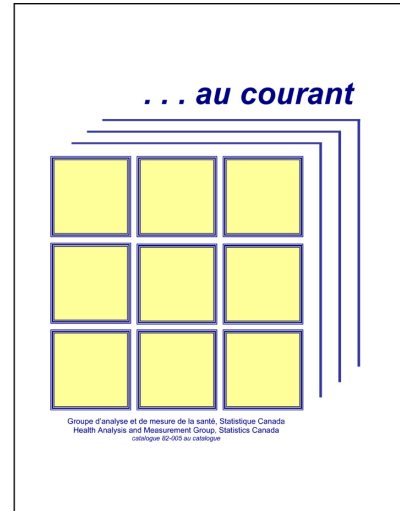




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... au courant





Statistics Canada

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Note of appreciation

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Newsletter of the Health Analysis and Measurement Group, Statistics Canada

July 2005

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In this issue...

Contributing within Canada and abroad

On the home front, we recently released several analyses to showcase the potential of the National Population Health Survey (NPHS). Our *Recent releases* section highlights these findings for 1994/95 to 2002/03:

- once people are overweight, they are more likely to gain even more weight than to take it off;
- unhealthy behaviours may have a delayed effect, catching up to seniors;
- recent immigrants from non-European countries are twice as likely as the Canadian-born to experience deterioration in their health.

Abroad, we presented our work on the Population Health Impact of Disease in Canada (PHI) at the University of Queensland to a group that will launch the Ellison Institute for World Health late in 2005. We also presented at a World Health Organization meeting on the burden of noise. You can now access the PHI website at <http://www.phac-aspc.gc.ca/phi-isp/index.html>.

We presented our work on health disparities and the Joint Canada-US Survey of Health to the AcademyHealth meeting on health services research and the Harkness Associates meetings of the US Commonwealth Fund.

Work in progress...

Analysis in action: public health impact of excess weight

We recently used data from the NPHS to contribute to a heated debate about the public health impact of excess weight. This debate was sparked by an article "Excess Deaths Associated With Underweight, Overweight, and Obesity" by Flegal et al. in the *Journal of the American Medical Association*. A central question was raised: is being overweight protective against mortality risk?

We used longitudinal, nationally representative data in a partial replication of this study to address several questions. Our analysis confirmed findings in the US analysis: when compared to the body mass index (BMI) category now considered "normal," being overweight appears to be protective against mortality. However, when this "normal" BMI category is divided further, and the lowest risk category used as reference group, the association between excess weight and mortality changes. In this case, being overweight is no longer protective.

More research, including in-depth analyses of existing longitudinal population-based data sets, is required to adequately understand the association between excess weight and mortality.

HAMG conducts policy-relevant research and quantitative analysis of health and social issues.



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Canada

A rich new data source: Canadian population-based longitudinal data

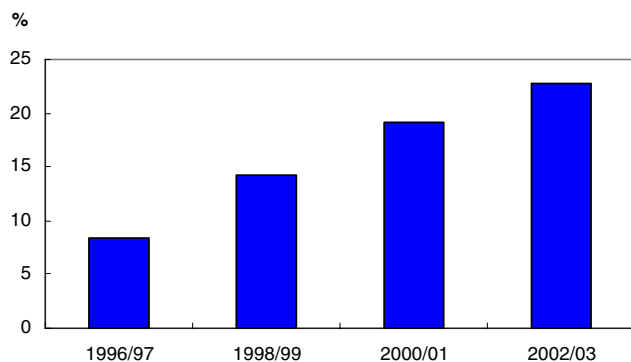
Population-based longitudinal data are a goldmine for health researchers examining the health of a population. These data have two main advantages over previous datasets. Cross-sectional data provide a snapshot of a population at different times, but longitudinal data allow comparison of the same people over time. In addition, most longitudinal studies follow a group of people over time, but the National Population Health Survey is representative of the general household population of Canada.

Statistics Canada analysts are now demonstrating the richness of these data by examining patterns over time of health and the factors that contribute to it. We provide a sample of three recent articles published by HAMG analysts and their colleagues based on five waves of longitudinal data, 1994/95 to 2002/03.

Obesity: A growing issue

This study found that almost one-quarter of Canadians who had been overweight in 1994/95 had become obese by 2002/03. On the other hand, only half as many, about 10%, who had been overweight were in the normal weight range eight years later.

Nearly one-quarter of adults who had been overweight in 1994/95 had become obese by 2002/03



The study followed National Population Health Survey (NPHS) participants aged 20 to 56 at the outset of the survey. These participants were 28 to 64 in the final year of the survey.

