



List of references on health expectancy

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New references with keywords and abstracts

2008

Molla, M. T., Lubitz, J. **Retrospective information on health status and its application for population health measures.** *Demography* 2008;45(1):115-128. CB18/40

(<http://muse.jhu.edu/login?uri=/journals/demography/v045/45.1molla.html>)

LIFE EXPECTANCY IN DIFFERENT STATES OF HEALTH / ACTIVE LIFE EXPECTANCY (ALE) / USA

Healthy life expectancies are almost always calculated by using health data from cross-sectional surveys. This type of calculation is done partly because data from longitudinal surveys are not always available, and when they are available, they are collected at intervals that are longer than one year. In such cases, collecting health information retrospectively for the years skipped by the survey is useful. The main purpose of this paper is to show how retrospective health information can be used to estimate life expectancies in different health states. Healthy life expectancies are estimated with and without using data on retrospective health information, and the corresponding estimates are compared. The two sets of estimates are similar. We conclude that retrospectively assessed health information based on a one-year recall period can be used to estimate years of life in various health states and that estimates based on such information will closely approximate estimates based on concurrent health information.

Diehr, P., O'Meara, E. S., Fitzpatrick, A., Newman, A. B., Kuller, L., Burke, G. **Weight, mortality, years of healthy life, and active life expectancy in older adults.** *Journal of the American Geriatrics Society* 2008;56(1):76-83. CB18/37

(<http://www.blackwell-synergy.com/doi/abs/10.1111/j.1532-5415.2007.01500.x>)

HEALTH EXPECTANCY / ACTIVE LIFE EXPECTANCY (ALE) / ELDERLY / HEALTHY LIFE YEARS / PERCEIVED HEALTH / OBESITY / ACTIVITIES OF DAILY LIVING (ADL) / ORIGINAL CALCULATION / MULTI-STATE LIFE TABLE METHOD / USA

Objectives: To determine whether weight categories predict subsequent mortality and morbidity in older adults.

Design: Multistate life tables, using data from the Cardiovascular Health Study, a longitudinal population-based cohort of older adults.

Setting: Data were provided by community-dwelling seniors in four U.S. counties: Forsyth County, North Carolina; Sacramento County, California; Washington County, Maryland; and Allegheny County, Pennsylvania.

Participants: Five thousand eight hundred eighty-eight adults aged 65 and older at baseline.

Measurements: The age- and sex-specific probabilities of transition from one health state to another and from one weight category to another were estimated. From these probabilities, future life expectancy, years of healthy life, active life expectancy, and the number of years spent in each weight and health category after age 65 were estimated.

Results: Women who are healthy and of normal weight at age 65 have a life expectancy of 22.1 years. Of that, they spend, on average, 9.6 years as overweight or obese and 5.3 years in fair or poor health. For both men and women, being underweight at age 65 was associated with worse outcomes than being normal weight, whereas being overweight or obese was rarely associated with worse outcomes than being normal weight and was sometimes associated with significantly better outcomes.

Conclusion: Similar to middle-aged populations, older adults are likely to be or to become overweight or obese, but higher weight is not associated with worse health in this age group. Thus, the number of older adults at a "healthy" weight may be much higher than currently believed.

Chalise, H. N., Saito, T., Kai, I. **Functional disability in activities of daily living and instrumental activities of daily living among Nepalese Newar elderly.** *Public Health* 2008 CB18/23
(http://www.ncbi.nlm.nih.gov/pubmed/17888469?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

DISABILITY / ACTIVITIES OF DAILY LIVING (ADL) / INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL) / ELDERLY / NEPAL / 2005

This paper examines the prevalence of functional disability among elderly people in Nepal.

2007

Gan, Q., Smith, K. R., Hammond, S. K., Hu, T. W. **Disease burden of adult lung cancer and ischaemic heart disease from passive tobacco smoking in China.** *Tobacco Control* 2007;16(6):417-422. CB18/38
(<http://tobaccocontrol.bmj.com/gate2.inist.fr/cgi/content/abstract/16/6/417>)

DISABILITY-ADJUSTED LIFE YEARS (DALYs) / MORTALITY / SMOKING / CHINA

Objective: To address the health hazards tobacco smoking imposes upon non-smokers in China, this paper estimates the burden of diseases in adults from passive tobacco smoking for two major diseases-lung cancer and ischaemic heart disease (IHD).

