

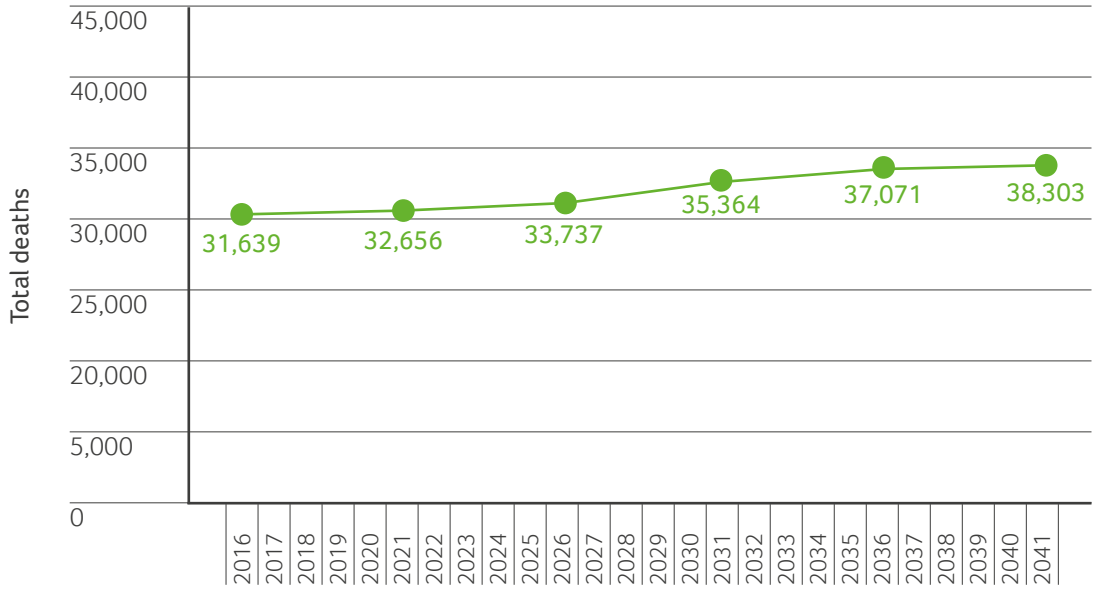
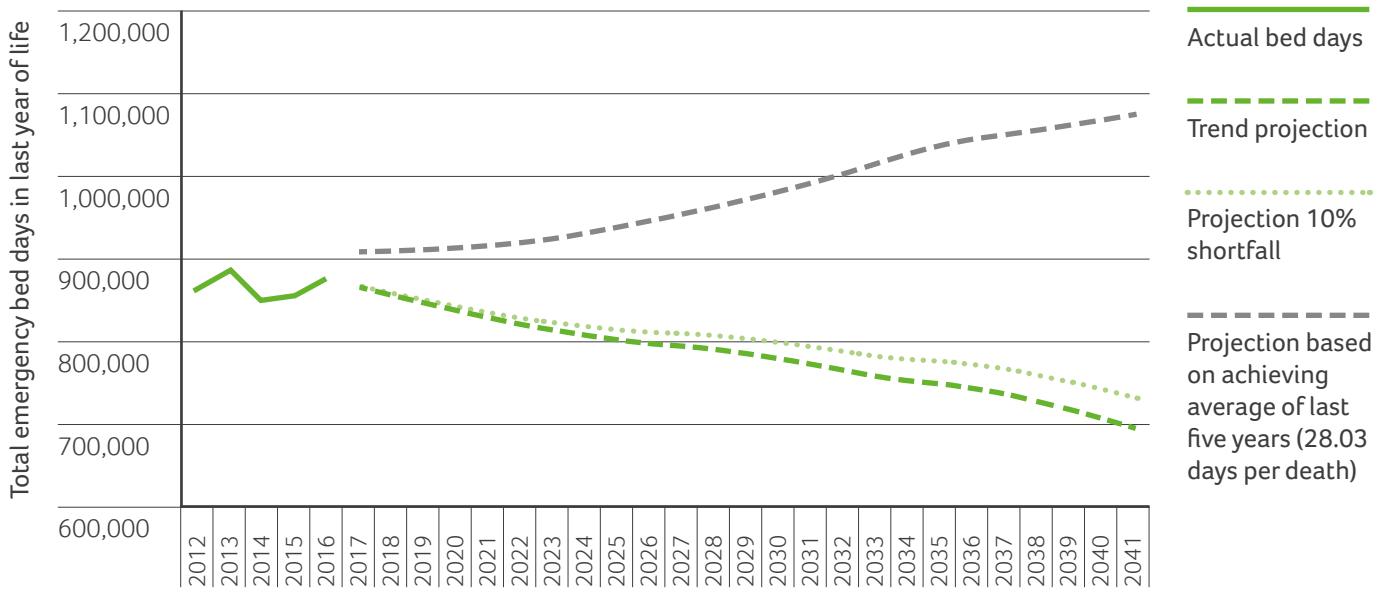


