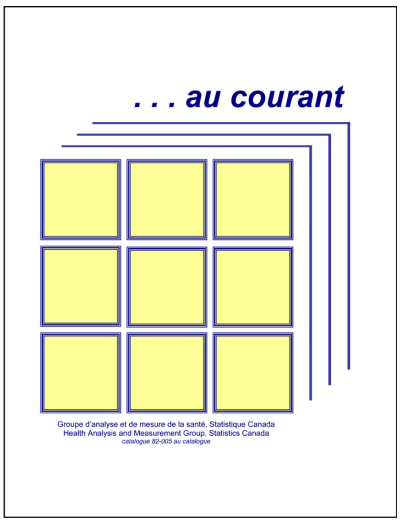
Catalogue no. 82-005-XIE

. . . au courant



Statistics Canada Statistique Canada

Canada

Statistics Canada

. . . au courant

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2004

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission from Licence Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

August 2004

Catalogue no. 82-005-XIE

Frequency: Irregular

ISSN: 1703-2180

Ottawa

La version française de cette publication est disponible sur demande (n° 82-005-XIF au catalogue).

. . . au courant

Newsletter of the Health Analysis and Measurement Group, Statistics Canada ***July 2004***

In this issue
Another busy year at HAMG
Jean-Marie Berthelot

Coming soon
Joint Canada/US Survey of Health (JCUSH)
François Gendron

Feature article
Health state preference scores for Canadians
Julie Bernier and Kathy White

What's new
Articles, announcements and seminars

In this issue…

Another busy year at HAMG

We have had another busy year! We hope that you have joined us for our seminar series or seen our work at conferences or in your reading.

In January, we presented our first results from the Population Health Impact of Disease in Canada (PHI) research program to our Advisory Committee. We have estimated health-adjusted life years (HALYs) lost to cancers through three major steps: describing and classifying health states, obtaining health state preference scores, and integrating this information with Canadian epidemiologic data. Our process will soon be documented on the Health Canada website, and we are currently preparing the first results for dissemination. Our feature story describes how we elicited health state preference scores from groups of lay Canadians and provides initial preference scores for several health states.

We continue to publish articles on a range of subjects (see the Supplement to this issue). In June we had two major releases, the Joint Canada/US Survey of Health (see Coming soon) and the second wave of the Health Services Access Survey, which are available free of charge on the Statistics Canada website.

Jean-Marie Berthelot, Manager

Coming soon…

Joint Canada/US Survey of Health (JCUSH)

Most Canadians and Americans report being in good to excellent health. However, Canadians with the lowest incomes are less likely to be in fair or poor health and are less likely to report severe mobility limitations than their American counterparts. Furthermore, more Americans than Canadians report an unmet health care need.

These are some of the major findings of the Joint Canada/US Survey of Health, a collaboration of HAMG, Health Statistics Division, and the US National Center for Health Statistics. This is the first study to compare health status and access to health care services between the two nations using an identical instrument with the same collection methodology. A sample of 3,500 Canadians and 5,200 Americans were surveyed by telephone by Statistics Canada interviewers in 2003.

Joint Canada/United States Survey of Health, 2002-03, released June 2, 2004, highlights differences within and between the two countries related to health status, health care utilization, and unmet health care needs, for both insured and uninsured individuals and by income level.

See our report Sanmartin C, Ng E, Blackwell D, Gentleman J, Martinez M, Simile C, *Joint Canada/United States Survey of Health, 2002-03.* http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82M0022X

François Gendron

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

Statistics Canada Statistique Canada

Catalogue no. 82-005-XIE ***ISSN 1703-2180***

Canada

Health state preference scores for Canadians

In past newsletters, we have described the Population Health Impact of Disease in Canada (PHI) research program, a collaboration of Statistics Canada, Health Canada, and researchers from McGill University, the University of Ottawa, the University of Manitoba, the Institute for Clinical Evaluative Sciences (ICES) and the Montérégie Regional Board of Health and Social Services.

This program is building a framework to examine the relative impact of diseases and health conditions relevant to Canadians and the risk factors that contribute to them. Summary measures are used to combine the impact of mortality and morbidity in a single indicator. An important component of this program is the development of preference scores that help quantify the impact of a health condition in terms of health-related quality of life, or more specifically, limitations to functional capacity.

This article describes the process and preliminary results of eliciting preference scores from panels of lay Canadians. A preference score represents an individual's relative preference for a health state compared with full health.