Methods: The disease burden was estimated in terms of both premature mortality and disability adjusted life years (DALYs), a measure that accounts for both the age at death and the severity of the morbidity.

Results: Passive smoking caused more than 22 000 lung cancer deaths in 2002 according to these estimates. When the toll of disability is added to that of mortality, passive smoking was responsible for the loss of nearly 230 000 years of healthy life from lung cancer. Using the evidence from other countries that links IHD to passive smoking, we estimated that approximately 33 800 IHD deaths could be attributable to passive smoking in China in 2002. Passive smoking is also responsible for the loss of more than one quarter of a million years of healthy life from IHD. Although most of the disease burden caused by active smoking occurs among men, women bear nearly 80% of the total burden from passive smoking. The number of deaths among women caused by passive smoking is about two-thirds of that caused by smoking for the two diseases we examined.

Conclusion: Even without considering the passive smoking risks for other diseases and among children that have been documented in other countries, passive smoking poses serious health hazards for non-smokers, especially for adult female non-smokers in China, adding more urgency to the need for measures to be taken immediately to protect the health of non-smokers and curb the nation's tobacco epidemic.

Chung, C.-W., Wang, J.-D., Yu, C.-F., Yang, M.-C. **Lifetime medical expenditure and life expectancy lost attributable to smoking through major smoking related diseases in Taiwan.** *Tobacco Control* 2007;16(6):394-399. CB18/39
(<http://tobaccocontrol.bmj.com.gate2.inist.fr/cgi/content/abstract/16/6/394>)

LIFE EXPECTANCY LOST / SMOKING / HEALTH EXPENDITURE / TAIWAN

Objective: To estimate the lifetime financial burden on Taiwan's national health insurance (NHI) system, life expectancy and years of life expectancy lost (YLEL) attributable to smoking from major smoking related diseases.

Methods: 10 major smoking related diseases (seven cancers, stroke, acute myocardial infarction and chronic obstructive pulmonary disease) were selected for this study. A survival analysis was conducted on linked cohorts from the National Death Registry database and the National Cancer Registry (NCR) and patients at the National Taiwan University Hospital (NTUH). Estimation of the smoking attributable fraction (SAF) for the study diseases was undertaken by combining the relative risks of smokers against non-smokers and the prevalence of smoking in Taiwan. The YLEL attributable to smoking was calculated for the study diseases by combining the survival analysis results, the SAF and the annual incidences of each disease. The lifetime medical expenditure for the study diseases was estimated by integrating the survival curve and the mean annual medical costs calculated from NHI reimbursement records.

Results: There were 241 280 incidents of the 10 study diseases in 2001, of which about 53 648 cases (22.2%) were attributable to smoking, with a total YLEL of 191 313 at an average of about 3.6 YLEL per case. For each case, the average survival time was about 10.2 years. Under two different annual discount rates, the total lifetime financial burden on the NHI was estimated at between \$291 million (£147 million; J216 million) (3% discount) and \$336 million (1% discount) for all diseases attributable to smoking in 2001, accounting for about 24.6% of the total estimated lifetime medical expenditure for all incidents of the 10 study diseases.

Conclusions: Smoking places tremendous financial and health burdens upon both society and individuals. A much more stringent tobacco control strategy is needed to curb the damage from smoking.

Cambois, E., Clavel, A., Romieu, I., Robine, J.-M. **Trends in disability-free life expectancy in France for the elderly population: consistent and divergent patterns according to the underlying disability measure.** In: Population Association of America; New York 2007. CB18/29
(<http://paa2007.princeton.edu/download.aspx?submissionId=70285>)

DISABILITY-FREE LIFE EXPECTANCY / TRENDS / DISABILITY / HEALTH INDICATOR / 1980-2003

In this study we propose several estimates of disability-free life expectancy (DFLE), based on various indicators of disability. The aim is to point out specific patterns related to the underlying concept and indicator used: common functional problems, activity restrictions, dependency on someone. We estimated 10 different DFLE based on 4 different household based surveys, three of them providing chronological series. The study confirms the usual patterns of age trajectory, gender gap, whatever the underlying concept, while these patterns are not evenly stressed. It shows the closeness of DFLE estimates based on

similar disability indicators, even coming from different databases. Time trends differ according to the estimates; the more severe the disability indicator, the steeper the increase in DFLE. Despite data constraints and limitations, this study highlights the policy relevance of producing a whole set of DFLE indicators to better appraise disability patterns and trends in each country.