The weight gain was not limited to overweight Canadians. The study documented that between 1994/95 and 2002/03, one-third of people who started out in the normal weight range became overweight.

Some of the findings over the eight year period:

- 38% of the men whose weight was normal in 1994/95 had become overweight compared to 28% of the women.
- 28% of the women who had been overweight became obese, compared to 20% of the men.
- Overweight men in their twenties and thirties were more likely than those in their fifties to become obese.
- Overweight men who smoked daily in 1994/95 were almost 50% more likely to have become obese than were those who had never smoked.
- Members of highest income households were 40% less likely than those in the lowest income households to become obese.

- Overweight people who were restricted in their daily activities were at increased risk of becoming obese.
- Moderate physical activity, including walking and standing, did offer overweight women some protection against obesity.

Le Petit C, Berthelot J-M. *Obesity: a Growing Issue*. Catalogue no. 82-618-MWE2005003.

Healthy aging

This study suggests that unhealthy habits may not have an immediate impact on middle-aged adults but they tend to catch up to seniors as life goes on. Unhealthy behaviours such as smoking, physical inactivity and unhealthy weight were associated with decreasing chances of healthy aging among seniors (65 and older).

Among middle-aged adults aged 45 to 64, socio-economic characteristics such as the education level and household income were more important determinants of healthy aging than healthy behaviours.

Although they are harmful at any age, the consequences of unhealthy behaviours on the chances of healthy aging of middle-aged adults are not yet fully observable. The study also suggests that the benefits of healthy behaviours are cumulative through time and benefit people in the long term.

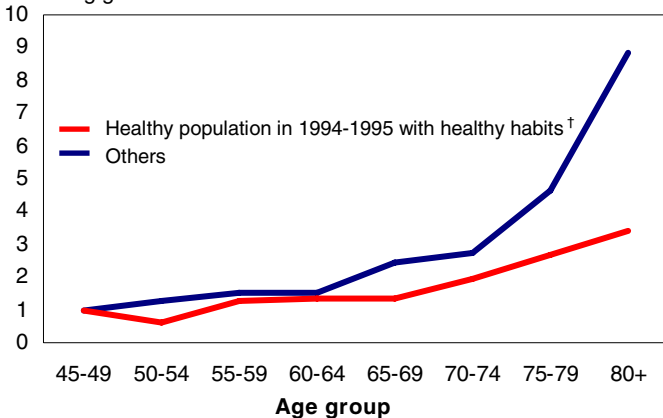
The study followed individuals who were healthy in 1994/95 during five waves of the National Population Health Survey (NPHS). Health was defined using four criteria, two related to physical health, disability and dependence, one related to mental health, and another related to self-perceived health. All criteria had to be met in order for a person to be considered in good health.

Of course as people age, their likelihood of remaining healthy decreases. About one out of five (20%) middle-aged adults lost their good health or died between each survey cycle. Among seniors, this proportion was higher, at about one out of three (30%).

After the eight years of observation, a little more than two middle-aged adults out of five (44%) were still alive and in good health. However, this was the case for only 22% of seniors.

People with healthy behaviours were at less risk of losing their good health

Adjusted risk ratio
for losing good health



Data source: 1994/95 to 2002/03 National Population Health Survey, longitudinal file

† Never smoked or quit for at least 10 years, physically active in leisure time, normal weight range

Among both the middle-aged and seniors, better educated individuals were more likely to remain healthy between 1994/95 and 2002/03. Among seniors, the chances of healthy aging were significantly enhanced by having a positive attitude towards life, but decreased by having chronic conditions such as arthritis, diabetes and heart disease.

Martel L, Belanger A, Berthelot J-M, Carrière Y. *Healthy Aging*. Catalogue no. 82-618-MWE2005004.

Dynamics of immigrants' health

When immigrants arrive in Canada, they are generally in better health than the Canadian-born population. A recent study found that 97% of new immigrants rated their health as good, very good or excellent six months after their

Other recent releases

Joseph KS, Wilkins R, Dodds L, Allen VM, Ohlsson A, Marcoux S et al. Customized birth weight for gestational age standards: Perinatal mortality patterns are consistent with separate standards for males and females but not for blacks and whites. *BMC Pregnancy Childbirth* 2005; 5(1):3. <http://www.biomedcentral.com/1471-2393/5/3>

Ross NA, Dorling D, Dunn JR, Henriksson G, Glover J, Lynch J et al. Metropolitan income inequality and working-age mortality: a cross-sectional analysis using comparable data from five countries. *J Urban Health* 2005; 82(1):101-110. Summary available at <http://www.statcan.ca/Daily/English/050429/d050429b.htm>

Borugian M, Spinelli J, Mezei G, Wilkins R, Abanto Z, McBride ML. Childhood leukemia and socioeconomic status in Canada. *Epidemiology* 2005; 16(4):526-531. Summary available at <http://www.statcan.ca/Daily/English/050705/d050705b.htm>

Flanagan W, Boswell-Purdy J, Le Petit C, Berthelot J-M. Estimating summary measures of health: a structured workbook approach. *Population Health Metrics* 2005; 3(1):5. <http://www.pophealthmetrics.com/content/3/1/5>

arrival, compared with 88% for the general population. However, as time passes, this so-called "healthy immigrant effect" tends to diminish as their health status converges with that of the general population.

