

The last century witnessed a transformation of the UK population. In 1901 the population of the UK numbered 39.3 million; by 2011 it had risen to over 62 million – despite the fact that during the 20th century 15 million more people emigrated from the UK than immigrated. The growth in the absolute size of the population has been accompanied by changes in its composition, the most marked of which has been a rise in its average age.

Figure 1 shows the percentage of Britain's population that are aged 65 and over and also those aged 85 plus. In 1901, people aged 65 and over comprised around 5 per cent of the total population, by 1941 this had doubled to 10 per cent and by 1981 the percentage reached 15 per cent. Today 16 per cent of Britain's population is aged 65 and over, and this proportion has been fairly stable for the last 20 years.

However, over the next 20 years, we can expect to see a significant rise in the share of the older population as the baby boom cohorts born after the second world war and during the late 1950s/early 1960s begin to retire. In 2021, a fifth of the population will be aged 65 and this will rise to a quarter by 2041.

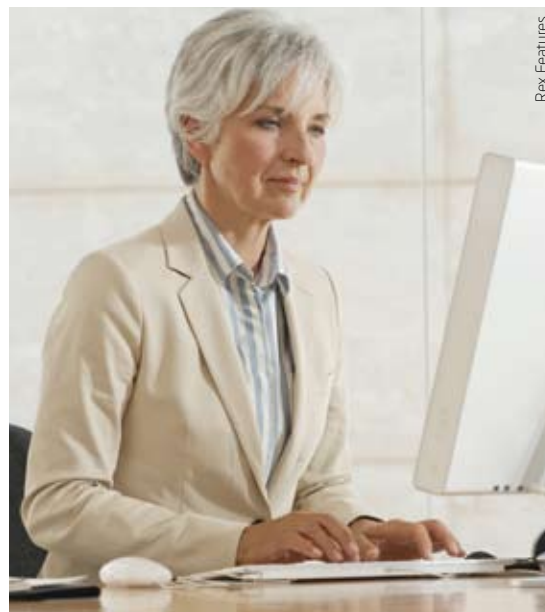
The graph also highlights the ageing of the elderly population itself, ie reflecting an increase in the proportion of the 'oldest old'. In 1901 people aged 85 and over made up just 0.2 per cent of the population. Today, these 'older elders' account for about 2 per cent of the total population and by 2041 they will constitute 5 per cent.

The size and shape of a population is determined by three components: fertility, mortality and migration. Although there have been dramatic improvements in mortality, affecting the capacity of people to survive to

Active ageing

Living and working longer

In the first of three articles on age and vision, **Professor Jane Falkingham** and **Professor Maria Evandrou** discuss the challenges of active ageing



The state pension age for women is set to increase rapidly

old age, the main driver of population ageing in the 20th century has been changes in fertility, which have affected the size of the generations available to survive.

Figure 2 shows the trends in the total annual births and deaths in the UK over the past century. The annual number of

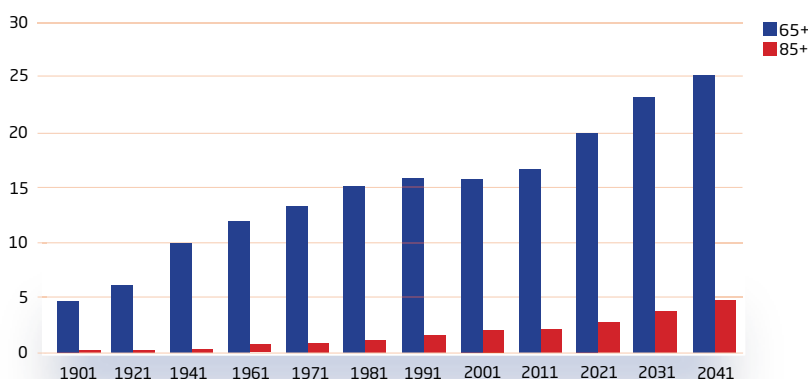
deaths has been fairly stable, with the peaks in the two world wars evident. The graph also shows three peaks in births, the first in 1920 following the end of the first world war, the second 1946-48 immediately following the second world war and then a sustained bulge in the 1960s. It is the ageing of the latter two baby boomer generations that will present the challenge for policy makers and planners over the next 3-4 decades.