Braungart Fauth, E., Zarit, S. H., Malmberg, B., Johansson, B. **Physical, cognitive, and psychosocial variables from the disablement process model predict patterns of independence and the transition into disability for the oldest-old.** *Gerontologist* 2007;47(5):613-624. CB18/36
(<http://gerontologist.gerontologyjournals.org/cgi/content/abstract/47/5/613?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=Fauth&andorexacttitle=and&andorexacttitleabs=and&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&sortspec=relevance&volume=47&firstpage=613&resourcectype=HWCIT>)

ACTIVE LIFE EXPECTANCY (ALE) / ACTIVITIES OF DAILY LIVING (ADL) / TRANSITIONS / DISABILITY COMPRESSION / FUNCTIONAL STATUS / DISEASE / OLDEST OLD / SWEDEN

Purpose: This study used the Disablement Process Model to predict whether a sample of the oldest-old maintained their disability or disability-free status over a 2- and 4-year follow-up, or whether they transitioned into a state of disability during this time.

Design and Methods: We followed a sample of 149 Swedish adults who were 86 years of age or older over a period of 4 years; we grouped them by ability in activities of daily living as being functional survivors (nondisabled over time), increasingly disabled (initially nondisabled but later disabled), chronically disabled (disabled at all waves), or deceased. We used variables from baseline to predict group membership into these four longitudinal outcome groups.

Results: Results indicated that demographic factors, physical impairments, physical and cognitive limitations, and psychosocial variables at baseline predicted membership into the functional survivor group after 2 years and most continued to distinguish between functional survivors and other groups after 4 years.

Implications: These findings indicate key variables that may be useful in predicting shorter term longitudinal changes in disability. By understanding the physical, cognitive, and psychological variables that predict whether a person develops a disability within the next 2 or 4 years, we may be better able to plan for care or implement appropriate interventions.

Healthy Ageing - A challenge for Europe. Swedish National Institute of Public Health; 2007. CB18/33
(http://www.fhi.se/shop/material_pdf/healthy_ageing.pdf)

HEALTH-ADJUSTED LIFE EXPECTANCY (HALE)

This Report brings together information from the Healthy Ageing project: literature on intervention, statistical data, examples of good practice and facts about policies and strategies for healthy ageing. It also proposes recommendations. The project has gathered information on official statistical sources concerning older people living in EU countries, among which Health-adjusted life expectancy, as calculated by the WHO in its 2002 world health report.

2006

U.S. Department of Health and Human Services. **Healthy People 2010 Midcourse Review.** Washington, DC: U.S. Government Printing Office; 2006. CB18/34
(<http://www.healthypeople.gov/Data/midcourse/html/default.htm>)

HEALTH EXPECTANCY / HEALTHY LIFE EXPECTANCY / DISABILITY-FREE LIFE EXPECTANCY / DISEASE-FREE LIFE EXPECTANCY / PERCEIVED HEALTH / ACTIVITY RESTRICTION / DISEASE (CHRONIC) / ORIGINAL CALCULATION / SULLIVAN METHOD / USA / 1999-2000 / 2001-2002

Three measures of healthy life expectancies that combine death rates with different measures of health were selected to track progress toward Goal 1 of healthy People 2010 "increase quality and years of healthy life". Expected years in good or better health, expected years free of activity limitation, and expected years free of selected chronic diseases are calculated for men and women at birth and at age 65, using a double-decrement life table technique based on the Sullivan method. Analyses are based on the 1999–2000 and 2001–02 death data from the National Vital Statistics System (NVSS) and 1999–2000 and 2001–02 health data from the National Health Interview Survey (NHIS).

Schoen, R., Canudas-Romo, V. **Multistate cohort models with proportional transfer rates.** *Demography* 2006;43(3):553-568.