This new study followed initially healthy individuals across five waves of longitudinal data from the National Population Health Survey (NPHS). It showed that between 1994/95 and 2002/03, immigrants in general were more likely than the Canadian-born population to experience a shift towards fair or poor health. Moreover, recent immigrants from non-European countries who arrived in Canada between 1984 and 1994 were twice as likely as Canadian-born to report deterioration in their health during the study period.

This might suggest that these recent immigrants from non-European countries, who were initially healthy in 1994/95, adopt some unhealthy lifestyles in the process of adapting to a new culture. The study found that these immigrants were almost twice as likely as Canadian-born to have a 10% or more increase in their body mass index. As for daily smoking, no corresponding evidence was found as non-European immigrants overall were less likely than the Canadian-born to become daily smokers.

The fact that recent non-European immigrants were at higher risk of experiencing deterioration in their health is mirrored in their greater likelihood of becoming frequent visitors to the doctor (at least six consultations a year).

Ng E, Wilkins R, Gendron F, Berthelot J-M. *Dynamics of immigrants' health in Canada: evidence from the National Population Health Survey*. Catalogue no. 82-618-MWE2005002.

These articles are part of an Internet publication *Healthy Today, Healthy Tomorrow? Findings from the National Population Health Survey*, available at <http://www.statcan.ca/bsolc/english/bsolc?catno=82-618-MWE>. A fourth article in the series is "A step forward, a step back: smoking cessation and relapse" by Margot Shields.

Presentations

2005 Biennial meeting of the Society for Research in Child Development (SRCD) in Atlanta, Georgia, April 7-10, 2005

- Dafna Kohen Neighborhood poverty: pathways to adolescent outcomes in the National Longitudinal Survey of Children and Youth
- Dafna Kohen Ecological factors associated with the use of Methylphenidate

REVES 2005, the 17th Meeting of the International Network on Health Expectancy and the Disability Process, Beijing, China, May 18-20, 2005

- Russell Wilkins Health expectancy of the Inuit-inhabited areas of Canada

73e congrès de l'ACFAS (Association francophone pour le savoir), at université du Québec, Chicoutimi, May 9-13, 2005

- François Gendron The obesity epidemic: what do we know about it? *
- Russell Wilkins Linking two of Canada's national treasures: mortality follow-up from a census-based sample of the Canadian population *
- Philippe Finès The income-mortality gradient: Outaouais *

Conference of the Canadian Research Data Centre Network, "Canadian Families under Pressure," Montréal, Québec, May 19-20, 2005

- Dafna Kohen The physical and emotional health of caregivers of children with disabilities: A comparison with national samples of Canadian caregivers
- Sharanjit Uppal The use of respite care for caregivers of children with disabilities

Annual Meetings of the Canadian Population Society, at the Congress of the Humanities and Social Sciences, University of Western Ontario, London, Ontario, June 2-4, 2005

- Philippe Finès Determination of comparable groups of low-income persons to assess the impact of income source on health indicators
- Philippe Finès Definition of optimal cut-off points of Aboriginal density in Canadian enumeration areas
- Edward Ng Determinants for HUI-based disability using the 2003 Joint Canada/United States Survey of Health: is there a country difference?
- Russell Wilkins Linking two of Canada's national treasures: mortality follow-up from a census-based sample of the Canadian population

33rd Annual Meeting of the Statistical Society of Canada (SSC), University of Saskatchewan, Saskatoon, June 12-15, 2005

- Analytical results and methodological issues encountered in the 2002-2003 Joint Canada/US Survey of Health (JCUSH)
- François Gendron Health disparities in the U.S. and Canada

* Presented in French; English titles provided for the reader's convenience.

HAMG Seminar Series

These were the final two HAMG seminars for the season. See you next time!

- April 21 Stephanie Jackson, Public Health Agency of Canada The Economic Burden of Illness in Canada (EBIC)
- April 27 Jean-Marie Berthelot, HAMG Findings from the Joint Canada/United States Survey of Health

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We welcome your comments!
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