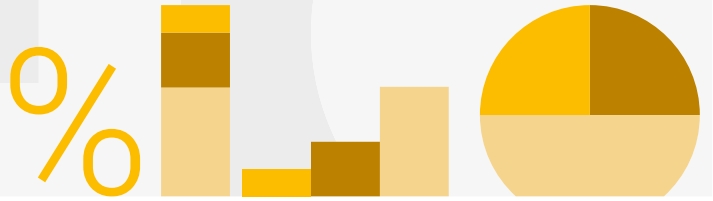


## FSO News



01 Population

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# Active ageing

## Editorial

Over the coming decades, Switzerland and most countries will face greater economic and social problems as a result of demographic ageing. Yet older people are also a valuable but often neglected social resource. They play an important part in the community and society.

Demographic ageing refers to the decrease in the proportion of children and young people and the increase in the proportion of older people in a population.

For demographic ageing to make a positive contribution to Switzerland's well-being and social cohesion, its political authorities and society need to adopt policies and programs that encourage active ageing<sup>1</sup>, i.e. the promotion of health, participation in society and security of older people. Opportunities to live in good health and security and to participate in society must accompany a longer life. Active ageing describes the process leading to this notion of ageing.

The implementation of policies enabling active ageing in a population requires reliable statistical information. These data should make it possible to identify problematic areas that need to be improved. They also enable us to monitor the effect of implemented policies.

This publication aims to help increase awareness of active ageing in Switzerland. It firstly describes demographic ageing among the population, its causes and current and future levels. The second article examines the situation of older people as regards poverty. Another key element of active ageing – health – will be considered in the next article. To conclude, we will then examine the issue of statistical measures of active ageing by looking at the active ageing index developed under the EU's mandate. This index allows us to compare the situation in various European countries and to identify the areas needing to be improved in each country.

*Stéphane Cotter (FSO)*

### Content:

- 1 Demographic ageing in Switzerland
- 2 Poverty makes active ageing more difficult
- 3 Health in old age: active ageing until the age of 80
- 4 Evidence of active ageing in European countries

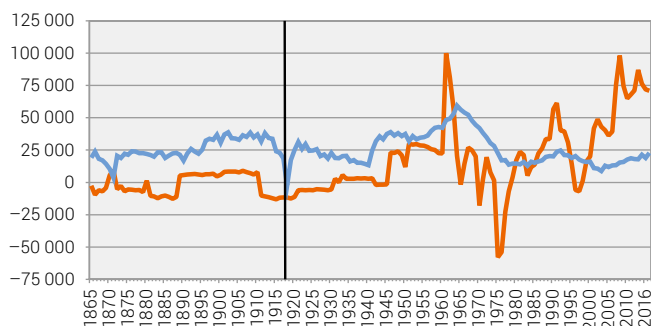
<sup>1</sup> The concept of active ageing aims at enhancing the physical and mental well-being of individuals. Personal well-being may ultimately contribute to their ability to be less dependent on and more contributive to societal life (WHO 2002).

## 1 Demographic ageing in Switzerland

The population is considered to be ageing when the share of younger persons decreases and the part of older persons in the population increases. It is strongly influenced by the excess of births over deaths<sup>2</sup> and net migration<sup>3</sup>. Switzerland has registered a natural increase in its population annually since the 19th century. 1918 was the only exception when the excess of births over deaths saw a sharp decline due to the Spanish influenza pandemic. During the baby booms of the 1940s and 1960s, a very high excess of births over deaths was registered. Net migration as a second factor of population ageing was relatively low until the middle of the last century. Both up to the end of the 19th century and between 1910 and 1930, Switzerland was, in fact, a country of emigration. Since the 1950s, net migration has, however, been a strong driver of population change in Switzerland. It should be noted here that this fluctuates considerably from year to year. For instance, in 1961 net migration was in excess of 100 000 persons while in 1975 a negative balance of 58 000 persons was recorded. Since the start of the new century, however, it has been the main factor behind Switzerland's demographic change. In 2016, for example, around 88 000 births and just under 65 000 deaths were recorded. In 2016, a positive migration balance of 72 000 persons was registered. The permanent resident population currently stands at 8.4 million.

### Factors of demographic change in Switzerland, 1865–2016

G1



— Migration rate      — Excess of births

1918: Spanish flu  
1961: migration rate  
1965: excess of births  
1975: economic crisis

Sources: FSO – BEVNAT, STATPOP

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The ageing of the population means that the longer the intergenerational contract between the middle generations (20 to 64 years) and the older generations is, the greater the burden for the population of working age. This burden is reflected in the youth dependency ratio<sup>4</sup> and the old-age dependency ratio<sup>5</sup>. The youth dependency ratio shows that the under 20 age group has fallen sharply compared with the 20–64 age group. While in 1900 there were still almost 80 young people to 100 people aged 20 to 64, in 2016 this ratio fell to just under a third (32.5). In contrast, the old-age dependency ratio has sharply increased since 1900. The share of the population aged 65 and over has sharply increased compared with the 20–64 year age group. In 2016, there were almost 30 people aged 65 and over for 100 persons aged 20–64 whereas at the start of the last century there were only around 6 people aged 65 and over for 100 persons aged 20–64.

The ageing of the population and changes to the population age structure will become increasingly important over the next few centuries, posing problems for both the pension system and the economy. Payments from the middle generation to the older population are continuously increasing as the result of low birth and mortality rates. In the future, a shrinking group of employed persons will support an increasingly ageing generation. Increasing life expectancy has a crucial role here as the older generation that is living longer than originally anticipated by employee pension funds is being supported by the middle generation. In Switzerland, 65 year old men have an average further life expectancy of around 20 years and women of the same age can expect to live almost another 23 years. The proportionate decrease in the younger population and increase in the older population means that the population is ageing overall.

### Age structure

There are several causes for the ageing of the population in a given region. These include ongoing low birth rates as well as the continuous increase in life expectancy and migration movements. In Switzerland, birth rates have been too low to assure the replacement of generations since 1970.<sup>6</sup> For this, a total fertility rate of 2.1 children per woman is necessary. The median age of the Swiss population has increased from 25.1 years in 1900 to 42.4 years in 2016, with a slightly higher median age among women (43.4) than men (41.3). One fifth of the population is currently aged 65 or over whereas this figure was just under 6% in 1900. Back then over 40% of males and females were aged 0 to 19 years while the same age group accounts for only around 20% of the population today, i.e. half the number. While 20 to 64 year olds made up 50% of the population in 1900, today they account for slightly over 60% of the population. However, there has been considerable change among the 65 and over age group. In 1900, this category accounted for 5% (men) and 6% (women) of the population. Today they make up 16% (men) and 20% (women) of the population respectively.

<sup>4</sup> number of 0–19 year olds for 100 persons aged 20 to 64

<sup>5</sup> number of persons aged 65 and over for 100 persons aged 20–64

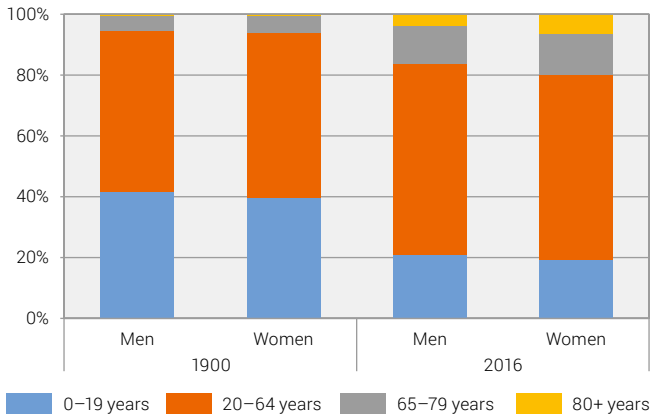
<sup>6</sup> Generation replacement is guaranteed by a total fertility rate of 2.1.