CB18/35

(<http://muse.jhu.edu/journals/demography/toc/dem40.2.html>)

CALCULATION METHOD

We present a new, broadly applicable approach to summarizing the behavior of a cohort as it moves through a variety of statuses (or states). The approach is based on the assumption that all rates of transfer maintain a constant ratio to one another over age. We present closed-form expressions for the size and state composition of the cohort at every age and provide expressions for other useful summary measures. The state trajectories, or life course schematics, depict all the possible size and state configurations that the cohort can exhibit over its life course under the specified pattern of transfer rates. The two living state case and hierarchical multistate models with any number of living states are analyzed in detail.

2004

World Health Organization. *The World Health Report 2004: changing history.* Geneva: WHO; 2004.

CB18/32

(<http://www.who.int/whr/2004/en/index.html>)

HEALTH REPORT / WORLD POPULATION / HEALTH EXPECTANCY / DISABILITY-ADJUSTED LIFE YEARS (DALYs) / HEALTH-ADJUSTED LIFE EXPECTANCY (HALE)

Annex Table 3 provides estimates of the burden of disease for the 14 epidemiological sub-regions using disability-adjusted life years (DALYs). DALYs for 2002 have been estimated based on cause-of-death information for each sub-region and regional or country-level assessments of the incidence and prevalence of diseases and injuries.

Annex Table 4 reports the average level of population health for WHO Member States in terms of healthy life expectancy (HALE). HALE is based on life expectancy at birth and includes an adjustment for time spent in poor health.

Pérès, K., Jagger, C., Lièvre, A., Barberger-Gateau, P. **Espérance de vie totale et sans incapacité chez le sujet âgé.** *Revue d'Epidémiologie et de Santé Publique* 2004;52(Hors série I):1S63.

CB18/30

(<http://www.masson.fr/masson/portal/bookmark?Global=1&Page=18&MenuIdSelected=106&MenuItemSelected=0&MenuSupportSelected=12&CodeRevue=RESP&CodeProduct=710&Path=REVUE/RESP/2004/52/HS1/ARTICLE1111516881113.xml&Locations=&Pos=113>)

HEALTH EXPECTANCY / DISABILITY-FREE LIFE EXPECTANCY / ORIGINAL CALCULATION / MULTI-STATE LIFE TABLE (Imach) / DISABILITY / EDUCATION / AGED / FRANCE / 1990s

Objectifs : Calculer des Espérances de Vie Totale (EVT) et Sans Incapacité (EVSI) chez le sujet âgé selon différents degrés de sévérité d'incapacité et étudier les inégalités selon le sexe et le niveau d'études.

Méthodes : Les calculs ont été réalisés sur 3 773 participants de la cohorte PAQUID (Personnes Agées QUID) ; sujets âgés de 65 ans et plus, vivant à leur domicile à l'inclusion et revus à plusieurs reprises au cours des dix premières années de suivi de la cohorte. L'incapacité a été analysée selon un indicateur hiérarchisé combinant trois échelles d'incapacité (activités de base et instrumentales de la vie courante -ADL et IADL-, ainsi qu'une échelle évaluant la mobilité), distinguant quatre degrés d'incapacité de sévérité croissante : indépendance totale, incapacité légère, modérée ou sévère. Les calculs ont été réalisés sur les données collectées au cours des dix années de suivi de la cohorte et pour chaque seuil d'incapacité à l'aide du logiciel IMACh (Interpolated Markov Chain), en tenant compte du sexe et du niveau d'études.

Résultats : L'EVT à 65 ans était de 18,4 ans sur lesquels, 36,7 % étaient vécus en totale indépendance, 33,7 % en incapacité légère, 22,7 % en incapacité modérée et 6,9 % en incapacité sévère. A 65 ans, les femmes pouvaient espérer vivre en moyenne 4,5 années de plus que les hommes, mais 4,2 ans de plus en incapacité modérée ou sévère et 2,2 ans de moins en totale indépendance.

Conclusion : Ces travaux offrent des données uniques en France sur l'état de santé et la qualité de vie de notre population âgée. D'importantes inégalités entre hommes et femmes ont été observées, notamment en terme d'EV totale et d'EV en incapacité. Les femmes vivraient en incapacité, les années de vie gagnées par rapport aux hommes, alors que les sujets ayant un plus haut niveau d'études ne « paieraient » pas une espérance de vie plus élevée par de l'incapacité.

