



Will GenX end universal healthcare

Highlighting the demographic pressures ahead

About the author

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About the series

This series of insight papers reflect the insights and lessons learned from working with technology in healthcare. They are based on experience of real-world delivery of technology and lessons learned. The series of papers range from broad national level problems to specific technology challenges within healthcare systems.

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Will GenX end universal healthcare?

If Geography is destiny, then is demographics precognition? In the UK, 2021 is a census year, so expect a raft of demographic articles in a few months once the data has been processed and analysed. This insight article will look at population implications for the NHS in or around the mid-2040s and how GenX will place enormous strain on universal healthcare delivery.

For simplicity we'll go with the definition of [GenX^{\[1\]}](#) as people born from 1965 to 1980 (Today's forty & fiftysomethings, retiring in or about 2030 to 2050).

70+ years of the NHS (Universal healthcare)

To examine the results of what universal healthcare in the UK has achieved, here is a little background. While available in many countries with different payer models, the usual definition is a national system that assures access to health care to all its residents without incurring financial hardship. There are many funding models governments around the world use provide this; typically either direct taxation, social insurance or

private medical insurance (or a combination of all 3) Universal healthcare does not necessarily mean free healthcare.

“One of the goals with universal healthcare is to create a system of protection which provides equality of opportunity for people to enjoy the highest possible level of health”

World health organisation

In the UK the [NHS^{\[2,3\]}](#) delivers the nation's universal healthcare through taxation and is free at the point of use.



...It was once said that the moral test of government is how that government treats those who are in the dawn of life, the children; those who are in the twilight of life, the elderly; and those who are in the shadows of life, the sick, the needy and the disabled...

Hubert Humphrey
38th Vice president US 1965-69

Since its foundation in 1948, perhaps the best illustration of what has been achieved is to look at the UK's population health metrics since that time.

UK	1948	2019
Population	50,000,000	67,000,000
Retirement age	65	66
Life expectancy	66(m) 70(w)	79(m) 83(w)
Cost	£375m (\$10.5B)	£140B
Per capita	£200	£2,000

Despite considerable^[4,5] political and clinical resistance to its creation, since 1948 with the introduction of the NHS:

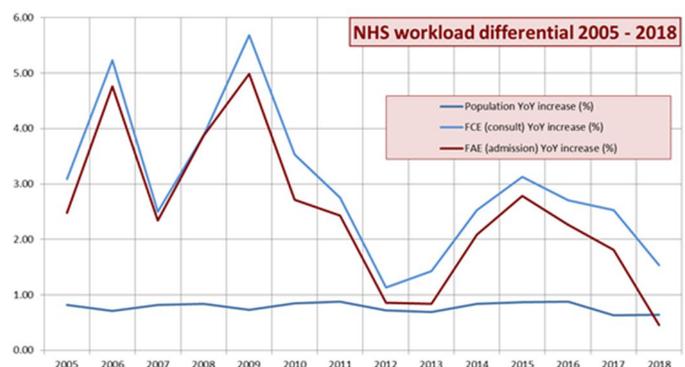
- ALL UK residents can now expect an extra 13 years of life post retirement
- UK children now grow up knowing 4 grandparents
- The NHS is instrumental for the UK passing the moral test of government

Before examining the implications of the ageing GenX cohort, let's look at some statistics from NHS workload pre-COVID (the years 2005 to 2018). We looked at pre-COVID data as this pandemic was a once in a lifetime event that probably makes NHS workload worse with a huge backlog of care yet to be delivered. With demographics we are

examining long term trends rather than single year data aberrations. The raw data for this is available^[6] with a raft of other data available from NHS digital^[7].