<sup>2</sup> difference between the number of live births and the number of deaths

<sup>3</sup> difference between immigration and emigration

### Permanent resident population by gender and age group, 1900 and 2016

G2

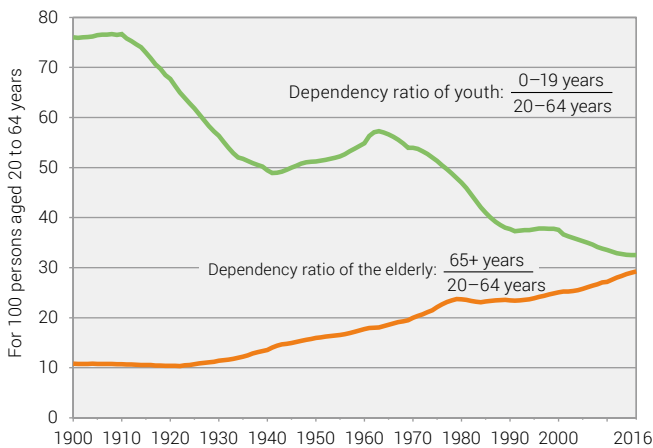


Source: FSO

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The youth dependency ratio has decreased considerably. While this was around 80 at the start of the last century, today it stands at around one third. For 100 persons aged 20–64, just under 30 persons are of pension age. This trend – in which the younger population has decreased proportionately and the older population has grown – has led to the ageing of the population.

### Youth and old-age dependency ratios, 1900 and 2016 G3



Sources: FSO – ESPOP, STATPOP

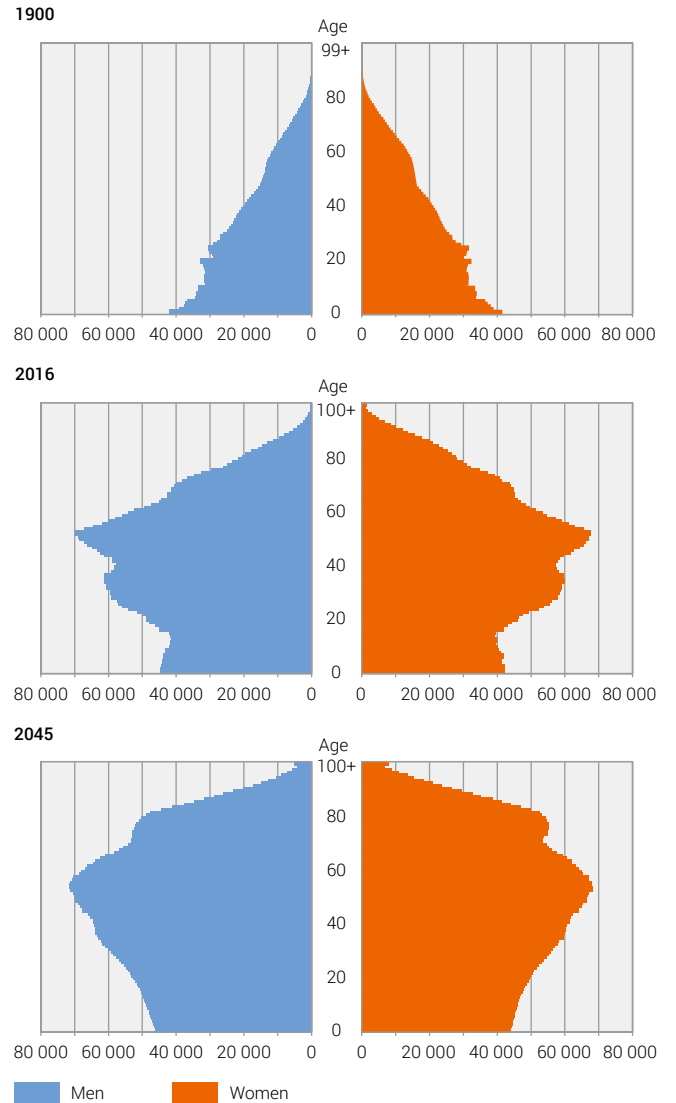
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### Age pyramids 1900, 2016, 2045

Age pyramids show a population's age structure differentiated by men and women. Changes to the age pyramid have a crucial impact on employee pension funds. In around 1900 the share of young people was still comparatively high and the share of older people correspondingly low meaning that the age pyramid had a wide base and a narrow top. Since the start of the new century the tree shape has turned into what demographers describe as a bell. The population's age structure is influenced by the baby boom generation leading today to an expanding mid section. This shape is due both to the decline in the birth rate that cannot be countered by immigration and continuously increasing life expectancy. As shown by the FSO's population projections, in the next thirty years the tree shape will evolve into an urn shape. The top will continue to expand as the baby boomers get older.

### Age pyramids 1900, 2016, 2045

G4

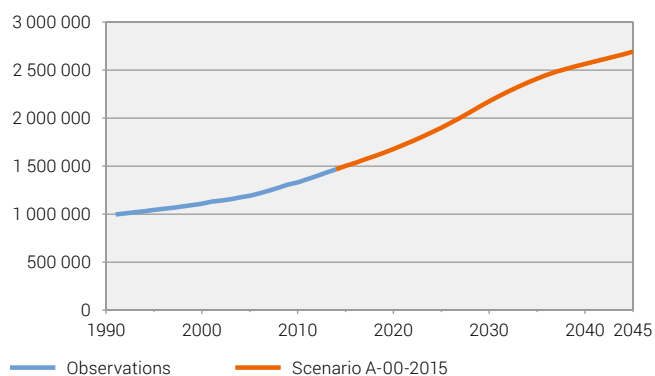


Sources: FSO – ESPOP, STATPOP, SCENARIO

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The change in the 65 and over age group shows that the generation of old-age pensioners in Switzerland - currently standing at 1.7 million - will see a strong increase over the next thirty years. The FSO's population projections show that in 2045 pensioners will account for over 2.7 million inhabitants in Switzerland. In the next few years, between 40 000 and 60 000 new pensioners are expected every year. The share of older generations in the population will increase from 18% (in 2016) to just under 27% 30 years from now. The number of persons aged 80 and over will also double. While there were just under half a million people aged 80 and over in 2016, according to the population projections, in 30 years' time there will be over a million people in this age category living in Switzerland. This phenomenon of change within a population's age structure to the benefit of older age groups is referred to as population ageing.

### Change in population aged 65 and over in Switzerland, reference scenario G5



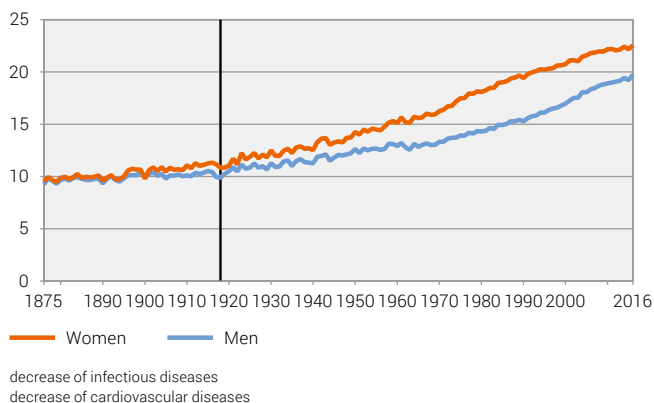
Sources: FSO – STATPOP, SCENARIO © FSO 2018

### Evolution of mortality and ageing at the top

Demographic ageing refers to increasing life expectancy and a larger proportion of the elderly in the population. We are referring to "ageing at the top" when life expectancy increases. Mortality<sup>7</sup> has shown a downward trend in Switzerland. Over three decades, the number of deaths was around 60 000 per year. It has increased over the last few years, and in 2016 just under 65 000 deaths were registered. A trend in which the number of deaths of people under the age of 80 is decreasing has been observed, while more and more people are dying aged 80 and over.

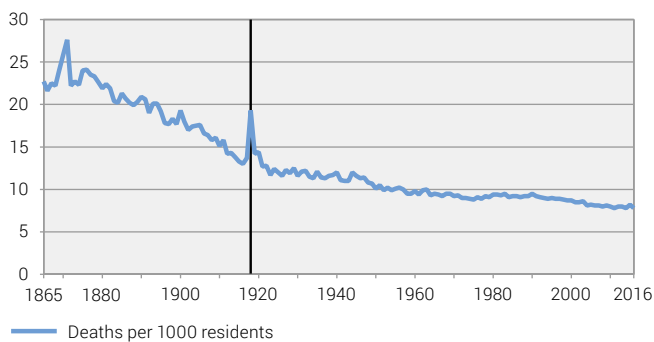
<sup>7</sup> Mortality describes the frequency of deaths or deceased persons in a population.

### Change in average life expectancy from age 65 in Switzerland, 1875–2016 G6



Source: FSO – BEVNAT © FSO 2018

### Mortality trends in Switzerland, 1865–2015 G7



Source: FSO – BEVNAT © FSO 2018

This change is due to changes in the age structure of the population. For instance, a clear decrease can be seen in the standardised mortality rates<sup>8</sup>.