However, it is important not to forget that the survivors from the 1920s generation are now entering very old age; there are currently nearly half a million people aged 90 and over in the UK.

Although the number of deaths has been stable, this has been in the context of a rising population, and throughout the last century mortality rates have been falling at all ages. Improvements in mortality mean that more of the large baby boom cohorts are surviving longer.

Current population projections suggest that more than 95,000 of those individuals aged 65 in 2012 can expect to celebrate their 100th birthday in 2047.¹ This is a remarkable change; between 1911 and 2011 the number of centenarians is estimated to have increased 140-fold, from 100 to just over 14,000 today and by 2035 the total number of centenarians is projected to rise to 110,000. At present there are more female than male centenarians – seven women for every man, but this ratio is now beginning to fall as recent mortality improvements have been greater for males and by 2035 it will be close to two to one.

What will the health and socio-economic characteristics of those retiring in the 21st century look like and how will they differ from previous cohorts of elderly persons? The post second world war baby boomers have grown up in a very different world to



Source: ONS Population Trends and Population Projections (selected volumes)

Figure 1 Proportion of the UK population aged 65+ and 85+

their parents' generations and will have different expectations of old age and different lifestyles. The next section discusses trends in health, employment and financial well-being among those over 50 today.

Focus on active ageing

In a recent speech, the EU commissioner for employment, social affairs and inclusion, Laszlo Andor, highlighted that the key to tackling the challenges of an ageing population will be to focus on 'encouraging older people to remain active by working longer and retiring later by engaging in volunteer work after retirement and by leading healthy and autonomous lives'. 2012 has been designated the European Year of Active Ageing and Solidarity between Generations by the European Union.²

Active ageing is defined by the World Health Organization (WHO) as 'the process of optimising opportunities for health, participation and security in order to enhance quality of life as people age'. The definition adopts a broad conceptualisation of participation, covering both paid and unpaid work as well as engagement in social and civic activities.

Increasing employment and rising pension age

Since the mid 1990s, successive UK governments have launched initiatives aimed at increasing the number of older workers and reversing the trend towards early retirement. In 1992, according to data from the Labour Force Survey published by ONS, only two-thirds (66 per cent) of men aged between 50 and the state pension age were in employment, but by 2011 this had risen to nearly three-quarters (72 per cent). The rise has been even more striking for women, from 59 per cent in 1992 to 71 per cent in 2011, reflecting

TABLE 1

Economic activity of men and women aged 50 plus by age^{1,2,3} 2011 UK

| | Age | Employed full-time | Employed part-time | Unemployed | Inactive | Retired | Sick or disabled | Inactive: others |
|--------------|--------|--------------------|--------------------|------------|----------|---------|------------------|------------------|
| Men | 50-54 | 77.4% | 5.4% | 4.9% | 12.2% | 0.8% | 8.4% | 3.1% |
| | 55-59 | 64.7% | 9.2% | 5.2% | 20.8% | 4.2% | 12.4% | 4.2% |
| | 60-SPA | 41.8% | 13.2% | 3.3% | 41.5% | 20.4% | 16.1% | 5.1% |
| | SPA-69 | 10.0% | 13.2% | 0.4% | 76.3% | 64.7% | 8.3% | 3.3% |
| | 70+ | 2.0% | 4.6% | 0.1% | 93.4% | 93.4% | 0% | 0% |
| Women | 50-54 | 45.1% | 31.5% | 2.9% | 20.4% | 0.8% | 9.4% | 10.2% |
| | 55-SPA | 34.8% | 29.6% | 2.4% | 33.2% | 8.2% | 12.9% | 12.1% |
| | SPA-64 | 11% | 21.2% | 0.6% | 67.2% | 51.8% | 7% | 8.5% |
| | 65-69 | 3.5% | 12.6% | 0.3% | 83.5% | 71.9% | 6.1% | 5.5% |
| | 70+ | 0.4% | 2% | 0% | 97.6% | 97.6% | 0% | 0% |

1 The 'inactive: others' category includes those seeking and not seeking work. This includes students and people looking after family home. **2** SPA = State pension age; 65 for men and between 60 and 61 for women, depending on their date of birth. **3** Data not seasonally adjusted. *Source:* Labour Force Survey, Office for National Statistics

the overall rise in female labour force participation at all ages across this period. More people are also working beyond the state pension age (SPA), with retirement becoming a phased 'transition' rather than a single 'event'.