NHS - Headline numbers

Demand for NHS services is increasing every year. The increase in demand is far higher than population increase, up to 5 times higher in some years. Therefore this demand it is **not driven by either a higher birth rate or immigration but population ageing.**

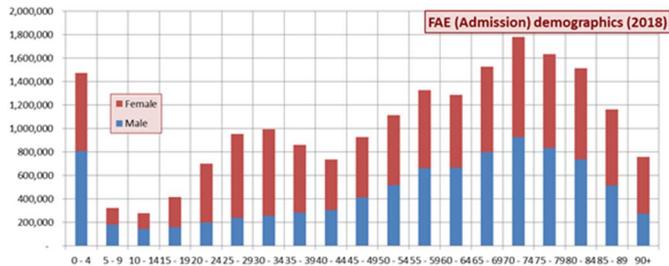




The highest usage of NHS admission services by age group are:

- Babies (being born)
- Women of child-bearing years (having those babies)
- 15 year age cohort of 65 to 79 year olds (retirees)

If NHS demand is in large part composed of caring for older people, we can use demographics to extrapolate what the situation will be like in 20 years' time when Generation X enters this age bracket.



Increased NHS demand it is not driven by either a higher birth rate or immigration, but population ageing.

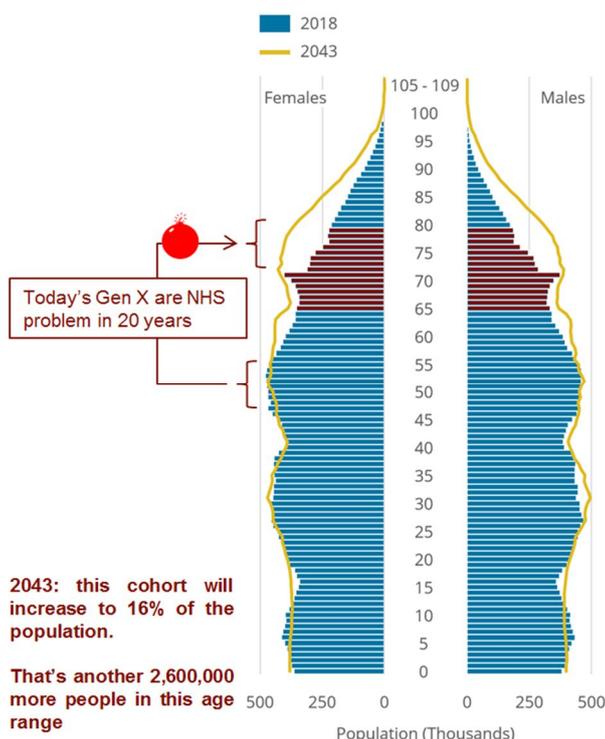
25% of hospital admissions come from this retiree cohort (13% of the UK population). This is just a fact of getting old and gives an insight into NHS workload relating to chronic lifestyle conditions (NCDs). **An ageing population is driving increased pressure on the NHS.**



