



Institute  
and Faculty  
of Actuaries

# Evidence for LSE-Lancet Commission 'The Future of the NHS'

IFoA response to London School of Economics  
and The Lancet Commission

30 July 2018

## **About the Institute and Faculty of Actuaries**

The Institute and Faculty of Actuaries (IFoA) is a royal chartered, not-for-profit, professional body. We represent and regulate over 32,000 actuaries worldwide, and oversee their education at all stages of qualification and development throughout their careers.

We strive to act in the public interest by speaking out on issues where actuaries have the expertise to provide analysis and insight on public policy issues. To fulfil the requirements of our Charter, the IFoA maintains a Public Affairs function, which represents the views of the profession to Government, policymakers, regulators and other stakeholders, in order to shape public policy.

Actuarial science is founded on mathematical and statistical techniques used in insurance, pension fund management and investment. Actuaries provide commercial, financial and prudential advice on the management of assets and liabilities, particularly over the long term, and this long term view is reflected in our approach to analysing policy developments. A rigorous examination system, programme of continuous professional development and a professional code of conduct supports high standards and reflects the significant role of the profession in society.

## Evidence for LSE-Lancet Commission 'The Future of the NHS'

Name of Organisation/Individual: *Institute and Faculty of Actuaries*

### Role organisation/individual plays within the NHS?

The Institute and Faculty of Actuaries (IFoA) is a royal chartered, not-for-profit, professional body. We represent and regulate over 32,000 actuaries and student actuaries worldwide, and oversee their education at all of stages of qualification and development throughout their careers.

Actuarial expertise is used to examine the possible financial, economic, health and resource challenges of demographic change, and to understand their impacts. Actuaries have long been involved in financial planning for the NHS and this is now a growing area for actuarial work as the government looks for ways to restructure the welfare state to meet the changing needs, demands and expectations of a changing population.

### From your/organisation's perspective what are the biggest challenges facing the NHS in the immediate future and also looking forward over the next 20 years?

- The UK's changing demographics have the potential to seriously affect the NHS's ability to deliver quality care in the future. The population is growing, individuals are living longer, and in the coming decades there will be a growing proportion of older people in the population.

The UK population is projected to increase by almost 10% to 71.8 million in 2036. Crucially, the number of those over the age of 75 is projected to double over the next 30 years.<sup>1</sup> The IFoA's Continuous Mortality Investigation consistently shows improvements in longevity and, while its most recent work predicts that the pace of increase in longevity is slowing, the population is still ageing, albeit not at the same rate predicted in previous years.

All the while, improvements in healthy life expectancy are not keeping pace with this increasing longevity. Males can now expect to spend 16.1 years in poor health in later life, and females 19 years. Research also suggests that the prevalence of multi-morbidity (the presence of 2 or more conditions) is forecast to rise, not just in the retired population, but in younger age groups too. Collectively, these trends point towards increasing demand on NHS resources, yet NHS funding is not currently keeping pace with this increasing demand. In response to the spending increases set out in the 2017 Budget, for example, the King's Fund predicted a projected funding gap of more than £20 billion by the end of this parliament.<sup>2</sup>

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<sup>1</sup> ONS (2016) National Population Projections, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections>

<sup>2</sup> The King's Fund, Nuffield Trust and The Health Foundation (2017), The Autumn Budget: Joint statement on health and social care, <https://www.kingsfund.org.uk/publications/autumn-budget-2017>

- The IFoA is also concerned about the threat of antimicrobial resistance (AMR), which has become an increasing concern to the medical professions, health services and governments of the world's major economies. Meanwhile, an equally alarming decline has occurred in the research and development of new antibiotics to deal with the threat.
- In the immediate future it is crucial that the government finds a solution to the social care crisis, if it is to have any positive impact on the NHS. Social care needs are rising, yet State spending relative to demand is falling. The effects of this are already being seen with the proportion of delayed transfers of care attributable to a lack of social care provision increasing. In order to create a sustainable framework, both health and social care need to be considered as part of the funding debate.

It is therefore vital that the government sets out a more comprehensive vision for social care in England. There are many options as to what this might look like, but the ongoing uncertainty in the public consciousness around who pays for care is leaving individuals underprepared for planning their own provision.

## What innovative solutions has your organisation trialled to address these challenges and what was your experience regarding their effectiveness?