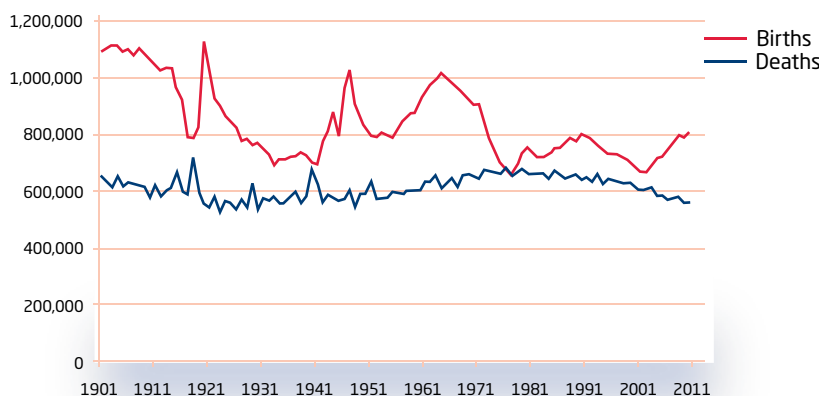
This transition is illustrated in Table 1, which shows a rise in the percentage of men and women working part-time as people approach and pass the SPA. Only 5 per cent of men aged 50-54 were employed part-time in 2011. However, 13 per cent of men aged within five years of the SPA, ie between 60 and 69 were working part-time. More women work part-time than men, and a higher proportion of women continue working beyond the SPA, reflecting in part the fact that the SPA is currently lower for women than men, although this is changing with the SPA being equalised over the next 10 years. Among those men and women who are not in the labour force, being 'retired' increases with age while being inactive due to ill health or disability decreases. Nevertheless, 16 per cent of

men within five years of the SPA are not working due to poor health.

The SPA is currently being revised. Under the Pensions Act 1995, women's SPA would have reached 65, and thus be in line with men's, by 2020. However, following the Pensions Act 2011, women's SPA will now increase more quickly and will reach 65 between April 2016 and November 2018. The Pensions Act 2007 introduced a rise in the SPA for both men and women to 68 by 2046, with phased increases to 66 between 2024 and 2026, to 67 between 2034 and 2036 and 68 between 2044 and 2046. However, the 2011 Act has brought forward the increase from 65 to 66 to between December 2018 and October 2020. The chancellor further announced in his 2011 autumn statement that the SPA would increase to 67 between 2026 and 2028. However, this change is not yet law and will require the approval of Parliament.

The changes to the SPA mean that more older people will be working longer. There are some concerns that an older work force may reduce productivity as health, and in particular visual and auditory acuity, decline with age. However, a recent review of the literature on age and employment concluded that there is no consistent evidence that older workers are generally less productive than younger workers.³ Indeed there is some evidence that older workers are more reliable than younger workers, especially around punctuality and accuracy.

Experience also matters; a study of bus drivers found that 60-64 year-olds had fewer accidents than drivers in any other age category, with the authors suggesting that judgment and patience



Source: ONS Vital Registration historical data series

Figure 2 Number of births and deaths in the UK

Demographics

may be compensating for declines in reaction time or vision (Shephard, 2000).

Moreover, there is strong evidence that work is generally associated with positive physical and mental health. The report prepared for the Health and Safety Executive concluded that the ageing of the workforce should not present a problem as long as employers are aware that there may be a reduction in some capabilities with age and that these can be identified on an individual basis and suitable accommodations put in place.³ These include accommodation for visual impairments, highlighting the need for eye care professionals to work in partnership with local employers as well as older workers themselves.

