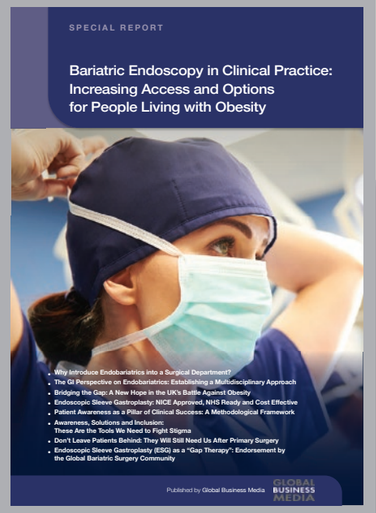
SPECIAL REPORT

Bariatric Endoscopy in Clinical Practice: Increasing Access and Options for People Living with Obesity

- Why Introduce Endobariatrics into a Surgical Department?
- The GI Perspective on Endobariatrics: Establishing a Multidisciplinary Approach
- Bridging the Gap: A New Hope in the UK's Battle Against Obesity
- Endoscopic Sleeve Gastroplasty: NICE Approved, NHS Ready and Cost Effective
- Patient Awareness as a Pillar of Clinical Success: A Methodological Framework
- Awareness, Solutions and Inclusion: These Are the Tools We Need to Fight Stigma
- Don't Leave Patients Behind: They Will Still Need Us After Primary Surgery
- Endoscopic Sleeve Gastroplasty (ESG) as a "Gap Therapy": Endorsement by the Global Bariatric Surgery Community

Published by Global Business Media

GLOBAL BUSINESS MEDIA



Published by Global Business Media

Global Business Media Limited
62 The Street Ashtead Surrey KT21 1AT
United Kingdom

Switchboard: +44 (0)1737 850 939
Fax: +44 (0)1737 851 952
Email: info@globalbusinessmedia.org
Website: www.globalbusinessmedia.org

Publisher
Kevin Bell

Business Development Director
Marie-Anne Brooks

Editor
Dr. Michael A. James PhD

Senior Project Manager
Steve Banks

Advertising Executives
Michael McCarthy
Abigail Coombes

Production Manager
Paul Davies

For further information visit:
www.globalbusinessmedia.org

Contents

Foreword

Obesity is a complex and multifaceted chronic disease that affects millions worldwide, with profound implications for physical health, mental well-being, and societal stigma. As the prevalence of obesity continues to rise, the need for innovative, patient-centered solutions has never been greater. The articles presented here offer a comprehensive exploration of the evolving landscape of obesity management, emphasizing the critical role of endobariatric procedures, multidisciplinary collaboration, and the urgent need to address stigma and patient education.

Endobariatric therapies, such as Endoscopic Sleeve Gastroplasty (ESG) and Transoral Outlet Reduction (TORe), are minimally invasive techniques that provide alternatives to and revisional options after traditional bariatric surgery, particularly for patients who may not qualify for or desire invasive procedures. The importance of integrating endobariatrics into a multidisciplinary framework, where collaboration between endoscopists, surgeons, nutritionists, and mental health professionals ensures holistic care is evident. This approach not only expands treatment options but also addresses the diverse needs of patients, from those seeking early intervention to those managing recurrent weight gain or post surgical metabolic conditions. The integration of endobariatrics into surgical departments and weight management programs is required for personalized, scalable solutions. Yet, their success hinges on robust patient education and long-term support. Articles herein on post-procedure care and revisional endobariatrics emphasize the importance of continuous multidisciplinary engagement to sustain weight loss, manage complications, and address emotional challenges. Creating awareness about endobariatric options is equally vital. Effective education strategies, ranging from webinars and support groups to culturally sensitive materials, empower patients to make informed decisions. By embedding these resources across hospital departments and establishing seamless referral pathways, healthcare systems can ensure that patients receive timely, tailored care. To that end, a UK panel has developed an optimal patient pathway providing clear and practical guidance to help remove the barriers to ESG adoption, discussed herein. Cost-effectiveness and National Institute for Health and Care Excellence (NICE) approval of ESG are expanding access to gastric remodeling intervention to a larger population throughout the NHS, as highlighted in an article by Dr Rubin George and Professor Bu' Hussain Hayee. Technological and procedural advancements alone are insufficient without addressing the pervasive stigma surrounding obesity. A powerful interview with Executive Director of the European Coalition for People living with Obesity (ECPO), Vicki Mooney underscores the devastating impact of bias in healthcare, media, and society. Her personal experiences reveal how stigma discourages individuals from seeking care, perpetuating a cycle of shame and isolation. The call for person-first language, improved provider education, and media accountability is a reminder that empathy and respect must underpin all clinical interactions. As Mooney advocates, recognizing obesity as a chronic disease, not a lifestyle choice, is essential to transforming patient outcomes and dismantling harmful stereotypes. The vision for the future of obesity management is one that combines cutting-edge medical interventions with compassionate, stigma-free care. The journey toward better health is not solitary but collective, requiring the commitment of providers, policymakers, and society at large. As we advance, collaboration, education, and inclusivity must be prioritized to ensure that no patient is left behind.

