ELSEVIER

Surgery for Obesity and Related Diseases ▮ (2017) 00–00

SURGERY FOR OBESITY AND RELATED DISEASES

Integrated Health Article

Progression to surgery: online versus live seminar

Maureen Miletics, B.S.N., M.S., C.B.N.[a,*], Leonardo Claros, M.D., F.A.C.S., F.A.S.M.B.S.[b], Jill Stoltzfus, Ph.D.[c], Terri Davis, R.N., C.B.N.[a], Maher El Chaar, M.D., F.A.C.S., F.A.S.M.B.S.[b]

[a]*St. Luke's Weight Management Services, St. Luke's University Health Network, Bethlehem, Pennsylvania*

[b]*Department of Surgery, Division of Bariatric and Minimally Invasive Surgery, the Medical School of Temple University/St Luke's University Health Network, Bethlehem, Pennsylvania*

[c]*Research Institute and Medical School of Temple University/St. Luke's University Health Network, Bethlehem, Pennsylvania*

Received September 5, 2017; accepted November 15, 2017

Abstract

Objective: The objective of this study was to evaluate progression to surgery rates for live and online seminar and assess weight loss outcome comparisons at 1-year postoperation.

Setting: University Hospital Network, Allentown, PA, USA.

Methods: The entry point into our program was an information seminar where prospective patients are educated about obesity, bariatric surgery, indications and contraindications, risks and benefits, and our center's process. Between January of 2009 and November of 2011, only live information seminars were offered. In November of 2011, we started offering an online information seminar to reach those who are unable to attend a live seminar. Tracking of live versus online seminar attendance was documented in our database.

Results: Between November 1, 2011 and September 30, 2015, 3484 people completed an information seminar. Of those, 2744 attendees came to a live seminar while 740 completed the online seminar. A significantly higher number of live seminar attendees, 78.1% (2144/2744) progressed to an office visit compared with online seminar attendees 66.5% (492/740), $P < .0001$. Similarly significant, 40.1% (1101/2744) of live seminar attendees progressed to surgery versus 29.7% (220/740) of online attendees ($P < .0001$). Sex (78.2% female for live seminar versus 79.5% female for online seminar, $P = .65$) and initial body mass index (46.3 ± 7.4 for live seminar versus 45.3 ± 7.1 for online seminar, $P = .09$) were very similar between the groups. Online seminar attendees' age (42.7 ± 12.1) was younger than that of the live seminar attendees' (47.3 ± 12.3) ($P < .0001$) but has little clinical value.

Conclusion: Our results demonstrated that live seminar attendees are more likely to progress to surgery and therefore should continue to be offered. (Surg Obes Relat Dis 2017;▮:00–00.)

Keywords: Online seminar; Live seminar; Information seminar; Information session; Online session; Progression to surgery; Throughput

With the increase in staff time constraints, costs associated with live information seminars at multiple sites, and online seminar use, it may be prudent to discontinue live bariatric surgery information seminars. According to Eaton et al. [1] online information sessions can be an effective and convenient way to educate patients. Online sessions may be completed anywhere at any time, helping patients with unusual work schedules, mobility issues, or concerns about distance from live seminar venues [1].

*Correspondence: Maureen Miletics, B.S.N., M.S., C.B.N., Weight Management Services, St. Luke's University Health Network, Allentown Campus, 1736 Hamilton Street, Allentown, PA 18104.

E-mail: Maureen.Miletics@sluhn.org

https://doi.org/10.1016/j.soard.2017.11.014

1550-7289/

Based on survey results in 2016, 88% of U.S. adults use the Internet [2] and 90% of U.S. households had at least 1 internet-enabled device, with many having multiple devices, such as smart phones, lap top/desktop computers, tablets, or streaming equipment [3]. In 2013, 59% of U.S. adults reported looking online for health information [4]. People are increasingly connected by virtual means and want easy access to everything from banking to news to shopping to healthcare access.

Our study sought to compare progression with surgery rates for live versus online seminars as well as weight loss at 1-year postoperation.

Methods

This was a retrospective analysis of prospectively collected data. The entry point for our bariatric surgery program was an information seminar where prospective patients are educated about obesity, bariatric surgery, indications and contraindications, risks and benefits, and our center's process. Between January of 2009 and October of 2011, only live seminars were offered. In November of 2011, we started offering an online information seminar. Both seminar venues provided the same information, except the live seminar offered the opportunity to ask questions and hear patient testimonies.

Registration for live seminars occurred via telephone or self-registration online. The registration form for the live seminar was directly fed into our bariatric database at which point the patient's database status is labeled "seminar registration." We held 3 live information seminars per month at different locations within our hospital network. One session was at 1 PM and the other 2 were at 6 PM. A standard power point presentation was presented by 1 of our 2 surgeons, our RN director, and/or RN coordinator. Once a prospective patient signs in, his/her database status changed to "seminar attendance." Patients who wished to schedule an office-based evaluation were required to provide demographic and health insurance information. Evaluation forms were given to patients at the live information seminar, with instructions to bring completed forms to the initial evaluation.

The online information seminar can be accessed from our bariatric center website and viewed on a computer or smartphone. After watching the video, prospective patients must pass a quiz with a score of 83% or better. They may take the quiz as many times as necessary. Bariatric staff then receives an e-mail with the prospective patient's name, date of birth, email address, and referral source. This information was documented in the bariatric surgery database, and the prospective patient's status was deemed "seminar attendance." A link to the program evaluation forms was available to the prospective patient upon passing the quiz. Unlike the live seminar, instructions were provided to the prospective patient to complete the evaluation forms in their entirety and then mail or fax them to our office. Once these forms were received and verification was made in the database for "seminar attendance," the prospective patient was called by office staff to set up an initial evaluation appointment.

For the purposes of our study, patient throughput, progression to office appointment attendance, and/or progression to surgery were tracked for every person who registered for a live seminar or who passed the quiz for the online seminar between November 1, 2011 and September 30, 2015. Patients were excluded if they attended both the live and online seminars (which could include patients looking for more information or restarting the program after never following through the first time).

Data analysis

We conducted 3 separate sets of statistical analyses. First, we compared follow through with office and surgery between live and online seminar based on separate χ^2 tests (Table 1). Second, we compared age, sex, and initial body mass index (BMI) between the live and online seminar patient groups using independent samples t tests or χ^2 tests as appropriate (Table 2). Third, we conducted separate subgroup analyses for sleeve gastrectomy and Roux-en-Y gastric bypass patients to compare percent of excess weight loss at 1 year, percent total weight at 1 year, and the difference between initial BMI and BMI at 1 year using independent samples t tests (Tables 3 and 4). All analyses were conducted using IBM SPSS Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY, USA), and $P < .05$ denotes statistical significance, with no adjustment for multiple testing.

Results

Between November 1, 2011 and September 30, 2015, 3484 people completed an online or live information

Table 1
Seminar outcomes

	Seminar to office	Seminar to surgery	Office to surgery
Live seminar	2144/2744 (78.1%)	1101/2744 (40.1%)	1101/2144 (51.4%)
Online Seminar	492/740 (66.5%)	220/740 (29.7%)	220/492 (44.7%)
P value*	<.0001	<.0001	.008

*Based on separate independent χ^2 tests, with $P < .05$ denoting statistical significance and no adjustment for multiple testing.