



Food and ageing: cause and effect

How ready is the food system for the implications of an ageing population?

A report of the Business Forum
meeting on 7th May 2013

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About the Business Forum

Ethical questions around climate change, obesity and new technologies are becoming core concerns for food businesses. The Business Forum is a seminar series intended to help senior executives learn about these issues. Membership is by invitation only and numbers are strictly limited.

The Business Forum meets six times a year for in-depth discussion over an early dinner at a London restaurant.

To read reports of previous meetings, visit foodethicscouncil.org/businessforum.

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Introduction

The UK population of older people is predicted to rise rapidly, with 51% more people aged 65 and over in England by 2030 compared to 2010, and 101% more people aged over 85. In its recently published report 'Ready for Ageing'¹, the House of Lords Committee on Public Service and Demographic Change warns that the Government and our society are woefully underprepared for ageing. There are significant implications for our food and farming system, which poses the question: 'How ready are food and farming businesses for these changes'?

The May 2013 meeting of the Food Ethics Council Business Forum explored some of the many implications of an ageing population on the food system, including changing dietary needs of older people. It discussed how ready the food industry feels it is and what effective, ethical responses might be. It considered what impacts people working longer and retiring later might have on the food and farming system. It also explored questions like whether it is right or fair that some older people are enabled to lead healthier lives for longer, whilst many others are not.

We are grateful to our speakers, Professor Sarah Harper, Professor of Gerontology at Oxford University and Director of the Oxford Institute of Population Ageing and Professor Margot Gosney, Director of Clinical Health Sciences at University of Reading. The meeting was chaired by Geoff Tansey, Food Ethics Council Board member.

The report was prepared by Dan Crossley and outlines points raised during the meeting. The report does not necessarily represent the views of the Food Ethics Council, the Business Forum, or their members.

¹ House of Lords Select Committee on Public Service and Demographic Change, Ready for Ageing Report (2013) <http://www.parliament.uk/business/committees/committees-a-z/lords-select/public-services-committee/report-ready-for-ageing/>

Key points

- The age composition of the world's population is changing. In the UK, the proportion of older people is predicted to rise rapidly. The Government and society are woefully underprepared. Much of the food industry too seems ill prepared for the challenges of an ageing population.
- There are many physiological, psychological and physical changes associated with ageing. These affect the amount and type of food older people eat, which in turn affect their ability to recover from illness quickly. It is not possible for people to change their normal ageing, but it is possible to change people's behaviour – and people's diets.
- Whilst many people will live healthier and longer, there will be an increasing proportion who are frail. In the future, there may well be a cohort of people in their nineties caring for their disabled children with chronic diseases caused by obesity. Some argue that public health measures to prevent obesity will be more effective and fairer in the long run than treating obesity-related conditions with pharmaceuticals.
- The food industry should not treat the older population as a homogeneous group; instead it must understand different (often complex) needs of older people. There are commercial opportunities available for ageing consumers, including functional foods.
- It is not just ageing consumers; an ageing food and farming workforce is cause for concern in many parts of the world.
- Food (and good nutrition) is cause and effect of an ageing population. If the goal is happier, healthier lives for all, what people eat has a vital role to play.

Global demographic change

Global demographic change is a fundamental driver of lives in the 21st Century – and will fundamentally affect what is produced and consumed. Population growth per se is arguably not the major demographic issue; it is falling fertility, lengthening lives, changing migration flows and – critically – what happens with consumption.

The world's population will grow significantly and is projected to increase from just over seven billion currently to around ten billion by 2050. Population density will also change, with 75% of people expected to live in urban centres by the end of the century, compared to about 50% currently. Migration flows will also change considerably.

At a global level, the total fertility rate (the number of children that women of child-bearing age have) is falling, with two-thirds of the world's population now not replacing itself – so there will be fewer children in the world. Whilst at the moment, half the population of some Asian countries is currently under 15, by the end of the century, there will be almost no country in the world that has more than 15% of its population as children.

Migration flows often counterbalance the ageing of populations. Many people suggest the BRIC countries will prosper because they have a demographic dividend – where the majority of the population is of working age. This is in contrast to Europe, which has a demographic deficit, in that it doesn't have enough young people in its labour markets naturally compared with the number of older people it has.

Ageing: a very real issue

The age composition of the world will change considerably. As the relative number of children

declines, so the average age of the population goes up. When this is combined with falling mortality, it leads to longer life expectancies (albeit with considerable global variation). That will mean that in the second half of the century, we will end up with about a third of the global population aged over 60. Even though what it means to be 60 now is likely to be very different to what it means to be 60 in 25 years' time, the world's population is still ageing.

In many parts of Europe, an ageing population is not a new 'phenomenon' – it is something that has been happening for a considerable period of time. In 1850, half the UK population had died by 45 years of age – and people had an equal chance of dying at almost every age. Now half the UK population is alive at 85. So, mortality is falling and people are living longer. There are currently about 12,500 centenarians in the UK. Projections suggest there will be half a million centenarians by the middle of this century, growing to approaching a million by the end of this century. There are around 8 million people currently alive in the UK who will reach 100 years of age.