Michael James
Editor

Michael A. James PhD *is a medical writer, biotech entrepreneur/founder in the fields of oncology and virology, and former faculty of Surgery and Pharmacology/Toxicology at the Medical College of Wisconsin. He holds a PhD in microbiology from the University of Iowa and was trained in cancer cell biology and molecular biology at Washington University in St. Louis.*

ENDO-2296903-AA

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

Why Introduce Endobariatrics into a Surgical Department?

Written by Michael A. James PhD *with input from* ***Jamie Kelly (BSc BM MRCS FRCS, GEN SURG)*** *Consultant Upper GI & Bariatric Surgeon, University Hospital, Southampton*

The introduction of endobariatric procedures into a surgical department represents a strategic evolution in the management of obesity, offering a complementary and often transformative approach to traditional bariatric surgery. With obesity rates continuing to rise globally, the demand for effective, minimally invasive weight loss solutions has never been greater. Endobariatrics, which includes procedures such as Endoscopic Sleeve Gastroplasty (ESG), involving suturing to reduce gastric volume; intragastric balloon placement; and transoral outlet reduction (TORe), involving suturing to reduce the size of the gastric outlet, provides a versatile portfolio of treatments that can address the diverse needs of patients who may not be candidates for or willing to undergo traditional bariatric surgery.[1,2] By integrating endobariatrics into a surgical department, healthcare providers can expand their treatment offerings, improve patient outcomes, and enhance the overall efficacy of their weight loss programs.

Expanding Treatment Options for Diverse Patient Needs

Endobariatrics caters to a wide range of patients, each with unique needs and preferences. One key demographic includes people living with obesity who are frustrated with self-management through diet and exercise alone but on the other hand don't accept surgery as viable or option or they are not eligible for surgery. Despite their best efforts, many patients struggle to achieve sustainable weight loss.[3] For these patients, endobariatric procedures offer a structured, medically supervised intervention that can jumpstart weight loss and provide the necessary support for long-term success.[4]

Another group that may benefit includes patients whose condition is not satisfactorily managed by a pharmaceutical approach, such as GLP-1 agonists. While these medications can be effective, they are often associated with side effects, high costs, and the need for ongoing use.[5] Endobariatrics provides a a solution that aligns with the preferences of patients seeking a less medication-dependent solution.[6] Endobariatrics is also invaluable for patients who are non-surgical candidates due to health or personal reasons. Additionally, patients who refuse surgery due to fear of complications or the irreversible nature of surgical interventions often find endobariatrics to be a more acceptable alternative.[7] Finally, endobariatrics serves as a bridge to other medical procedures, such as orthopedic surgeries or organ transplants, by helping patients achieve the necessary weight loss to qualify for these interventions. For instance, intragastric balloons have been successfully used to achieve short-term weight loss in patients with high surgical risk, enabling them to become eligible for life-saving procedures.[8]

Integrating Endoscopic Procedures into the Surgical Team

The successful implementation of endobariatrics requires close collaboration between endoscopists, bariatric surgeons, and support staff. Team collaboration is essential to ensure seamless patient care, from initial consultation to post-procedure follow-up.[9] Endoscopists must develop specialized skills, such as endoscopic suturing and balloon placement, to ensure procedural efficacy and safety.

Establishing a Weight Loss Program as a Multidisciplinary Center

A multidisciplinary approach is fundamental to the success of endobariatric programs. Registered dietitians and nutritionists are integral to pre- and post-procedure care, providing tailored dietary plans to support weight loss and maintenance.[10] Psychological support is equally important, as mental health significantly influences adherence to lifestyle changes and long-term outcomes.[11] Exercise physiologists, including personal trainers/clinical exercise specialists/physiotherapists, further enhance patient care by designing personalized physical activity programs that align with weight loss goals.[12]

With obesity rates continuing to rise globally, the demand for effective, minimally invasive weight loss solutions has never been greater

Endobariatrics serves as a bridge to other medical procedures, such as orthopedic surgeries or organ transplants, by helping patients achieve the necessary weight loss to qualify for these interventions

Coordinated care ensures that patients receive comprehensive support throughout their weight loss journey. For example, post-endobariatric monitoring typically involves 6 to 12 contact points within the first year, emphasizing the importance of sustained engagement.[13] This level of follow-up is more intensive than that required after traditional surgery, underscoring the need for a robust support system.[14]

Building a successful weight loss program involves integrating endobariatric options into a broader framework that includes lifestyle management, medical interventions, and surgical solutions. Offering a range of treatments ensures that patients can choose the approach that best aligns with their health conditions, preferences, and goals.[15] A patient-centered approach, supported by a multidisciplinary team, enhances satisfaction and outcomes.[16]

Long-Term Care and Post-Procedure Management

Long-term care is critical to maintaining weight loss and addressing potential complications. Patients must be educated about the risk of weight regain and the importance of adhering to lifestyle modifications, including diet, exercise, and psychological support.[17] Regular follow-ups allow clinicians to monitor progress, provide ongoing education, and intervene promptly if complications arise.[18]

