

1047-58

Reported Health Behaviors Long-Term After Coronary Artery Bypass Surgery Compared With the General Population

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Background: Smoking cessation, increased walking exercise and a reduction in dietary fat are recommended to patients after coronary artery bypass (CABG) surgery.**Methods:** Postal survey of 2,500 randomly-selected survivors from a State population of 8,910 patients with first, isolated CABG between 1980-93 was conducted in 1999, the same year as a Perth National Heart Foundation Risk Factor Prevalence Survey (RFPS).**Results:** Response was 82%. A subset of 757 men and women aged 50 to 69 years and between 6 and 20 years post-CABG were compared with 780 age and sex matched RFPS participants randomly-selected from the general population.

Patients after CABG reported eating meat significantly less often; a small proportion (2% to 9%) had a diet containing >15.5% of total fat as saturated fat, while this ranged from 15% to 28% in the RFPS participants. CABG patients were overall more likely to have quit smoking, significantly so for older women, and male patients were significantly more likely to walk regularly for exercise. The post-CABG patients were, however, no less likely to be overweight or obese (Table 1).

Conclusion: Survivors of CABG surgery are more likely to report recommended diet and exercise behaviours and to have quit smoking than the general population. The proportion of those overweight or obese is similar.

Health behaviours in post-CABG patients and the general population

CABG vs RFPS OR 95% CI, 2p

	Age (years)	Males	Females
Quit smoking	50-59	1.4 (.8-2.3) .2	1.1 (.4-3.2) .9
	60-69	1.7 (.99-2.9) .23	3.3 (1.5-7.2) .004
Eat meat <3 x week	50-59	1.6 (1.09-2.5) .02	2.8 (1.3-6.3) .01
	60-69	1.3 (.95-1.8) .1	2.5 (1.5-3.9) .001
BMI >25	50-59	.9 (.6-1.5) .8	1.07 (.5-2.4) .9
	60-69	.9 (.6-1.4) .8	1.09 (.7-1.8) .8
Walk for exercise	50-59	2.9 (1.8-4.5) .001	2.6 (.95-7.1) .8
	60-69	1.8 (1.3-2.6) .001	1.3 (.83-2.1) .3

POSTER SESSION

1070 Economics in Outcomes Research

Sunday, March 30, 2003, 3:00 p.m.-5:00 p.m.

McCormick Place, Hall A

Presentation Hour: 3:00 p.m.-4:00 p.m.

1070-51

Does Robotic Technology Make Minimally Invasive Cardiac Surgery Too Expensive? A Hospital Cost Analysis of Robotic and Conventional Techniques

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Background: While potential benefits of robotically assisted cardiac surgery include decreased morbidity and improved recovery, some have suggested a prohibitively high cost. This study was undertaken to compare the hospital costs of open and robotically assisted cardiac procedures.**Methods:** Clinical and financial data were obtained from our hospital database for patients undergoing atrial septal defect (ASD) or mitral valve repair (MVR). Procedures were performed by sternotomy or minithoracotomy (OPEN, n=68), or with robotic assistance (ROBO, n=30) using the Da Vinci system (Intuitive Surgical, Mountain View, CA). Total cost was comprised of direct (patient-specific) and indirect (facility-specific) costs and was further subdivided into operative and postoperative costs.**Results:** Intraoperative cost was higher for robotic ASD (p=0.064) and robotic MVR (p=0.025) as compared to open. However, for both ASD and MVR, there was no significant difference in total cost of robotic versus open procedures (table).

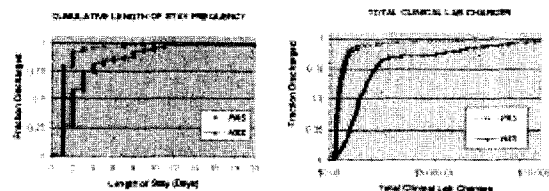
	Direct Cost	Indirect Cost	Total Cost	Operative Cost	Postoperative Cost
ASD	13958 ± 7409	14667 ± 8517	28625 ± 15694	12444 ± 5747	12367 ± 8571
OPEN	13829 ± 4939	13571 ± 5361	27400 ± 10221	16264 ± 5780	11358 ± 6430
p	.954	.665	.794	0.064	0.707
MVr	18595 ± 10885	18758 ± 11387	37351 ± 22066	16611 ± 5540	13019 ± 6818
OPEN	17284 ± 5313	17516 ± 7223	34800 ± 12313	20549 ± 4079	11539 ± 10619
p	.663	.704	.681	0.025	0.594

Conclusion: Beyond the initial capital investment associated with robotic technology, robotic surgery does not increase total hospital cost. While intraoperative costs are higher for robotic procedures, these are offset by a less costly postoperative course. This may be secondary to a trend toward decreased ICU and hospital stay for robotic patients. Thus, it is possible that the benefits of minimally invasive surgery may justify investment in this technology.

1070-52

A Physician Assistant Hospital Service Provides More Efficient Care to Interventional Cardiology Patients Than a Medical Housestaff Service

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Background: Teaching hospitals have traditionally relied on medical housestaff supervised by attending physicians. Increasingly, physician assistants (PA) have taken on larger roles within the hospital but the efficiency of this approach has not been rigorously evaluated.**Methods:** All 5208 patients (pts) having cardiac catheterization procedures in a teaching hospital from 7/1/2000 through 8/9/2001 were reviewed. After excluding ambulatory pts (1471) and those admitted to critical care units, there were 1147 admissions to the PA staffed service (PAS) and 1317 to the medical housestaff service (HSS). Because of a lack of uniform admitting criteria, the pt cohorts in each service were not equivalent. Diagnosis and acuity adjustments were made by evaluating only pts with coronary syndrome DRGs exclusive of Q-wave MI and adjusting for other illness using the Charlson Co-Morbidity Index.**Results:** When corrected for diagnosis and co-morbidity, length of stay and charges (clinical laboratory) generated by clinical management (not procedures) were significantly lower on the PAS compared to HSS, while mortality was identical (0% PAS vs 1.35% HSS, p=ns). Cumulative frequency plots illustrate this:**Conclusions:** The PAS' clinical results are equivalent to those of the HSS but the PAS is more effective in limiting inpatient length of stay and clinical management-related charges. This service model maintains excellent clinical care while controlling resource consumption.

1070-53

Institutional Variations in Surgical Treatment Costs in the United States and Canada

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Background: Numerous studies have examined the cost of specific procedures at individual hospitals however, little is known about institutional variations in surgical treatment costs.**Methods:** We compared the costs of treating 1,057 consecutive patients undergoing abdominal aortic aneurysm (AAA) repair and 11,459 patients undergoing coronary artery bypass graft (CABG) surgery between 1997 and 2001 at 6 U.S. (U1-U6) and 4 Canadian (C1-C4) hospitals. Participating hospitals used the same cost accounting system to provide patient-level clinical and cost data. Canadian costs were converted to U.S. dollars using purchasing power parities.**Results:** Patients had similar demographic and clinical characteristics both within and across countries. In the U.S., there were significant differences in treatment costs at different hospitals for both AAA repair and CABG. In Canada, inter-hospital variations were less prominent but were still significantly different. Mortality rates among AAA repair patients ranged from 4.8-13.3% while those in Canada were 5.7-20.7%. Among those undergoing CABG, mortality rates ranged from 0.3-3.7% and 0.8-4.2%, respectively. In both countries, variations in treatment costs were not related to variations in mortality.