There may be trouble ahead

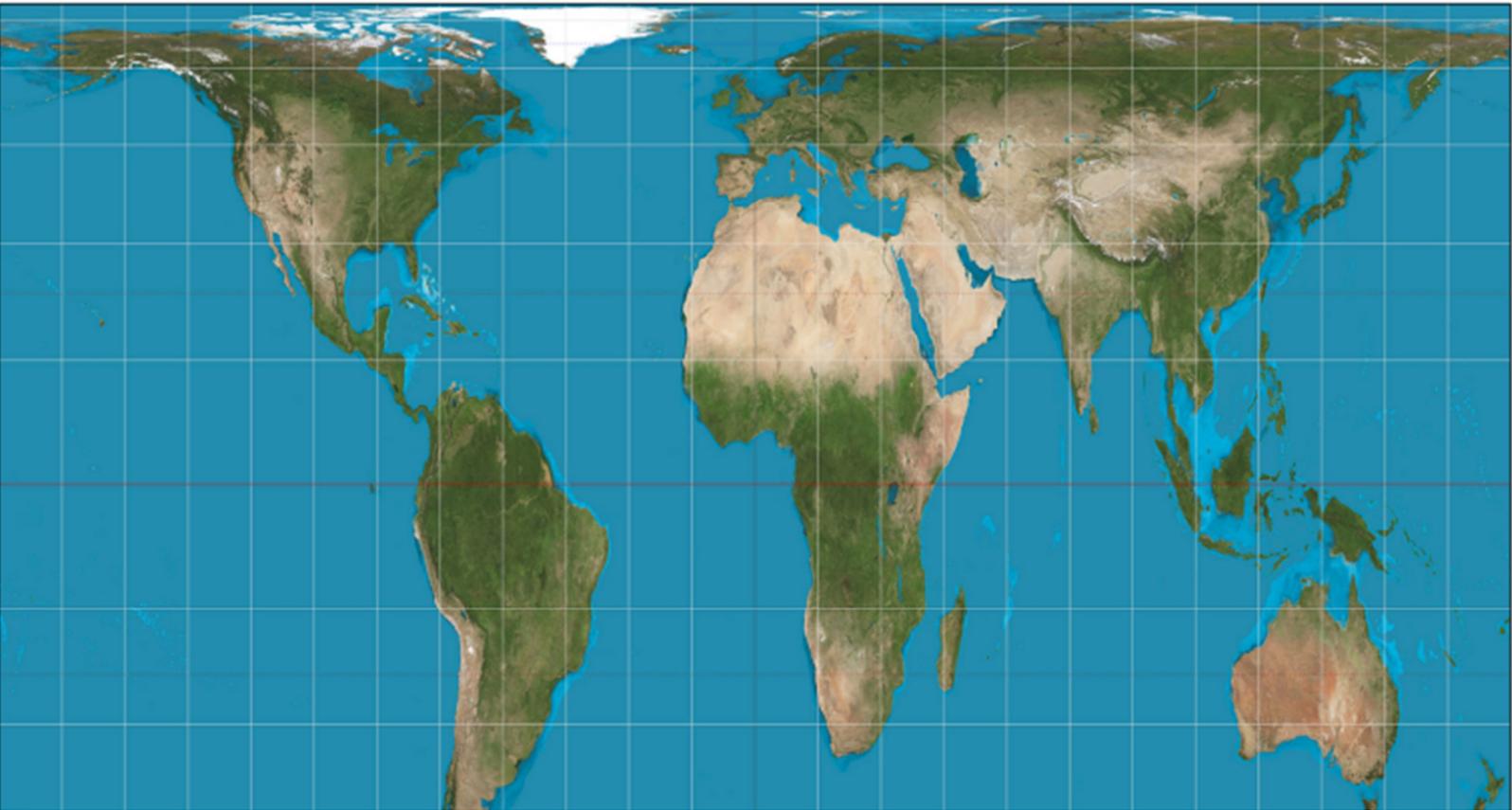
It is accepted that the NHS is under enormous strain (even pre-COVID) with an ever increasing workload. Noting that 25% of admissions are in the 65 to 79 year age bracket, the diagram below shows the population profile of the UK with this age cohort coloured in dark red. These are people born from 1939 to 1953 and there are 8.8m citizens in this age cohort currently.

However the yellow line is the extrapolated age profile in 2043 and note that there will be **more people in this age group by then, both in absolute and population percentage terms**. The 65 to 79 year olds of 2043 are GenXers. There will be 11.5m of these citizens accounting for 16% of the UK population. In absolute terms that is **2,600,000 more Generation X retirees in 2043 than the baby boomer pensioners of today**.



As to younger generations at this time (mid 2040s), **Millennials**^[8], **GenZ**^[9] & **GenAlpha**^[10] will be the working population (i.e. the income tax source to fund universal healthcare) and this population will remain roughly steady (40.2m in 2018 and 41.1m in 2043) in number **but reduce** in percentage of population terms (61% in 2018 to 57% in 2043).

So in 2043 the UK, like many developed economies, will have a universal health system serving a much larger retiree cohort from a reduced tax base. If we continue as is, there will be trouble ahead.



Looking over our shoulder

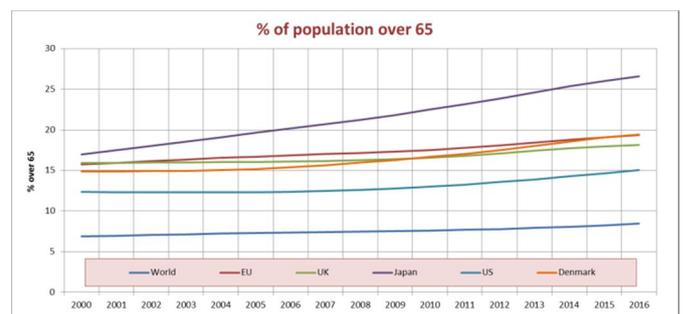
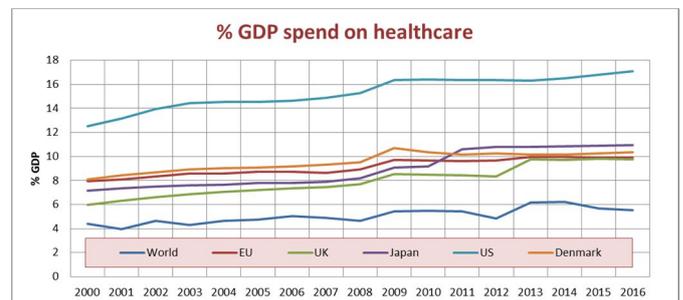
As well as the use of demographics to make predictions on future healthcare demand, we can also look at other countries with different age profiles to see how they are managing the need to care for their ageing populations.