Managing patient expectations is also vital. While endobariatric procedures can achieve significant weight loss, they are not a standalone solution. Patients must understand that sustained success requires a holistic approach, including behavioral changes and long-term commitment.[19]

Conclusion

The introduction of endobariatrics into a surgical department is a forward-thinking strategy that addresses the limitations of traditional bariatric surgery while expanding treatment options for a diverse patient population. By offering minimally invasive solutions, managing complications, and fostering a multidisciplinary approach, endobariatrics enhances patient care, improves outcomes, and positions the department as a leader in obesity management. As the field continues to advance, the integration of endobariatrics will undoubtedly play a pivotal role in shaping the future of weight loss interventions. Emerging technologies and techniques, such as advanced endoscopic suturing devices and combination therapies with anti-obesity medications, hold promise for further improving patient outcomes.[20,21] By embracing these innovations, surgical departments can be future-proofed and remain at the forefront of obesity care, offering cutting-edge solutions that meet the evolving needs of patients.

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

References:

[1] Dayyeh, B.K.A. *et al*. (2022). Endoscopic sleeve gastroplasty for treatment of class 1 and 2 obesity (MERIT): a prospective, multicentre, randomised trial. *The Lancet*. https://doi.org/10.1016/S0140-6736(22)01280-6.

[2] Glass, J. *et al*. (2019). New Era: Endoscopic treatment options in obesity–a paradigm shift. *World Journal of Gastroenterology*. https://doi.org/10.3748/wjg.v25.i32.4567.

[3] Lavie, C.J. *et al*. (2018). Healthy Weight and Obesity Prevention: JACC Health Promotion Series. *Journal of the American College of Cardiology*. https://doi.org/10.1016/j.jacc.2018.08.1037.

[4] Huberty, V. *et al*. (2021). Endoscopic sutured gastroplasty in addition to lifestyle modification: short-term efficacy in a controlled randomised trial. *BMJ Journals*. https://doi.org/10.1136/gutjnl-2020-322026.

[5] Imam, A. *et al*. (2023). Weight Loss Effect of GLP-1 RAs With Endoscopic Bariatric Therapy and Bariatric Surgeries. *Journal of the Endocrine Society*. https://doi.org/10.1210/jendso/bvad129.

[6] Dave, N. *et al*. (2023). Endobariatrics: a Still Underutilized Weight Loss Tool. *Current Treatment Options in Gastroenterology*. https://doi.org/10.1007/s11938-023-00420-6.

[7] Goyal, H. *et al*. (2021). Endobariatric procedures for obesity: clinical indications and available options. *Therapeutic Advances in Gastrointestinal Endoscopy*. https://doi.org/10.1177/2631774520984627.

[8] Lari, E. *et al*. (2021). Intra-gastric balloons – The past, present and future. *Annals of Medicine and Surgery*. https://doi.org/10.1016/j.amsu.2021.01.086.

[9] Boškoski, I. *et al*. (2023). Curriculum for bariatric endoscopy and endoscopic treatment of the complications of bariatric surgery: European Society of Gastrointestinal Endoscopy (ESGE) Position Statement. *Endoscopy*. https://doi.org/10.1055/a-2003-5818.

[10] Negi, A. *et al*. (2022). Nutritional Management and Role of Multidisciplinary Follow-Up after Endoscopic Bariatric Treatment for Obesity. *Nutrients*. https://doi.org/10.3390/nu14163450.

[11] Normand, E. *et al*. (2022). Review about Psychological Barriers to Lifestyle Modification, Changes in Diet Habits, and Health-Related Quality of Life in Bariatric Endoscopy. *Nutrients*. https://doi.org/10.3390/nu14030595.

[12] Tewksbury, C. and Isom, K.A. (2022). Behavioral Interventions After Bariatric Surgery. *Current Treatment Options in Gastroenterology*. https://doi.org/10.1007/s11938-022-00388-9.

[13] Storm, A.C. *et al*. (2018). Endobariatrics: A Primer. *Clinical Gastroenterology and Hepatology*. https://doi.org/10.1016/j.cgh.2018.03.009.

[14] Budny, A. *et al*. (2024). Long-Term Follow-Up After Bariatric Surgery: Key to Successful Outcomes in Obesity Management. *Nutrients*. https://doi.org/10.3390/nu16244399.

[15] Maselli, D.B. *et al*. (2024). How to establish an endoscopic bariatric practice. *World Journal of Gastrointestinal Endoscopy*. https://doi.org/10.4253/wjge.v16.i4.178.

[16] Lahooti, A. *et al*. (2024). Improvement in Obesity-Related Comorbidities 5 Years After Endoscopic Sleeve Gastroplasty: A Prospective Cohort Study. *Gastrointestinal Endoscopy*. https://doi.org/10.1016/j.gie.2024.12.017.

[17] Noria, S.F. *et al*. (2023). Weight Regain After Bariatric Surgery: Scope of the Problem, Causes, Prevention, and Treatment. *Current Diabetes Reports*. https://doi.org/10.1007/s11892-023-01498-z.