The ageing of the world's population – and of the UK's population – will have profound impacts on the food system, and vice versa. Food is a *cause*: diet is a key factor in life expectancies increasing in many countries in the world. The *effects* of an ageing population on the food system are also considerable – and often underestimated.

Health, nutrition and ageing

There are many physiological, psychological and physical changes that occur with ageing and these link with nutrition in several ways.

Malnutrition affects between 5 and 10% of those over the age of 65 in the UK. Of those going into hospital, approximately 55% of them are malnourished when they enter hospital and around 65% are suffering from malnutrition by

the time they leave. Nutrition deteriorates in the hospital setting for a range of reasons – physiological, psychological and physical.

There are important physiological changes as people age. They often get impaired swallowing ability – particularly seen in conditions including strokes and dementia. Their taste thresholds diminish, so that people don't get the same sensory enjoyment they once did from the same food. Their satiety levels (i.e. what it takes for them to feel 'full') change, and they typically become less hungry. This is a challenge of 'normal' ageing, but particularly of sick older people. The societal and health costs of malnutrition in the UK for older people are estimated to be c. £8 billion per annum. If someone arrives in hospital with good nutrition, studies suggest they're more likely to recover (and be able to get out of their hospital bed and return home) more quickly.

The psychological aspects of ageing – and their relationship with nutrition – are important too. Lots of people in advanced states of dementia do not eat (and while there are 'tricks' that can be played to increase appetite, none of them works completely). There is a complex interaction between diet and nutrition and anxiety and depression. Depression affects one in three people over the age of 65 in the UK. A higher prevalence of depression affects oral intake, which in turn affects nutritional deficiencies.

There are physical aspects of increasing age that impact on food too. Those with disabling arthritis will find it more difficult to prepare and eat food. Loneliness is a growing issue for many people in the UK and this means that the social benefits of eating in a group are sometimes lost. As people age, other physical factors affect nutrition – including the ability to shop, the ability to stand to prepare food and the choice of food available or accessible to them.

Food and diverse ageing consumers

The older population is not a homogeneous group. Segmenting people into consumer groups requires *more* sophistication as people get older, rather than less. Whilst the food industry can broadly speaking split older people into those that are able to look after themselves and those that are not, the reality is far more complex. Many food businesses are only beginning to realise they need to do much more to better understand older people's (varied) needs. Many daily activities that people take for granted, such as opening a pack of food, are often much more difficult for older people.

It is worth noting that older people do not only get food in the retail setting (including increasingly through online retailers). The out-of-home foodservice sector has a big role to play here in providing appropriate food products for older people. Many older people rely on meals-on-wheels, although these services are being cut in many parts of the UK. Hospital food is often a source of debate. However, when seeking to tackle issues around food in hospitals, it should be remembered that the hospital budget for food and drink for one patient is typically in the region of £2.50 per day. Taking preventative action to avoid people having to go into hospital in the first place would be preferable. If people (including older people) do have to enter hospital, it is important for their recovery that they are in a state of good nutrition before they enter.

Obesity in tomorrow's older people

Obesity is a growing and global crisis, affecting many millions today - not just in the US (where every state has at least 20% of its population as obese), but also in countries like the UK (one-third of women in the UK are obese) and in many countries in Africa and Asia. This includes tomorrow's older people, i.e. today's younger generation. If smoking was the public health issue

of the twentieth century, then obesity is arguably the 21st century's biggest public health challenge. Public health messages on obesity though have been sporadic to date.

However, studies have shown that while obesity increased significantly in the latter part of the twentieth century (and into the early years of the 21st century) in the US, the number of obesity-related deaths declined. Although the evidence is not clear cut, the most likely argument is that people have increased their use of pharmaceuticals (blood pressure tablets etc) to counteract negative effects of obesity.

This means that increasingly there will be people entering old age with chronic conditions, but that they are able to live with them for longer. This raises important ethical concerns, as the likelihood is that not everyone will be able to afford the cost of rising pharmaceutical bills to combat obesity-related conditions. In the not too distant future, there may well be a cohort of people aged in their nineties caring for disabled children in their sixties or seventies with chronic diseases caused by obesity. So, although 'science' is enabling (many but not all) people to live longer, it is also enabling people to live longer with diet-related chronic diseases. Projections suggest that for an increasing percentage of many people's lives, they will be living with a frailty.

Food and ageing producers

It is not just the links between food and ageing people as consumers that are important to understand. An ageing food and farming workforce is cause for concern in many parts of the world.

A large percentage of the world's food is grown by smallholders in the Global South. What those who are modelling future food production have tended to ignore is the gender and age structure of those farmers. Much of the world's farming

population is ageing. For the many ageing smallholders in areas very vulnerable to climate change, questions arise such as whether they have the education and skills to take on the mitigation and adaptation measures that are so needed. How can traditional science interact with more modern scientific technology to produce enough food to feed the world?