Over the last 40 years life expectancy has risen by 8.5 years among newborn girls and by just under 10 years among newborn boys. There has also been a considerable change in further life expectancy at the ages of 65 and 80. A decrease in infectious and cardiovascular diseases due to improved medical care has contributed to this increase in life expectancy.

<sup>8</sup> As the populations to be compared mainly have different age structures and as mortality risks depend on age, the influence of age must be mathematically eliminated. This is done by calculating how many cases would be expected in a standard population and for the same age-specific mortality risks as in the examined population. The "European" or "world" theoretical age structure is used here as the standard population as this is standard for international comparisons of rates.

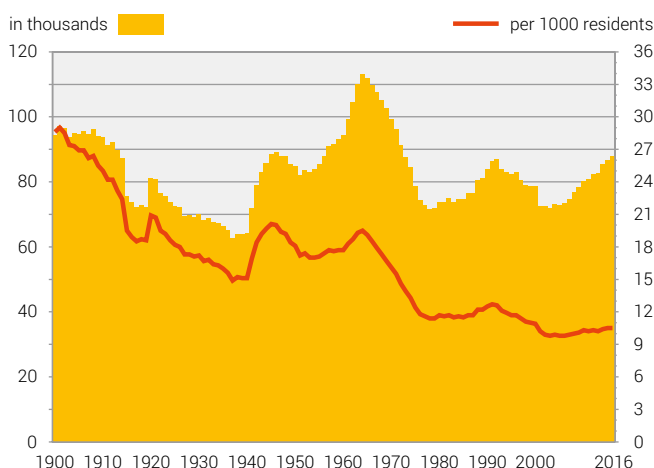
In the first decade of the 21st century, the life expectancy of men at birth increased by 2.9 years to 80.1 years while that of women increased by 1.7 years to 84.5 years. The gender-specific difference in life expectancy fell between 2000 and 2010 from 5.6 years to 4.4 years. Compared with the past decade, the increase in life expectancy slowed among both men and women. The considerable increase in life expectancy among men during this decade has mainly been explained by the lower mortality rate among men of retirement age. The decreasing probability of dying among persons aged 65 and over was responsible for more than half the increase in life expectancy at birth among both men and women<sup>9</sup>.

## Evolution of fertility and ageing at the bottom

As previously mentioned, we speak of demographic ageing when we observe an increase in the share of older people on the one hand and a decrease in that of younger people on the other. This decrease results from the decline in the birth rate which is also the reason for the change in the population's age structure. As this decline triggers the shrinking of the base of the age pyramid, we call this phenomenon "ageing at the bottom". The end of the "Trente Glorieuses (Glorious Thirty)" in Switzerland – the period from 1945–1975 – precipitated the end of the baby boom. From 1965 onwards, the number of live births in Switzerland fell – with the exception of the years 1984 to 1992 – until the start of the new millennium. Between 1965 and 2003, the number of births fell from 111 800 to 71 800 per year. Since then, their number has increased slightly. However, because of a growing population, we note that the crude birth rate first of all declined, then stabilised at 10 births per 1000 inhabitants (see red curve in graph G8).

### Live births, 1900–2016

G8



Sources: FSO – ESPPOP, BEVNAT, STATPOP

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At the same time as the decrease in the number of births, we can also observe a decrease and delay in childbearing. Because women are having children later in life, they are also gradually having fewer children as their biological ability to have children decreases with age. While in 1965 a woman gave birth to her first child at the age of 25.6 and had 2.6 children on average, in 2016 these figures were 30.8 years and 1.5 children respectively.

This change may be explained by various factors such as longer time spent in education, couples waiting longer to have children, greater availability of contraception allowing for better family planning, the difficulty of balancing work and family and an increase in the share of childless people.

## The role of migration

Migration has a role in both the population structure by age and demographic growth (see G1). However, it also has a rejuvenating effect on the Swiss population. Persons arriving in or leaving Switzerland are mainly of working age (20–64 years). In 2016, this was the case for 78% of foreign nationals who immigrated and 80% of those who emigrated. By comparison, foreign nationals aged 65 and over arriving in Switzerland accounted for only 1%. The share of the same group leaving the country was 5%.

The impact of migration on ageing can be measured by simulating the change in the population from a reference date and assuming the total absence of any migratory movements. The results obtained from this type of simulation make it possible to calculate the importance of migration as a brake to demographic ageing. We can measure the change in the population since 1945 in the absence of migration. At the end of the observation period (2015) we see that:

- Population increase would have been slower. Instead of there being 8.3 million inhabitants, there would have been 5.0 million.
- The working-age population would have been smaller. Instead of there being 5.2 million people, there would have been 2.9 million.
- The population aged 65 and over would have been smaller. Instead of there being 1.5 million inhabitants, there would have been 1.2 million.
- However, in terms of the old-age dependency ratio, there would have been more people aged 65 and over for 100 persons of working age. The old-age dependency ratio would have reached 43 without migration instead of the figure of 29 observed in 2015. More specifically, ageing would have been far greater in the absence of migration.

In this respect, migration has slightly slowed down the ageing of the population without providing a solution to this issue. This result joins Wanner's findings published in 2013. Nevertheless, Switzerland's foreign population will also age, and in the long-term this could heighten the phenomenon of ageing in Switzerland.

In 2020 the number of older migrants will reach approx. 400 000.

<sup>9</sup> FSO, mortality tables for Switzerland 2008/2013

## Conclusions

Switzerland has seen marked population ageing since the end of the 19th century. The mortality rate and birth rates have sharply declined over the last 150 years. These trends are some of the causes for the ageing of the Swiss population. As the main factor behind population growth for 30 years, migration has also helped stem population ageing. However, the population will quickly age over the next few decades. The older generation of tomorrow will differ from today's generation of pensioners as the former enjoys better health and economic prosperity than the latter.

According to public perception, population ageing today is often considered a problem for Switzerland's long-term future and a challenge for younger generations. This has already been clear since the 1970s.

Jacqueline Kucera (FSO), Fabienne Rausa (FSO)

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## 2 Poverty makes active ageing more difficult

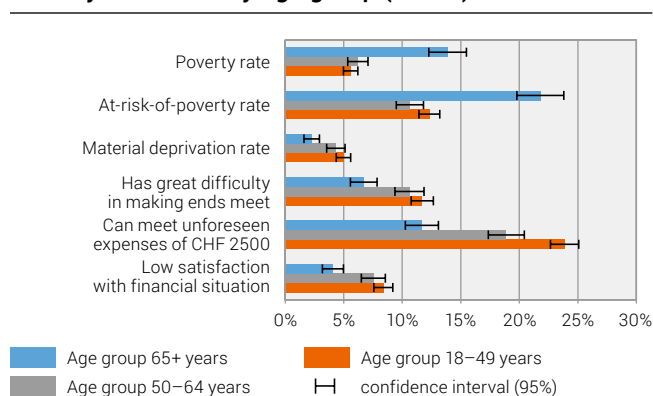
Financial limitations have an impact on various areas of life, including a considerable effect on aspects of active ageing. This raises the question as to whether active ageing in Switzerland is also possible for people affected by poverty. To this end, it is important to firstly determine the extent of old-age poverty. This is hardly an easy endeavour as the standard concepts for measuring poverty focus on income and therefore provide inadequate results for people beyond retirement age who often have assets. It can, however, be shown that the disadvantages of people affected by poverty continue after retirement and limit possibilities for active ageing.

### Old-age poverty in figures

In Switzerland, poverty is usually measured using three different concepts: In addition to the absolute poverty rate, there is also the at-risk-of-poverty rate and the material deprivation rate (see insert). Graph 1 shows that the absolute poverty rate and at-risk-of-poverty rate are approximately twice as high among persons aged 65 and over than among the population of working age. In many cases, the income of the older population (mainly pensions) also seems insufficient to secure their livelihood.

### Poverty indicators by age group (as a %)

G9



Only persons living in private households (excluding collective households). The absolute and at-risk-of-poverty rates are based on income and do not take into account any financial assets.

Source: FSO – Source: Survey on income and living conditions (SILC) 2015, version from 16.09.2017

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A look at material deprivation suggests that many of these people have other means to secure their livelihood despite their low income. Only around 2% of people aged 65 and over are materially deprived. Indicators used for a subjective assessment of the financial situation also reinforce the presumption that income-based poverty measures generally overestimate income poverty (see also FSO, 2014). Furthermore, another trend concerning the age groups can be seen for the subjective indicators: While the share of people affected by poverty following the income-based poverty concepts is far higher among pensioners than it is among younger people, the reverse is true for all other

poverty concepts. In the final years of employment, a similar trend among the population aged 65 and over is predominantly observed.