[18] Kumbhari, V. *et al*. (2021). Endoscopic Evaluation and Management of Late Complications After Bariatric Surgery: a Narrative Review. *Obesity Surgery*. https://doi.org/10.1007/s11695-021-05603-7.

[19] Mehta, A. *et al*. (2022). Quality of Life, Mental Health, and Weight Loss Outcomes Following Endoscopic Sleeve Gastroplasty. *Journal of Gastrointestinal Surgery*. https://doi.org/10.1007/s11605-021-05137-4.

[20] Faulx, A.L. (2024). Endobariatrics and Obesity Medicine: Present Status and Future Directions. *Gastrointestinal Endoscopy Clinics*. https://doi.org/10.1016/j.giec.2024.07.004.

[21] White, M.E. and Kushnir, V. (2024). Combination Therapies: Anti-Obesity Medications and Endoscopic Bariatric Procedures. *Gastrointestinal Endoscopy Clinics*. https://doi.org/10.1016/j.giec.2024.06.003.

By embracing these innovations, surgical departments can be future-proofed and remain at the forefront of obesity care, offering cutting-edge solutions that meet the evolving needs of patients

ENDO-2296701-AA

The GI Perspective on Endobariatrics: Establishing a Multidisciplinary Approach

Written by Michael A. James PhD *with input from* ***Ivo Boskoski (MD, PhD, FESGE)*** *Associate Professor of Gastroenterology, Fondazione Policlinico Universitario Agostino Gemelli IRCCS in Rome*

Within a comprehensive and multidisciplinary weight management program, endoscopic bariatric therapies, including Endoscopic Sleeve Gastroplasty (ESG), TORe, and intragastric balloon placement, offer an alternative, expanding treatment options

Obesity is a growing epidemic, affecting over 2 billion adults globally as of 2021, many of which qualify for bariatric procedures. High risk, high cost, and eligibility requirements have been associated with rising demand for varied weight loss solutions beyond traditional bariatric surgery.[1] While surgical interventions such as gastric bypass and laparoscopic sleeve gastrectomy remain the gold standard for severe obesity, not all patients qualify or desire invasive procedures.[2] Within a comprehensive and multidisciplinary weight management program, endoscopic bariatric therapies, including Endoscopic Sleeve Gastroplasty (ESG), TORe, and intragastric balloon placement, offer an alternative, expanding treatment options.[3] Additionally, these procedures can serve as bridging therapies for patients with Class III obesity or significant obesity related complications who may not be immediate candidates for surgery but require effective weight reduction strategies to improve eligibility for future interventions.[4] Education of multidisciplinary teams including bariatric surgeons on endobariatrics and integration of cases into the workflow are key components of establishing a collaborative approach.

The Case for Endobariatrics

Endoscopic bariatric procedures have demonstrated strong safety profiles compared to surgical alternatives.[5] ESG, for instance, has been associated with a serious adverse event rate below 2%, compared to surgical complications occurring in up to 15% of bariatric procedures.[6,7] Furthermore, the MERIT Trial demonstrated that ESG achieves around 13.6% total body weight loss (TBWL) at 52 weeks.[8] This compares to 24–30% TBWL for laparoscopic sleeve gastrectomy,[8] but offers a safe, effective, and minimally invasive option. Endobariatrics also provides a reversible, repeatable intervention, allowing for staged approaches in patients with progressive weight gain or metabolic derangements that necessitate ongoing treatment.[9]

Certain surgical procedures, such as gastric bypass revision, are considered higher risk due to their complexity and potential for complications. Endoscopic alternatives, such as endoscopic suturing or stent placement, offer less invasive options for managing these conditions.[9] For example, endoscopic revision of gastric bypass has been shown to be effective in addressing weight regain or complications without the need for repeat surgery.[10] Similarly, endoscopic management of surgical complications, such as leaks and fistulas, has demonstrated high success rates, reducing the need for more invasive surgical interventions,[11] and with the risk of these complications after endoscopic procedures being low.[12]

With growing patient preference for minimally invasive options, integrating endobariatrics into a multidisciplinary program can alleviate the surgical burden while addressing weight loss needs earlier in the disease course.[13] The use of endoscopic interventions allows for earlier intervention in patients with lower BMI categories who are experiencing significant weight-related health concerns but do not yet meet the criteria for bariatric surgery.[4]

One of the key benefits of endobariatric procedures is that they do not preclude further surgical or non-surgical options. For example, patients who undergo ESG can still opt for surgical interventions if needed, making it a flexible option for those who may require staged treatment approaches. This flexibility is particularly beneficial for patients with significant obesity related complications or those who are not immediate candidates for surgery.[4]

Building a Robust Weight Loss Management Program

The benefits of a multidisciplinary team are well-documented. Studies have shown that a team-based approach improves patient outcomes, reduces complications, and enhances long-term weight loss maintenance.[14] For example, patients who receive care from a multidisciplinary team are more likely to adhere to post-procedure dietary and lifestyle recommendations, leading to better weight loss outcomes.[15] The integration of clinical psychologists into the team has been shown to improve patient adherence and reduce the risk of weight regain.[16]