Unpaid work and volunteering

In addition to paid work in the labour market, older people make an important contribution through the provision of informal support towards people other than relatives, as well as within the family. It is estimated that 1.5 million people aged over 60 provide informal care on a regular basis to someone in or outside their household. Moreover, according to the National Citizenship Survey,⁴ 28 per cent of the 50-64 age group reported participating in volunteering across a wide range of activities, and this figure rises to 30 per cent among those aged 65-74. Thus many older people continue being active citizens well beyond retirement.

Income and expenditure

Older people are also active consumers. Over the past 20 years, the average income of pensioners has been rising faster than average earnings, largely as a result of the increasing number of people retiring with occupational pensions.⁵

The average gross incomes of all pensioner households increased from £282 per week in 1994/95 to £406 per week in 2008/09 (both years in 2008/09 prices). This masks differences between different types of households. On average, in 2008/09 the incomes of pensioner couples (£564 per week) were more than twice the incomes of single pensioners (£275 per week). Moreover, single women pensioners, with £264 per week, were on lower average incomes than single men pensioners, with £304 per week.

It is important to note that there are significant differences between the experience of poorer and richer pensioners. The average income of the top 20 per cent of pensioner couples is nearly four times that of the bottom

TABLE 2

Household expenditure as a percentage of total expenditure by age of household reference person 2010

| Commodity or service | Under 30 | 30-49 | 50-64 | 65-74 | 75+ | All |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| Food & non alcoholic drinks | 9% | 10% | 11% | 14% | 16% | 11% |
| Alcoholic drinks, tobacco & narcotics | 2% | 2% | 3% | 3% | 2% | 2% |
| Clothing & footwear | 5% | 5% | 5% | 4% | 3% | 5% |
| Housing (net), ¹ fuel & power | 20% | 12% | 10% | 13% | 18% | 13% |
| Household goods and services | 5% | 6% | 8% | 7% | 8% | 7% |
| Health | 0% | 1% | 1% | 2% | 2% | 1% |
| Transport | 13% | 14% | 15% | 13% | 8% | 14% |
| Communication | 3% | 3% | 3% | 3% | 3% | 3% |
| Recreation & culture | 9% | 11% | 14% | 15% | 11% | 12% |
| Education | 6% | 2% | 2% | 0% | 0% | 2% |
| Restaurants & hotels | 9% | 9% | 9% | 7% | 6% | 8% |
| Miscellaneous goods & services | 7% | 8% | 7% | 8% | 9% | 8% |
| Other expenditure items | 12% | 16% | 13% | 11% | 13% | 14% |
| Total expenditure (£) | 448.40 | 573.10 | 518.60 | 365.20 | 240.40 | 473.60 |
| Average weekly spend per person (£) | 190.10 | 193.70 | 233.10 | 208.20 | 173.40 | 203.10 |

¹ excluding mortgage interest payments, council tax and Northern Ireland rates.
Source: ONS (2011) Family Spending 2010



Elderly people today have very different expectations of old age than previous generations

(£755 versus £197 per week). Although many older people are able to enjoy a well resourced retirement, there remains a significant proportion of older people who have to manage on relatively low incomes.

The importance of older people as consumers is illustrated in Table 2. Average weekly household expenditure per person rises with age, peaking among households headed by people

aged 50-64 at £233.10. The average level of per capita spending by households headed by a person aged 65-74 is higher than among those aged 30-49 (£208.20 versus £193.70) reflecting in part the smaller household size. Interestingly, among those aged 50-64 spending on housing accounts for just 10 per cent, while recreation and culture accounts 15 per cent; this is in contrast to those aged under 30, where housing takes up 20 per cent of all spending.

With a growing older population remaining in work (full-time or part-time) for longer and, at least some, retiring with occupational pensions and having the resources to spend on recreation and leisure activities, in the next section we discuss what that might mean for the optical profession.

