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The cost of bariatric medical tourism on the Canadian healthcare system

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Abstract

BACKGROUND: Medical tourists are defined as individuals who intentionally travel from their home province/country to receive medical care. Minimal literature exists on the cost of postoperative care and complications for medical tourists. The costs associated with these patients were reviewed.

METHODS: Between February 2009 and June 2013, 62 patients were determined to be medical tourists. Patients were included if their initial surgery was performed between January 2003 and June 2013. A chart review was performed to identify intervention costs sustained upon their return.

RESULTS: Conservatively, the costs of length of stay (n = 657, $1,433,673.00), operative procedures (n = 110, $148,924.30), investigations (n = 700, $214,499.06), blood work (n = 357, $19,656.90), and health professionals' time (n = 76, $17,414.87) were summated to the total cost of $1.8 million CAD.

CONCLUSIONS: The absolute denominator of patients who go abroad for bariatric surgery is unknown. Despite this, a substantial cost is incurred because of medical tourism. Future investigations will analyze the cost effectiveness of bariatric surgery conducted abroad compared with local treatment.

Medical tourism is defined as an individual intentionally traveling from their home province or country to receive medical care. This phenomenon has become relevant to the evolving field of bariatric surgery, as obese patients seek this evidence-based approach for weight loss. Long wait times are thought to be the predominant reason for patients traveling abroad, particularly when private clinics promote swift wait times, equivalent care, and affordable prices.[1,2] Overall cost burden of these procedures is both personal and public. On average, a patient is said to pay $16,000 for a gastric band in private Canadian facilities.[3] However, there are many controversial ethical and medical issues associated with medical tourism, such as queue jumping, language barriers for care, and risks of travelling after major abdominal surgery.[4,5] Although the number of patients who become medical tourists in Canada is unknown (and untracked),[6] some fraction of these patients do seek

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follow-up upon returning home, either for routine care or because of negative sequelae of their surgical intervention. In addition, Alberta Health and Wellness does reimburse for select procedures for medical tourism upon returning to Canada. Evidently, there is an inherent public cost to this care, which presently is poorly explored in the literature.

Within the jurisdiction of Alberta Health Services, these patients present to the Royal Alexandra Hospital (RAH) for treatment. This is a 678-bed hospital, which conducts 9,000 to 10,000 surgical procedures each year. The Royal Alexandra is home to the bariatrics team and Weight Wise clinic: a multidisciplinary clinic where patients are assessed before surgery by nursing, medicine, dietetics, psychology, and surgery, and are followed closely thereafter. The wait time to enter this program is approximately 3 months and 8 to 9 months for surgery. On average, it takes 12 months to receive surgery upon entering the program, 3 months of which are to aid the patient through lifestyle changes and prepare for surgery. Presently, this program has a capacity to conduct 250 bariatric surgeries per annum. Medical tourists presenting to this clinic not only occupy the limited space in the program, but also often require complex revision surgery and high-level care that detract resources from the long waitlist of eligible surgical candidates.

Methods

Charts were reviewed based on initial contact with our institution from February 2009 to June 2013. There is no tracking system or code for bariatric medical tourism patients; therefore patients selected for this review were based on recall from the bariatric surgeons at our institution. To reduce the bias, all revision clinic and gastroesophageal stented patient charts were reviewed to identify medical tourists. The Human Research Ethics Board approved this study.

Patients were included in this study if they received bariatric surgery either outside of Alberta or Canada. Patients who had their bariatric surgery in a province or country they originally lived in and moved to Alberta afterward were excluded from this study, because this population would capture patients who went through the appropriate healthcare channels for surgery and not medical tourism. Patients were included regardless of their eligibility for bariatric surgery, as initially determined by the 1991 National Institute of Health accepted criteria. Patients were excluded if their initial surgery was earlier than 2003 or if the surgery was a vertical-banded gastroplasty (VBG). We wanted to capture a more recent surgical group and funding already exists to revise VBGs. The charts were reviewed for age at postoperative intervention, sex, preoperative body mass index (BMI), date, location and type of initial surgery, postoperative BMI at intervention (in Alberta), date and reason for intervention, type of initial contact for intervention, days in hospital (including intensive care unit [ICU]), type of revision surgery, operating room time, types of investigative procedures performed, and amount of blood work required.

A summation was performed of the cost of initial contact for intervention, hospital stay, revision surgery, investigative procedures, and blood work. The costs for an initial visit were determined by the average cost for an emergency room visit including all health professional personnel ($287.00, $n = 1$) and/or the average cost of a visit to the interdisciplinary team at the weight wise clinic ($495.86, $n = 9$) or revision clinic ($218.18, $n = 4$). The cost for hospital stay is based on an average cost for 24 hours in hospital ($1,483.00) and ICU ($3,178.00). The cost of revision surgery is the sum of the specific billing of each patient's case from the RAH operating room and the average billing amount for each procedure from the bariatric surgeon. Investigative procedure costs were provided by the diagnostic imaging department ($21.54–$683.00), gastroenterology department ($197.60–$2,185.19), pathology department ($415.68), and Alberta Health Services materials management Website. Procedure costs also included the interpretation fees and staff time. Blood work costs were divided into general hospital blood workup ($47.60), bariatric team workup ($141.15), and transfusion costs ($46.50–$419.00). Dollar amounts were provided by laboratory services and hematology.[7] The cost the patient paid for their initial surgery was approximated by the available Canadian bariatric surgery costs literature and an average of quotes from private out-of-country clinics.[3,8–10]

All costs were based on the most conservative costs available. Not all costs were taken into account, such as the cost of anesthesiology billing or clerk work. Emergent U.S. operative procedures that would be insured by the Canadian healthcare system were based on Canadian costs and not United States dollars. Stent placement was not considered an investigative procedure and was included in operative procedures.

The RAH is a public Canadian university-affiliated academic tertiary care institution.

Patients were stratified into 4 categories based on the level of intervention required, which was agreed upon by the surgical team A, B, C, or D.

Category A No surgery required. Patients who have been referred to the RAH Weight Wise revision clinic have had blood work before being referred, required band fills, or have not followed up with the clinic.

Category B No surgery required. Patients who needed to have minor investigative procedures done for complications, such as gastroscopy and diagnostic imaging. Interventions such as stent placement and hospital stay for malnutrition and dehydration included.

Category C Patients who required a definitive minor surgery, such as a band removal, had diagnostic