In the UK, anecdotal evidence suggests that many young people do not want to follow in their parents' footsteps as farmers. This is perhaps not surprising, given that comparative unsuccessful farming profitability in many parts of the world has accompanied the rise in cheap food. Although numbers enrolling are increasing in some agricultural colleges in the UK, that is not always leading to more people becoming farmers. There are initiatives and steps in place to begin to address barriers to young people entering farming, but these have so far met with mixed success. The growing ageing population will be dependent on a food and farming workforce already under pressure. One of the ways to combat this challenge will be people having to work longer in the future and retiring later,

The food industry responds?

Sections of the food industry have already started to recognise these challenges and the potential commercial opportunities that an ageing population will bring,

Some retailers and foodservice providers are tailoring product offerings to older consumers – providing smaller portion sizes, traditional nutritionally-balanced meals and easier-to-open packaging. Food businesses have a key role too in helping to educate people from a very young age about healthy eating (and active lifestyles) across the life course. If this were successful, it would help realise significant public health savings.

The food industry is also investing sizeable sums of money on functional foods and supplements – many of which are aimed at older people. The evidence is growing as to why certain foods are good for people. Many are working to overcome some of the barriers to wider uptake of nutritional supplements (for example to maintain or improve heart health), which include issues of consumer perception. Many food companies are working to provide robust health claims and to be able to target these at different segments of society – including older people. It is unclear whether the health-seeking behaviour that is increasingly common in countries like the United States will become more widespread in the UK.

Moving forward

The population is ageing – both at a UK and at a global level. Whilst large numbers of people will live healthier and longer, there will be an increasing proportion that is frail. This will be caused by normal ageing issues, but compounded by poor nutrition. If such issues can be tackled in those that are particularly frail, then much of that research can be extrapolated to those older people who are physically more robust, in order to prevent onset of frailty until much later.

Ethical questions around access and fairness come to the fore here. There are huge inequalities – again at both a UK and a global level. This can be seen in the UK if looking at life expectancies.

A recent study has shown that if a UK man aged 65 is highly educated, has a high income and leads a healthy lifestyle, on average he will live until he is 88 years old. If on the other hand, he is poorly educated, has a low income and leads an unhealthy lifestyle, he will on average only live until he is 76 years old. When exploring the key variables to explain this, the overriding factor was found to be healthy lifestyles – of which food was a critical part.

It is not possible for people to change their normal ageing. However, it is possible to change pathology (study and diagnosis of disease). Pathology has to change before people age. That can be done through a combination of actions. It is not possible to change genetics (currently and in this context), but it is possible to change people's behaviour. Part of the behaviour that needs changing if people are to 'age gracefully' (and healthily) is their diet.

Despite some of the steps already being taken, on the whole, the food system is underprepared for the immense challenges that an ageing population will bring. Quite simply, food (and good nutrition) is cause and effect of an ageing population. If the goal is happier, healthier lives for all, what people eat has a vital role to play.

Speaker biographies



Geoff Tansey, trustee of the Food Ethics Council, is a freelance writer and consultant on food, agriculture and related intellectual property issues. He helped found and edit the journal *Food Policy*. He is an honorary research fellow in the Department of Peace Studies, Bradford University and honorary fellow at the Centre for Rural Economy, University of Newcastle Upon Tyne. His books include *The future control of food – a guide to international negotiations and rules on intellectual property, biodiversity and food security*, co-edited with Tasmin Rajotte, and *The food system: a guide*, with Tony Worsley. In 2005, he received one of six Joseph Rowntree ‘Visionaries’ Awards, and won the Derek Cooper Award for best food campaigner/educator in the 2008 BBC Radio 4 Food & Farming Awards.



Sarah Harper is Professor of Gerontology at Oxford University and Director of the Oxford Institute of Population Ageing. She works on global population ageing, widespread falls in fertility and growth in extreme longevity with particular interest in the Asia-Pacific Region. She was an author of the Royal Society report on population change: *People and the Planet*, serves as on the Advisory Board of Population Europe, the World Demographic Association, the English Longitudinal Study of Ageing, and the Scientific Board of Natural England. She is co-editor of the *Journal of Population Ageing* and author of *Ageing Societies* (2006) Hodder; and *Population Challenges for the 21st Century*, OUP (2013).



Margot Gosney is Director of Clinical Health Sciences at University of Reading. She began her studies in medicine at the University of Liverpool. She decided on a career in Geriatric Medicine during her undergraduate days and spent her final year elective researching adverse drug reactions and potential interactions in elderly hospitalised people. This resulted in her first publication in *The Lancet*. In 1992, she was appointed Senior Lecturer at the University of Liverpool, in 2003 appointed Director of Clinical Health Sciences, University of Reading and Honorary Consultant in Elderly Care Medicine at the Royal Berkshire NHS Foundation Trust. She is researching the barriers to good nutrition and strategies to improve this with a multidisciplinary group. Her research predominantly focuses on hospitalised individuals at most risk of the results of suboptimal nutrition.



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