Health state descriptions

We used 239 health state descriptions selected to provide a broad coverage of the impact of diseases relevant to Canadians. Each health state, which could represent a specific stage in the progression or treatment of a disease, had been assigned a level for each of the 11 attributes of the Classification and Measurement System of Functional Health (CLAMES). (See Table 1.)

Table 1
Classification and Measurement System of Functional Health (CLAMES)

Core attributes	Supplementary attributes
Pain or Discomfort	Anxiety
Physical Functioning	Speech
Emotional State	Hearing
Fatigue	Vision
Memory and Thinking	Use of hands and fingers
Social Relationships	

Standardized descriptions were developed for use in preference exercises to assure a common understanding of the health state. For instance, the card ML describes severe chronic asthma (Figure 1). The core attributes were listed on every card; to simplify the presentation blank space was used to indicate no limitations. Supplementary attributes were listed only if they applied to that health state.

The development of CLAMES and health state descriptions are detailed in our September 2003 newsletter.

Preference exercises

A subset of these health state descriptions was considered by groups of Canadians in 9 Canadian communities: Vancouver, Edmonton, Saskatoon, Toronto, Ottawa, Montréal, Québec, Moncton, and Halifax. Full-day sessions were led by a trained facilitator from Statistics Canada assisted by a member of the study team. Each group of 8 to 11 individuals included a mix of gender, age group and socio-demographic profile. Individuals with activity limitations due to health conditions were included in each group. One panel comprised only rural dwellers, and four groups were conducted in French.

Figure 1
Description card used in preference measurement

HEALTH STATE: ML

You have problems with the following:

Pain or Discomfort	Moderate pain or discomfort
Physical Functioning	Mild limitations in physical functioning
Emotional State	
Fatigue	Sometimes feel tired, and have little energy
Memory and Thinking	
Social Relationships	
Anxiety	Mild levels of anxiety experienced occasionally

We used a thermometer-like scale (visual analogue scale) to orient participants to the descriptions and the concept of preference measurement. Then we used the Standard Gamble technique to elicit preference scores on a scale where dead is 0 and full health is 1.

Participants were asked to imagine that they were living in the health state represented on the card and to consider how living with the health state would affect their own life. They were asked to assume that they would be in that state of reduced health for the rest of their life.

They were then offered a hypothetical procedure that had a certain probability of restoring them to full health with a corresponding probability of ending their life instantly (for instance, 80% probability of full health and 20% probability of death).

They had to choose whether they wished to take the procedure (with the specified probability of success) or to remain in the state of reduced functional capacity for the remainder of their life. The probabilities were then varied until the point at which participants found it most difficult to make a decision whether to take the procedure or not.

For 12 anchor states considered by all groups, individuals recorded their scores before and after group discussion. Group discussion helped participants clarify information about their decisions and hear other opinions, but they were not encouraged to reach consensus.

Another 227 health states were randomly assigned as individual exercises (14 to each participant). Each health state was thus considered by at least six individuals. Although the health states were presented without disease labels, most represented a disease under study.

Table 2 shows the average or mean of the scores provided in the group exercises for the anchor states. As one could expect, there was some variation in the scores between individuals. This variation could reflect personal situations and values, for instance, a parent might view functional limitations differently from a young adult without children. Individuals with strong family supports systems might consider severe functional limitations differently from those who live by themselves without these supports.

Table 2
Preference scores obtained in group exercises (mean)

Health State	Disease represented	Score
YD	Dental caries	0.98
NW	Type 2 diabetes	0.97
ML	Asthma (severe)	0.93
GM	Depression (mild)	0.88
IG	Obsessive compulsive disorder (severe)	0.85
MV	Inflammatory bowel disease	0.85
EK	Chronic fatigue syndrome	0.72
VV	Cancer (palliative care)	0.58
NN	AIDS (end stage)	0.29
UF	Stroke (severe, long-term effects)	0.26

Note: Health states were presented to the participants as a description of functional limitations, without disease labels. Ten of the twelve anchor states are presented here with diseases they could represent.

These exercises demonstrated that lay Canadians were willing and able to use the Standard Gamble in a group setting. Participants expressed enthusiasm about contributing to measurements for health state preferences and were eager to be informed about the results of these exercises.

Next steps

The mean scores for 239 health states are being used to develop a statistical function that establishes a relative weighting for each level of each attribute. With this function, we can estimate preference scores for any combination of levels for the eleven attributes—a theoretical possibility of over 10 million health states!