Fig 6b **Wales – Total emergency bed days in the last year of life**



The tables below set out the implications in terms of beds and costs for each of the scenarios.

Implications for Wales – Current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	872,000	2,389	£194m	0	0	£0
2021	833,000	2,283	£196m	(39,000)	(106)	£3m
2026	800,000	2,193	£208m	(72,000)	(196)	£15m
2031	775,000	2,124	£223m	(97,000)	(265)	£29m
2036	746,000	2,044	£237m	(126,000)	(345)	£43m
2041	702,000	1,923	£246m	(170,000)	(465)	£52m

Implications for Wales – 10% shortfall on current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	872,000	2,389	£194m	0	0	£0
2021	840,000	2,302	£198m	(32,000)	(87)	£4m
2026	813,000	2,228	£212m	(59,000)	(161)	£18m
2031	795,000	2,179	£228m	(77,000)	(210)	£35m
2036	774,000	2,120	£245m	(98,000)	(269)	£52m
2041	737,000	2,020	£258m	(135,000)	(369)	£65m

Implications for Wales – Based on average of last 5 years

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	872,000	2,389	£194m	0	0	£0
2021	915,000	2,508	£216m	43,000	119	£22m
2026	946,000	2,591	£246m	74,000	202	£52m
2031	991,000	2,716	£285m	119,000	327	£91m
2036	1,039,000	2,847	£330m	167,000	458	£135m
2041	1,074,000	2,941	£376m	202,000	553	£182m

Analysis – Wales

On the face of it the picture in Wales is encouraging. However:

- Wales was in a significantly worse position in 2016 than the other nations and efforts to reduce lengths of stays and numbers of admissions have therefore had a bigger impact.
- Sustaining this rate of reduction in average days will inevitably become more difficult as the number of average days reduces.
- Even if the current trend is sustained, by 2041 Wales will still not achieve an average days figure to match England in 2016.
- Further reduction in average days in hospital will require investment in community services so, even if fewer hospital beds are required in future in Wales, this may not translate into significant cost savings.