A successful multidisciplinary weight loss program requires collaboration between several specialties, each performing a critical component of care. Key components and competencies of such a program are: 1) bariatric endoscopists, who perform non-surgical procedures, provide patient education, and manage follow-up care;[17] 2) bariatric surgeons, who offer both surgical and endoscopic interventions, ensuring seamless transitions between treatment modalities;[18] 3) nurses and nurse coordinators, who facilitate pre- and post-procedure care, coordinating patient education and compliance;[19] 4) nutritionists and dietitians, who develop individualized nutritional plans critical for sustaining weight loss after endobariatric procedures[15] and address patient needs before surgery; 5) clinical psychologists, who address emotional and behavioral factors influencing obesity treatment adherence;[16] and 6) primary care physicians, often the first point of contact for patients seeking treatment and support, who act as referral sources and provide ongoing management of obesity-related conditions.

Open communication among team members fosters a cohesive strategy for individualized patient care. Regular multidisciplinary meetings can enhance integration of endoscopic and surgical pathways, improving patient outcomes.[20] Shared decision-making models that involve the patient, endoscopist, and surgeon help guide treatment selection based on medical history, patient goals, and long-term weight loss expectations. Options may include endoscopic procedures, bariatric surgery, and GLP-1 medications, the application of which require an integrated team approach and can allow personalization to the needs of each patient and the limitations of each case.

Patient Presentations: Who Benefits from Endobariatric Alternatives

Patients who benefit from endobariatric procedures include those ineligible for open surgery due to certain obesity related complications, patients seeking non-invasive options, and individuals experiencing weight regain post-surgery.[10] ESG has shown efficacy in patients with BMI <35 who may not qualify for surgery but require effective weight management solutions.[7] Additionally, patients with prior abdominal surgeries, adhesions, or significant surgical risk factors may benefit from endoscopic options as a lower-risk alternative.

Traditional surgery remains the preferred option for patients with BMI >40 or >35 with significant obesity-related complications; however, >1% of eligible patients undergo surgery because of its complexity.[21] Obesity stigma, under-funded service, and access to care all contribute to low rates of election to undergo surgery. Increasingly, expert positions are describing ESG as suitable for all obesity classes, not only those characterized by BMI >35. This highlights the potential for less invasive endobariatrics to increase the rate of election to undergo procedures.

Barriers for Bariatric Surgeons

Many bariatric surgeons have not had access to formal training in endoscopy, necessitating dedicated educational programs to develop the requisite technical skills.[22] Hands-on training, proctorships, and simulation-based learning have proven effective in bridging the skills gap and facilitating the integration of endoscopic techniques into surgical practice.[23]

Surgical teams could benefit from a broader role in obesity management, integrating both surgical and non-surgical options while collaborating with endoscopists.[24] Developing joint credentialing pathways and cross-training programs can help standardize expertise and encourage shared responsibility in patient care.[25] Institutions that successfully integrate disciplines may achieve higher patient satisfaction and improved referral networks.

Clinical and Operational Considerations for Integrating Endobariatrics

One challenge in integrating endobariatrics is insurance coverage and reimbursement disparities. ESG remains an out-of-pocket expense for most patients, though ongoing advocacy aims to secure broader reimbursement policy.[26] Demonstrating long-term cost savings associated with reduced obesity-related conditions may improve public sector reimbursement.

Long-term follow-up is critical for all weight loss procedures, whether surgical or endoscopic. Studies highlight that continued multidisciplinary engagement enhances weight loss maintenance and mitigates weight regain.[14] Digital health tools, such as mobile applications and telemedicine check-ins, offer scalable solutions for remote patient monitoring.

As interest in endobariatric options grows, it is essential to be prepared to manage the higher flow of patients. This includes ensuring

Education of multidisciplinary teams including bariatric surgeons on endobariatrics and integration of cases into the workflow are key components of establishing a collaborative approach

Patients who receive care from a multidisciplinary team are more likely to adhere to post-procedure dietary and lifestyle recommendations, leading to better weight loss outcomes

that the multidisciplinary team is adequately staffed and that workflows are optimized to handle increased patient volumes.[17] The internal workflow between multidisciplinary team members is critical for ensuring seamless patient care. For example, the bariatric endoscopist may perform the initial procedure, followed by close follow-up with the nurse coordinator to monitor recovery and compliance. The nutritionist and psychologist provide ongoing support to address dietary and behavioral challenges, while the bariatric surgeon remains available for any necessary surgical interventions.[18] Regular team meetings and shared decision-making models help ensure that all team members are aligned and that patient care is coordinated effectively.[20]

Conclusion: The Future of Multidisciplinary Weight Loss Programs

A multidisciplinary approach integrating endobariatrics with traditional bariatric surgery presents the most comprehensive strategy for obesity treatment. Establishing collaborative partnerships between endoscopists and surgeons will drive improved patient outcomes and broaden accessibility to effective, individualized weight loss solutions.[27] Ongoing research, technological advancements, and provider education will ensure that multidisciplinary obesity care continues to evolve, offering patients the best available options tailored to their needs.