We looked at whether these countries provide universal healthcare to their populations and how they performed in terms of GDP spend. This is summarised below:

Country	Health service	% GDP spend	% retirees	Life Expectancy
UK	Universal	9.76	18.2	81.2
US	Private	17.1	15.8	78.9
Japan	Universal	10.9	27.6	84.5
Denmark	Universal	10.4	19.4	80.8
EU	-	9.9	19.4	77.4
World	-	10	8.4	69

UK health spending seems to be typical of a European country (slightly lower than average) While Japan seems to show healthcare provision is possible with a large elderly population. The UK is 20 years behind Japan in its demographic profile.

In terms of GDP healthcare spend and ageing profile of population over time we have:



The US seems to have the worst of all worlds with a larger GDP spend, a younger population and health outcomes of a lower life expectancy. This implies a move to private healthcare delivery is not an obvious solution.



GenX is different - maybe

But Generation X is different. They live healthier lifestyles, finally deciding to give up cigarettes and excessive drinking. Surely that has to have an impact. With Non-communicable diseases (NCDs - i.e. lifestyle conditions) unfortunately, it is not so black and white.

Smoking cessation has indeed increased across the population, which leads to fewer strokes and heart attacks. But diabetes incidence has increased over the same time (which leads to more strokes and heart attacks). We cannot solely rely on assuming Generation X will be any healthier in retirement than previous generations. The ailments of the 2040's may be different than those of today but the need for care will remain.