Manuel, D. G., Schultz, S. E. **Using linked data to calculate summary measures of population health: Health-adjusted life expectancy of people with Diabetes Mellitus.** *Population Health Metrics* 2004;2(1):4. CB18/22
(<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=406424>)

HEALTH-ADJUSTED LIFE EXPECTANCY (HALE) / DIABETES / ORIGINAL CALCULATION / SULLIVAN METHOD / CANADA / 1996-1997

Objectives: To estimate the health-adjusted life expectancy (HALE) from diabetes mellitus (DM) using a population health survey linked to a population-based DM registry.

Methods: The 1996/97 Ontario Health Survey (N = 35,517) was linked to the Ontario Diabetes Database (N = 487,576). The Health Utilities Index (HUI3) was used to estimate health-related quality of life. HALE was estimated using an adapted Sullivan method.

Results: Life expectancy at birth of people with DM was 64.7 and 70.7 years for men and women - 12.8 and 12.2 years less than for men and women without DM. The HUI3 was lower for physician-diagnosed DM compared to self-reported DM (0.799 versus 0.872). HALE at birth was 58.3 and 62.8 years for men and women - 11.9 and 10.7 years less than that of men and women without DM.

Conclusions: The linked data approach demonstrates that DM is an important cause of disease burden. This approach reduces assumptions when estimating the prevalence and severity of disability from DM compared to methods that rely on self-reported disease status or indirect assessment of disability severity.

Lively, W., Cai, Y. *Estimates of the human development index for provincial- and county-level units of China*. In: International symposium on population and sustainable development strategy; Shanghai. 2004. CB18/28

LIFE EXPECTANCY / EDUCATION / CHINA

The authors propose the calculation of Literate Life Expectancy as an alternate indicator to Health Development Index (HDI).

DesMeules, M., Manuel, D. G., Cho, R. **Mortality: life and health expectancy of Canadian women**. *BMC Women's Health* 2004;4(Suppl 1):S9. CB18/21
(<http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2096684&blobtype=pdf>)

HEALTH-ADJUSTED LIFE EXPECTANCY (HALE) / LIFE EXPECTANCY / MORTALITY / CAUSE OF DEATH / SEX COMPARISON / CANADA

Health issue: The sex differences in mortality, life expectancy, and, to a lesser extent, health expectancy, are well recognized in Canada and internationally. However, the factors explaining these differences between women and men are not well understood. This chapter explores the contribution of various causes of death (such as preventable and sex-specific deaths) on these differences between women and men.

Key findings: "External" preventable causes of death (e.g. smoking-related, injuries, etc.) were responsible for a large portion of the sex gap in mortality and life expectancy. When excluding these causes from the calculations, the sex gap in life expectancies were largely reduced, decreasing from approximately 5.5 years (life expectancy being 81.4, years in women, and 75.9 years in men) to approximately 2.2 years (84.9 in women and 82.7 in men). Sex gaps in corresponding health expectancies entirely disappeared when these preventable causes of death were excluded. Moreover, a larger death burden was observed among women than men for sex-specific causes of death (eg. excess breast cancer, gynaecological cancers, maternal mortality). Significant disparities were also observed in the mortality rates of various subgroups of women by geographic regions of Canada.

Data gaps and recommendations: These results indicate that women do not appear to have a large biological survival advantage but, rather, are at lower risk of preventable deaths. They also provide additional information needed for the development of policies aimed at reducing disparities in life and health expectancies in Canada and other developed countries.

2003

Ofstedal, M. B., Zimmer, Z., Cruz, G. T., Chan, A. W., Lin, Y.-H. *Self-Assessed Health Expectancy Among Older Asians: A Comparison of Sullivan and Multistate Life Table Methods* Population Studies Center, University of Michigan; 2003 (Report No. 03-60). CB18/25

HEALTH EXPECTANCY / PERCEIVED HEALTH / ELDERLY / ORIGINAL CALCULATION / SULLIVAN METHOD / MULTI-STATE LIFE TABLE METHOD / PHILIPPINES / TAIWAN / SINGAPORE / INDONESIA / 1990s

