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Why are the old dying younger?

Danny Dorling

It took just four months, from December 1952 to March 1953, for some 12,000 more residents to perish in what was then modern London's most massive civilian disaster. The initial public reaction was to correctly attribute the deaths to air pollution. At the time most Londoners kept warm by burning dirty coal. Cool air had settled over the Thames Valley in early December '52 and did not move for weeks. The air turned thick with smog. In one week alone some 4,703 people died. Much higher than the 1,852 who had died during the same week the previous year¹.

By early 1953 a Member of Parliament had put this episode into context when he asked the Minister of Housing, Harold Macmillan: 'does the Minister not appreciate that last month, in Greater London alone, there were literally more people choked to death by air pollution than were killed on the roads in the whole country in 1952?' Macmillan may well have appreciated the likelihood that it was the smog, but he was also averse to spending more on smokeless fuel for the poor in a time of austerity.

Macmillan ordered an official government report to be conducted which conveniently proposed the hypothesis that influenza had caused all the excess winter deaths. Many MPs and the public remained suspicious. They did not think it had been just another bout of flu. They agitated and, within three years, laws had been passed requiring the burning of cleaner more expensive coal in cities such as London.

Half a century later a study was published in an academic journal which demonstrated that only a very small fraction of the deaths in the months after the 1952/53 smog could have been attributed to influenza.³ Another 8000 Londoners died early due to the delayed effects of smog, rather than the flu. The deaths had initially been blamed on flu; that misconception was later revealed to have been caused by a Conservative government trying to save money and avoid having to take action⁴.

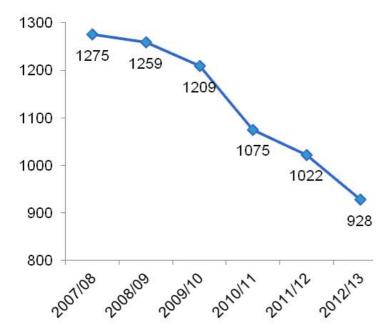
The 1953 smog matters today. It tells us about what ministers and their officials are capable of. In 2012 and 2013 government influence and lack of action, rather than external factors beyond their control, might again have contributed to a rise in deaths. Again the deaths are taking place in a time of austerity and again the government of the day would prefer to be able to point the finger at some "influenza-like illness" – blame the cold when it wasn't that cold – rather than a cause which they could tackle.

This time it is austerity itself that is being blamed, but no one is quite sure whether more people are dying now because they cannot afford to heat their homes or because they are getting worse care when elderly. There might even be an unrecognized time bomb suddenly reducing that generation's life expectancy, like cigarettes did in the past and obesity might do in future; but that seems unlikely. All we do know is that more people were dying in 2012 and 2013 than in previous years.

We also know that recessions are not normally linked with rising mortality. In the past numbers of deaths often fell during recessions as fewer people worked in dangerous industries due to lay-offs. More recently falls in road traffic accidents were recorded during the early years of the 2008-onwards recession as fewer people could afford to drive. But today appears to be different, or at least different for the elderly.

Between 2008 and 2013 cuts have meant that some 483,000 old and disabled people in the UK have either lost their care support or are no longer eligible to claim it. According to the Personal Social Services Research Unit the "reductions ...are particularly acute for older people" ⁵. There are now millions fewer social care visits a year to the elderly than took place five years ago. These are visits to elderly people who would have been assessed as vulnerable, visits that could result in the carer setting in motion a course of action that results in avoiding an unnecessary death ⁶. The greatest cuts to visits came after the general election of May 2010.

Change in reported number of social care recipients, England (000s)



Source: Figure 1 of http://careandsupportalliance.wordpress.com/

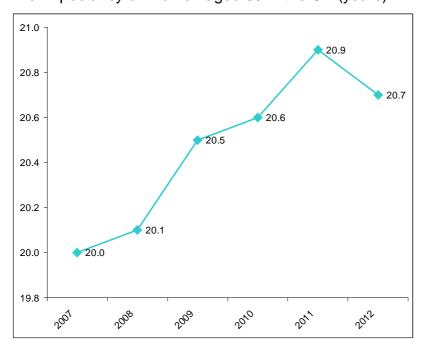
In July 2013 an internal Public Health England report entitled "Weekly and monthly provisional figures on deaths registered in England and Wales; outline of reported deaths in 2013 to week ending 5th July." was leaked by the Health Service Journal. In an uncanny repeat of events exactly six decades earlier the report revealed that "...Since December 2012, both male and female mortality are estimated to have increased." This was no normal increase and for the group most affected, the very elderly, their death rates which had been unusually high during most of 2012, were reported to be rising.