Many bariatric surgeons have not had access to formal training in endoscopy, necessitating dedicated educational programs to develop the requisite technical skills

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

References:

[1] Ng, M. *et al*. (2025). Global, regional, and national prevalence of adult overweight and obesity, 1990–2021, with forecasts to 2050: a forecasting study for the Global Burden of Disease Study 2021. *The Lancet*. https://doi.org/10.1016/S0140-6736(25)00355-1.

[2] Aderinto, N. *et al*. (2023). Recent advances in bariatric surgery: a narrative review of weight loss procedures. *Annals of Medicine and Surgery*. https://doi.org/10.1097/MS9.0000000000001472.

[3] Goyal, H. *et al*. (2021). Endobariatric procedures for obesity: clinical indications and available options. *Therapeutic Advances in Gastrointestinal Endoscopy*. https://doi.org/10.1177/2631774520984627.

[4] Dolan, R. *et al*. (2022). Endoscopic Management of Obesity, in *Nutrition, Weight, and Digestive Health: The Clinician's Desk Reference* (eds.Newberry, C. *et al*.), Springer International Publishing, Cham, pp. 241–255.

[5] Marincola, G. *et al*. (2021). Laparoscopic sleeve gastrectomy versus endoscopic sleeve gastroplasty: a systematic review and meta-analysis. *Endoscopy International Open*. https://doi.org/10.1055/a-1300-1085.

[6] Matteo, M.V. *et al*. (2022). Outcomes of Endoscopic Sleeve Gastroplasty in the Elder Population. *Obesity Surgery*. https://doi.org/10.1007/s11695-022-06232-4.

[7] Dayyeh, B.K.A. *et al*. (2022). Endoscopic sleeve gastroplasty for treatment of class 1 and 2 obesity (MERIT): a prospective, multicentre, randomised trial. *The Lancet*. https://doi.org/10.1016/S0140-6736(22)01280-6.

[8] Carr, P. *et al*. (2022). Efficacy and safety of endoscopic sleeve gastroplasty and laparoscopic sleeve gastrectomy with 12+ months of adjuvant multidisciplinary support. *BMC Primary Care*. https://doi.org/10.1186/s12875-022-01629-7.

[9] Kumbhari, V. *et al*. (2021). Endoscopic Evaluation and Management of Late Complications After Bariatric Surgery: a Narrative Review. *Obesity Surgery*. https://doi.org/10.1007/s11695-021-05603-7.

[10] Abboud, D.M. *et al*. (2022). Endoscopic Management of Weight Recurrence Following Bariatric Surgery. *Frontiers in Endocrinology*. https://doi.org/10.3389/fendo.2022.946870.

[11] Bulajic, M. *et al*. (2021). Endoscopic therapy of weight regain after bariatric surgery. *World Journal of Gastrointestinal Surgery*. https://doi.org/10.4240/wjgs.v13.i12.1584.

[12] Baratte, C. *et al*. (2025). Position statement and guidelines about Endoscopic Sleeve Gastroplasty (ESG) also known as "Endo-sleeve." *Journal of Visceral Surgery*. https://doi.org/10.1016/j.jviscsurg.2024.12.003.

[13] Nassani, N. *et al*. (2024). Endobariatric systems: Strategic integration of endoscopic therapies in the management of obesity. *Indian Journal of Gastroenterology*. https://doi.org/10.1007/s12664-024-01632-z.

[14] Budny, A. *et al*. (2024). Long-Term Follow-Up After Bariatric Surgery: Key to Successful Outcomes in Obesity Management. *Nutrients*. https://doi.org/10.3390/nu16244399.

[15] Negi, A. *et al*. (2022). Nutritional Management and Role of Multidisciplinary Follow-Up after Endoscopic Bariatric Treatment for Obesity. *Nutrients*. https://doi.org/10.3390/nu14163450.

[16] Tewksbury, C. and Isom, K.A. (2022). Behavioral Interventions After Bariatric Surgery. *Current Treatment Options in Gastroenterology*. https://doi.org/10.1007/s11938-022-00388-9.

[17] Maselli, D.B. *et al*. (2024). How to establish an endoscopic bariatric practice. *World Journal of Gastrointestinal Endoscopy*. https://doi.org/10.4253/wjge.v16.i4.178.

[18] Telese, A. *et al*. (2021). Bariatric and Metabolic Endoscopy: A New Paradigm. *Clinical and Translational Gastroenterology*. https://doi.org/10.14309/ctg.0000000000000364.

[19] Mohamed Hamed, S. *et al*. (2024). Effect of Implementing Nursing care Standards on Compliance and Lifestyle Behavior for Patients undergoing Laparoscopic Sleeve Gastrectomy. *Egyptian Journal of Health Care*. https://doi.org/10.21608/ejhc.2024.399168.

[20] Xie, J. and Wang, Y. (2024). Multidisciplinary combined treatment based on bariatric surgery for metabolic syndrome: a review article. *International Journal of Surgery*. https://doi.org/10.1097/JS9.0000000000001320.