Self-assessed health has been found to be a strong predictor of changes in health and of mortality and has been included in many surveys of health and aging around the world. In this paper, we estimate expectancies in self-assessed health and compare these among older adults across four Asian settings (the Philippines, Taiwan, Singapore and Indonesia), making use of data from several national panel surveys conducted in the mid to late 1990s. All of these societies are undergoing rapid population aging and social

and economic change, and there is much concern among policymakers about of the potential implications for future disease burden and associated informal and formal care demands. Yet, very little health expectancy research has been conducted in these settings. This paper is the first of a series of planned health expectancy analyses based on these panel surveys that will focus on alternative indicators of physical and mental disability. In the current analysis, self-assessed health is dichotomized into categories reflecting negative health ratings (e.g., poor/not good at all) versus positive or neutral health ratings (excellent to good/average/fair). In the first stage of the analysis we calculate health expectancy using the Sullivan method based on data from a single wave of each survey to compare trends in self-assessed expectancies by age and sex across settings. In the second stage we take advantage of the panel data by calculating health expectancy using multistate life table methods and compare these estimates with the Sullivan estimates. Results suggest that despite differences in the proportion reporting negative health across settings, patterns by age and sex are similar. Sullivan and multistate estimates also compare closely, except for Singapore, where there are very large transition rates from favorable to negative self-assessed health over the survey period.

Manuel, D. G., Leung, M., Nguyen, K., Tanuseputro, P., Johansen, H. **Burden of cardiovascular disease in Canada.** *Canadian Journal of Cardiology* 2003;19(9):997-1004. CB18/19
(<http://www.pulsus.com/journals/abstract.jsp?sCurrPg=journal&jnlKy=1&atlKy=3813&isuKy=104&spa ge=1&isArt=t>)

HEALTH EXPECTANCY / HEALTH-ADJUSTED LIFE EXPECTANCY (HALE) /
CARDIOVASCULAR DISEASE / FUNCTIONAL LIMITATION / ACTIVITY RESTRICTION /
SOCIAL PARTICIPATION / ORIGINAL CALCULATION / SULLIVAN METHOD / CANADA /
2000-2001

Background: This report updates the death estimates for cardiovascular disease (CVD) in Canada and introduces a population-based perspective on disease prevalence and health-related quality of life (HRQOL) burden.

Methods: The Canadian Mortality Database was used to estimate the mortality of men and women in different age groups for the 139 Canadian health regions from 1950 to 1999. Heart disease prevalence and its impact on HRQOL were estimated using the 2000-2001 Canadian Community Health Survey (CCHS). Life table techniques were used to estimate the impact of heart disease on life and health expectancy.

Results: Although CVD remains the leading cause of death in Canada, between 1950 and 1999 the death rates from CVD dropped from 702 per 100,000 to 288 per 100,000 men, and from 562 per 100,000 to 175 per 100,000 women. Results from the CCHS indicated that 5.4% of men and 4.6% of women reported having heart disease as diagnosed by a medical professional. Of these individuals, 14% of men and 21% of women reported difficulty ambulating - about six times more than people without heart disease. In total, 4.5 years of life expectancy and 2.8 years of health expectancy were lost due to CVD. The study also found large differences in the burden of CVD among men and women and across the 139 Canadian health regions.

Conclusions: CVD is a major disease burden in terms of both mortality and HRQOL and is an important source of health inequalities between populations in Canada. Any attempt to improve the health of Canadians or to reduce health inequalities should include interventions to reduce CVD mortality and morbidity. Given the present impact of CVD on HRQOL, reducing or eliminating heart disease may potentially result in an increase in life expectancy that will be larger than the gains in health expectancy.

Li, M.-F. *Health status and health expectancy for the elderly in Taiwan from 1989 to 1999*: University of South Carolina; 2003. CB18/24
(<http://proquest.umi.com/pqdlink?did=765392901&Fmt=2&clientId=79356&RQT=309&VName=PQD>)

HEALTH EXPECTANCY / ACTIVE LIFE EXPECTANCY (ALE) / LIFE EXPECTANCY / HEALTH STATUS / TRANSITIONS / ORIGINAL CALCULATION / MULTI-STATE LIFE TABLE (Imach) / TAIWAN / 1989-1999

There are two aims in this study. The first is to identify risk factors affecting health status of the elderly in Taiwan during 1989 to 1999. The second is to discover whether the elderly live longer having a longer healthy life or only extending unhealthy life. The study is based on the nationally representative longitudinal data set, called "Surveys of Health and Living Status of the Middle Aged and the Elderly in Taiwan." A logistic regression analysis, using SAS program, was performed to analyze risk factors of health status. Health transitions, life expectancy (LE), and active life expectancy (ALE) were analyzed based on a concept of multi-state life table by using the Interpolation of Markov Chains (IMaCh) program.

