Economic and Health Impacts of Narrower Health Inequalities, Australia

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Abstract

Objective: to estimate the health and economic impacts of narrower health inequalities in Australia. The health impacts are measured in terms of improved mortality and disability rates, and the economic impacts in terms of lower government expenditures on health care costs and on the disability support pension.

Material and methods: this paper reports on an application of a dynamic microsimulation model which accounts – amongst many other variables - for the links between Australians' socioeconomic status and their health. The full model simulates individuals' life cycles over a 20 to 30 year period. Its base year data was developed using a 1 per cent unit record Census sample of the Australian population. Health is proxied by linked mortality and disability equations, accounting for the fact that healthy people generally live longer than the disabled. For socioeconomic status the analyst can choose from four types of indicators.

Results: if a policy was implemented which resulted in the lifting of the health status of all Australians to that of the most affluent 20% in the population, then close to one million fewer Australians are estimated to be disabled, over 180,000 life years could be saved, health care costs would be around A$3 billion lower and the government could save close to A$1 billion on the disability support pension.

Conclusion: the narrowing of health inequalities at the national level has the potential to deliver, in the longer term, considerable health and cost saving benefits.

Aims

The main aim of this paper is to simulate the impacts on population health, on health care costs and on the disability support pension of a hypothetical policy scenario that narrows health inequalities in Australia. Another aim is to illustrate the much greater complexities that can be addressed in studies of health inequalities through use of dynamic microsimulation techniques than what has been possible with more traditional methods.

The original Dynamic Microsimulation Model

The dynamic microsimulation model – DYNAMOD[1] - to which a Health_Socioeconomic Status module has been added for purposes of this paper - is able to project the entire Australian population 20 to 30 years into the future. The model is based on a 1 per cent representative sample of the Australian population (150,000 persons) extracted by the Australian Bureau of Statistics (ABS) from its 1986 Census.[2] It was developed by the

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[1] Stage 1 of the original model is documented in Antcliff et al (1996). King et al (1999a) provide an overview of stage 2 of DYNAMOD's development, with details and calibration in Abello et al (2002), Bækgaard (2002 a and b), King et al (2002), King et al (1999b) and Robinson et al (2002). Stage 3 is described in Kelly (2002).

[2] With the complete 1 per cent sample the weight for each DYNAMOD person - when estimating total population results - would be 100. However, because some records were deleted in the model's Base dataset due to Census 'non-response' – the weight attached to each person in the model is 103.

National Centre for Social and Economic Modelling, University of Canberra. The model simulates future events occurring in the lives of persons' in its Base population - such as couple formation, birth of a child, education, leaving home, migration, divorce, being employed, income from work and government, wealth accumulation, becoming disabled, recovering from disability and death (Figure 1).

Constructing the Health_Socioeconomic Status Module

In the version used in this paper we added to the original model an indicator of socioeconomic status (SES). This indicator was developed so that the two health status measures already in the model – mortality and disability – could be differentiated by SES. As a result, in the current version the mortality and disability statistics in the input data to DYNAMOD reflect the well known pattern of poor Australians becoming disabled and dying at younger ages than better off Australians. Walker (2002) documents these developments and describes the complex set of equations that link mortality and disability in the model.

Indicators of health status

In this paper we are using disability and mortality as indicators of health status. In the literature mortality is probably the most commonly used such indicator. Because in many instances mortality – and thus life expectancy - is a result of years lived with one or more chronic diseases which may result in disability, we also considered disability as an indicator of health status. Our linking these two indicators in the model is supported by Davis et al (2002)[1] who found that "two thirds or more of the increase in life expectancy over the decade 1988 to 1998 was taken in a state of disability"(p.1).

Disability is defined in our study as a limitation or impairment which has lasted, or is likely to last, for at least six months and restricts every day activities (ABS 1999b, pp.66-7). Chronic diseases are the major causes of disability (ABS 1999a and b). In every day life, even a mild disability will have a highly restricting effect on a person's functionality. Examples of mild disability are an inability to easily walk 200 metres, walk up and down stairs without a handrail, or use public transport. Clearly, disability will have a considerable impact not only on people's quality of life, but also on their financial situation and on whether they receive government benefits.