[21] Glass, J. *et al*. (2019). New Era: Endoscopic treatment options in obesity–a paradigm shift. *World Journal of Gastroenterology*. https://doi.org/10.3748/wjg.v25.i32.4567.

[22] Boškoski, I. *et al*. (2023). Curriculum for bariatric endoscopy and endoscopic treatment of the complications of bariatric surgery: European Society of Gastrointestinal Endoscopy (ESGE) Position Statement. *Endoscopy*. https://doi.org/10.1055/a-2003-5818.

[23] Cagiltay, N.E. *et al*. (2019). The Effect of Training, Used-Hand, and Experience on Endoscopic Surgery Skills in an Educational Computer-Based Simulation Environment (ECE) for Endoneurosurgery Training. *Surgical Innovation*. https://doi.org/10.1177/1553350619861563.

[24] Matteo, M.V. *et al*. (2021). Personalized Approach for Obese Patients Undergoing Endoscopic Sleeve Gastroplasty. *Journal of Personalized Medicine*. https://doi.org/10.3390/jpm11121298.

[25] https://www.sages.org/publications/guidelines/updated-panel-report-best-practices-for-the-surgical-treatment-of-obesity/.

[26] Dave, N. *et al*. (2023). Endobariatrics: a Still Underutilized Weight Loss Tool. *Current Treatment Options in Gastroenterology*. https://doi.org/10.1007/s11938-023-00420-6.

[27] Faulx, A.L. (2024). Endobariatrics and Obesity Medicine: Present Status and Future Directions. *Gastrointestinal Endoscopy Clinics*. https://doi.org/10.1016/j.giec.2024.07.004.

The nutritionist and psychologist provide ongoing support to address dietary and behavioral challenges, while the bariatric surgeon remains available for any necessary surgical interventions

ENDO-2296702-AA

Bridging the Gap: A New Hope in the UK's Battle Against Obesity

Andy Currie PhD FRCS (Gen Surg), *Consultant Bariatric and UGI Surgeon, University Hospitals of Derby and Burton NHS Trust*

The UK is grappling with a formidable obesity crisis. With 28% of adults in England living with obesity and a further 36% classified as overweight, the human and economic toll is staggering, costing the NHS over £6 billion annually. Despite existing treatments, a significant void remains in effective, accessible solutions. But a groundbreaking consensus initiative is paving the way for a minimally invasive procedure, Endoscopic Sleeve Gastroplasty (ESG), to become a vital new NHS tool to help patients living with obesity.

While surgery for obesity (bariatric surgery) offers significant benefits, less than 0.2% of eligible patients receive it, due to resource constraints and patient reluctance towards major surgery

The Treatment Chasm

For millions living with obesity, effective long-term treatment can feel out of reach with only diets and lifestyle management being offered despite limited long term evidence of success. While surgery for obesity (bariatric surgery) offers significant benefits, less than 0.2% of eligible patients receive it, due to resource constraints and patient reluctance towards major surgery. This leaves a vast population in need of a middle-ground solution.

Enter ESG. This innovative endoscopic procedure, which reduces stomach size without incisions, has shown remarkable efficacy, with studies demonstrating an average of 13.6% total body weight loss at one year.[1] Crucially, it's been deemed "highly cost-effective" for patients with Class II obesity from an NHS perspective. The National Institute for Health and Care Excellence (NICE) officially recommended ESG in February 2024, and the British Obesity and Metabolic Surgery Society (BOMSS) has endorsed it as a viable therapeutic option. The evidence is clear: ESG works. The challenge now is making it accessible.

A Unified Front: Crafting an NHS Pathway

Despite ESG's proven benefits, its adoption within the NHS has been limited. Recognizing this urgent need, a pioneering study, led by a multidisciplinary panel of 16 UK experts, employed a "Nominal Group Technique" to forge a comprehensive, consensus-based pathway for ESG implementation.

This diverse group — including bariatric surgeons, endoscopists, GPs, nurses, dietitians, psychologists, healthcare commissioners and, importantly, a patient representative — meticulously addressed every aspect of the patient journey: from initial referral to the procedure itself, and crucial long-term follow-up. The goal? To create a seamless integration of ESG into existing NHS obesity care services, personalizing treatment options and bridging the current treatment gap.

Key Recommendations for a Brighter Future

After rigorous discussion and multiple meetings, the panel achieved an impressive 96% consensus on 37 vital recommendations. Here are some of the game-changing highlights:

- **Broadening Access:** ESG is recommended for patients with a BMI of 30-40 kg/m², with no upper limit, but importantly, a lower threshold of 27.5 kg/m² for individuals of South Asian, Chinese, other Asian, Middle Eastern, Black African, or African-Caribbean heritage, acknowledging ethnic-specific obesity risk profiles.
- **Integrated Care:** The pathway emphasizes seamless integration with existing multidisciplinary team (MDT) obesity services, leveraging the NHS's current structure.
- **Streamlined Procedure:** Pre-operative protocols are aligned with existing NICE guidelines, with routine endoscopy during the procedure itself, eliminating unnecessary prior tests.