Preference scores are an important component of our summary measures, health-adjusted life years lost to a disease (HALYs), because they contribute a measure of severity for each health state. We first calculate year-equivalents lost to reduced functioning (YERFs) which are the product of incidence (number of cases), duration, and a weight for severity (1 minus the preference score). These are calculated for each stage in the progression and treatment of the disease across every age group and for both genders. YERFs are then combined with years of life lost to the disease (YLL) to obtain HALYs lost to the disease.

To date, we have calculated HALYs for 26 cancer types and five risk factors that contribute to them. Our focus in the next year will be on the contribution of obesity to several major disease groups including diabetes and cardiovascular diseases. The ultimate goal of this research program is to obtain a relative ranking of diseases and to determine the overall impact of health determinants that affect Canadians.

In summary

As part of the Population Health Impact of Disease in Canada (PHI) research program, we elicited preference scores from small groups of the Canadian lay population.

We used standardized descriptions based on literature review and medical expertise to classify and measure the impact of functional limitations for 239 health states. Standardized descriptions helped make sure that individuals had a common understanding of health states.

The observed scores are being used to establish a statistical function that contributes to measures of the relative impact of disease and health determinants in the Canadian population.

Health preference measurement makes an important contribution to assessing the relative impact of diseases on health-related quality of life because it quantifies the severity of functional limitation.

Julie Bernier and Kathy White

Julie Bernier *came to Statistics Canada in 1995, after working as a statistical consultant and teaching statistics at Université Laval. She joined the Health Analysis and Measurement Group in 2000 as Chief of the Health Measurement Section. Her research interests are generic measures of population health, health-related quality of life indicators, and health state preference measurement.*

What's new. . .

Recent articles

We've run out of room in this issue. Please see the supplement to this newsletter for our recent publications.

Announcements

Congratulations to **Russell Wilkins**, whose responsibilities as Adjunct Professor in the Department of Epidemiology and Community Medicine at the University of Ottawa have been renewed for another three years. Russell also organized the Canadian Population Society's annual meetings at the Congress of the Humanities and Social Sciences in Winnipeg, Manitoba. For the agenda and abstracts, see www.canpopsoc.org.

Congratulations to our manager, **Jean-Marie Berthelot**, one of two Canadians selected for a *Harkness Associate* award by the Canadian Health Services Research Foundation (CHRSF) and the Commonwealth Fund. This award, which involves participation in five international meetings over the next year, recognizes his contribution to research in health disparities and health care services and his ability to communicate them to the international research community. For more information, see the CHSRF website at http://www.chsrf.ca/funding_opportunities/harkness/2004_e.php. Jean-Marie also received Professional Statistician accreditation from the Statistical Society of Canada (SSC). In March 2004, the SSC formally established a program of accreditation for professional statisticians who practice in Canada.

We are also pleased to announce that **Dafna Kohen** has been invited to be an Adjunct Professor in the Department of Epidemiology and Community Medicine at the University of Ottawa and an Affiliate Scientist with the Science Program Group of the Institute of Population Health. She will be coinvestigator on a project called the Ottawa Equity Gauge and will "contribute to the training of highly qualified personnel in population health."

Junling Ma has been working with us since January using mortality data to infer patterns of influenza incidence with the aid of administrative data and microsimulation. This analysis will provide an evidence base that contributes to developing improved control strategies.

Sharanjit Uppal joined us this spring as part of the ES recruitment program. Sharanjit will be working on a study of mental health in the Canadian armed forces and on other analytical projects.

Kathryn O'Grady, a master's student in epidemiology at the University of Ottawa, is examining the effect of neighbourhood economic characteristics on the health of individuals.

Chantelle Richmond, a doctoral student at McGill University, is examining the dimensions of health in the Aboriginal Peoples Survey.

Seminars and presentations

Another exciting seminar series finished on May 26, 2004. The past year's schedule is in the supplement to this issue. See you in the fall!

Standards of service to the public
Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1-800-263-1136.

Note of appreciation
Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

. . .* au courant *is published three times a year by the Health Analysis and Measurement Group, Statistics Canada.
Aussi disponible en français.