Eye care and eyewear habits

In 2011 the College of Optometrists commissioned a nationally representative survey of 4,004 adults aged 18-60 living in the UK to shed light on consumer attitudes and behaviour toward eye health. Although the survey only covered those aged under 60, and thus missed out on an opportunity to elicit information on eye care and eye care habits of the majority of the older population, it nevertheless provided some interesting insights in the habits and attitudes of those aged 50-59, ie the baby boomers born in the late 1950s to mid 1960s.

The likelihood of a person wearing corrective eyewear increases with age; 93 per cent of those aged 50-59

years wore some form of corrective eyewear compared to 51 per cent of those aged 18-29.⁶ This reflects the fact that visual acuity is known to decline with age.³ However, older people were significantly less likely to wear contact lenses, with just 8 per cent of 50-59 year-olds doing so compared with 18 per cent of the younger age group (18-29). Perhaps not surprisingly, older people were most likely to consider sight tests important; 86 per cent compared to 71 per cent of 18-29 year-olds. Interestingly, however, 28 per cent of carers for older people, both professional and non-professional did not know that sight tests for those aged 60+ were available on the NHS.

Looking to the future, as more older people work for longer and engage in sport and leisure activities, this age group will be an important client group. So too will be their employers, many of whom will wish to support their workers in maintaining their visual health. Furthermore, 'younger' older people are often engaged in the provision of informal care to older parents, spouses and other family members. Thus they may be important sources of support and providers of information to the 'older' elderly population. It is likely that tomorrow's elders will be more active consumers, wanting more choice in eyewear and eye care as they age. ●

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Going digital

Caledonian Optical is ready to take its freeform revolution nationwide. **Mike Hale** reports

Apart from granite buildings, Aberdeen is probably best known for its oil industry and indeed most facets of the city have some sort of connection to it if you look hard enough. Prescription house Caledonian Optical is no different; part of the lab's business is providing safety eyewear for use on the oil rigs. 'As the rigs have gotten older, there are more rust and other particles flying about,' says Mike Stewart, general manager of Caledonian Optical. 'To have a prescription in a wraparound model is a reasonably complex process and you need to have the correct equipment and the BSI standards in place because everything has to be done in a controlled environment.'

With governmental contracts in that area, such work makes up a decent amount of business and the lab also has a specialist rimless department. However, the main focus of the lab going forward is on offering cutting-edge freeform technology. From humble beginnings, Stewart says Caledonian Optical has grown through a policy of embracing technology to stay ahead over the years.

'The lab was started by the Duncan & Todd group of optical practices in 1976. This was just in a little room but it was still one of the first labs in Britain to offer a one-hour service for a cut, edge and fit. Since then the lab has slowly progressed in size over the years and we started surfacing in 1991. The key has been that we've always kept up to date with the latest technology thanks to the financial backing of the owners.'

An example of this from the past is the purchasing of Nidek robotic edgers once they were available to improve glazing services. 'This allowed us to increase capacity and service without increasing staff levels,'

notes Stewart. 'The same happened with rimless work – our staff have the skill to do the drilling and other work by hand but the machines can do most of it now.'

Caledonian moved to its current premises in central Aberdeen seven years ago, a move that doubled the amount of space available to the surfacing and glazing processes.

'We were at a point where we needed to invest in bigger and better machines and to incorporate them effectively it made sense to move,' says Stewart. 'We are already at the point where we might have to move again because the business is growing.'

Freeform investment

The lab's business from the Duncan & Todd group, which currently numbers 23 practices, has remained fairly constant in recent years so growth is coming from new business. The driving force behind this is the freeform service offered by the lab courtesy of a £400,000 investment in the necessary equipment.

'Years ago, when we first did work for practices outside the Duncan & Todd group, there was no overriding reason for them to send us work rather than to a local lab. Now with the freeform technology, we are making our own lenses and, when any new lens comes out, we can apply our technology to the material and have it available as soon as possible.'

'The digital revolution has really helped us,' adds Mark Robertson, business development manager of Caledonian Optical. 'We can compete with the larger lens companies but we are still an independent company that offers clients a personalised service.'

Robertson outlines the way that freeform has allowed the lab to benefit patients, saying whereas before a patient might have to adapt to a particular varifocal lens, freeform allows the construction of a lens