

Previous Studies Comparing Health Care in the U.S. vs. Canada

Editor's Note: With the publication of a new study comparing health care in the U.S. with Canada, we thought a review of some of the previous research over the years might be useful.

Prepared by Nicholas Skala, PNHP Staff – May 17, 2006

Kidney Disease

Hornberger, J.C. et al, "Mortality, Hospital Admissions, and Medical Costs of End-Stage Renal Disease in the United States and Manitoba, Canada," *Medical Care* 35(7):686-700 (1997)

Major Findings:

- After adjustment for the case mix and treatment variables, the mortality rate for end-stage renal disease was 47% higher in the U.S. than in Canada.
 - Canadian patients are twice as likely to receive kidney transplants as are Americans. (Note: this likely reflects the profitability of continuing dialysis rather than performing a transplant.)
 - Adjusted monthly costs of treatment were \$503 higher in the U.S. (Largely due to the far higher rates of dialysis).
 - Fifty-seven percent (57%) of U.S. patients had reprocessed dialyzers used on them, compared with 0.0% of Canadian patients.
 - The hospital admission rate among U.S. renal disease patients was 41% lower (Note: this is mainly because of the far lower transplant rate among U.S. patients).
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Cancer Survival

Gorey, K. et al, "An International Comparison of Cancer Survival: Toronto, Ontario and Detroit Metro Areas," *American Journal of Public Health* 87(7):1156-1163 (07/1997)

Contact: Kevin M. Gorey, PhD (gorey@uwindsor.ca)

Major Findings:

- Low-income Americans (residing in census tracts with a median income of less than \$17,800 at the time of diagnosis) had significantly lower survival rates than higher-income Americans (median census tract income of \$51,500 or more) for 12 of 15 kinds of cancer studied. Canadians had no such association for any cancer.¹
- Compared with their American counterparts, low-income Canadians had a significant survival advantage for 13 of the 15 kinds of cancer studied.
- Authors' conclusion: the advantage that low-income Canadians enjoy in cancer survival is due to their equitable health system. A single-payer system in the U.S. would likely a comparably equitable system.

¹ Studied cancers: lung, breast, colon, bladder, rectum, non-Hodgkin's lymphoma, corpus uterus, stomach, oral, pancreas, kidney, ovary, cervix uterus, brain-CNS

Cardiac Care

Tu, J. et al, "Use of Cardiac Procedures and Outcomes in Elderly Patients with Myocardial Infarction in the United States and Canada," *NEJM*, 336(21)1500-1505 (05/22/97)

Contact: Jack V. Tu, MD, PhD (tu@ices.on.ca)

Major Findings:

- One-year mortality rates following myocardial infarction were virtually identical for both countries (34.3% U.S. vs. 34.4% Canada).
- U.S. patients were far more likely to undergo expensive and invasive treatments such as coronary angiography (34.9% U.S. vs. 6.7% Canada); percutaneous transluminal coronary angioplasty (11.7% U.S. vs. 1.5% Canada); and coronary-artery bypass surgery (10.6% U.S. vs. 1.4% Canada).

Eisenberg, M. et al, "Outcomes and the Cost of Coronary Artery Bypass Graft Surgery in the United States and Canada," *Arch. Int. Med.* 165:1506-1513 (07/11/05)

Contact: Mark J. Eisenberg, MD, MPH (meisenberg@epid.jgh.mcgill.ca)

Major Findings:

- Canadians had lower rates of unadjusted in-hospital mortality (1.4% Canada vs. 2.2% U.S.). There was no difference between the countries after controlling for demographic and clinical differences.
- The average length of a hospital stay in Canada was 16.8% longer
- Adjusted costs of CABG in the U.S. were 82% higher than in Canada
- Average in-hospital treatment costs were nearly twice as much in the U.S. (\$20,673 U.S. vs. \$10,373 Canada / Median: \$16,036 U.S. vs. \$7,880 Canada).
- Administrative costs consumed more of the total cost of treatment in the U.S. (38.2% of total costs in the U.S. vs. 31.7% in Canada).

Knee Replacement Waiting Times

Coyte, P. et al "Waiting Times for Knee-Replacement Surgery in the United States and Ontario," *NEJM* 331(16) (1994)

Contact: Dr. Robert McMurtry (robert.mcmurtry@sjhc.london.on.ca)

Major Findings:

*Note: all U.S. data are for U.S. Medicare patients. The lower waiting times for U.S. patients show that a single-payer system could be implemented in the United States with little or no waiting times for care.

- Median waiting times for orthopedic consultation were 2 weeks in the U.S. and 4 weeks in Canada.
- Median waiting times once surgery had been scheduled were 3 weeks in the U.S. and 8 weeks in Canada.²
- Overall satisfaction with the surgical experience was similar in both countries (85.3% U.S. and 83.5% Canada).

² Wait times have decreased substantially since 1994. The median waiting time for elective surgery across all provinces was 4 weeks in 2005. ("Access to Health Care Services in Canada 2005," Statistics Canada, January 2006).

Bone Marrow Transplants

Silberman, G. et al, "Availability and Appropriateness of Allogenic Bone Marrow Transplantation for Chronic Myeloid Leukemia in 10 Nations," *NEJM* 331(16) (10/20/94)

Major Findings:

- Canada had a higher rate of annual bone marrow transplants (0.89 per 100,000 population vs. 0.81 per 100,000 in the U.S.)
- The U.S. is not unique in providing broad access to high-tech treatment: On no measure of availability or appropriateness (e.g., proportion of patients with CML receiving treatment, length of time between diagnoses and transplantation, stage of disease at transplantation, etc.) did it surpass the nine other nations studied.

General Surgery

Roos, L. et al "Health and Surgical Outcomes in Canada and the United States," *Health Affairs* (Summer 1992)

Major Findings:

- Manitoba had lower mortality rates for patients 65 and older three years after both low-mortality (18.52% U.S. vs. 15.31% Canada) and moderate-mortality (19.19% U.S. vs. 16.63% Canada) procedures. There was no difference on high-mortality procedures (41.50% U.S. vs. 41.82% Canada).³

Health Care Quality

Hussey, P. et al "How Does the Quality of Care Compare in Five Countries?" *Health Affairs* 23(3) May/June 2004.

*Note: for the purposes of this study, the nation with the worst survival rate was assigned a baseline value of 100. All figures compare the U.S. and Canada's relative performance to this poorest-performing nation.

Major Findings:

- On seven diseases / procedures for which data are available for both countries, Canada survival rates were superior to the U.S. for four (colorectal cancer: 113 Canada vs. 108 U.S.; childhood leukemia: 118 vs. 110; kidney transplants 113 vs. 100; and liver transplants 123 vs. 102), about the same on two (cervical cancer: 106 Canada vs. 108 U.S.; and non-Hodgkins lymphoma: 107 vs. 109), and worse on one (breast cancer: 104 Canada vs. 114 U.S.).

³ **Low-mortality procedures:** hip replacement, cholecystectomy, open prostatectomy, carotid endarterectomy, transurethral prostatectomy. **Moderate-mortality:** cholecystectomy (w/ exploration of bile duct), CABG, heart valve replacement. **High mortality:** hip fracture repair, concurrent valve replacement / bypass surgery.