We welcome your comments!
Jean-Marie Berthelot, Manager
Kathy White, Editor
Tel:1-800-263-1136
Email: hamg@statcan.ca

Recent articles

Allard Y, Wilkins R, Berthelot J-M. Premature mortality in health regions with high Aboriginal populations. *Health Reports* 2004; 15(1): 51-60. http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82-003-X20030016765

Flanagan W, Le Petit C, Berthelot J-M, White KJ, Coombs BA, Jones-McLean E. Potential impact of population-based colorectal cancer screening in Canada. *Chronic Dis Can* 2003: 24(4): 81-8. http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/cdic-mcc/index.html

Kierans W, Kramer M, Wilkins R, Liston R, Foster L, Uh SH, Mohamed J. *Charting birth outcome in British Columbia: determinants of optimal health and ultimate risk - an expansion and update*. Victoria (BC): British Columbia Vital Statistics Agency; March 2004. 130 pp. http://www.vs.gov.bc.ca/stats/features/index.html

Luo ZC, Liu S, Wilkins R, Kramer MS. Risks of stillbirth and early neonatal death by day of week. *CMAJ* 2004; 170(3): 337-41. http://www.cmaj.ca/cgi/reprint/170/3/337.pdf

Luo ZC, Wilkins R, Platt RW, Kramer MS, for the Fetal and Infant Health Study Group of the Canadian Perinatal Surveillance System. Risks of adverse pregnancy outcomes among Inuit and North American Indian women in Quebec, 1985–97. *Paediatr Perinat Epidemiol* 2004; 18: 40–50.

Lynch J, Davey Smith G, Harper S, Hillemeier M, Ross NA, Kaplan GA, Wolfson MC. Is income inequality a determinant of population health? Part 1. A systematic review. *Millbank Quarterly* 2004; (1): 5-99.

Maroun J, Ng E, Berthelot J-M, Le Petit C, Dahrouge S, Flanagan WM, et al. Lifetime costs of colon and rectal cancer management in Canada. *Chronic Dis Can* 2003; 24(4): 91-101. http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/cdic-mcc/index.html

Martel L, Bélanger A, Berthelot J-M. Healthy aging: the determinants of aging without loss of independence among older Canadians. *Report on the Demographic Situation in Canada 2002*. (Statistics Canada Catalogue 91-209) 2003; 153-69.

Ng E, Wilkins R, Fung Kee Fung M, Berthelot J-M. Cervical cancer mortality by neighbourhood income in urban Canada from 1971 to 1996. *CMAJ* 2004; 170(10): 1545-9. http://www.cmaj.ca/cgi/reprint/170/10/1545.pdf

Sanmartin C, Gendron F, Berthelot J-M, Murphy K. *Access to health care services in Canada, 2003*. Statistics Canada Catalogue 82-575-XIE. Ottawa: Statistics Canada; 2004. http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82-575-X

Sanmartin C, Ng E, Blackwell D, Gentleman J, Martinez M, Simile C. *Joint Canada/United States Survey of Health, 2002-03*. Statistics Canada Catalogue 82M0022XIE. Ottawa: Statistics Canada; 2004. http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82M0022X

Sanmartin C, Ross NA, Tremblay S, Wolfson M, Dunn JR, Lynch J. Labour market income inequality and mortality in North American metropolitan areas. *J Epidemiol Comm Health* 2003; 57(10): 792-7.

Sanmartin CA and the Steering Committee of the Western Canada Waiting List Project. Toward standard definitions for waiting times. *Healthcare Management Forum* (online) Fall 2003. http://www.cchse.org/Forum/Summer2003/Sanmartin%20final.pdf

Tremblay S, Dahinten S, Kohen D. Factors related to adolescents' self-perceived health. *Health reports*–Supplement. (Statistics Canada Catalogue 82-003-SIE) 2003; 7-16. http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82-003-S&CHROPG=1

Wilkins R. *PCCF+ Version 4D User's Guide*. Automated geographic coding based on the Statistics Canada Postal Code Conversion files, including postal codes to December 2003. Statistics Canada Catalogue 82-F0086-XDB. Ottawa: Health Analysis and Measurement Group, Statistics Canada; 2004. http://www.statcan.ca:8096/bsolc/english/bsolc?catno=82F0086XDB