Hope for the future

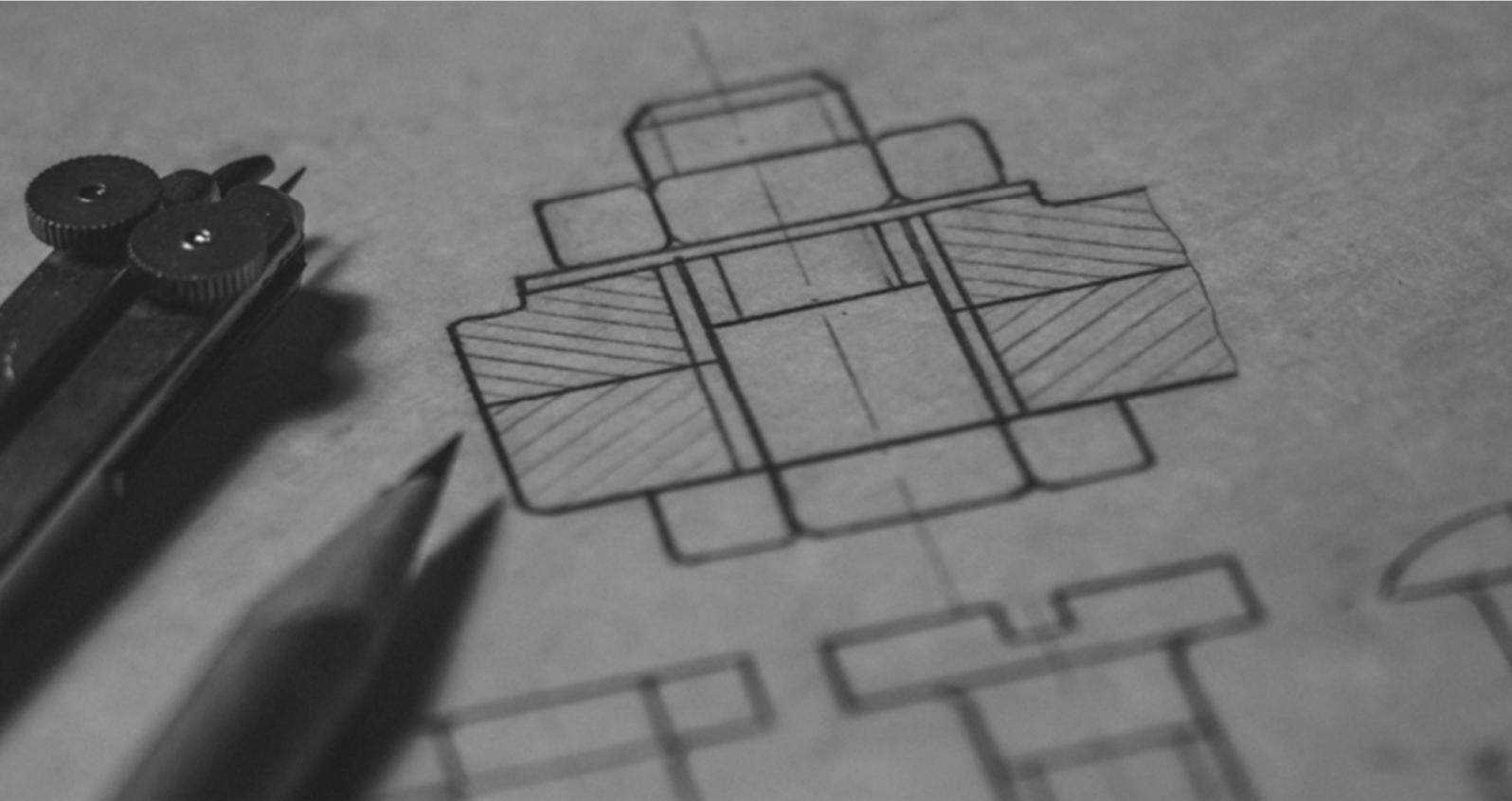
We now have to accept that the 2040s will have a much larger cohort of older people requiring universal healthcare services, provided by a reduced working population and a decreased tax base to fund it from. This has deep implications for

the sustainability of NHS care provision in its current form and funding sources. We believe it is possible to provide the same level of universal care to future generations as currently enjoyed by today's population.

Population health institutions will of course continue campaigns around disease prevention, no doubt healthier older people will be the end result over time but we do not believe this heralds a significant decrease in ageing related NHS demand in the medium term. Other conditions will present in ageing populations.

As for NHS workload with diagnosed conditions in the population, an immediate part of the solution is **increased use of technology**, particularly in **remote monitoring of chronic conditions**. For undiagnosed clinical workload, digital triage will become commonplace.

Generation X are perhaps different to previous generations in that they are **more exposed to and accept technology as part of future healthcare delivery**. Out of hospital/clinic use of digital healthcare systems where in-person consults are not strictly necessary will become the norm for this generation.



Extreme efficiency required - starting now

The low hanging fruit to getting extreme efficiency gains to sustain universal healthcare via technology are already here. The technology exists, Generation X is accepting of its need and use, COVID has shown that high quality remote clinical interaction is possible. It is now a question of national level execution and clinical acceptance. If systematic remote monitoring of chronic conditions becomes commonplace, it is the first step in making universal healthcare sustainable for all future generations.

"Everyone, deep in their hearts, is waiting for the end of the world to come"

Haruki Murakami



Further reading:

[1] - https://en.wikipedia.org/wiki/Generation_X

[2] - <https://www.nhs.uk/>

[3] - https://en.wikipedia.org/wiki/National_Health_Service

[4] - <https://www.nationalarchives.gov.uk/cabinetpapers/alevelstudies/origins-nhs.htm>

[5] - <https://blogs.lse.ac.uk/politicsandpolicy/why-should-the-people-wait-any-longer-how-labour-built-the-nhs/>

[6] - <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity>

[7] - <https://digital.nhs.uk/data>

[8] - <https://en.wikipedia.org/wiki/Millennials>

[9] - https://en.wikipedia.org/wiki/Generation_Z

[10] - https://en.wikipedia.org/wiki/Generation_Alpha