In the current model there is a choice between disability as a (0,1) variable, or as a (0,1,2,3) variable - this latter indicating progression of the disease(s) causing disability to various stages of severity. In this paper we only used the (0,1) variable.

Modelling socioeconomic status

The most commonly used indicators of SES internationally are the geographically based indicators of socioeconomic advantage or disadvantage. In Australia these are the Socioeconomic Indexes for Areas (SEIFA) produced by the Australian Bureau of Statistics - with the SEIFA of relative socioeconomic disadvantage being the most commonly used.

Due to lack of other statistics, we used the SEIFA when preparing mortality by SES for DYNAMOD's input data.[2] For sake of consistency, we also used the SEIFA when constructing the 'disability by SES' input dataset for (Walker 2002). However, because the

[1] Based on data in four cross sectional ABS Disability surveys.

[2] The SEIFA are based on the geographic area of deceased's last residential address. SES indicators based on variables such as family income, education, employment and/or profession cannot be constructed for deceased persons due to unavailability of such variables in mortality databases.

SEIFA is related to a geographic area – and thus all persons living in that area are allocated the same SEIFA – it cannot account for the characteristics of individuals in the way other indicators – such as family income - can. Walker and Becker (2004) have shown that the SEIFA underestimates the extent of inequalities in disability rates by SES relative to indicators based on family income. In view of this we chose to model SES in both DYNAMOD's Base data and its simulation phase as a function of income-related variables.

To impute SES to the *Base dataset* we constructed an indicator using two variables already in that dataset: total income and superannuation (the only indicator of wealth in that dataset):

SES_status = yearly income + annualised super[1]

Then we summed individuals' SES_status within each family and allocated that value to each family member. Next we sorted the Base population by SES_status and divided that population into five equal parts – thus creating the variable 'SES quintile'.

In the Base dataset there was also a need to re-impute disability status to each individual. This was because in the original Base data disability was only allocated by age and gender and we now required an allocation by SES as well. As the basis for this imputation we constructed a family income[2] variable from the ABS's 1998 Disability survey. We also incorporated a scaling factor, which was chosen so that the distribution of disability in the model's output for 1998 - by age, gender and SES - closely matched the same distribution in the Disability survey.

For the *simulation phase* of the model, due to the wide range of variables available in DYNAMOD we were able to construct SES indicators that better reflected the economic resources available to families. In DYNAMOD, apart from income (earned and government cash benefits) and family size, a comprehensive indicator of family wealth is accumulated over people's life courses (Kelly, 2002). Income is important because, out of the indicators of SES used in the literature, family income is considered to be the single most effective summary measure of SES (Vinson 1999). However, Headey and Wooden (2004) noted that income was an imperfect measure of the economic circumstances of households and demonstrated that wealth - which can be viewed as providing a degree of economic security - was at least as important as income. Because people tend to accumulate wealth as they age, their SES may not decline in line with their cash incomes once they leave the workforce. Thus, data permitting, wealth should be accounted for in measures of SES. Finally, family size is important because what a family of one earning A$50,000 a year can afford per person is considerably greater than what a family of five with the same income can afford per family member.

In the literature family size is generally accounted for through use of an equivalence scale factor. In this paper we used the modified OECD scale – with the equivalence scale factors being the sum of 1.0 for the first adult, 0.5 for the second adult and 0.3 for each dependent child (Appendix).

Based on the above, a preferred SES measure would be one that was a function of yearly 'equivalent family income' as well as an annualised indicator of wealth. Three different SES indicators were constructed within the simulation part of the model, each computed at the end of the relevant financial year:

Income = Family income (earned + government benefits);
Income_Wealth = Family income (earned + government benefits) + annualised wealth;[3]

[1] To convert lump sum values for superannuation into an annuity we used a constant of 0.052. This matches the conversion factor used in DYNAMOD's simulation phase (see footnote 3 on this page).