### Pensioner households are more often able to fall back on assets

A possible explanation for this discrepancy between the different indicators could be higher satisfaction levels in general and more modesty among pensioner households. However, the assumption that many households may compensate lacking income through existing income is far more likely. The poverty rate and the at-risk-of-poverty rate only take income into consideration. On average pensioner households, however, have far more assets that they can use to secure their livelihood than other households. The share of households that have very few or no assets is far lower among pensioners than it is among households with persons of working age (FSO 2014, Wanner/Gabadinho 2008). Persons of pension age thus correspondingly fall back on assets far more often to cover everyday expenditure than persons of working age (17.6% compared with 5.1%). On the one hand, pensioner households have more assets as the Swiss old-age provision system and its three-pillar concept is dependent on retirement assets being obtainable not only in the form of pensions but also as capital payments. On the other hand, older persons often have savings, and due to longer life expectancy inheritances also tend to arrive later on in life than they did among previous generations (Stutz et al. 2007).

For these reasons, all persons unable to meet unexpected financial expenses of CHF 2500 within a period of one month without negatively affecting the household's financial situation are defined as poor hereafter. This approach considers income and assets and is therefore better suited to assessing the financial situation of the senior population than income-based poverty measures<sup>10</sup>.

### Poverty and active ageing

Active ageing means that people have the opportunity to maintain their health as they age, to participate in life in their social environment, to ensure their personal security and to thus improve their quality of life (WHO 2002). However, the aspects of life included in this definition are both dependent on one another and on a person's financial means. Imposed early retirement, for example, can considerably reduce a household's financial means while employment beyond retirement age may also prevent poverty (von Gunten et al. 2015). Health problems may be both the cause and effect of poverty, participation in social activities is sometimes also linked with financial costs, and poverty also has a negative effect on overall life satisfaction (Tillmann et al. 2016, Villiger/Knöpfel 2009).

#### Concepts for measuring poverty

The **poverty rate** is based on an "absolute" threshold: People are considered to be poor if they do not have the financial means for a socially integrated life. The poverty threshold used is based on guidelines from the Swiss Conference for Social Welfare (SKOS) and considers a fixed amount to cover living expenses, individual housing costs as well as CHF 100 per month per person aged 16 or over for additional expenses.

The **at-risk-of-poverty-rate** is based on a "relative" threshold: People with an equivalised disposable income that is considerably below the standard income level in the relevant country are seen to be at risk of poverty. Thus poverty is seen as a form of inequality and depends on the standard of living in the country in question. The European Union has set the at-risk-of-poverty threshold at 60% of the median equivalised disposable income.

The **material deprivation rate** is described as income-related deprivation in at least three out of nine categories coordinated across Europe: to be able to meet unexpected financial expenses of CHF 2500; to afford a one-week annual holiday away from home; to have no arrears; to afford a meal with meat or fish (or vegetarian equivalent) every second day; to be able to keep a home adequately warm; to have access to a washing machine; to own a colour TV, a telephone and a car.

One distinct poverty indicator is whether a household is able **to meet unexpected financial expenses of CHF 2500** from its own resources without negatively affecting the household's financial situation. As the question explicitly mentions possible assets (savings), it is particularly well-suited to measuring old-age poverty.

Another poverty indicator may be deduced from the question as to how well a household is able **to make ends meet financially**. A person is considered poor when they live in a household which states that when taking all income into consideration it has difficulty or a lot of difficulty in making ends meet at the end of the month.

Finally, a **household's level of satisfaction with its financial situation** may also provide information on its poverty situation. This is evaluated on a scale of 0–10 with the categories 0–4 indicating "low satisfaction".

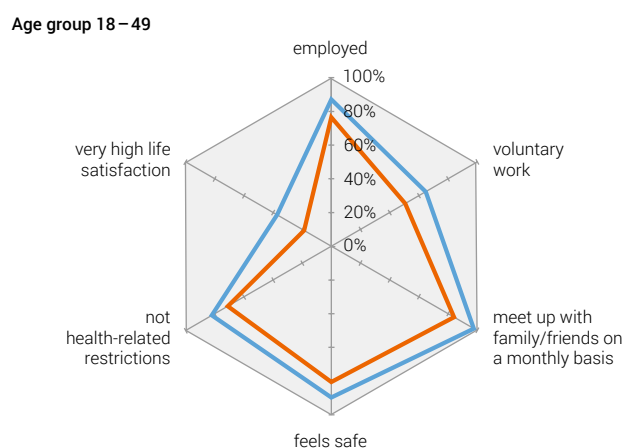
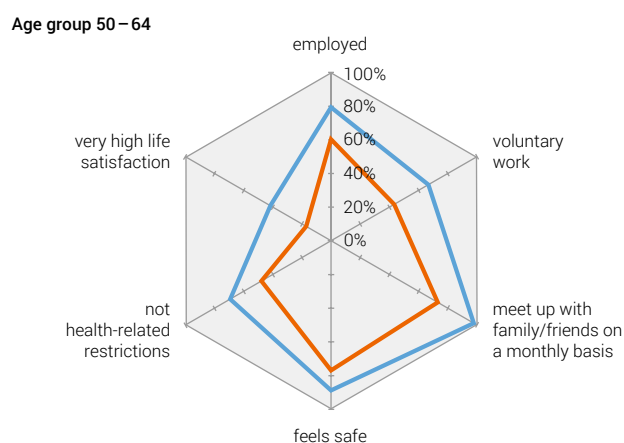
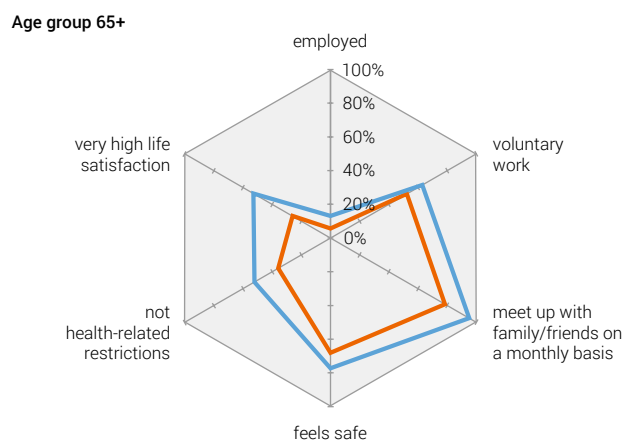
<sup>10</sup> The results presented here remain stable if the question how well the household is able to make ends meet financially is used as the poverty indicator.

Graph 10 shows that in six fundamental areas of active ageing (see the active ageing index), the share of people aged 65 and over who are affected by poverty is lower than that not affected by poverty. Slight differences can be seen between voluntary work and employment. It is hardly surprising that the share of employed persons is low as the analysis concerns the population of retirement age. Substantial differences in particular can be seen between people affected by poverty and those not affected by poverty in terms of life satisfaction, health and social contact with family and friends. However, the question as to whether these differences are the cause or effect of poverty cannot be answered based on the analyses carried out here, nor can the extent to which the individual areas are linked with each other be determined. It remains unclear whether financial difficulties, for instance, have a greater impact on satisfaction with life than health problems.

As the dimensions analysed show not only aspects of active ageing but may also represent indicators for participation in society in general, a comparison with the younger population is also recommended. Here it is seen that the differences throughout the course of life firstly increase and then decrease again with age. For example, the differences between people affected by poverty and those not affected by poverty among the population aged 18 to 49 years is far smaller than that among those aged 50 to 64. The differences are slightly less marked among the over 65 age group. Health and employment are exceptions: For health, the differences following retirement remain constant and for employment the differences in retirement age are larger than among those aged 50 to 64. Here it is likely that employed persons are not part of the population living in poverty because they are still in employment.

### Share of persons aged 65 and over by poverty status that fulfil a certain aspect of active ageing (as a %)

G10



— not poor — poor

Only persons living in private households (excluding collective households).

Source: FSO – SILC 2015, as at 19.6.2017

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**Poverty indicator:** Persons unable to meet unexpected financial expenses of CHF 2500 are considered here as poor.

**Voluntary work:** organised and non-organised voluntary work in the last 12 months.

**Feels safe:** People who feel very/quite safe walking around their residential area alone after dark.

**Does not have any health limitations:** No everyday health limitations in the last 6 months.

**Very high level of life satisfaction:** Value of 9 or 10 on a scale of 0–10 when asked about overall satisfaction with life.