For risk factors of health status, regular exercise is the only factor having statistically significant positive effects on being in a healthy state for the elderly among all health dimensions across survey years.

Education, gender, age, ethnicity, and the presence of a companion show disparate effects across health dimensions. Interaction effects also varied between gender/education and gender/smoking status in terms of Instrumental Activities of Daily Living (IADL), perceived health, and life satisfaction.

For results of ALE, based on the Activities of Daily Living (ADL) index, females have more years of LE, ALE, and inactive life expectancy (ILE) compared to males. However, when different health indices are used--IADL and functional ability (FA) indices--females have more years of LE and ILE, but fewer years of ALE compared to males. There are marked differences in years of ALE between the elderly who started with different initial health states. For example, the elderly at age 70, who started with an active state without limitation in the ADL index, have 5-7 more years of LE, with 7-9 more years of ALE, and 2 fewer years of ILE compared to the ones who started with an inactive state.

The varied effects of risk factors on health status and disparity in ALE between genders for the elderly provide practical indicators for evaluating current health and social welfare programs. Policy implications and future research are suggested.

2002

World Health Organization. *The World Health Report 2002. Reducing risks, promoting healthy life.*

Geneva: WHO; 2002.

CB18/26

(<http://www.who.int/whr/2002/en/index.html>)

HEALTH REPORT / WORLD POPULATION / HEALTH EXPECTANCY / DISABILITY-ADJUSTED LIFE YEARS (DALYs) / HEALTH-ADJUSTED LIFE EXPECTANCY (HALE)

The report describes the amount of disease, disability and death in the world that can be attributed to a selected number of the most important risks to human health. The report also calculates how much of this present burden could be avoided in the next couple of decades if the same risk factors were reduced.

Organisation Mondiale de la Santé. *Rapport sur la santé dans le monde 2002: Réduire les risques et promouvoir une vie saine.* Genève: OMS; 2002.

CB18/27

(<http://www.who.int/whr/2002/fr/>)

HEALTH REPORT / WORLD POPULATION / HEALTH EXPECTANCY / DISABILITY-ADJUSTED LIFE YEARS (DALYs) / HEALTH-ADJUSTED LIFE EXPECTANCY (HALE)

Ce rapport décrit la charge de morbidité, d'incapacité et de mortalité dans le monde attribuable à

quelques-uns des risques les plus importants pour la santé humaine. Il calcule aussi la part de cette charge qu'il serait possible d'éviter au cours des deux prochaines décennies si ces mêmes facteurs de risque commençaient à être atténués dès à présent.

Organisation Mondiale de la Santé. **Rapport sur la santé dans le monde 2004: changer le cours de l'histoire.** Genève: OMS; 2002.
(<http://www.who.int/whr/2004/fr/index.html>)

CB18/31

HEALTH REPORT / WORLD POPULATION / HEALTH EXPECTANCY / DISABILITY-ADJUSTED LIFE YEARS (DALYs) / HEALTH-ADJUSTED LIFE EXPECTANCY (HALE)

Le Tableau 3 de l'annexe donne des estimations de la charge de morbidité dans les 14 sous-régions épidémiologiques en utilisant les années de vie corrigées de l'incapacité (AVCI). Les AVCI pour 2002 ont été estimées sur la base d'informations concernant les causes de décès pour chaque sous-région, ainsi que d'évaluations régionales ou nationales de l'incidence et de la prévalence des maladies et traumatismes.

Le Tableau 4 de l'annexe indique le niveau de santé moyen de la population dans tous les Etats Membres de l'OMS en termes d'espérance de vie corrigée de l'état de santé (EVCS). L'EVCS est basée sur l'espérance de vie à la naissance, corrigée du temps passé en mauvaise santé.

2001

Manuel, D. G., Schultz, S. E. **Increasing longevity and future hospital use.** *Hospital Quarterly* 2001;4(3):17-17.

CB18/20

HEALTH EXPECTANCY / LIFE EXPECTANCY / LONGEVITY / AGING / MORBIDITY COMPRESSION

The authors provide considerations on increasing longevity, the aging of populations and future demand for hospital services.