- The IFoA is in the process of establishing a working party to bring together members of the actuarial profession and members from other relevant organisations with a view to exploring population health management (PHM) in the NHS.

The NHS in England is tackling the challenge of rising healthcare demand and constrained funding by adopting new models of care to develop integrated local healthcare systems for a defined population. To underpin delivery of the improved outcomes, better care and value for money that are being sought, it is essential that healthcare systems develop a comprehensive understanding of the health characteristics of their population – for example, current patterns of care demand, forecasting future demand, and predicting the effects of interventions.

We feel that the actuarial skillset has much to offer the NHS in building and deploying such demographic, risk modelling and analytical capability, but there is currently limited awareness of this across the NHS. The proposed working party therefore intends to develop a guide to Integrated Care Partnerships (ICPs), Integrated Care Systems (ICSs) and Sustainability and Transformation Partnerships (STPs) about developing practical PHM capabilities.

- The IFoA is also undertaking a number of large research projects as part of its Actuarial Research Centre (ARC) initiative. One research programme, '[Use of Big Health and Actuarial Data for understanding Longevity and Morbidity Risks](#)', has made some interesting initial findings, particularly on the use of statins and on blood pressure treatment<sup>3</sup>.

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<sup>3</sup> These are initial research findings and the work is still ongoing. We would be happy to share more information about the progress of this research.

Firstly, in a study of the benefits of statins in low risk patients, initial findings have suggested that the current internationally recommended thresholds for statin therapy for primary prevention of cardiovascular disease in routine practice are too low, and may lead to overtreatment, particularly in people under 60 and at low risk.

Secondly, addressing the question of what the ideal blood pressure is in hypertensive patients, and comparing the same survival model on SPRINT clinical trial data and THIN primary care data, findings suggest that intensive treatment of blood pressure may be harmful in the general population, although it might be beneficial in high risk patients who are closely monitored.

- With regards to social care, the IFoA has completed a number of research papers on funding solutions in order to inform the ongoing national social care debate. In our 2016 paper "[The Future of Social Care Funding - Who Pays?](#)" we analysed the extent to which the 2014 Care Act reforms met the policy intention of protecting people from catastrophic care costs, whilst facilitating individual understanding of their potential care funding requirements.

Last year we also partnered with older people's charity Independent Age to produce a report, [Will the Cap Fit? What the government should consider before introducing a cap on social care costs](#), which presents new insights on the impact that different approaches to introducing a cap on care costs, and changing the means-test in England, could have on pensioner households who need care.

As mentioned above, we believe that a fair settlement for social care, which recognises the growing demand and changing distribution of health and social care needs across the population, will be crucial to ensuring the sustainability of the NHS over the long term. Ensuring that individuals are prepared for the potential costs of social care in the future, and that these costs are shared fairly across the population, will help the ease the burden on both individuals and the wider health system as more and more people require social care.

- The IFoA produces a regular [Longevity Bulletin](#) which presents research on some of the biggest challenges facing government and society in the context of longevity, ageing and population change. Recent issues have covered AMR, trends in healthy life expectancy, and the use of 'big data' in health.

## Any other issues your organisation wishes to highlight to our commission?

The IFoA has a number of ongoing work streams which may be of interest to the Commission. Our members are currently conducting the following research projects, all of which we would be pleased to present in more detail to the Commission:

- [Antibiotic Resistance](#) – examining the rise of AMR and how it has become an increasing concern to the medical professions, health services and governments of the world's major economies

- [Cancer Modelling](#) – developing projections of the likely future financial burden of cancer in England and Wales, covering both direct and indirect costs
- [Diabetes](#) – researching the risk factors, incidence and mortality of diabetes along with future plausible trend scenarios which are of relevance to working actuaries (in the context of high prevalence of this disease and implication on NHS budgets)
- [Genetics](#) – exploring the potential risks of anti-selection from genetic testing
- [Impact of E-Cigarettes](#) – examining the impact of e-cigarettes on insured lives
- [Impact of Wearables and the Internet of Things](#) – examining current and potential usage within the health and care area
- [Product Research Group](#) – building on previous research projects on social care (see above) to develop a tool to help individuals understand their potential future care costs, and modelling potential changes to the means testing thresholds for social care in England