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Future health trends in the North East and how they might be supported or disrupted by policy changes

Future of an ageing population: think piece

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Future health trends in the North East and how they might be supported or disrupted by policy changes

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Contents

1. Scope

This paper briefly discusses the expected future trends in health in the North East, looking in particular to 2025 and 2040, and how policy changes might impact positively or negatively. Although a whole population, lifecourse, approach is taken, age is the strongest risk factor for most long term chronic diseases and therefore the background emphasises expected changes in the older population (defined as 65+ years), the very old (aged 85+ years) and additionally those currently aged 55-64 (who will attain 65+ by 2025) and the 40-54 years age group (who will attain 65+ by 2040). Health is viewed broadly, in terms of life and health expectancies, and more specifically in terms of the key diseases and conditions and their risk factors.

2. Background

The impact of long term chronic diseases and conditions on health and care services is driven by the number of older, and more specifically very old, people, who are at greater risk of these conditions. Whether the impact for the North East will differ to that for England will, in part, be determined by the degree to which future population change for the North East is different to that for England.

Between 2015 and 2025, the overall population of the North East is projected to grow the slowest of all regions at 2.9% compared to England as a whole which will grow by 7%. Although the rate of growth of the older population (65+) in the North East will be similar to England, its age composition will be somewhat different. The North East will experience a net decrease in the number of middle-aged (aged 40-54 and 55-64), a combination of historic lower fertility rates and net outward internal migration, in contrast to the small increases in these cohorts in England (Table 1). This will have potential implications for the size of the labour force but also for the provision of care. The 55-64 year age group will be the children of, and therefore the main providers of informal care for, the very old (85+) whilst the latter population will more than double over the next 25 years in the North East, as in England.

Not only will the age composition of the population change over the next 25 years but its ethnic composition will also change. Population projections by ethnic group indicate greater growth in the Non-White groups in the North East than the UK as a whole, with the greatest growth in the Mixed ethnic group followed by the Asian (mainly South Asian) group (Rees et al., 2013). Recent research has shown that over half of the ethnic groups in 2001 had significantly lower disability-free life expectancy (DFLE) at birth than White British men and women (Wohland et al., 2014b). Indeed Indian women had the same life expectancy at birth as White British women but lived 4.3 fewer years without disability. South Asians are known to have higher rates of chronic disabling conditions (cardiovascular disease, diabetes and coronary heart disease). On the other hand risk factor profiles (smoking, alcohol consumption, obesity, physical activity) are not uniformly high amongst these ethnic groups either though levels of physical activity are low for most Non-White women (Department of Health, 2001). Socio-economic position may explain some, but not all, of the differences in DFLE between ethnic groups (particularly the very low DFLE for Bangladesh and Pakistani groups) though is unlikely to explain the findings for Indian women.

3. Trends in life and health expectancies

Two health expectancies are routinely calculated by the Office for National Statistics (ONS): DFLE, based on limiting longstanding illness; and healthy life expectancy (HLE), based on self-reported general health. Although the underlying health measures are self-reported, and are therefore influenced by an individual's expectations and perceptions, they do have predictive value in use of health and social care and mortality. The most accurate picture of inequalities between local areas in the UK comes from the decennial censuses[1].

There is a strong north-south gradient in life and health expectancy with Southern regions of England enjoying more years free of disability and in good health at all ages than Northern regions, Wales and Scotland. Though higher deprivation in Northern compared to Southern regions accounts for some of this, it does not explain it all. Southern areas still have higher DFLE than North ones with equivalent levels of deprivation. For instance male DFLE at birth in the most deprived wards in the North East were 4.9 years less than in similar wards in the East of England (Rasulo et al., 2007).

Between 1991 and 2001, inequalities in DFLE and HLE at birth across England and Wales, as measured by the difference between the 10th and 90th percentiles, increased from 6.8 years to 8.3 years for male DFLE and from 8.1 to 9.4 years for female DFLE. These were greater increases than those in life expectancy (3.4 to 3.7 years for male life expectancy and 4.1 to 4.5 years for female life expectancy) (Wohland et al., 2014a). Therefore using differences in mortality or life expectancy, vastly underestimates inequalities across England, yet life expectancies or standardised Mortality Ratios (SMRs) are currently included in the National Outcomes Framework and in resource allocation formulae in NHS and public health services.

