Development of a Comprehensive Laparoscopic Adjustable Gastric Banding Program in a Community Setting

Keith Z. Brewster, Andreas M. Kluftinger & Gareth H. Jones
Overview

- Obesity
  - Canada & British Columbia
- Laparoscopic Adjustable Gastric Banding
- Kelowna Band Surgery
  - Development - Program Overview - Results
- Challenges
- Benefits
- Future Directions
Obesity

• Medical condition characterized by accumulation of excess body fat
  • Associated with countless comorbidities

• Caused by an integration of bio-psycho-social factors

• POSITIVELY shown to NEGATIVELY affect:
  • Health
  • Life Expectancy
  • Quality of Life
Obesity in Canada

Obesity Trends* Among Canadian Adults
HPS 1985
(*BMI ≥ 30, or ~30 lbs overweight for 5’ 4” woman)

Obesity Trends* Among Canadian Adults
HPS, 1990
(*BMI ≥ 30, or ~30 lbs overweight for 5’ 4” woman)

Obesity Trends* Among Canadian Adults
NPHS, 1998
(*BMI ≥ 30, or ~30 lbs overweight for 5’ 4” woman)

Obesity Trends* Among Canadian Adults
CCHS, 2000
(*BMI ≥ 30, or ~30 lbs overweight for 5’ 4” woman)

Obesity in Canada

• Some estimates suggest that nearly 1/4 Canadians are obese

  • 8.6% of children (aged 6-17)

  • Range 5.3% (Richmond, BC) to 35.9% (Athabasca, Saskatchewan)

• National economic impact of obesity was 4.6 billion dollars in 2008

  • Impact of obesity and obesity-related illness was 7.1 billion dollars

  • Up 19% since 2000
Obesity in Canada

NOTES: * Significantly different from previous year estimate. † High sampling variability, interpret with caution.
SOURCE: Analysis of the 2007/08 Canadian Community Health Survey, Statistics Canada.
Obesity in British Columbia

- CCHS estimates nearly 14% of B.C. residents are obese.

- More than 2000 B.C. residents die prematurely (annually) as a result of obesity-related illness.
  - Loss of 9000 potential life years.

- Obesity-related illness costs the B.C. health care system an estimate of 380 million dollars.

- Productivity loss (absenteeism, disability, death) cost the B.C. economy an estimate of 730-830 million dollars (annually).

- Combined, direct and indirect costs of obesity total over 1 billion dollars.
Obesity Prevention

• Primary Prevention
  • Education / Legislation
  • Diet / Exercise / Behaviour Modification

• Secondary Prevention
  • All of the Above
  • Lifestyle Intervention / Pharmacotherapy
  • Surgical Intervention (Gastric Banding)
Laparoscopic Adjustable Gastric Banding

- Inflatable silicone device placed around the top portion of the stomach
- Restricts food intake
- Minimally invasive compared to other surgical options
- Reduced recovery time / scarring
- Surgery acts as a catalyst
Laparoscopic Adjustable Gastric Banding

• In Canada, several provinces offer funding for bariatric surgery (gastric banding)
  • Alberta, Saskatchewan, Manitoba, Quebec
  • Demand “heavily outweighs” the supply

• Currently, there is no provincial funding for gastric banding in British Columbia
  • Residents seek out private clinics for bariatric treatment of obesity
    • Often travel great distances to do so
Travelling for Gastric Banding
• Founded in 2009 by Dr. Andreas M. Kluftinger, MD

• Offers the only comprehensive laparoscopic adjustable gastric banding program in B.C.’s Southern Interior region

• Provides services to residents of British Columbia, Alberta, NWT, Yukon

• Provides individualized, tailored pre and post-operative programming to compliment the surgery

• Improves: Patient Experiences, Needs, Goals, and Outcomes

• Integrates a team of multi-disciplinary health care professionals

• Surgeon, Psychologist, Dietitian, Exercise Physiologist, Outreach Specialists
Program Overview

- Patient Referral
- Initial Consult
- Pre-Operative Program
- Surgery
- Post-Operative Program
Patient Referral

- Patient referral can come from several different sources / avenues
  - Family Physician
  - Internist
  - Psychologist
  - Nurse Practitioner
  - Self-Referral
    - Website / Community Awareness Sessions
Initial Consult

• Foundation for program delivery

• Patient meets with bariatric treatment team
  
  • Patient Evaluation (Inclusion / Exclusion Criteria)
  
  • Information Session / Assess Health Status
  
  • Develop Plan / Timeline
  
  • Applicants - Candidates
Pre-Operative Program

- Spans 2-6 months (dependent on patient compliance)

- Adaptation to necessary lifestyle changes with practitioner support
  
  - Diet – Exercise – Education

- Weight management
  
  - Maintenance or loss

- Pre-Operative program success/adherence compliments gastric banding surgery
Surgery

- Procedure lasts approximately 45 minutes

- Staff on site: 2 Surgeons, Anesthesiologists, 3 Registered Nurses
  - CPSBC Guidelines

- Generally performed at private surgical clinic (Okanagan Health Surgical Centre)
  - Some cases are performed at Kelowna General Hospital
    - BMI over 50
    - ASA > 2
    - Only B.C. residents
Post-Operative Program

• Provides support and direction for long-term success

• post-operative program lasts for 1 years post surgery

• Follow-up with:
  • Surgeon, Dietitian, Exercise Physiologist, Patient Outreach Specialist

• Education sessions and support groups
  • In-person and virtual

• Access to “Realize My Success®”
Program Results

• Total Patients (n=43)

• Patients at 1 year post surgery
  • EWL: 36 - 83 % (average: 66%)

• Patients at 20 months post surgery
  • EWL: 33-86% (average: 64%)
  • Improvement of comorbidities (77%)

• Lost to follow up: 0% (n=0)
Challenges

• Competing with Alternatives
  • Procedures / Centres / Costs

• Coordination
  • Patients / Practitioners

• Lack of Awareness
  • Surgery / Lifestyle Change

• Distance Involved / Patient Compliance
Benefits
Benefits

• Provide a needed service to patients
  • Accessible Care
  • Individualized Programming
  • Adequate Support
  • Access to Resources
  • Accountability
Future Directions

- Expanding Practitioner Team
- Expanding Program Outreach Services
- Expanding Service Providers
- Research Projects / Initiatives
  - Screening Tool Development
  - University of British Columbia - Health and Exercise Sciences
Gratitude & Acknowledgements

• Canadian Obesity Network & ISORAM

• Kelowna Band Surgery
  • Dr. Andreas M. Kluftinger, MD FRCSC (Director of Surgical Services)
  • Jordelle Dupre, RCEP ASCM (Certified Exercise Physiologist)
  • Lisa Koski, RD CDE (Program Dietitian)
  • Dr. Kristina Towill, Ph.D. (Psychologist)

• University of British Columbia
  • Dr. Gareth Jones
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References


### Obesity in British Columbia

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- **42,500** Lost Work Days
- **70,000** Physician Visits
- **100,000** Hospital Bed Days