[2] This was the closest to the SES indicator in the Base data, since the Disability survey has no information on superannuation or wealth.

[3] To convert wealth into an annuity we used a constant, 0.052 - the observed 5.2% rate of return on renting private dwellings. This reflects the fact that most of the wealth of Australians arises from home ownership (Kelly et al 2004).

Equivalent Income_Wealth = {family income (earned+government benefits) + annualised family wealth} / equivalence scale factor.

The Income indicator was chosen because it is often used in the literature (usually in cases where there are no other data). The choice of the Income_Wealth indicator was also built into the new Module because it was closest to the SEIFA index on which the model's input mortality and disability datasets are (of necessity) based. Finally, the Equivalent Income_Wealth indicator was included because it is the indicator that best reflects the economic resources available to families. Equivalent income indicators[1] are also the most commonly used SES measures in socioeconomic studies - with equivalent income deciles being often available in ABS statistical collections (ABS 2003 and 2001a; Saunders 1996; Walker and Abello 2000). The enhanced model was calibrated by comparing simulated mortality and disability rates for 1998 with published official statistics for the same year (Walker 2003).

Examining the reasons why inequality estimates – that is differences between the disability rates of the rich and the poor – differed between the individual-based SES indicators and the SEIFA, Walker and Becker (2004) found that as the definition of the SES indicator changed, the allocation of persons of a given age and health status to an SES quintile also changed. This means, for example, that choosing Income_Wealth in DYNAMOD instead of the Income indicator have the effect of more older persons being allocated to SES quintile 3 (and less to SES quintile 2). Because people accumulate wealth as they age, considering wealth will have the greatest impact on the allocation of the elderly. Allocating more older persons to quintile 2 resulted in an increase in the proportions disabled in that quintile (and a decrease in quintile 2, where these persons were located with the Income indicator).

Simulating a narrowing of health inequalities

The Scenario evaluated in this paper is one in which all Australians are assumed to have the same mortality and disability rates as people in the least disadvantaged SES quintile (ie quintile 5). There is Australian and international evidence that quintile 5 can be seen as an upper bound of potential health improvements (Hayen et al, 2002).[2] Also Turrell and Mathers (2001) studied a similar scenario, with mortality as an indicator of health.

Policies to bring this Scenario about could involve, for example, government initiatives that encouraged doctors to provide patients in lower SES groups with recommendations on how to adopt healthier lifestyles. Such policies may be complemented by subsidies being offered for the activities/expenditures required to bring about the desired lifestyle changes (eg subsidised gym fees if the recommendation involved more physical exercise).

For both the Base case and the Scenario simulations, we imputed SES using the Income_Wealth indicator. We chose this indicator because it produced outputs that were most coherent with the SEIFA index used in the model's mortality and disability input data.

Results under the Scenario are compared with the Base case - which assumes that past trends and policies will continue. Individuals' life courses are simulated between 1986 and 2020, with results reported in 1998 – the year for which model results can be compared with official statistics – and a date 20 years later, that is 2018.

[1] Without considering wealth, generally due to lack of suitable data.

[2] Hayen et al (2002, p. 228) found that primary prevention strategies implemented in New South Wales had led to much greater health benefits in the most advantaged SES group – in terms of less cancers, heart disease, etc – than in the rest of the population. They also referred to similar evidence internationally.

To facilitate comparisons with earlier studies, we constructed Deferred mortality (and Deferred disability) indicators. These show the per cent of deaths (or disability) that would be deferred in a particular year had the Scenario been implemented.[1]

Assumptions

All the assumptions made in DYNAMOD as 'default' prior to the adding the Health_SES module apply to the simulations reported in this paper. These are detailed in the publications listed in Footnote1 on p.1. The main assumption of relevance to this study is that earned income and government transfers are projected over time are in constant dollars, allowing for a 1 per cent per annum real growth in these variables. Wealth is then estimated in the model on the basis of variables such as household savings rates - with the simulated growth rates in wealth ending up being three to four times that of total incomes (Kelly 2002).