More recent trends in life and health expectancies by region (2006-8 to 2009-11) (Office for National Statistics, 2014) rely on intercensal values derived from the Annual Population Survey[2]. Between 2006-8 and 2009-11 male and female life expectancy at birth in the North East rose by around 1 year, similar to increases in England as a whole, although men and women could expect to live 1.4 years less in the North East compared to England (Table 2). Trends in life expectancy at age 65 were similar (Table 3). Some positive trends were evident with over half of North East local areas having the same or better increase in life expectancy at birth than England as a whole.

Improvements in DFLE over the same period were greater in the North East than in England (Tables 2 and 3) though by 2009-11 men and women in the North East still lived 3 years less than their counterparts in England. For the majority of local areas in the North East, increases in male DFLE at birth were greater than those for life expectancy, suggesting an overall compression of disability. However an expansion of disability (life expectancy increases greater than DFLE increases) was seen in four areas for men

[1] Health expectancies on the total population (including those in institutions) are only available at the decennial censuses but trends have been hampered by changes in the census questions though recent research (Wohland, P., Rees, P., Gillies, C., Alvanides, S., Matthews, F. E., O'Neill, V. & Jagger, C. 2014a. Drivers of inequality in disability-free expectancy at birth and age 85 across space and time in Great Britain. Journal of epidemiology and community health, 68, 826-33) has produced comparable estimates of DFLE and HLE.

[2] Intercensal estimates at birth, at regional and local area level, should be relatively free of bias from exclusion of the institutional population, though at local area level care should be taken since some local authorities cover popular retirement areas with high numbers of residential care facilities.

(Hartlepool, Northumberland, Redcar and Cleveland, South Tyneside) and three for women (Darlington, Hartlepool, Redcar and Cleveland).

Despite the mostly positive trends in DFLE, none of the local areas in the North East have life expectancy, DFLE or HLE at birth greater than the overall values for England, and the majority of North East areas are ranked in the bottom third for these indicators. The latest figures show that male DFLE at birth for all North East areas was below 65, current State Pension Age (SPA) compared to 47% (9/19) for the South East and 56% (18/32) for London. Female DFLE at birth was below 65 for 83% (10/12) of areas in the North East compared to 42% (8/19) of South Eastern areas and 50% (16/21) of London areas. Further increasing SPA will therefore impact differently in the North East to Southern regions and employers and government will need to be mindful of this. If HLE is used rather than DFLE a worse picture emerges with all areas in the North East having HLE at birth below 65 years (SPA) for males and females, with the exception of male HLE in Darlington.

4. Trends in health and behaviours

Inequalities in DFLE at birth between regions in England are largely driven by social class composition and levels of unemployment, though these factors are less influential in explaining variation in DFLE at age 85 (Wohland et al., 2014a). The North East has historically fared worse with regard to deprivation and the economic restructuring which closed traditional industries as well as the more recent economic recession, adversely affecting employment, skills, household income and expectations. In terms of specific health factors that drive DFLE variation, long term conditions such as cardiovascular disease (CVD), diabetes, stroke, and dementia, are known to reduce DFLE. There is however less evidence for their contribution to regional inequalities or the contribution of the main associated risk factors (smoking, alcohol consumption, obesity, physical inactivity). Limited regional trend data are available and the main source has been the Health Survey for England.

Between 2006 and 2011 the proportion of North East men with any CVD remained the highest amongst the Strategic Health Authorities at 24% whilst the proportion of women with any CVD fell marginally from 20% to 19%. Ischaemic Heart Disease (IHD) fell for men, from 15% to 9%, and for women, from 10% to 7%. The prevalence of stroke remained static for men (4%) and rose marginally for women (4% to 5%).

In contrast to CVD, the prevalence of doctor diagnosed diabetes doubled for men (5.2% to 10.5%) with the North East moving from a middle ranking of the SHAs to top ranking. Increases in prevalence were also seen in women (4.8% to 5.4%), but the rankings remained similar, in the top four SHAs.