What the internal Public Health England Report revealed was shocking. Here is what it said in its own words: "When we focus on mortality over 75, we observe rapidly increasing mortality for both males and females, presenting throughout 2012, and continuing into 2013. Female 12 month mortality over 75 is currently higher than in any year since 2009; and April 2013 saw a particularly sharp increase. Worryingly, female 75+ mortality trends appear to have been worse in the Spearhead areas".

In normal years and normal times mortality rates fall. Only very rarely do they rise.

The Spearhead areas are some of the poorest parts of the country. They are those places which had the highest premature mortality rates in the very recent past. They were the areas targeted by the last Labour Government for special intervention to try to bring down health inequalities in England. It was first in some of those poorest areas that the greatest absolute increases in mortality among the elderly were beginning to be reported by the summer of 2013, but excess deaths had been occurring throughout the previous twelve months. We now know that for women this has resulted in a drop in life expectancy after age 65 between 2011 and 2012.

Life Expectancy of Women aged 65 in the UK (years)



Source: Table A1.1 2012-based Expectation of Life, 1981-2062, Principal Projection, United Kingdom, December 2013

The Health Service Journal explained to its readers, mostly health service workers and researchers, that as a result of the increase in elderly deaths, 2012 was the first year in which overall all-age mortality had increased since 2003. Back then the rise had been followed by a very steep reduction in deaths in the following year which rebalanced the long term trend back towards a steady fall in mortality and a rise in life expectancy. The 2003 rise was a quickly reversed blip. The 2012-2013 rise appeared more of a trend.

According to the leaked Public Health England report, by mid-2013 there had been "...if anything, a further deterioration in mortality compared with that observed [in the same period in 2012]". The number of excess deaths in England in 2012-13 had been 23,400 (5 per cent) above Office for National Statistics expectations. However, and seemingly unperturbed, an anonymous official told the Health Service Journal in reaction to the story that "If increased mortality continues through 2013 and into 2014, there will have to be more detailed consideration."

Apportioning a rise in mortality on the grounds of each event having some particular and singular cause isn't always that helpful, but neither is inaction. Six months ago government and its agents were prepared to wait for another 18 months before acting. But then the Health Service Journal did not just publish the story, it leaked the entire original report. As a result the responsible body was suddenly forced to become a little more responsible. How did Public Health England react to its internal report being leaked? It shot the messenger.

On August 15th 2013 the Orwellian-style entitled "Chief Knowledge Officer" of Public Health England, issued an open letter which suggested that there had been methodological weaknesses in the leaked internal report and explained that: "The analyst was therefore asked to stop circulating the reports." The reports stopped. But the deaths didn't. And the need to explain the increase remained.

The Chief Knowledge Officer's letter was accompanied by a new eight page Public Health England report on "Excess winter mortality 2012 to 2013" which did not explain why there were any methodological weaknesses in the original internal report, but instead said that "...temporal coincidence with influenza A(H3N2) across the UK and Europe suggests that influenza has contributed significantly." And that influenza was "a major explanatory factor".

Contrast the official message, that it is probably just mostly 'flu, with what was revealed in the leaked internal reports, which showed that the long term trend in England of many years of falls in mortality and rises in life expectancy appeared to have been halted in 2012; and that the situation was deteriorating throughout 2013. It was hard to know what to believe. Then the Office of National Statistics (ONS) produced its own report in November 2013. And the scale of excess deaths was revealed to be even greater, despite the fact that our last winter was not as cold as in Labour's last year of office, a winter when far fewer elderly died.