National projections – Scotland

Fig 7a **Scotland – Projected deaths per year**

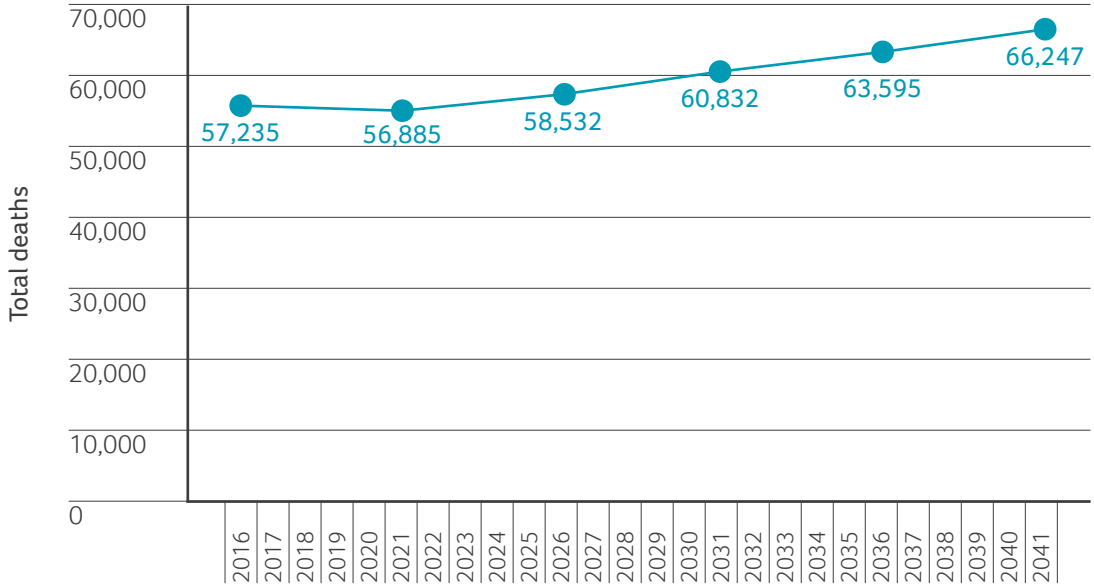
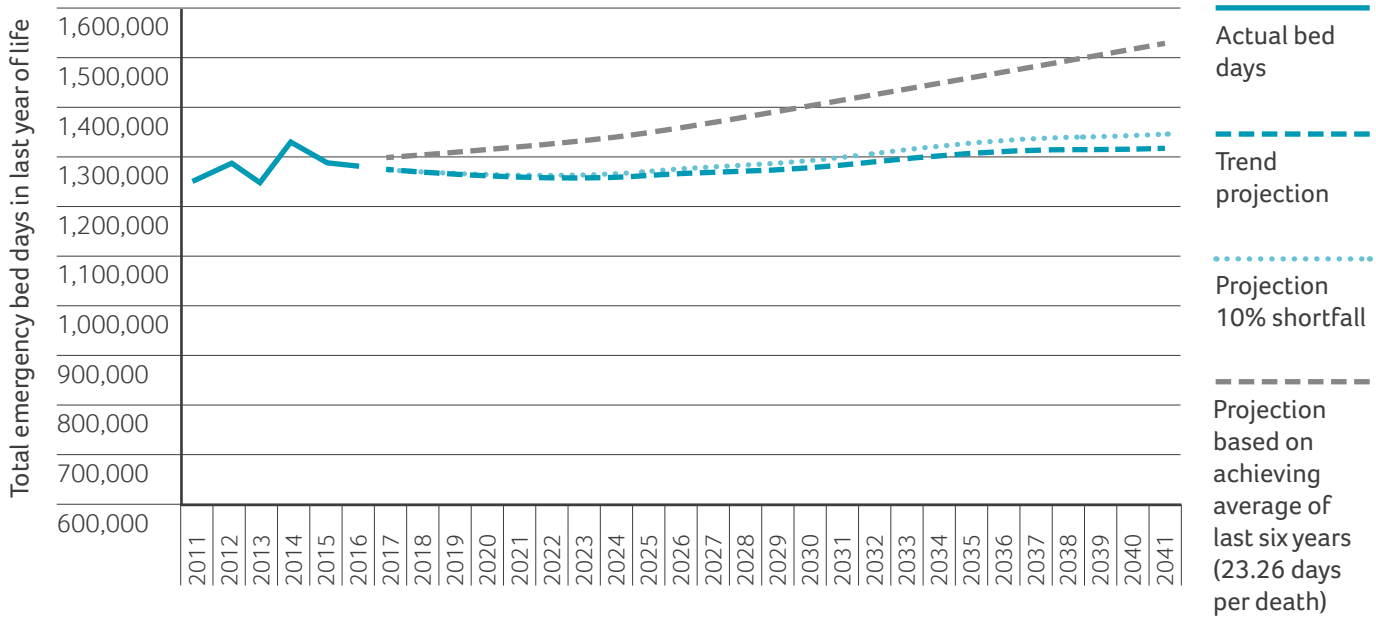


Fig 7b **Scotland – Total emergency bed days in the last year of life**



The tables below set out the implications in terms of beds and costs for each of the scenarios.