*All differences between people affected by poverty and those not affected by poverty are significant.*



## Conclusion

Active ageing is more difficult for those affected by poverty than for other persons of retirement age. However, this inequality does not just emerge after retirement. Rather, disadvantages concerning the health and social participation of working age persons who are affected by poverty seem to continue following retirement. Inequalities between people of retirement age, however, tend to be slightly less marked than among the population aged between 50 and 64. To improve the chances of active ageing for those affected by poverty, corresponding measures must be implemented earlier on in life.

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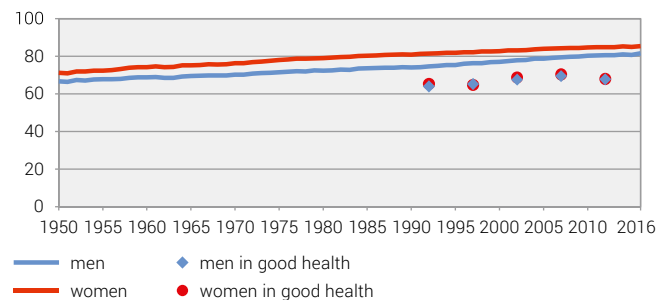
## 3 Health in old age: active ageing until the age of 80

Active ageing allows older people to reach their physical, social and mental potential until an advanced age and leads to their active participation in social life.

Life expectancy in Switzerland is among the highest in the world: in 2016, life expectancy at birth was 81.5 years for men and 85.3 for women. Healthy life expectancy, which is calculated by combining data on mortality and self-perceived health, was 67.7 years for men and 67.9 for women (G11) in 2012. The narrow gap between men and women means that greater female longevity consists, for a significant portion, of years lived in poor health. The gap between the two types of life expectancy shows that the extra years of life are not necessarily healthy ones. The health of the elderly population varies widely; some people remain in good health until an advanced age, requiring health care only at the end of their lives, whereas others need care much earlier and for many years.

### Healthy life expectancy at age 65

G11



The data of 2012 regarding live expectancy in good health are not directly comparable with those of the years before. The questionnaire has been adapted.

Sources: FSO – BEVNAT, ESPOP, STATPOP and SHS

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This article looks at different aspects of health and ageing, by examining some age-related health problems.

In 2012, 8% of the population aged 65 and over were in long-term care in a nursing home. The proportion of the population living in nursing homes increases substantially with age, especially in advanced age (half of 90 to 94 year-olds and 90% of 95 year-olds and over). Both sexes are equally represented until around the age of 80, after which women outnumber men. Almost three-quarters of people living in nursing homes are women (72%).

### Data source

Data come from the Swiss Health Survey (SHS) 2012. This survey has been carried out every five years since 1992. It is a sample survey conducted by means of computer assisted telephone interviews (CATI), followed by a written questionnaire. The population aged 15 or over living in a private household is interviewed.

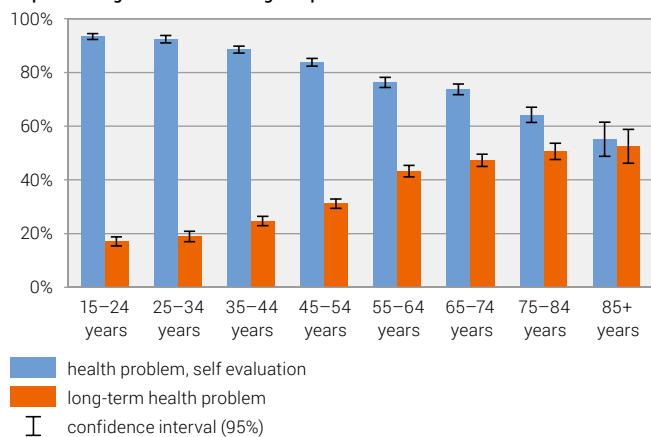
## Self-perceived health

In 2012, five out of six people aged 15 and over living in a private household said they were in good or very good health. Only 4% said that they were in bad or very bad health. The percentage of people in good health declines gradually with age up until the age of 74 (74% for 65–74 year-olds), after which it falls faster until reaching 55% from the age of 85 (G 12). This trend affects men and women more or less equally.

### Self-perceived health and long-term health problems by age, in 2012

G12

Population aged 15 or over living in a private household



Source: FSO – Swiss Health Survey

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### Functional limitations and limitations in activities of daily living

One person in four was restricted or extremely limited for at least six months in his/her usual activities due to a health problem. Such limitations increase with age: up until the age of 54 no more than 20% of the population are affected. Between the ages of 55 and 79 this proportion has risen to a third, after which it grows considerably, affecting half of those aged 80 and over (53%), with no real difference between men and women. A quarter of those affected experience serious limitations.

Functional limitations (affecting eyesight, hearing and locomotion) also increase with age (G13). From the age of 80, the proportion of people with sight or hearing problems doubles and that of people with a locomotion problem more than triples. This shows that with age, the ability to move around in one's environment tends to decline.

Furthermore, 87% of people aged 65 and over wear glasses and 2% have difficulty in reading a book or newspaper. 15% wear a hearing aid but 6% of them are nevertheless unable to follow a conversation between at least two people. Poor hearing can lead to isolation and withdrawal from one's social life.

### Measuring functional limitations and limitations in activities of daily living

Functional limitations are tested by three questions on the ability to a) read a book or newspaper (or watch TV), including with glasses (eyesight); b) follow a conversation involving at least two people, including with a hearing aid (hearing); c) walk alone unaided without stopping and without being in a lot of discomfort (locomotion). Persons with a major or complete limitation answered either "yes but with great difficulty" or "no" to one of the three questions ("only a few steps" or "I can't walk" for locomotion); those with a slight limitation responded to at least one of the three questions with the answer "yes, without too much difficulty" ("more than a few steps, but less than 200 metres" for locomotion), and those with no limitations answered "yes without difficulty" to all three questions ("200 metres or more" for locomotion).

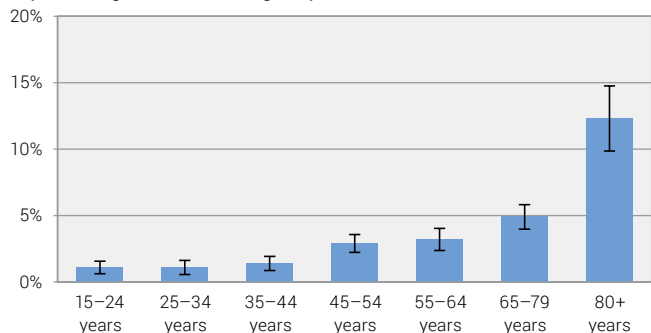
**Limitations in activities or daily living** are often measured in health surveys on the basis of two indicators:

- **Instrumental activities of daily living (IADL)** such as preparing meals, making phone calls, grocery shopping, doing laundry, doing housework, managing money and paying bills, using public transport. Persons with a major or complete limitation answered either "yes but with great difficulty" or "no" to one of these activities; those with a slight limitation responded to at least one of these activities with "yes, but with some difficulty", but had no major or complete limitation, and those with no limitation answered "yes without difficulty" to all activities.
- **Activities of daily living (ADL)** such as eating, going to bed, getting out of bed, getting up from a chair, dressing and undressing, going to the toilet, taking a bath or shower. Persons with a major or complete limitation answered either "yes but with great difficulty" or "no" to one of these activities; those with a slight limitation responded to at least one of these activities with "yes, but with some difficulty", but had no major or complete limitation, and those with no limitation answered "yes without difficulty" to all activities.

## Functional limitations by age, in 2012

G13

Population aged 15 or over living in a private household



I confidence interval (95%)

Source: FSO – Swiss Health Survey

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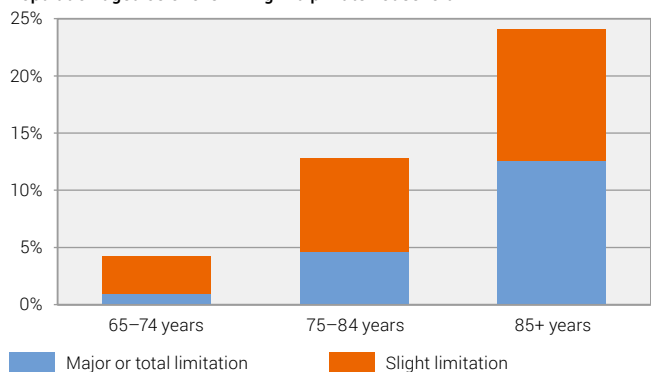
Elderly person find it difficult to be independent when they can no longer carry out a series of activities unaided, such as preparing meals, making phone calls, going grocery shopping, doing housework, paying bills or using public transport (IADL)<sup>11</sup>. 20% of people aged 65 and over have difficulties to or are incapable of carrying out at least one of these activities, mostly heavy housework. More than double the number of people aged 85 and over are in this situation compared with people aged between 75 and 84 (53% compared with 23%), who in turn are twice as many as those aged 65 to 74 (11%).