The ONS report revealed that it was not necessarily because the winter of 2012/13 had been cold that deaths had risen among the elderly. The government statisticians explained that during the exceptionally colder winter of 2009/10 the number of excess winter deaths had been "similar to years with mild winters" 11. It is thus not so much the cold but the extent to which people can afford to heat their homes, and probably much else, such as whether they are visited, that matters. ONS revealed that in 2012/13 there had been a 29% increase in deaths as compared to the 15.5% the winter before, some 31,100 more people dying than the average for non-winter months. They highlighted that the great majority of these untimely deaths were in people over 75 years old. This is now a greater number of unexplained excess deaths than all those attributed to the 1952/53 smog.

ONS also cast doubt on 'flu being the main cause of the spike saying: "Influenza activity in 2012/13 was relatively low..." The Press reacted quickly. *The Independent* explaining that "About 10,000 of the deaths are estimated to be the result of cold houses, as people struggled to heat their homes in the coldest winter for nearly 50 years, against a backdrop of soaring energy prices." And that elderly people now had to decide between heating and eating.

The Telegraph reported how a 'Samaritan army' would be needed of 100,000 volunteers to try to prevent the catastrophe repeating itself this winter¹³. However it did not explain that the call for a hundred thousand volunteers was needed because many paid for visits to the vulnerable had been cut. Events will soon reveal whether such calls are effective. However, just as food banks staffed by volunteers are not as good a way to distribute food as poorer people simply receiving decent pay and benefits, ad hoc visits to neighbours are not a substitute for proper social services.

The one thing we can now be sure of is that the major reason for the spike in deaths in 2012/2013 was not flu. David Stuckler, based in Oxford University, and Martin McKee, of the London School of Hygiene and Tropical Medicine, have already determined that the rise is not due to influenza and pneumonia, two causes which they have estimated, contributed only 5.8% and 3.5% of the rapid absolute increase in elderly mortality in the UK since early 2012¹⁴. The European Centre for Disease Prevention and Control also recently reported that the UK had one of the lowest reported intensities of influenza across Europe in winter 2012/2013¹⁵.

It is not just cuts to local social services that are known to coincide with the rising deaths. The deliberate disorganization into which the NHS and its monitoring bodies were plunged into due to the passing of the 2012 Health and Social Care Act may need to take part of the blame when the final autopsy is carried out. It will be far more than the surveillance and 'knowledge' functions of the old NHS which will have suffered so much recently as a result of NHS 'reform'. The NHS is now worse equipped to know what is happening to public health. It may also have been made less likely to deal with the consequences.

The 'reforms' allowed family doctors more choice as to which patients they might wish to treat. This is not about growing patient choice, especially for the least vocal and most feeble of the elderly ¹⁶. NHS privatization may already be playing a part in this saga; most clearly as the 2012 Act's implementation focuses clinicians' minds elsewhere. The Secretary of State for Health, Jeremy Hunt, also appears to have had his mind on other

things than the rising numbers of deaths. However, he has recently started personally phoning NHS hospital bosses in areas that miss the targets in action described as an "obsession", "crazy" and "hindering" ¹⁷.

Simon Wessely, Head of the Department of Psychological Medicine, Institute of Psychiatry, King's College London, and a practicing clinician put it like this: "It is hard to think of a single policy that will do more to extend the health gap between rich and poor than Hunt's latest plans. GP practices are going to be rated on a scale of one to four. Guess who won't be seen by the top-scoring practices: those who can't travel very far, because of a medical condition or because they don't have transport; those ill-informed about how to play the system; those mentally troubled, or with learning difficulties or dementia. Guess who will be seen: the affluent, information-rich and mobile."

The recent increase in deaths among the elderly in England has been so great that by winter 2013 ONS reported an overall decline in life expectancy over age 65 as measured against previous expectations. Pension planners noted that ONS: "...said 'period' life expectancy at age 65 in 2012-13 was most recently estimated to be 18.3 years for men and 20.6 years for women - significantly below the respective 19 years and 21.3 years reported in the ONS's forecast published in 2009." ¹⁹ *The Guardian* reported this as a drop of 2% in post-retirement UK life expectancy as compared with the 2010-11 projections and raised the idea that this coincides very closely with the roll-out of the incoming 2010 UK Conservative led Coalition government's unprecedented program of cuts to local authorities, and cuts to numerous social support schemes, housing and welfare payments. ²⁰

What has taken place in Britain recently has few precedents. To see sustained national absolute rises in mortality for particular age groups in Britain (outside of war time) you have to look back to the 1930s. The best place to look for reasons why there might be a fall in life expectancy among the elderly in England now, is where in the rich world a similar fall has occurred before. The closest precedent to what is happening now in the UK can be found in what was happening in the USA under the last Republican regime. It was in the last year of George Bush's welfare-cutting presidency, during 2008, that the life expectancy of Americans fell for the first time in 15 years. The elderly were worse affected.