Implications for Scotland – Current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	1,285,000	3,520	£285m	0	0	£0m
2021	1,273,000	3,488	£300m	(12,000)	(32)	£15m
2026	1,276,000	3,495	£332m	(9,000)	(25)	£47m
2031	1,290,000	3,535	£371m	5,000	14	£85m
2036	1,312,000	3,593	£416m	27,000	73	£131m
2041	1,327,000	3,636	£465m	42,000	116	£179m

Implications for Scotland – 10% shortfall on current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	1,285,000	3,520	£285m	0	0	£0
2021	1,275,000	3,494	£300m	(9,682)	(27)	£15m
2026	1,281,000	3,510	£333m	(3,668)	(10)	£48m
2031	1,300,000	3,560	£373m	14,556	40	£88m
2036	1,325,000	3,630	£420m	39,998	110	£135m
2041	1,345,000	3,686	£470m	60,268	165	£186m

Implications for Scotland – Based on average of last 6 years

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	1,285,000	3,520	£285m	0	0	£0
2021	1,323,000	3,625	£312m	38,179	105	£26m
2026	1,361,000	3,730	£354m	76,488	210	£69m
2031	1,415,000	3,877	£406m	129,986	356	£121m
2036	1,479,000	4,053	£469m	194,254	532	£184m
2041	1,541,000	4,222	£539m	255,939	701	£254m

Analysis – Scotland

In Scotland, if the current trend persists, the number of beds required will actually fall slightly over the next eight years. However, even on current trends this situation reverses after 2026 due to increasing numbers of people dying over the coming years as the population ages.

Under the other two scenarios, the implications for Scotland in terms of the need for additional beds and resources are even more significant.