In terms of mental health, women in the North East have one of the highest prevalence of probable psychological disturbance or mental ill health, as denoted by a score of 4 or more on the GHQ-12 score. North East men rank towards the middle of the Government Office Regions. The NHS Outcomes Framework 2014/5 and the Public Health Outcomes Framework 2013/6 both include dementia as a priority. The higher prevalence of dementia found in Newcastle, compared to Nottingham and Cambridgeshire, from the Cognitive Function and Ageing Studies appears to be explained by higher levels of deprivation in the North East (Matthews et al., 2013). The North East benefits from a strong regional cohesion between groups and organisations addressing dementia care through the North East Dementia Hub. Dementia diagnosis rates for the North East (54%) are above the national average for England (48%), which may reflect higher prevalence as well as better recognition and therefore earlier treatment.

With regard to physical activity levels, the North East currently ranks fourth amongst the nine Government Office Regions for men, with 68% of men meeting aerobic guidelines. However the region ranks bottom for women with only 48% of women meeting guidelines. Overweight and obesity levels in the North East currently rank third lowest for men but second highest for women (jointly with North West, East and West Midlands). The proportion of men in the North East who are overweight or obese has risen slightly between 2006 and 2011 from 62% to 66% but the proportion obese has fallen slightly from 28% to 25%. The proportion of women who are overweight or obese has remained static between 2006 and 2011 at 61% as has the proportion obese at 28%.

Figures from the General Household Survey show that in 1998 the prevalence of cigarette smoking in the North East compared to England as a whole, was slightly lower for men (28% v 29%) and higher for women (30% v 26%). Between 1998 and 2007 the

prevalence of cigarette smoking in the North East reduced by 7%, reflecting the same trend in England overall. However a much less positive picture emerges for alcohol consumption. Regardless of the measure, men and women in the North East rank highest on alcohol consumption compared to their counterparts in other Government Office Regions. 32% of men in the North East and 22% of women have an average weekly alcohol consumption at a level that puts them at increased risk of harm. Almost half (45%) of North East men and 38% of women reported drinking twice the recommended amounts on a single day, these proportion rising since 2006 from 40% (men) and 35% (women).

5. Key points

- Although life and health expectancies in the North East have risen in the last decade, values are still well below the average for England.
- Inequalities in DFLE across England are wider than those in life expectancy and therefore the continued inclusion of life expectancy (SMR) in the NHS resources allocation formula disadvantages areas such as the North East.
- Extending the State Pension Age will be challenging in the North East since most areas have DFLE at birth below 65. Employers will therefore have to accommodate substantial numbers of workers who are already limited before 65.
- Net decreases in the numbers of people pre-retirement (55-64 years) compared to England, but similar doubling of the next generation of the very old who will be reliant upon them for care, may also impact on employers.
- Trends in diabetes, overweight and excess alcohol consumption are increasing in the North East and the region currently ranks amongst the highest on diabetes, CVD, IHD, stroke, excess alcohol consumption, and obesity as well as mental ill health in women. All of these are likely to impact on DFLE, potentially to a greater extent than life expectancy. Thus the current upward trend in DFLE may not continue long term.

Supporting tables

Table 1: Percentage and absolute change in population between 2015, 2025 and 2040 for England and the North East, by age group (Source: ONS 2012-based sub-national population projections)

		Percentage changes			Absolute changes (1000s)		
	Age group	2015-2025	2025-2037	2015-2037	2015-2025	2025-2037	2015-2037
England	All ages	7.0	6.4	13.8	3817	3736	7553
	40-54	-5.6	7.1	1.1	-632	758	126
	55-64	20.2	-9.4	8.9	1245	-699	547
	65-74	7.3	22.4	31.3	383	1266	1648
	75-84	36.0	15.8	57.4	1128	675	1803
	85+	42.1	63.9	132.9	558	1204	1761
North East	All ages	2.9	2.4	5.4	77	65	143
	40-54	-13.7	6.4	-8.2	-74	30	-44
	55-64	10.5	-19.8	-11.4	35	-72	-38
	65-74	9.9	11.0	22.0	27	33	60
	75-84	29.1	18.3	52.7	48	39	87
	85+	44.9	60.2	132.1	28	55	83

Table 2: LE and DFLE at birth 2006-08 and 2009-11 and change, England and North East local areas, by sex