In the USA in 2008 the nation's oldest adults died from heart disease, cancer and respiratory ailments at a greater rate that year than the year before. According to the US National Center for Health Statistics, in 2008 life expectancy in the US fell by 36.5 days compared with 2007 to 77.8 years and crucially the US report concluded "... Children born in 2008 lost a little over a month of expected life. The drop in expectancy was largely the effect of increased mortality among the oldest adults – those at least 85." It is uncanny that again today, following more austerity cuts for the poorest, but now in the UK, it is again those aged 85 that appear worse affected. And the cuts in the UK were in the private as well as the public sectors.

The announcement in July 2011 that the UK's largest private care home provider was about to go bankrupt and might need to close all 752 of its care homes was unlikely to have had only a minimal effect on the health of its elderly and frail customers. But that threat to elderly people's care homes was only made possible because the Coalition

Government in power did not intervene at an earlier stage. The BBC posted the story that some 31,000 care home residents were at risk of eviction as a piece of 'business news' rather than as a health story²².

In June 2013 a review of the impacts on health of involuntary nursing home relocation was released by the Personal Social Services Research Unit ²³. It showed that ill-planned relocations were particular stressful, being linked to worse survival rates. It also found that relocation, especially from inadequate and poor care, could also improve survival. Where the situation worsened there were increased falls, depression, pressure sores, hospital transfers, prescription of anti-psychotics, reduced cognition, communication and social functioning.

There are many factors other than a 'flu epidemic that could have contributed to the rise in deaths we have seen among the elderly in Britain since early 2012. Reduced of social service visits, forced home moves due to cuts, and less medical attention could all increase unexpected deaths in the elderly²⁴. At the other extreme it is possible that as the pound fell in value, more frail 'ex-pat' pensioners had to return to Britain from overseas, including some recently mocked for complaining about losing their winter fuel allowances²⁵.

One thing we do know: Almost all of the excess deaths have occurred since the start of Coalition government in May 2010. Widening health inequalities, which were instigated during Mrs. Thatcher's tenure, had continued to grow throughout the New Labour years, although for all of those years in all but one place the poor did see their health improve, just not as fast as the rich. The one place where falls in life expectancy were reported to be occurring before 2010 was in poorer neighbourhoods of Glasgow. News of actual falls in life expectancies for some groups there was first published in 2011.

Next it was in England that rising mortality began to be recorded. The Spearhead Areas of England were first identified in 2004 using information on deprivation, mortality from cancer and heart disease as well as life expectancy to determine the places where people face the greatest health challenges. It was in those areas where elderly death rates rose the most during 2012. Next, in 2013, mortality rates for elderly were found to have been rising across most of the country as well²⁶. So what are the prospects for 2014?

Most of the increasing numbers of deaths are certainly not simply not due flu but also not due to the cold. If deaths were simply due to a cold winter, you would expect the rise to have little effect on residents of care homes which are usually adequately heated. However, an increase in deaths from conditions which are likely to cause people to be admitted to residential care, such as dementia, would suggest that there has been a rise in residential care home deaths. And a large part of the recent rise has been an unexpected sudden increase in mortality attributed to dementia.

What are the possible physical mechanisms for this increased mortality? There are many: elderly residents in care homes not bothering to tell staff of any new symptoms that might warrant some action; the staff not noticing that someone appears unwell or just not

bothering to ensure that they are drinking enough, because the staff are under greater pressure; they are finding it harder to feed themselves as their extremely low wages fall in real terms. And all the time the numbers of visits to the vulnerable elderly by trained social service staff fall.