The key assumptions within the newly added Health_SES module are that:

(a) the age, sex and SES specific mortality and disability rates embedded in the model's input dataset remain unchanged over the simulation period; and
(b) the nationwide disability rate rises by 1 per cent every 5 years. This is based on past trends (ie a rise in the overall disability rate from 18.0 per cent in 1993 to 19.3 per cent in 1998 - ABS (1993 and 1999a - and an indication that this upward trend may have slowed somewhat since 1998 - ABS 2001b, p.iv).

As with most 'default' settings, the assumptions can be changed if required.

The simulations under the Scenario assume that the lifting of the health of all Australians to that of that of the most advantaged 20% of the population occurs 'instantaneously' in 1986 – the year when the simulation start.

Impact on the number of deaths

The number of deaths simulated for 1998 and 2018 under the Base case and the Scenario are presented in Table 1. From these we computed 'deferred mortality' estimates. The table shows that close to 70 per cent of all deaths were estimated to occur within the 75+ age group. This is as would be expected, given that average life expectancies for both men and women are above the age of 75.[2]

Table 1 shows that, in 1998, 5 per cent of deaths (5,500) could have been deferred under the Scenario compared with the Base case. Under the Base case these 5,500 deaths can be seen as 'premature deaths'– that is avoidable deaths that occur before 75 years of age (Dunn et al 2002, p.xiv; Hayen et al 2002). In 2018 premature mortality was estimated at 8 per cent – that is, 14,900 fewer persons would have died had the Scenario been implemented. Because we assumed that the patterns of mortality rates in 1998 – by age, sex and SES - would remain unchanged throughout the simulation period, differences between the 1998 and 2018 deaths in Table 1 arise from one source only: population ageing.

Assuming that all who have been 'saved' under the Scenario would live to age 75, Walker (2003) estimated 'years of lives saved' by taking the difference between age 75 and the mid-point of the 10-year age group to which the individuals who would have died under the Base case belonged, then multiplying this difference by the estimated number of lives saved under the Scenario. The 'years of life saved' estimates were 183,300 and 185,000 for 1998 and 2018 respectively.

[1] Turrell and Mathers (2002) note with respect to an indicator similar to Deferred mortality that it measures the burden of mortality in the Australian population that is attributable to socioeconomic disadvantage.

[2] Based on life expectancies at birth which, in 2000, were 77 years for men and 82 years for women – Dunn et al (2002, p.8).

Impact on the numbers disabled

Table 2 shows that, overall, there were around 22.7 per cent fewer disabled persons in 1998 under the Scenario than under the Base case, and 20.3% fewer in 2018. Population ageing and the rises in disability rates over time were the reasons for the lesser health gains 2018.

Figure 2 compares the Base case and Scenario disability results by SES in 1998 and 2018. It illustrates the finding that disability rates in Australia would be significantly lower if the health of all Australians could be lifted to that of the most advantaged SES quintile (ie quintile 5). Also, it also shows that a higher proportion of Australians will be disabled in 2018 than in 1998. Once again, this is partly due to population ageing – since older persons are considerably more likely be disabled than younger ones - and partly to the nationwide disability rate rising over time. Finally, Figure 2 shows that the proportion disabled in 2018 could be kept at broadly 1998 levels through implementation of the Scenario.

Impact on expenditures for the disabled

Health care costs

In 2000-01 total health costs in Australia were estimated at A$60.8 billion, with around 70 per cent of that having been funded by government. The A$60.8 billion was equivalent to A$3,153 per capita. (AIHW, 2002 pp.5,13). While there are no estimates available for the costs of treating and caring for the disabled, such expenditures are likely to be significantly greater than health costs per capita.[1] As there are no up-to-date cost data by main disabling illnesses, we assumed that health costs per disabled person were the same as the national average (ie A$3,153 in 1998) – an assumption that will clearly lead to an underestimate. Once such data become available, then it will be possible to derive more accurate cost figures.

