Who will care for the oldest people?

The number of informal carers for frail elderly people is set to fall steeply. **Jean-Marie Robine and colleagues** propose a way to assess the trend that should help policy makers plan for the deficit

Medical journals usually focus on the most dramatic consequences of population ageing,[1-4] such as the effect on financing of health care.[5 6] Many people fear that population ageing will generate a demand for long term care that will outpace the supply of formal care.[7 8] Of course, unremitting prevention of disability could reduce demand,[9] but the effect of a decline in disability on the solvency of social security programmes is still debated.[10] This debate does not consider the quality of long term care or the availability of families to care for frail elderly people.[11 12] We describe an indicator to monitor potential informal care resources using American and Swiss data as examples.

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Population ageing

Most studies of population ageing use demographic indicators based on a three age group population model—young people, those of working age, and elderly people. This model does not reflect the current population changes.[13] Indeed, the demographic dependency ratio (the ratio of young and elderly people to working people) will start to fall steeply only around 2010, as a result of ageing of the baby boomer generation (born after the second world war).[14] This indicator cannot properly reflect the large increase in the numbers of frail elderly people who may be highly dependent on others in their daily life.

The consequences of the demographic transition that occurred during the 20th century in Europe and North America were largely ignored. Population ageing is characterised by changes in the proportions of the different age groups. The sequence of changes begins with a decrease in the proportion of young people and a large increase in the working age group before leading later to an inescapable increase in the oldest age group. Within this group, younger retired people contribute increasingly to the long term care of very elderly people by providing informal care to their parents. This active retired generation, called the "sandwich" or "pivotal" generation, will have to play a greater part in the future as the oldest old are expected to make up an increasing proportion of the number of retired people.[15]

These significant changes in the population age structure will have a big effect on intergenerational relationships. As the three age group population model cannot reflect this, it is time to move to a four age group population model comprising young people, those of working age, younger retired people, and the oldest people.

Oldest old support ratio

Extending previous work,[16 17] we propose to introduce the oldest old support ratio as the ratio of people aged 50-74 to those aged ≥85 for monitoring changes in the age structure. This ratio provides information on the number of people potentially available to care for one person aged ≥85.

In practice, not all grown-up children, especially men, provide informal care for their parents. Spouses of dependent people significantly contribute as long as they are able to provide such help, but studies have shown the key role of women aged 50-74. Middle aged women not only care for their parents or in-laws but also have an important role in educating their grandchildren and supporting their children, thus having a pivotal role within the family.[15] On the other hand, not all people aged ≥85 require help with their everyday needs. For instance, according to the US national long term care survey only about half of Americans aged 85 or older are dependent on others to perform personal care or instrumental activities of daily living.[18]

Since it provides information on the numerical balance between the middle aged and oldest people, the oldest old support ratio is a rough indicator of informal care resources for very elderly people, complementing the demographic dependency ratio. The main conceptual difference with the oldest old support ratio is that people aged 50-74 are not available to care for anyone except their relatives. However, this more personal relationship between care givers and receivers does not question the necessity to monitor changes at the population level. Participation in the workforce among the 50-74 age group, especially women, might be limited in the future by the necessity of providing informal long term care to relatives.

Trends in Switzerland and the United States

To illustrate the new indicator, we use data from the Human Mortality Database (www.mortality.org) and demographic forecasts from the International Data Base (www.census.gov /ipc/www/idbnew.html) for Switzerland and the United States. In Switzerland, where data on population age structure are available from 1876, the

Change over time in dependency ratio and oldest old support ratio in Switzerland and United States

Year	Dependency ratio*		Oldest old support ratio†	
	Switzerland	United States	Switzerland	United States
1890	0.90	NA	139.7	NA
1910	0.87	NA	111.8	NA
1930	0.68	NA	101.0	NA
1940	0.64	NA	96.0	NA
1950	0.67	NA	68.9	NA
1970	0.73	0.92	37.9	30.9
1990	0.62	0.70	16.2	16.8
2010‡	0.65	0.69	8.7	9.9
2030‡	0.82	0.88	6.6	8.1
2050‡	0.98	0.91	3.5	4.1

*Dependency ratio=(number of people aged 0-19+number aged ≥65)/number aged 20-64.
†Oldest old support ratio =number of people aged 50-74/number aged ≥85.
‡Forecasted values.

dependency ratio has greatly improved, although the proportion of the population aged ≥65 has increased. The decrease in the proportion of young people has not been fully compensated for by the increase in people aged ≥65. This trend, also observed in the United States over the past 40 years, masks a substantial increase in the number of very elderly people as well as large changes in the ratio of the number of younger retired people to the oldest retired group. In Switzerland, the oldest old support ratio has fallen from 139.7 in 1890 to 13.4 in 2003 (table). The same trend applies in the United States. The oldest old support ratios are expected to decrease to 3.5 in Switzerland and 4.1 in the US by 2050 (table).

These forecasts highlight the large fall in the potential pool of informal carers. Although this may lead to an increase in the use of formal care services, informal care cannot be easily replaced by the less flexible and much more expensive formal services. Such services also require a large number of qualified staff, who are currently unavailable. Gerontologists are aware of these issues but are health policy makers? Failure to anticipate the consequences of these expected trends today will be a mistake that will be heavily paid for tomorrow.

Alternative futures

Several studies suggest that disability is falling among older people.[18-20] We therefore explored the effect of an improved functioning on the demand for long term care. This exercise shows that we would need to reduce the decrease in scores for activities of daily living and instrumental activities of daily living disabilities by 1-2% a year to compensate for the deficit of younger elderly people. Improving the level of functioning of the oldest people and preventing disability is undoubtedly difficult,[7 9] but strong public health policies providing more research and resources would help healthcare professionals to meet this challenge.

Alternative interventions include greater family involvement in long term care, particularly among husbands and sons. Is this a realistic solution? In future the oldest people, having benefited from higher education and better working and living conditions and being more wealthy, may prefer to pay for formal care rather than rely on family support. Individual strategies to maintain independence could include home modification or moving to housing that offers high tech facilities such as safety sensors and personal helper robots. Trends in marital status among both young and very elderly people will also matter, as will the development of private and public insurance for long term care.

SUMMARY POINTS

Current demographic change projects a decrease in informal care givers

A four age group population model will better anticipate the future long term care needs

The oldest old support ratio corresponds to the number of people aged 50-74 potentially available to care for one person aged ≥85

Such an indicator will aid local, national, and supranational planning of care

Starting debate

The oldest old support ratio is built on two age groups: 50-74 and ≥85 years. In essence it is arbitrary, but these age groups are the most used when defining care givers as well as the oldest age groups. The use of this new ratio should help make governments realise the implications of the substantial intergenerational changes that are occurring and aid policy makers to formulate adequate policies. Such a readily available, easy to use, indicator will also be useful in emerging countries such as China, where the same transitions are currently taking place at a much faster pace.

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