People may look back at the massive increase in deaths in the elderly and be amazed that the authorities initially just blamed the cold weather. It should soon become clear that a very large number of the additional deaths of people aged over 85 were in residential care homes that were adequately heated. We already know that a significant part of the rise in death is due to many more recent deaths attributed to dementia, not normally associated with cold²⁷. But how does an elderly person beginning to suffer from dementia cope as personal services are cut back and more and more information is disseminated on-line?

By November 2013 the National Health Service was giving out the following advice to the elderly via the internet: "If you are 65 or over, it is important to spend most of your time in a warm environment during the winter months. There are a number of things you can do to cope in cold weather. Keep your main living room at around 18-21°C (65-70°F) and the rest of the house at least 16°C (61°F). If you can't heat all the rooms you use, heat the living room during the day and the bedroom just before you go to sleep. Make sure you are receiving any benefits you are entitled to, such as the Winter Fuel Payment and Cold Weather Payment. Regular hot drinks and eating at least one hot meal a day will help keep energy levels up during winter and keep your body warm. Finally, make sure you get the seasonal flu jab."

On fuel poverty the advice simply read: "Commentators across the political spectrum have suggested that there is a link between fuel poverty (the inability to keep a home warm at an adequate level because of a low income) and excess deaths. This potential association was not examined in the ONS report." Just because it was not examined does not mean it did not matter. The author of the NHS advice was Bazian, "an Economist Intelligence Unit business healthcare" company. It works for parts of government as part of the expanding private sector. Evan bland advice is subcontracted out.

So what is the government itself doing? It has asked the main energy companies if they would 'please' not increase fuel bills by much until after the May 2015 election. However, it has also ensured that there is about to be a great reduction in the number of people who are cold, especially among elderly people. Unfortunately no one will feel the difference other than the statisticians. This is because the numbers of people living in fuel poverty are being reduced from 3.2 to 2.4 million by simply changing the definition of fuel poverty. The actual change being proposed is not necessarily disingenuous; but it could have been made in a way that did not result in a sudden reduction in the headline figure ³⁰.

Cold weather is no excuse for more deaths. We know that countries with regularly low winter temperatures, such as Finland and Germany, where most housing has adequate winter insulation and heating, have very low rates of excess winter mortality. We have to search around for more clues. Maybe as the price of fuel rises fewer elderly people are visited by relatives? There are many factors that matter, but the timing suggests it is the cuts, austerity and not all being in it together that matters most this time.

When, 60 years ago, in 1953, it began to emerge that thousands of people were dying who would not normally die, Londoners knew it was the smog. Their MPs knew, but the Conservative Government of the day and its housing minister, Macmillan, did not want the hassle of having to sort out the problem of urban air pollution. Macmillan became Foreign Minister in April 1955 and Chancellor just before the Christmas of that year. His career, eventual Prime Ministership, propelling the country towards the Suez crisis, and then telling the public they had never had it so good, was more important to him than a few thousand people dying before their time.

During 2013 it has become hard not to conclude that the rising deaths among the elderly were viewed again by patricians as a price worth paying for the greater good of 'balancing the books' and making Britain "Great" again, ready to win that 'global race'³¹. Along the way thousands will have to shiver in the cold or receive increasingly inadequate care in old age as budgets are slashed. In recent years, while the 1% became richer and richer, the poorer you are the more your income or benefits have been cut. It is the frail and elderly who are most likely to be too weak to get to food banks, let alone too old to face the shame of what is, in effect, begging for food.

In place of many actual visits from carers and medics the state now employs private companies to advise elderly patients by putting instruction up on the internet. Most over-85-years-olds have no internet access. It is blaming the victim to say that they should make sure they have at least one hot meal a day to keep warm and turn the heating up for a short while before they get into bed; only to spend the rest of the night breathing increasingly cold air into their lungs as their core body temperature falls. Electric blankets help if you are not incontinent, but elderly people often have to get out of bed several times a night.

It was almost certainly not flu. It may not even have mostly been the cold. The winter of 2009/10 was colder than this winter or last winter, but far fewer died. It is hard to believe that it is not the rising callousness of our age which, in a myriad of ways, is driving growing numbers of elderly people to die earlier they were expected to die. Life expectancy in the UK remains below that of most other Western European countries and for both poorer and older groups it would now appear to be falling.