We estimated that there would be 834,094 fewer disabled Australians under the Scenario than under the Base Case in 1998 and 1,038,137 in 2018 (Table 2). Thus, under our cost assumption, implementation of the Scenario would have resulted in health cost savings in 1998 of:

A$3,153 * 834,094 =A $2.63 billion

The corresponding estimate for 2018 – assuming constant 1998 prices - is:

A$3,153 * 1,038,137=A $3.27 billion

Disability support pension expenditures

Another government expenditure that may grow more slowly under the Scenario than under the Base case is Australia's disability support pension. This pension provides income support to people with a disability who are unable to work full-time. Between 1980 and 2000, the number of disability support pension recipients nearly trebled (from 229,200 to 602,300). The reasons provided by ABS (2002 and 2001b) for these increases include more people living alone (thus can better meet the related asset and income tests); improvements in mortality (ie people who would have died before are now kept alive disabled); ageing population; and increases in severe restriction rates amongst the disabled.

[1] Estimates available for the most expensive disabling illness, cardiovascular disease (CVD), indicate that in 1993-94 the cost of CVD in Australia amounted to A$3.9 billion. This represented 12 per cent of total recurrent health expenditure (Mathers and Penm, 1999a, p. xii). ABS 1999c (Table 10) shows that, in 1998, 9 per cent of the disabled had diseases of the circulatory system as 'main disabling condition', with around half of these having as 'main condition' heart disease. The same source shows that the most common 'main disabling conditions' were diseases of the musculoskeletal system (mainly arthritis). Total expenditures on musculoskeletal disorders were estimated to amount in 1993-94 to $3.0 billion (Mathers and Penm, 1999b, p. 18).

Although AIHW (2001) forecasts considerable future increases in the number of disabled with a severe or profound restriction – the ones most likely to qualify for the disability support pension – in this paper our cost estimates are based on the assumption that 'past trends will continue'. As a result, the findings below are likely to be underestimates.

In 2000, 602,300 people aged 15 years and over received a total of A$5.2 billion disability support pension – or A$8634 per recipient. Assuming that in 1998 a similar number, 602,300 persons (ie 16% of the disabled), received a disability support pension, and that that proportion applied to the 'deferred disabled' as reported in Table 2 (ie 834,094 persons), then the costs saved in 1998 under the Scenario (through fewer disability support pension recipients) would be: A$8,634 * 834,094 * 0.16 = A$1.15 billion. The corresponding estimate for 2018 - assuming constant 1998 prices - would be: A$8,634 * 1,038,137 * 0.16 = A $1.43 billion.

Estimated total benefits from implementation of the Scenario

Overall, we estimated that there would be around 180,000 life years saved each year if the Scenario were implemented. In addition, the total savings in 1998 arising from implementation of the Scenario were estimated to be around A$ 2.6 billion from lower health care costs, and around A$ 1.2 billion from lower disability support pension expenditures – a total of around A$4 billion that year. In 2018, this total was estimated at around A$5 billion.

Discussion

Comparisons with findings from earlier studies

Two earlier studies reported on analyses similar to those in this paper: an Australian study on socioeconomic inequalities in mortality (Turrell and Mathers, 2001) and a British study "Inequalities in life and death: what if Britain was more equal" (Mitchell, Shaw and Dorling, 2000). In the former, Australian mortality data were analysed with the SEIFA as indicator of socioeconomic status. In the latter, a SEIFA type indicator - named 'social class' - was geographic area based, and was computed on the basis of variables such as income, wealth and occupation. Both used less complex analytical techniques than the dynamic microsimulation modelling reported in this paper.

