

Population Aging, the Dependency Burden,
and Challenges Facing Preventive Medicine

Ryan D. Edwards
Associate Professor of Economics
Queens College, City University of New York
65-30 Kissena Blvd.
Flushing, NY 11367
Tel: (718) 997-5189
Email: redwards@qc.cuny.edu

Brief description:

Population aging will significantly raise the burdens on individuals at working ages of caring for retirees in advanced economies because of the modern system of age-related government transfers. Ensuring that future generations of workers remain healthy and productive will be an increasingly salient goal of preventive medicine.

Key words:

Health; disability; demography; obesity

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Population aging is underway across the developed world and even in some developing countries like China and South Korea, where the transition to lower fertility has been especially rapid (Lee, 2003). The United Nations Population Division (2011) predicts that by 2030, the ratio of population aged 65 and over to the working-age population aged 20-64 will average 36% across the more developed countries, up from 24% today and ranging from a high of 57% in Japan to 36% in the U.S. and to a low of around 30% in Ireland and parts of southeastern Europe. In Japan, where immigration is negligible and fertility has been below replacement levels since 1974, the labor force has been shrinking in absolute as well as relative size since 1998 (World Bank, 2012).

These changes in age structure alone will bring fundamental changes in economic performance (Bloom and Canning, 2008; Lee and Mason, 2010). A singular challenge is the strain on public transfer systems that fund pensions and medical care for the elderly by taxing working-age adults. Several elements beyond the basic metric of the number of citizens past retirement age per citizen of working age will impact our ability to sustain our well-being. One element is the consumption needs of the retired elderly, in particular of medical care, relative to their savings or work effort. Another is the growth in capital and technology that are necessary to continue to make future workers more productive. And a third set of elements of direct interest to readers of *Preventive Medicine* are the health, vitality, and motivation of future workers, all prerequisites for their continued productivity and thus the rightful focus of many public health initiatives today.

There is great importance in understanding medical expenditures toward the end of life, when they tend to be highest (Fuchs, 1984); methods of financing that spending; and work effort past traditional retirement ages, but these are not my focus here. Social

insurance takes care of problems like adverse selection and gaps in coverage, but it may increase moral hazard and probably reduces saving and capital accumulation, which in turn reduces the future productivity of workers and thus their ability to support the elderly. Public pensions disincentivize work effort in many countries (Gruber and Wise, 1999), although reforms have raised normal retirement ages in some countries while the global financial crisis has delayed retirement for many. These issues remain ongoing concerns for the design of micro and macroeconomic policies.

The outlook for population health at working ages in advanced economies is more mixed than implied by the demographic transition. One reason why population aging poses such challenges is because of unprecedented and sustained declines in mortality rates and extensions in longevity (Oeppen and Vaupel, 2002). But while life expectancies have risen around the world, trends in healthy life expectancy are less clear. Some evidence suggests that length of disability-free life could even be falling in the U.S. (Crimmins and Beltrán-Sánchez, 2011). Part of these trends concerns quality of life past retirement, which affects the first element mentioned above, the numerator of the support ratio and its consequences. And at older ages, disability may be the price we pay today for extended length of life. But from a cohort perspective, this begs the equally important question of whether preventive medicine earlier in the life course could have reduced the incidence of disabling diseases for the current and future elderly. Looking ahead, the question is whether preventive efforts today could better ensure the health and vitality of future workers, the third element impacting the burden of population aging.

Trends suggest there is plenty to be done in this regard. In many countries, shares of the working age population on disability rolls are rising (OECD, 2010b). Part of this is

due to the configurations of disability compensation systems, which can misalign incentives, and another part may reflect changing social norms and disease recognition. But there also are genuine inequalities in health at working ages. Disparities in health status, endowments, access to care, and behaviors are a perennial focus of research and policy, and reducing them will be important for confronting population aging as well as being important in its own right as a policy goal.

Several targets are noteworthy. Rising rates of obesity and overweight are universal across the developed world (OECD, 2010a) and are probably the low hanging fruit. The pages of *Preventive Medicine* and other publications are filled with studies of interventions that target diet or physical activity among various age groups. Future studies should attempt to measure all the relevant inputs and outputs in addition to treatments, and policy design deserves continued thought. Because we cannot tax obesity itself, interventions that tax calories or subsidize exercise, for example, may or may not actually reduce obesity. Expanding information is a promising avenue for helping consumers make healthy choices themselves (Bollinger et al., 2011).

The OECD (2010b) characterizes mental health problems as increasingly the “biggest single cause for a disability benefit claim in most countries,” but the proximate sources of this development remain unclear. Especially concerning are the rises in long-term and youth unemployment following the global financial crisis, because of the mental health trauma they have the potential to impart. Also salient is the structure of disability systems that compensate mental health disorders; there is a real risk that they may be iatrogenic, producing long-term dependence if individuals are required to self-assess as sick in order to maintain treatment or benefits (Frueh et al., 2007). Mental health ailments

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probably deserve more attention from researchers in preventive medicine than has been afforded thus far, a call-to-arms I humbly offer as a chief offender myself, being more familiar with the prices and quantities of economics than with the id and ego of psychology.

There are other avenues to emphasize, but let me close with the obvious. We cannot discount the possibility that inequality in socioeconomic status, on the rise in many industrial countries today, may be directly fueling the health inequalities we see at working ages and into retirement. Causality can certainly run both ways (Smith, 1999), and it would be premature to argue that policies reducing income inequality would necessarily produce fewer health inequalities, especially in the short run. But this too is a field of inquiry that deserves attention, as it seems apparent that like the others, it will only gain in salience if current trends continue.

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