National projections – England

Fig 8a **England – Projected deaths per year**

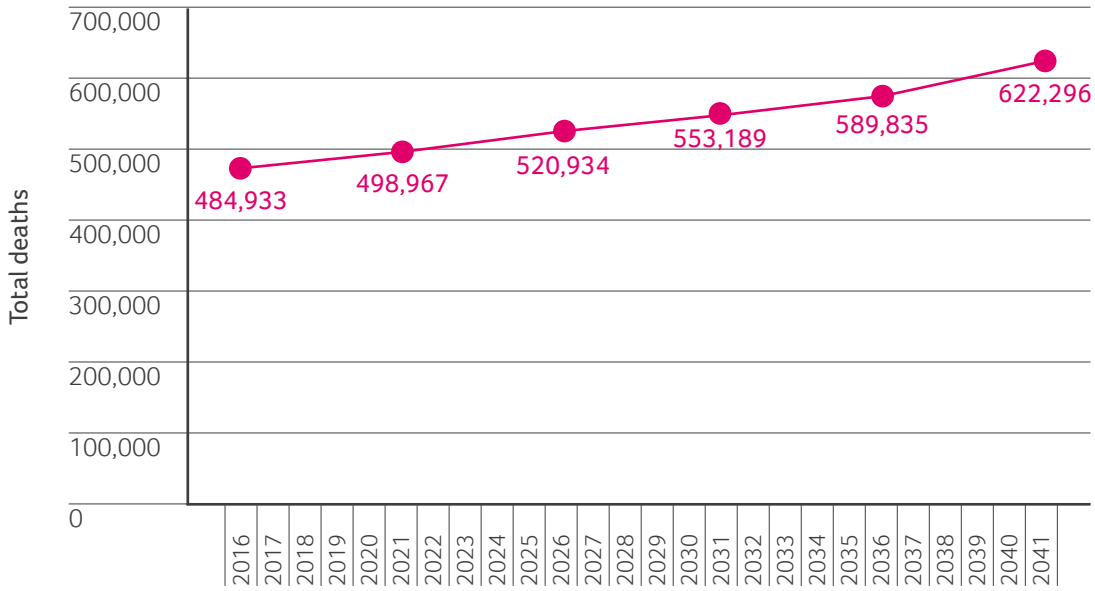
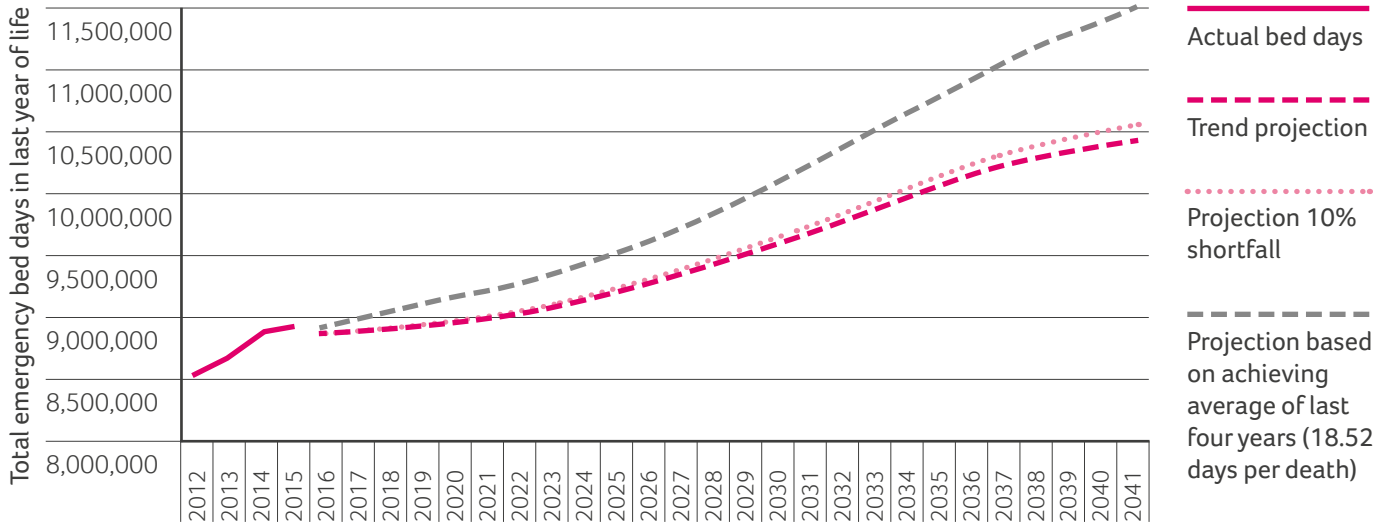


Fig 8b **England – Total emergency bed days in the last year of life**



The tables below set out the implications in terms of beds and costs for each of the scenarios.

Implications for England – Current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	8,934,000	24,475	£1,983m	0	0	£0
2021	9,021,000	24,715	£2,125m	87,000	239	£142m
2026	9,241,000	25,318	£2,404m	308,000	843	£421m
2031	9,625,000	26,371	£2,764m	692,000	1,896	£781m
2036	10,063,000	27,569	£3,191m	1,129,000	3,094	£1,207m
2041	10,405,000	28,508	£3,643m	1,472,000	4,032	£1,659m

Implications for England – 10% shortfall on current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	8,934,000	24,475	£1,983m	0	0	£0
2021	9,038,000	24,761	£2,129m	104,000	286	£146m
2026	9,277,000	25,415	£2,413m	343,000	940	£429m
2031	9,682,000	26,526	£2,780m	748,000	2,050	£797m
2036	10,143,000	27,789	£3,216m	1,209,000	3,314	£1,232m
2041	10,511,000	28,797	£3,680m	1,577,000	4,322	£1,696m