This loss of independence is worsened when a person has difficulty carrying out basic activities of daily living unaided, such as eating, getting dressed, going to the toilet and washing, as well as getting up, sitting down and going to bed. 3% of persons aged 65 and over are limited in at least one of these activities of daily living, with no real differences between sexes.

## Limitations in activities of daily living (ADL) by age, in 2012

G14

Population aged 65 or over living in a private household



Source: FSO – Swiss Health Survey

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<sup>11</sup> IADL = instrumental activities of daily living.

The percentage of people affected rises considerably with age, showing a ten-fold increase from the 65–74 year-old group to the 85 and over group (1% to 13%) (G14). Such difficulties in accomplishing activities of daily living are recognised as clear indicators of loss of independence and therefore of a need for care (Höpflinger and Hugentobler, 2006). A need for care is already present when a person has slight functional limitations (some difficulty with locomotion, hearing and eyesight) and increases with each additional degree of limitation. Among the activities mentioned previously, limitations in the basic activities of daily living (ADL - eating, getting dressed, going to the toilet etc.) imply a higher level of care than limitations in other activities such as preparing meals, making phone calls, grocery shopping or washing etc. (IADL). It can thus be seen that these limitations, more common with age, go hand in hand with an increased need for help: more than half of older people aged 65 and over affected by limitations in ADL receive help from family and friends or from a home care service. But when this help can no longer satisfactorily compensate for the loss of independence in carrying out activities of daily living, it is time to consider going into a nursing home.

However, figures from the SHS show that this loss of independence only concerns a minority of older people in Switzerland, as the majority (75%) of persons aged 85 and over do not suffer from any limitations in activities of daily living.

## Falls

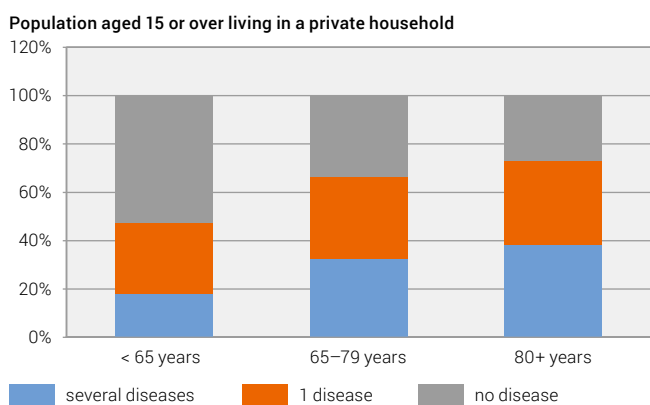
Falls can quickly limit a person's mobility, especially at an advanced age, aggravate their loss of independence and increase their need for care. A quarter of persons aged 65 and over fell at least once in a one-year period; four out of ten of them fell several times. Women were more likely to fall than men (28% compared with 21%) and persons aged 80 and over fell more than 65–79 year-olds (30% compared with 23%). Although falls can have a detrimental effect on an older person's capacity to move around, the reverse is also true: from the age of 65, persons with restricted locomotion are more likely to fall than those who can get around easily (42% compared with 24%). The same holds true for people with impaired hearing or eyesight or who have a long-term illness. Falls can provoke injuries, often a hip fracture, which frequently leads to a need for care, hospitalisation and in extreme cases, to the death of very old people.

## Chronic disease

Roughly a third (32%) of the Swiss population aged 15 and over say that they have a long-term disease or health problem compared with half the population of 65 year-olds and older. This amount does not change in advanced age. The prevalence of chronic disease also increases with age: the share of people who say they have at least one chronic disease from a list of 14 diseases is more than half from the age of 55, two-thirds among 65–79 year-olds and almost three-quarters (73%) among persons aged 80 and over. 38% of people aged 65 and over

suffer from hypertension, 25% from arthritis, 11% from diabetes and 9% from osteoporosis. These are the most common chronic diseases. However, a person's health is most seriously affected when they suffer from multiple chronic diseases. This is called multimorbidity, as the presence of several chronic diseases at the same time generates difficulties that are greater than the sum of problems that each disease entails<sup>12</sup>. The percentage of people suffering from multimorbidity<sup>13</sup> doubles from the age of 65 (G15), rising from 18% for 15 to 64 year-olds to 34% from the age of 65.

**Number of chronic diseases by age, in 2012** **G15**

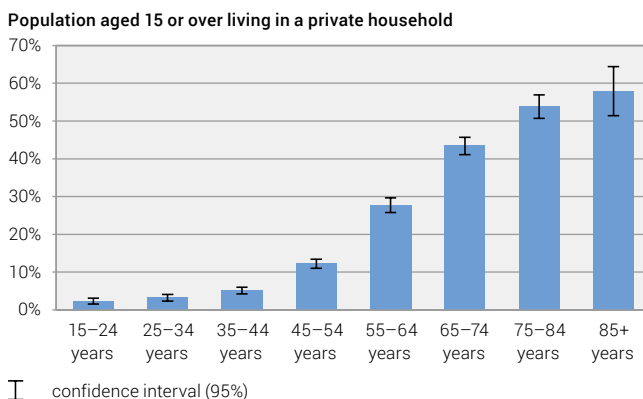


**Risk factors for cardiovascular disease**

Cardiovascular disease<sup>14</sup> is one of the main causes of death in Switzerland. The percentage of people hospitalised due to cardiovascular disease increases with age. Very old people (age 85+) frequently suffer from an overall weakening of their cardiovascular system, which is not necessarily the same as a cardiovascular disease. Hypertension, high cholesterol and diabetes are among the main risk factors for cardiovascular disease.

Hypertension<sup>15</sup> is very clearly an age-related disease: one in ten persons under the age of 65 suffers from hypertension whereas four in ten persons aged 65 and over do. More than half of the people aged 75 and over suffer from hypertension (G16). High cholesterol is a metabolic disorder; as with hypertension it is strongly associated with age, rising from 7% among people under the age of 65 to 31% among 65 year-olds and older. Both hypertension and high cholesterol are more common among men than women between the ages of 35 to 74.

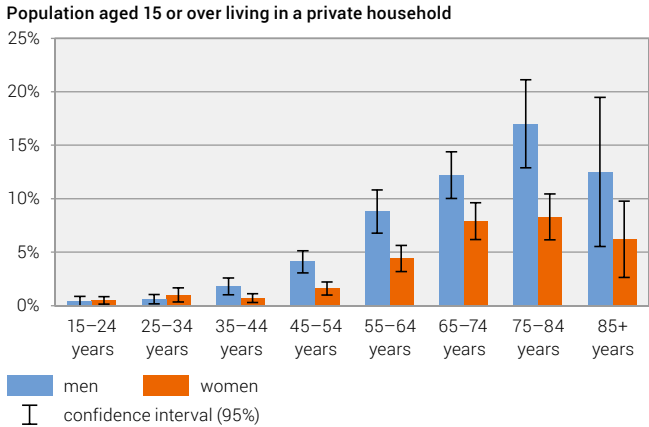
**Persons suffering from hypertension by age, in 2012** **G16**



Diabetes is an illness that constitutes a major risk factor for cardiovascular disease as it stimulates atherosclerosis inside blood vessels. There are two main types of diabetes. Type I diabetes is relatively uncommon and is due to insufficient production of insulin by the pancreas. It can occur from childhood and become acute. Type II diabetes is the result of a resistance to insulin. It is much more common than diabetes type I (accounting for 90% to 95% of all cases of diabetes) and typically occurs at an older age. It is, however, becoming more common among younger people, especially in those suffering from obesity. In 2012, 5% of men and 3% of women aged 15 and over said they had diabetes (without distinguishing the type). The percentage of people affected increases rapidly from the age of 45 for men and 55 for women (G17). Consequently, from the age of 45, men are much more affected than women. The percentage of people with diabetes rises five-fold from the ages of 15-64 (2%) to the ages of 65 onwards (11%). Type 2 diabetes can develop over a long period without symptoms. Prevention, therefore, has an important role. In 2012, the percentage of people who had tested their blood sugar level during the previous 12 months rose from 45% for 35-44 year-olds to 80% for persons aged 75 and over. There is no noticeable difference between men and women.