In both these publications only mortality in the population aged 0-64 years was considered. The Turrell and Mathers study distinguished between three age groups: 0-14, 15-24 and 25-64. One of its key finding was that: if it were possible to reduce death rates to a level equivalent to that of the least disadvantaged area, premature all-cause mortality for males in each age group would be lower by 22%, 28% and 26% respectively, and for females, 18%, 15% and 19%." - Turrell and Mathers (2001), p.238; Hayes (2002) and Turrell and Mathers (2002). In that paper 'excess' or 'premature' mortality was defined as the "per cent of deaths that would be avoided if all quintiles had the same mortality rate as Q1 (ie the highest socioeconomic status group)", p. 236 – a definition similar to that of our 'deferred mortality'.

Mitchell et al (2000) focus more on the components underlying the differences in socio-economic status, such as lower wealth and incomes due to unemployment. Examples of their findings are that: 7597 lives could be saved (7% of all deaths under age 65) if wealth redistribution patterns in the UK were reduced to those of the early 1980s; or 92% of avoidable child deaths could be prevented in areas where the death rates were higher than the national average if child poverty were eradicated; or 2504 lives could be saved through achievement of full employment.

In this paper we illustrated the considerably greater complexities, and broader range of questions, that use of a dynamic microsimulation model was able to address. While in most analyses reported in the literature mortality alone is used as 'proxy' for health, we were able to consider both mortality and disability and mathematically account for the complex linkages that exist between them. We noted that consideration of disability was as important as mortality, because it affected people's quality of life; reduced the number of productive years they had; and impacted significantly on health-related expenditures by individuals and governments. We were able to choose from several individual-based SES indicators, while many of the earlier mortality-based studies had to uniquely rely on a geographic-area-based SES index. These are known to be unable to differentiate - by age, sex, SES, etc - between individuals who reside in a particular area and have been shown to underestimate the extent of health inequalities between rich and poor (Walker and Becker 2004).

Concluding comments

A comment regarding earlier studies is that considering mortality only amongst part of the population - eg the 0-64 age group - will of necessity provide a partial estimate of health benefits and the related savings in expenditures. For example, in Australia, close to 80 per cent of deaths in 1998 occurred amongst people aged 65 years or more. Using mortality as a 'proxy' for health in the 0-64 age group only would thus lead to significant underestimation of the benefits of narrower health inequalities. In addition, the degenerative diseases that are the main causes of disabilities (and eventual deaths) generally progress to their more severe stage well beyond age 64.

Also, it is desirable for analyses of health inequalities to consider individuals' complete life courses – that is account for health as it evolves from birth and death. This is only possible if official data collections cover full populations – including all age groups and people living in all types of dwellings. With household surveys people in institutions (such as hospitals and nursing homes) are, by definition, not surveyed. Also, although all those living in households are surveyed, small sub-populations (such as people aged above 64 years) are likely to become non-representative when disaggregated by SES as well as other key variables (such as age and sex).

In this paper we have overcome to some extent the incomplete nature of the relevant statistical collections. This is because, with microsimulation, different variables can be imputed from different data sources - and thus achieve complete (but synthetic) coverage of all relevant factors. However, in analyses that account for population ageing, imputation cannot be seen as an adequate response to the issue of inadequate coverage in official data collections of older age groups. This is especially so now, because considerable further increases in life expectancies are expected in future due to breakthroughs in medical technologies made possible by the mapping of the human genome.

Appendix: the modified OECD equivalence scale factors

Equivalent family[1] income is a measure of income adjusted for the differing needs of various families (eg due to differences in family size). The aim is to have a measure through which the economic resources – and thus the standard of living - of different families can be compared. For further detail see Saunders (1996, pp 115-8).

In DYNAMOD, once the gross incomes (earned and/or received from government) of adults in the family had been added up to obtain the family's income, equivalent family income was computed using the modified OECD scale (Mejer and Siermann, 2000). This method uses equivalence scale factors (ESF) with:

- a weight of 1 for the first adult in the family;
- a weight of 0.5 for each subsequent adult in the family; and
- a weight of 0.3 for each dependent child.