	Male						Female					
	Life expectancy at birth			DFLE at birth			Life expectancy at birth			DFLE at birth		
Area name	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11
ENGLAND	77.9	78.9	1.0	63.3	63.9	0.6	82.0	82.9	0.9	64.5	64.4	-0.1
NORTH EAST	76.4	77.5	1.1	58.7	60.7	2.0	80.5	81.5	1.0	59.6	61.1	1.5
County Durham	76.8	77.5	0.7	56.8	58.4	1.6	80.5	81.4	0.9	56.1	58.6	2.5
Darlington	76.5	78.0	1.5	59.3	62.6	3.4	80.5	82.4	1.9	64.3	65.0	0.7
Gateshead	76.3	76.9	0.6	55.9	60.5	4.6	80.7	81.4	0.7	59.0	61.1	2.1
Hartlepool	75.3	76.6	1.3	57.6	57.5	-0.2	79.1	81.2	2.1	58.3	59.5	1.2
Middlesbrough	75.2	75.8	0.6	59.1	60.6	1.5	79.6	80.1	0.5	59.7	60.0	0.3
Newcastle upon Tyne	75.4	77.2	1.8	58.0	61.1	3.1	80.2	81.2	1.0	60.0	60.9	0.9
North Tyneside	76.6	77.8	1.2	59.7	61.7	2.0	80.7	81.8	1.1	60.5	62.4	1.9
Northumberland	77.9	78.7	0.8	63.5	63.4	-0.1	81.4	82.4	1.0	64.6	65.4	0.8
Redcar and Cleveland	77.0	78.4	1.4	60.4	59.3	-1.1	80.8	82.0	1.2	61.2	61.9	0.7
South Tyneside	76.0	76.6	0.6	61.1	60.0	-1.1	80.3	81.3	1.0	59.2	62.7	3.5
Stockton-on-Tees	76.2	78.0	1.9	59.8	62.7	2.9	80.8	81.9	1.1	59.2	62.3	3.1
Sunderland	75.3	76.7	1.5	55.9	60.6	4.7	80.4	80.8	0.4	58.5	58.6	0.1

Table 3: LE and DFLE at age 65 2006-08 and 2009-11 and change, England and North East local areas, by sex

	Male						Female					
	Life expectancy at birth			DFLE at birth			Life expectancy at birth			DFLE at birth		
Area name	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11	2006-08	2009-11	Change 06-08 to 09-11
ENGLAND	17.6	18.4	0.8	9.9	10.5	0.6	20.3	21.0	0.7	10.6	11.2	0.6
NORTH EAST	16.6	17.5	0.9	7.8	9.0	1.2	19.2	20.0	0.8	8.3	9.6	1.3
County Durham	16.6	17.6	1.0	7.0	8.3	1.3	19.0	19.7	0.7	6.8	8.3	1.5
Darlington	17.3	17.8	0.5	8.6	9.3	0.7	19.3	20.7	1.4	10.3	11.7	1.3
Gateshead	16.8	17.3	0.4	7.5	8.8	1.3	19.4	19.7	0.3	7.9	9.9	2.0
Hartlepool	15.8	17.1	1.4	7.2	7.1	-0.1	18.8	19.8	1.0	8.2	9.1	0.9
Middlesbrough	16.1	16.5	0.4	8.5	8.3	-0.2	18.4	19.0	0.6	9.1	10.0	0.9
Newcastle upon Tyne	16.0	17.1	1.0	7.4	9.6	2.1	19.1	19.8	0.7	8.5	9.1	0.5
North Tyneside	16.5	17.4	0.9	7.7	8.9	1.2	19.4	20.3	1.0	8.8	10.0	1.3
Northumberland	17.5	18.4	0.9	9.0	10.5	1.4	19.8	20.5	0.7	9.7	11.1	1.4
Redcar and Cleveland	16.9	18.2	1.3	9.7	9.5	-0.2	19.5	20.5	0.9	9.0	10.0	1.1
South Tyneside	16.2	16.8	0.5	8.6	8.9	0.2	19.1	20.0	0.9	7.7	10.5	2.8
Stockton-on-Tees	16.8	17.5	0.7	8.5	9.7	1.2	19.1	20.4	1.2	8.1	10.6	2.5
Sunderland	15.9	17.1	1.2	6.1	8.5	2.4	18.7	19.4	0.7	8.6	8.7	0.2

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