<sup>12</sup> for example, counterproductive treatments for two concomitant diseases  
<sup>13</sup> defined as the coexistence of two or more chronic diseases  
<sup>14</sup> a class of diseases involving the heart and circulation  
<sup>15</sup> The three risk factors mentioned in this paragraph refer to a level that is currently too high or to the taking of medication for a condition. For example, hypertension includes all people who say their blood pressure is currently too high as well as those who say they are taking medication for high blood pressure.

**Persons suffering from diabetes by age, in 2012** G17

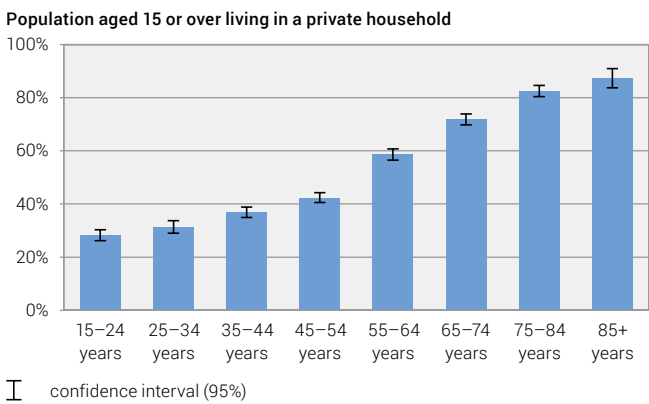


Source: FSO – Swiss Health Survey © FSO 2018

**Consumption of medication**

With age, the consumption of medication (G18) increases considerably, rising from four in ten persons up to the age of 64, to three in four persons from the age of 65 and even reaching almost nine in ten persons from the age of 80 (88%). Almost half of older people aged 65 and over take medication for hypertension (47%) and a quarter take painkillers (27%) or anti-cholesterol drugs (26%). The medication consumption of older people differs by sex. Men take more medication for cholesterol, the heart and diabetes, whereas women take more painkillers, sleeping tablets and anti-osteoporosis drugs. The consumption of medication increases with worsening health over the years, as for example when faced with functional health problems or chronic disease: 92% of people aged 65 and over with two or more chronic diseases take medication compared with 56% of people without any chronic diseases.

**Consumption of medication by age, in 2012** G18



Source: FSO – Swiss Health Survey © FSO 2018

**Medical consultations and hospital stays**

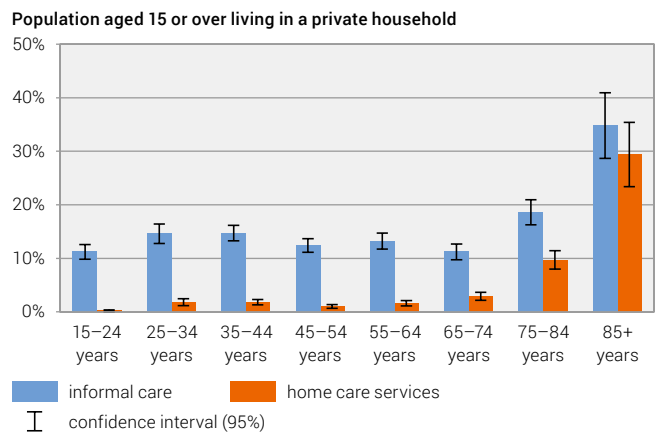
71% of Swiss men and 86% of Swiss women went at least once to the doctor over a 12-month period. The difference between the sexes is due to visits to gynaecologists. Women make more visits to the doctor than men do until the age of 64. After the age of 65 the differences between the sexes diminish. The percentage of people visiting the doctor increases with age, rising from 75% up to the age of 64 to 87% from the age of 65 and reaching 91% from the age of 75. Age also has an influence on hospital stays, with people aged 75 and over being twice as likely to have been hospitalised in a one-year period compared with those aged up to 54 (20% compared with 9%: the share is 13% for 55–74 year-olds).

The percentage of people going to the doctor or being hospitalised also increases with age due to various health problems such as functional limitation, limitation in activities of daily life or chronic disease.

**Recourse to home care services and informal assistance**

A part of the population needs medical care or assistance accomplishing tasks of everyday life, as has been shown by the various aspects of health discussed thus far. This assistance contributes to the health and well-being of the people concerned and allows some of them to avoid residential care, or at least to delay it. The assistance needed can be provided by professional assistance and home care services, as well as by friends and family (G19). The percentage of people calling upon assistance and home care services increases with age and is less than 3% up to the age of 74. This figure triples (10%) for 75–84 year-olds and is 29% for people aged 85 and over. Informal assistance is much more widespread and increases considerably from the age of 85 (35%).

**Recourse to informal care and home care services by age, in 2012** G19



Source: FSO – Swiss Health Survey © FSO 2018

Professional assistance and home care services, however, cannot replace informal assistance. 63% of people who use home care services also receive informal assistance. Women use informal assistance or home care and assistance services more often than men. Of course, the assistance and care received also increase with worsening health due to age. Furthermore, a fairly large percentage of persons aged 65 and over who do not receive assistance would, however, like to have some help from their family or friends, for shopping, nursing care, meals or administrative tasks for example (23%).

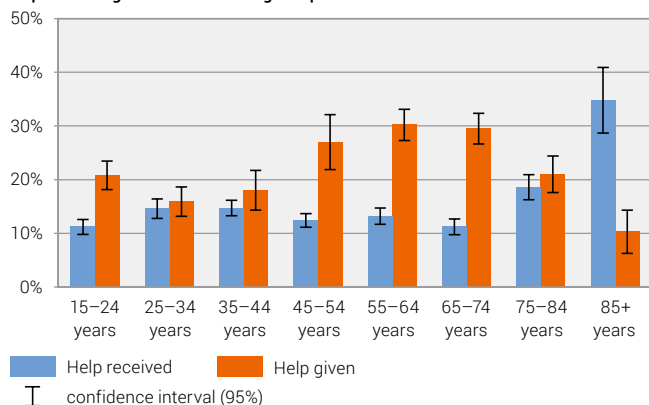
## Informal assistance provided by older people

Although people make more use of various types of assistance as they grow older, it is interesting to look at the help they provide themselves on a voluntary basis to other people, for example by visiting the sick, disabled or elderly and helping them in their household, by bringing them food or by providing transport. It can be observed that roughly one person in four aged 15 and over (23%) provides assistance to others, and that up until a relatively advanced age (74) the percentage of people providing help is much greater than that of people receiving it (G20). Received informal assistance only outstrips help given by individuals from the age of 85. This confirms the fact that older people do not receive help without giving help in return; one could even say that this reciprocity between help given and received is a good indicator of people's health.

## Informal care by age, in 2012

G20

Population aged 15 or over living in a private household



Source: FSO – Swiss Health Survey

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## Consequences for mental health

Older people who are greatly limited in their functional health are ten times more likely to assess their general health as poor or very poor (30% compared with 3%) than those with no limitations. Perceived health, which can be a source of worry or anxiety is a determining factor for a person's mental well-being (Dubé 2006). People with functional limitations suffer more often from great

psychological distress (10% compared with 3%) and are more likely to show symptoms of moderate to serious depression (6% compared with 2%). They also have lower energy and vitality levels (49% compared with 15%) and feel they have little control over their lives (24% compared with 16%). Lastly they are less likely to say that their quality of life is good or very good (73% compared with 94%) and are less able to benefit from a strong social network (15% compared with 29%). The psychological consequences are even stronger for people limited in their activities of daily living.

The combination of limitations in activities of daily living and mental health weakened by the fact of living alone may lead sooner or later to residential care. Persons who can no longer properly look after themselves and who do not receive the help of a spouse will thus have to be taken care of in an institution.

## Conclusion

The information considered above shows that health changes with age. It also confirms that many people remain healthy, mobile and active until they are almost 80 years old, enabling older people to look forward to ageing actively. The general picture to date thus indicates that being old nowadays does not necessarily mean being ill or in need of care. Although the natural ageing process reduces how well the human body works, the results of the SHS reveal that most of the population are in relatively good health up to an advanced age, i.e. almost 80. The ageing of the population therefore proves more marked from the age of 80 years old onwards and is often accompanied by a (considerable) decline in health, reflected, for example, in eyesight, hearing and locomotion limitations, falls, chronic diseases and hypertension. This decline in health is seen even later at the age of around 85 as a loss of independence shown by limitations in activities of daily living such as eating, getting dressed and going to the toilet.