The equation for the equivalent family income (EFI) is:

EFI = Gross Family Income/ESF

These family-based EFI values were then assigned to each family member.

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[1] In this paper 'family' has the same meaning as 'income unit' in ABS surveys.

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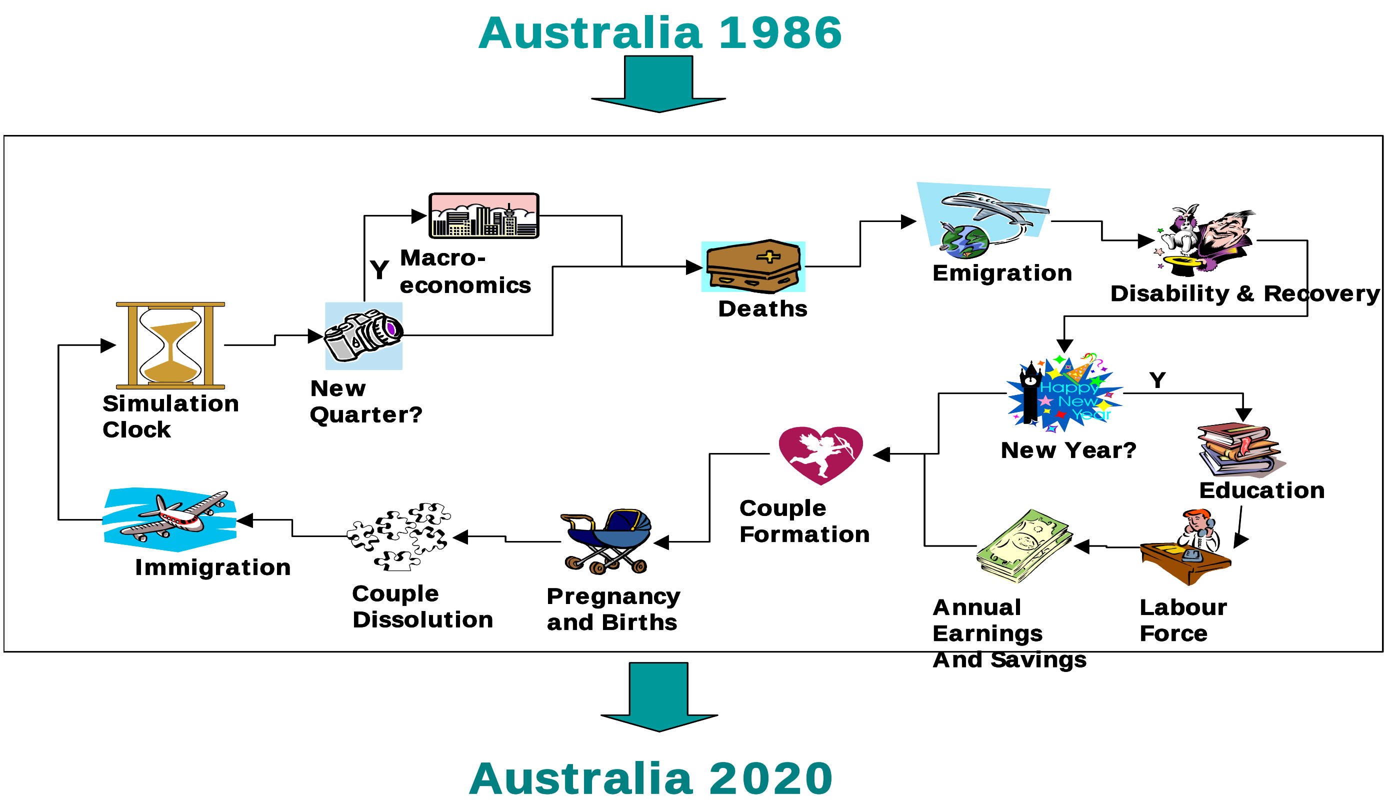