Implications for England – Based on average of last 4 years

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	8,934,000	24,475	£1,983m	0	0	£0
2021	9,241,000	25,317	£2,177m	307,000	842	£194m
2026	9,648,000	26,432	£2,509m	714,000	1,957	£526m
2031	10,245,000	28,069	£2,942m	1,312,000	3,593	£959m
2036	10,924,000	29,928	£3,464m	1,990,000	5,453	£1,480m
2041	11,525,000	31,575	£4,035m	2,591,000	7,100	£2,051m

Analysis – England

Whichever scenario you look at, the situation in England is very bleak unless significant action is taken to more drastically reduce the average days. The scale of the projected rise in the absolute number of deaths in England means that current measures to reduce average days in hospital will be overtaken by the pace of demographic change, as well as the rise in average number of admissions. England will still require significantly more resources in the future to cope with demand, even if the current downward trend is maintained – an additional 4,000 beds at a cost of over £1.6bn by 2041.

Even with significant and sustained investment in community services, given the scale of the challenge it is very difficult to escape the conclusion that more hospital beds will be needed in any scenario. If this is the case then the planning for these beds needs to begin now – this is not currently happening, so it is unclear how the government is proposing to address these issues.

National projections – Britain

Implications for Britain – Current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	11,090,000	30,385	£2,462m	0	0	£0
2021	11,128,000	30,486	£2,622m	37,000	102	£160m
2026	11,317,000	31,006	£2,944m	227,000	621	£482m
2031	11,691,000	32,030	£3,357m	601,000	1,645	£895m
2036	12,120,000	33,207	£3,843m	1,030,000	2,822	£1,381m
2041	12,435,000	34,068	£4,353m	1,344,000	3,683	£1,891m

Implications for Britain – 10% shortfall on current trend

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	11,090,000	30,385	£2,462m	0	0	£0
2021	11,153,000	30,557	£2,628m	63,000	172	£166m
2026	11,371,000	31,154	£2,958m	281,000	769	£496m
2031	11,777,000	32,265	£3,382m	686,000	1,880	£920m
2036	12,242,000	33,539	£3,881m	1,151,000	3,154	£1,419m
2041	12,594,000	34,503	£4,409m	1,503,000	4,119	£1,947m

Implications for Britain – Based on average of last 4 years

	Actual bed days	Total beds	Total cost (assuming 2% annual inflation)	Actual bed days increase/ (decrease) against 2016 position	Beds increase / (decrease)	Cost increase (assuming 2% annual inflation)
2016	11,090,000	30,385	£2,462m	0	0	£0
2021	11,479,000	30,385	£2,704m	389,000	1,066	£242m
2026	11,955,000	31,450	£3,110m	864,000	2,368	£648m
2031	12,651,000	32,753	£3,633m	1,560,000	4,276	£1,171m
2036	13,442,000	34,661	£4,262m	2,352,000	6,443	£1,800m
2041	14,139,000	36,828	£4,950m	3,049,000	8,354	£2,488m

Conclusion

While clearly some emergency hospital admissions for people in the last year of their life are appropriate and necessary, many are not, particularly where good community services are in place.

For instance, research from the Nuffield Trust[6] shows that people who receive support in their homes from the Marie Curie Nursing Service were three times less likely to have an emergency admission at the end of their lives, resulting in lower average costs to the NHS.

It is hard to see what clinical reason there can be for every single person dying in Britain (excluding those who die suddenly) to spend three weeks of their last year of life in a hospital bed as a result of one or more emergency admissions. Emergency hospital admissions are stressful and upsetting for individuals and families, particularly when they may have little time left. A&E should be a last resort, not the first port of call.

Rapidly improving the current situation doesn't just make sense for patients – it's critical for the future of the NHS. Our analysis shows the dramatic increase in hospital beds and costs the healthcare system will have to accommodate if nothing changes – or even if improvement continues at its current speed.

If those beds and funds aren't in place, people in the UK will have to adapt to a radical change in their ability to access hospital care due to overcrowding. Their expectations of the quality and extent of their care at the end of their lives will be in serious danger of not being met.

6 The impact of the Marie Curie Nursing Service on place of death and hospital use at end of life, Chitnis et al, November 2012, Nuffield Trust.

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