The government said it would look after pensioners. It brought in the triple-lock on state pensions and protected the free bus pass, but it has not looked after all pensioners equally. It will be those who were poorer and lived in poorer areas who will have made up the majority of the now prematurely dead, and who will make up the majority of the thousands extra who will die between Christmas 2013 and May 2015, should the situation not improve. These are the last of all those people who in their millions voted in that landslide election of 1945 and ushered in the welfare state and whose votes ensured there was an NHS and a social service.

Deaths are rising, but this rise is being ignored, assumed to be a blip. Between 2011 and 2012 life expectancy of women aged over 60 dropped by a fifth, the falls were smaller but significant for men³². Elderly women are far more likely to be living alone. Only in a minority of cases has flu been the proximal event and even for those cases we do not know why susceptibility is increasing. We can make many guesses but surely this all

deserves better investigation? We need to know why so many thousand extra elderly people have died than were expected to die. And we need to know who does not want us to know.

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http://www.historytoday.com/devra-davis/great-smog written by Devra Davis author of When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution (published by the Perseus Press).

Reference as above reporting how "medical essayist David Bates, then a young physician experienced in wartime medicine, recalls that officials could not imagine that the environment could produce more civilian casualties in London than any single incident of the war."

Bell et al (2004) A retrospective assessment of mortality from the London smog episode of 1952: the role of influenza and pollution. Environmental Health Perspectives; 112(1): 6–8. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241789/

Stone, R. (2002) Counting the Cost of London's Killer Smog, Science, 13 December, 298, 5601, 2106-2107 DOI: 10.1126/science.298.5601.2106b or a summary at: http://www.sciencemag.org/content/298/5601/2106.2.short

Fernandez, J-L, Snell, T. and Wistow, G. (2013) Changes in the Patterns of Social Care Provision in England: 2005/6 to 2012/13, Personal Social Services Research Unit, PSSRU, Discussion Paper 2867, December, http://www.pssru.ac.uk/archive/pdf/dp2867.pdf

See Figure 1 of UKHCA (2013) "Half a million older and disabled people lose care since start of recession", December 15th, http://careandsupportalliance.wordpress.com/ And also: "1000s of UK elderly missed out on care: Research Press TV, Ireland, December 16th, "http://www.presstv.ir/detail/2013/12/16/340361/100s-of-uk-elderly-missed-out-on-care/

The report is still available from the Health Service Journal: http://www.hsj.co.uk/Journals/2013/07/23/u/j/e/Weekly-and-monthly-provisional-figures-on-deaths-registered-in-England-and-Wales--16th-July.doc

West, D. (2013) EXCLUSIVE: Unexpected rise in deaths among older people, Heath Service Journal, July 25th, http://www.hsj.co.uk/news/exclusive-unexpected-rise-in-deaths-among-older-people/5061540.article#.UoyrZtK-06Y

Newton, J. (2013) Public Health England's role in the publication and analysis of mortality data, Open Letter, Public Health England, 15th August, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/229832/John_Newton_Letter_Excess_Winter_Mortality.pdf

Public Health England (2013) Excess winter mortality 2012-13, Public Health England, https://www.gov.uk/government/publications/excess-winter-mortality-2012-to-2013

ONS (2013) Excess Winter Mortality in England and Wales, 2012/13 (Provisional) and 2011/12 (Final), 26th November, (page 5), http://www.ons.gov.uk/ons/rel/subnational-health2/excess-winter-mortality-in-england-and-wales/2012-13--provisional--and-2011-12--final-/stb-ewm-12-13.html

Bawden, T. (2013) Winter freeze led to 31,000 extra deaths last year - against a backdrop of soaring energy prices, The Independent, November 26th, http://www.independent.co.uk/news/uk/home-news/winter-freeze-led-to-31000-extra-deaths-last-year--against-a-backdrop-of-soaring-energy-prices-8965427.html

Donnelly, L. (2013) NHS wants 'Samaritan army' to help elderly, The Telegraph, November 27th, http://www.telegraph.co.uk/health/nhs/10477205/NHS-wants-samaritan-army-to-help-elderly.html

Stuckler, D. and McKee, M. (2013) Why are death rates rising in people aged over 85, Better Health for All Blog of the Faculty of Public Health, August 23rd, http://betterhealthforall.org/2013/08/23/why-are-death-rates-rising-in-people-aged-over-85/