Figure 1: *DYNAMOD's simulation cycle*

Table 1: *Deferred mortality by age using the Income_Wealth indicator of SES*

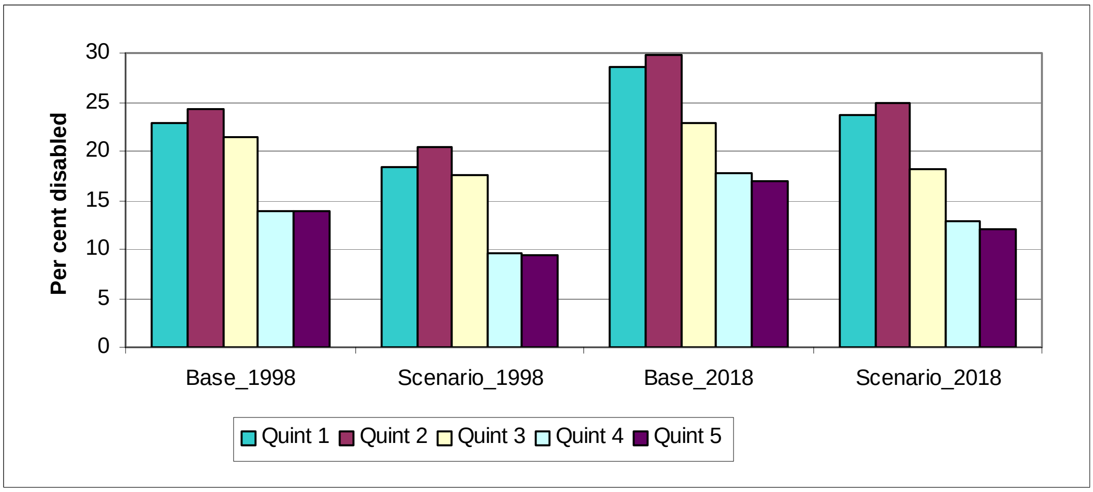
Age group	**Base Case** No of deaths** a	**Scenario** No of deaths** b	**Deferred deaths*** Per cent 100*(a-b)/a
		1998	
0-14	2,900	2,300	21
15-34	3,400	3,100	9
35-64	11,500	6,400	44
65_74	24,100	21,200	12
75+	77,500	80,900	-4
ALL ages	119,400	113,900	5
		2018	
0-14	2,100	1,600	24
15-34	2,500	1,600	36
35-64	13,200	9,800	26
65_74	37,600	31,300	17
75+	127,900	124,100	3
ALL ages	183,300	168,400	8

* Per cent of deaths that would have been deferred had the Scenario been implemented – that is if all Australians had the same mortality rate as people in the richest socioeconomic quintile.
** Estimated using DYNAMOD, weighted (weight = 103)

Table 2: *Deferred disability by age using the Income_Wealth indicator of SES*

Age	**Base Case** Persons disabled** a	**Scenario** Persons disabled** b	**Deferred disability*** Persons disabled (a-b)	**Deferred disability*** Per cent 100*(a-b)/a
		1998		
0-14	264,504	169,847	94,657	35.8
15-34	502,228	345,977	156,251	31.1
35-64	1,514,821	1,056,883	457,938	30.2
65_74	644,265	551,153	93,112	14.5
75+	744,381	712,245	32,136	4.3
ALL	3,670,199	2,836,105	834,094	22.7
		2018		
0-14	267,285	175,512	91,773	34.3
15-34	538,484	331,145	207,339	38.5
35-64	2,064,532	1,416,662	647,870	31.4
65_74	1,072,848	949,042	123,806	11.5
75+	1,172,346	1,204,997	-32,651	-2.8
ALL	5,115,495	4,077,358	1,038,137	20.3

* Per cent of disability that would have been deferred had the Scenario been implemented – that is if all Australians had the same disability rate as people in the richest socioeconomic quintile.
** Estimated using DYNAMOD, weighted (weight = 103)



Source: DYNAMOD simulations

Figure 2: *Proportion disabled, Base Case and Scenario, Income_Wealth indicator of SES: 1998 and 2018*