The challenges resulting from the increased longevity and general ageing of society are very real in terms of health and social policies for the next 20 years. However, the information presented above also indicates that there might be some hope for the future, i.e. active ageing already seems to be a reality for part of the Swiss population up to the age of almost 80, enabling them to live with a high level of physical, social and mental well-being. This brief and general overview of selected aspects of health with age should mention, however, that the health of older people remains very disparate. It should not hinder the implementation of various active ageing measures to help enable people age in good health to an older age while maintaining their independence and place in society, which would promote active participation in social life. The challenge lies in fully exploiting the potential of older people by promoting an active life and reducing their dependence on family and the state. In this respect, these pro-active ageing measures are a priority aim for public health.

*Renaud Lieberherr (FSO, GESB)*

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## 4 Evidence of active ageing in European countries

Countries around the world are struggling to support their ageing populations and there is great urgency for them to address this challenge with suitable policies. In going beyond the rhetoric of policy reforms and in stimulating positive behavioural responses from individuals, what has become clear is the necessity for a high-quality evidence base. Such evidence should point to good practices around the world promoting active forms of ageing, particularly a greater degree of social and economic engagement of older people, as well as their autonomy and self-reliance.

The Active Ageing Index (AAI) has generated this new evidence base by quantifying the differential extent to which older people have realised and can realise their potential in three distinct domains of active ageing: employment, social participation and independent living. The AAI adds a fourth domain that goes beyond observing the actual experiences of active ageing by capturing how countries differ with respect to the human capital of their older populations and in providing an enabling environment for active ageing (see G21).

The AAI project is managed jointly by the European Commission's Directorate General for Employment, Social Affairs and Inclusion (DG EMP) and the United Nations Economic Commission for Europe (UNECE). The first phase of the work was carried out in 2012, in partnership with the European Centre for Social Welfare Policy and Research in Vienna. The project was continued into its second phase at the University of Southampton in the UK from 2015–16, and the third phase was launched in 2017, also at the University of Southampton, and will conclude in 2018.

The AAI also offers a transversal breakdown by gender, highlighting the specific policy goal of reducing gender disparity in positive and equal experiences of ageing. The AAI evidence is put together for all 28 EU Member States, as well as for a number of non-EU countries including Norway, Switzerland, the United States and Canada. Thus it has provided insights to policymakers around the world to base their interventions on the cross-national evidence of active ageing indicators.

The key objectives of the AAI can therefore be summarised as:

- Develop a high-quality and independent evidence base concerning active ageing and use that evidence to highlight good practices around the world, which will ultimately help individuals and countries improve the quality of life and the well-being of older populations.

- Help governments appreciate that the policy of social investment and empowerment of older populations to live active and engaged lives is more cost-effective than the passive management of older people dependent on the state or family.
- Develop a credible methodology for a metric highlighting the contributions of older people in different dimensions of their lives, and identify the untapped potential of older people.

## What does the AAI evidence reveal?

The latest AAI results for the EU28 show that Sweden is at the top of the ranking, followed closely by Denmark, the Netherlands, Finland, the UK and Ireland. Switzerland has exactly the same AAI value as Sweden, and Norway and Iceland are marginally ahead (see G22).

Four southern EU countries (Italy, Portugal, Spain and Malta) are middle-ranked together with most other Western European countries including Germany. Greece and the majority of the Central and Eastern European countries are at the bottom of the rankings.

An important finding is that the current top-ranked countries such as Norway, Sweden, Switzerland, Denmark and the Netherlands barely pass the 40 points mark, which highlights that even the best performing countries are still below a desired value.

The countries at the other end of the spectrum (Greece at the bottom, preceded by Poland, Slovakia, Hungary, Romania and Slovenia) have AAI values below 30 points, suggesting they have as yet failed to tap into much of the potential of active ageing in their countries.

The AAI evidence developed so far has helped identify strategies that are effective in promoting and sustaining activity, independence and health during older ages, with the help of public policies at the national and the local level, with initiatives from civil society and employers' organisations, as well as by responses by older people themselves. Latvia and Malta have developed an active ageing strategy for 2010–16, using the references of the AAI, Estonia included AAI data in its latest Welfare Development Plan, and Poland has introduced a new long-term seniors' policy, which was developed after the country had a particularly low ranking in the first set of AAI results. Germany has been reviewing the AAI measure to use it for a comparison across regions. These are just a selection of examples of the influence the AAI has had.

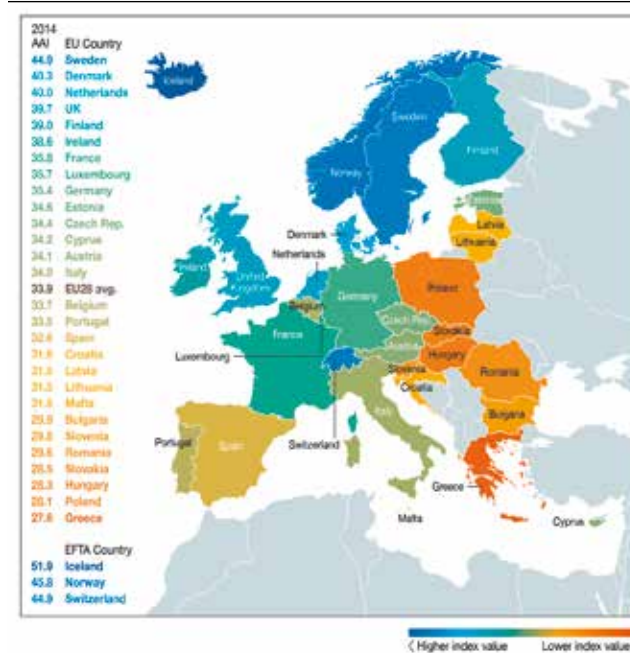
Looking at what has been achieved so far, it can be safely concluded that the evidence made available through the AAI is contributing to raising awareness of the challenges and opportunities for older people, as well as encouraging the search for better ways to develop their full potential. This is not just to enhance their individual well-being, but also to support the future sustainability of public welfare systems. This is reflected in the trend results of the AAI, which show that results improved between 2008 and 2012, despite many countries it covers going through an economic downturn and austerity during the same period.

The European institutions are playing an important role in disseminating good practices and in incentivising research and innovations, but this needs to continue, and the AAI focus must remain. At the same time, there are plans to continue to expand the geographical coverage and scope of the AAI, and to fine-tune the methodology behind it. Altogether the work planned has the potential to take the work of the AAI even further, and to realise real change, which will be even more valuable in the coming years in achieving the goal of 'leaving no one behind' in the 2030 Agenda for Sustainable Development.

*Asgar Zaidi, Universität Southampton and London School of Economics, UK.*

### Ranking of EU Member States compared with Iceland, Norway and Switzerland, on the basis of the 2014 overall AAI

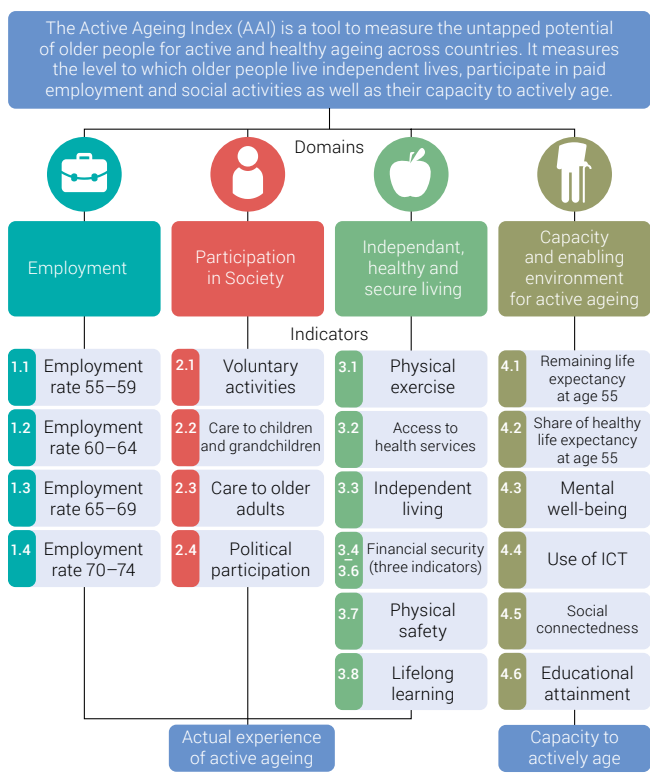
G 22



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### The domains and indicators of the Active Ageing Index (AAI)

G 21



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