HAMG Seminar Series 2003-04

October 16	Robert Choinière (Institut national de santé publique du Québec)	Mortality in Québec: an international comparison
October 27	Edward Ng (HAMG)	Cervical cancer mortality by income in urban Canada, from 1971 to 1996
November 10	Philippe Finès (HAMG)	The income–mortality gradient in the Ottawa-Gatineau CMA
November 24	Yves Carrière and Laurent Martel (Demography Division)	Projecting future needs for home care services accounting for the changing family structure
December 12	Nancy Ross (McGill University)	Health inequalities: patterns and processes of social pathologies
January 21	Claudia Sanmartin (HAMG)	When is waiting for care unacceptable?: The views and experiences of Canadian patients
February 18	Mark Tremblay (Statistics Canada) Doug Haines (Health Canada)	Canadian Health Measures Survey (CHMS) Human biomonitoring of environmental chemicals
March 31	David Earn (McMaster University)	Dynamics of childhood diseases
April 14	Tom Noseworthy (Western Canada Waiting List Project)	Western Canada Waiting List Project
May 12	Jane Boswell-Purdy (Health Canada), William Flanagan (HAMG)	The population health impact of cancer in Canada, 2001
May 26	Stéphane Tremblay (Canadian Institutes of Health Research)	Are teenagers representative of health?

Presentations by HAMG analysts at conferences

First Health Statistics Data Users Conference, Ottawa, September 7-9, 2003

Jean-Marie Berthelot	Potential impact of colorectal cancer screening
Jean-Pierre Courteau	Socio-economic indicators and health in urban Outaouais: a strained connection (with Philippe Finès)
Nancy Ross	Health inequalities between and within Canadian metropolitan areas
Russell Wilkins	Socio-economic inequalities in health outcomes

International Society for Quality of Life Research (ISOQoL), Prague, November 12-15, 2003

Sarah Gorber, Julie Bernier	Workshop on health preference measurement exercises
Julie Bernier	The measurement of preferences toward health states using the Classification and Measurement System of Functional Health (CLAMES)

Atelier pour les étudiants des programmes conjoints (INRS - Université de Montréal) en démographie. Ottawa, September 19, 2003

Russell Wilkins	Data and methods for evaluating socio-economic inequalities and health status*

2003 International Conference on Health Policy, Chicago (IL), October 17-19, 2003

Christel Le Petit	Potential impact of population-based colorectal cancer screening in Canada

Institute for Clinical Evaluative Sciences (ICES) Symposium, January 20, 2004

Sarah Gorber, Julie Bernier	Workshop on health preference measurement exercises

Population Association of America (PAA), Boston, April 1-3, 2004

Edward Ng	Healthy immigrant effect in Canada: a longitudinal perspective using National Population Health Surveys

New Investigators' Meeting of the Canadian Institute for Advanced Research (CIAR), Toronto, April 2004

Dafna Kohen, Nancy Ross	Urban environments and children's gradients

Young Investigators in Circulatory and Respiratory Health meeting, Winnipeg, May 6-9 2004

Jean-Marie Berthelot	From data to database development to useful information

ACFAS (Association francophone pour le savoir), Montréal, May 10-14, 2004

Russell Wilkins	Birth outcomes in common-law versus traditional marriages in Québec, 1990 to 1999*
Philippe Finès	Modeling life expectancy at birth in small Canadian cities*

2004 REVES (International Network on Health Expectancy and the Disability Process / Réseau Espérance de Vie en Santé) conference, Brugges, Belgium, May 17 -19, 2004

Jean-Marie Berthelot	Preferences of Canadians toward health states
Jean-Marie Berthelot	Canadian population health impact of cancer

Canadian Association for Health Services and Policy Research, Montreal, May 26-28, 2004

Claudia Sanmartin	When is waiting for care unacceptable?: The views and experiences of Canadian patients
Claudia Sanmartin	Western Canada Waiting List Project (invited panelist)

2004 Canadian Population Society (CPS) Annual Meetings, Congress 2004, Winnipeg, June 2-5, 2004

Russell Wilkins	Using linked birth and infant death data to describe disparities in birth outcomes across various demographic groupings in British Columbia from 1981 through 2000
Philippe Finès	Does the income-mortality gradient vary across urban areas in Canada?
Edward Ng	Healthy immigrant effect in Canada: a longitudinal perspective using National Population Health Surveys

Canadian Public Health Association, St. John's (NF), June 13-16, 2004

Edward Ng	Healthy immigrant effect in Canada: a longitudinal perspective using National Population Health Surveys
Nancy Ross	Neighbourhood effects on health in Montreal
Jean-Marie Berthelot	Examining impact of risks and interventions in populations: creating an agenda for methodology development and policy interaction (invited panelist)
Nancy Ross	Income and income disparities: implications for population health (invited panelist)

Canadian Paediatric Society, Montreal, June 16-20, 2004

Dafna Kohen	Childhood characteristics associated with receipt of methylphenidate (Ritalin)

* English translations of titles for these presentations are provided for the reader's convenience.