ECDC (2013) Influenza in Europe, Season 2012-2013, Latest surveillance data reports, European Centre for Disease Control, http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/Publishinglmages/influenza-europe-weekly-

infographic.jpg

http://www.discoversociety.org/focus-dismantling-universalism-inequality-and-public-health/, quoting in turn from: Price, D. and Pollock, A. (2013) Duty to care: In defense of universal health care, Centre for Labour and Social Studies, 14th May, http://classonline.org.uk/pubs/item/duty-to-care

BBC Health News (2013) Jeremy Hunt crazy to call hospital bosses, says regulator, 21 December, http://www.bbc.co.uk/news/health-25476090

Wessely, S. (2013) Any GP you want: so long as you're healthy, The Guardian, November 19th, http://www.theguardian.com/commentisfree/2013/nov/19/any-gp-so-long-as-you-are-healthy 19

IFA (2013) Life expectancy at retirement falls for men and women, Independent Financial Advisor on-line quoting Richard Willets, November 6th, http://www.ifaonline.co.uk/ifaonline/news/2305397/life-expectancy-at-retirement-falls-for-men-and-women 20

Ramesh, R. (2013) UK population to rise by 9.6m in 25 years, ONS predicts, The Guardian, November 6th, http://www.theguardian.com/uk-news/2013/nov/06/uk-population-rise-ons

Lopatto, E. (2010) Life Expectancy in the U.S. Drops for First Time Since 1993, Report Says, December 9th, http://www.bloomberg.com/news/2010-12-09/life-expectancy-in-the-u-s-drops-for-first-time-since-1993-report-says.html

BBC (2011) Southern Cross set to shut down and stop running homes, July 11th, http://www.bbc.co.uk/news/business-14102750

Holder, J. and Jolley, D. (2013) The impact of involuntary nursing home relocation on health outcomes: what can be done to help? LSE Health and Social Care, June 21st, http://blogs.lse.ac.uk/healthandsocialcare/2013/06/21/the-impact-of-involuntary-nursing-home-relocation-on-health-outcomes-what-can-be-done-to-help/

Tunstall, H. (2011) Methodologies to assess the relationship between residential histories and the geography of mortality, Economic and Social Research Council Report, http://www.esrc.ac.uk/my-esrc/grants/RES-000-22-2830/read/reports and also see: http://www.esrc.ac.uk/my-esrc/grants/RES-000-22-2830/read/reports

Torjesen, I. (2013) Unexpected rise in deaths among older patients leaves experts guessing over the likely cause, BMJ, doi: http://dx.doi.org/10.1136/bmj.f4795 (Published 29 July 2013) Cite as BMJ 2013;347:f4795 26

Dorling, D. (2013) In Place of Fear: Narrowing Health Inequalities The Centre for Labour and Social Studies (CLASS), May 21st, http://www.dannydorling.org/?page_id=3711 27

http://www.ons.gov.uk/ons/rel/subnational-health2/excess-winter-mortality-in-england-and-wales/2012-13--provisional-and-2011-12--final-/stb-ewm-12-13.html#tab-Final-EWM-in-2011-12-by-underlying-cause-of-death

Bazian (2013) Excess deaths rose by a third last winter, 26th November (for author see: http://www.bazian.com/) http://www.nhs.uk/news/2013/11November/Pages/Excess-winter-deaths-rose-by-a-third-last-winter.aspx 29

http://www.bazian.com/

Staff Reporter (2013) Ministers Accused Of Reducing Fuel Poverty By Changing The Definition, The Huffington Post, December 2nd, http://www.huffingtonpost.co.uk/2013/12/02/fuel-poverty-cheat_n_4370866.html 31

Becket, A. (2013) What is the 'global race'? The Guardian, September 22nd, http://www.theguardian.com/politics/2013/sep/22/what-is-global-race-conservatives-ed-miliband 32

ONS Period expectations of life, principal projections based on historical mortality rates from 1981 to 2012, Released December 11th 2013, http://www.ons.gov.uk/ons/rel/lifetables/historic-and-projected-data-from-the-period-and-cohort-lifetables/2012-based/index.html