[1] Abu Dayyeh, B. K., Bazerbachi, F., Vargas, E. J., Sharaiha, R. Z., Thompson, C. C., Thaemert, B. C., Teixeira, A. F., Chapman, C. G., Kumbhari, V., Ujiki, M. B., Ahrens, J., Day, C., Galvao Neto, M., Zundel, N., & Wilson, E. B. (2022). Endoscopic sleeve gastroplasty for treatment of class 1 and 2 obesity (MERIT): A prospective, multicentre, randomised trial. The Lancet, 400(10352), 441–451. https://doi.org/10.1016/S0140-6736(22)01280-6.

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

- **Expert Hands, Rigorous Training:** ESG requires trained endoscopists, supported by a skilled team, undergoing structured training including proctored cases to ensure safety and efficacy. All procedures will be meticulously logged in the National Bariatric Surgery Registry.
- **Long-Term Support:** Recognizing obesity as a chronic condition, the framework mandates structured follow-up for a minimum of two years, with a focus on dietary progression, protein prioritization, and tailored vitamin supplementation. Crucially, primary care will play a pivotal role in long-term coordination.

A New Chapter in Obesity Care

This groundbreaking consensus marks a pivotal moment in the UK's fight against obesity. By providing clear, practical guidance for clinicians and service managers, it removes the barriers to ESG adoption, paving the way for wider access to this safe, effective, and minimally invasive treatment. It represents a significant step towards personalizing care and offering a much-needed option for millions, ultimately enhancing the NHS's capacity to tackle one of its most pressing public health challenges. The future of obesity care in the UK looks brighter, more integrated, and more accessible, thanks to this collective effort.

Crucially, primary care will play a pivotal role in long-term coordination

The future of obesity care in the UK looks brighter, more integrated, and more accessible, thanks to this collective effort

ENDO-2296703-AA

Endoscopic Sleeve Gastroplasty: NICE Approved, NHS Ready and Cost Effective

Dr Rubin George, *Senior Research Fellow, Gastroenterology & Bariatric Endoscopy, King's College Hospital, London.*

Professor Bu' Hussain Hayee, *Consultant Gastroenterologist and Clinical Director for Liver, Gastroenterology, Upper GI & Endoscopy, King's College Hospital, London.*

The National Institute for Health and Care Excellence (NICE) approval for endoscopic sutured gastroplasty (ESG) and its expanded inclusion criteria can help give access to gastric remodeling intervention to a larger population throughout the NHS

Obesity and the Treatment Gap

The United Kingdom is facing a significant public health crisis, as the health survey for England 2021 reported that 25.9% of adults in England were obese, with an additional 37.9% classified as overweight but not obese.[1-3] Current predictions estimate that over 1 billion adults worldwide will suffer from obesity by 2030.[4] This epidemic places an immense £6.5 billion annual strain on the National Health Service (NHS).[5]

The established NHS obesity care pathway is tiered, progressing from community-based lifestyle services (Tier 2) to specialist multidisciplinary management (Tier 3), and finally to bariatric surgery (Tier 4) for the most severe cases.[6] Approximately 2 million individuals in the UK are clinically eligible for bariatric intervention, and it is estimated that only 1% undergo a procedure.[7] The National Institute for Health and Care Excellence (NICE) approval for endoscopic sutured gastroplasty (ESG) and its expanded inclusion criteria can help give access to gastric remodeling intervention to a larger population throughout the NHS.

Summary of NICE Guidelines

In February 2024, NICE published its Interventional Procedure Guidance 783 (IPG783), providing a clear endorsement for ESG to be offered within the NHS. The guidance states that the procedure is safe and, when combined with lifestyle changes, results in clinically significant weight loss.[8]

NICE provides specific eligibility criteria for the procedure. It is recommended for adults with a Body Mass Index (BMI) of 30 kg/m² or higher. Also, acknowledging that certain ethnic groups face health risks at a lower BMI, a threshold of 27.5 kg/m² or higher is recommended for people of South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean origin. ESG is positioned as an option for patients who have failed to lose weight through non-surgical measures, are not suitable for, or do not wish to undergo more invasive bariatric surgery.

The guidance mandates strict conditions for any centre wishing to provide an ESG service. The procedure must only be performed in specialist weight management centres by clinicians with specific training and experience. All aspects of patient care must be managed by a dedicated multidisciplinary team (MDT), and details of every patient undergoing ESG must be submitted to the National Bariatric Surgery Registry for ongoing national audit.[8]

Cost-Effectiveness of ESG

The economic case for adopting ESG within the NHS is exceptionally strong, demonstrating significant value compared to both lifestyle changes and traditional surgery.

ESG versus Diet and Lifestyle Modification (LSM)

A 2023 UK-specific study by Kelly et al. provides definitive evidence of ESG's cost effectiveness. The analysis found that ESG has an Incremental Cost-Effectiveness Ratio (ICER) of just **£2,453 per Quality-Adjusted Life Year (QALY) gained** when compared to an intensive LSM programme alone for patients with class II obesity.[9] This figure is remarkably low, falling far below the standard NICE willingness-to-pay threshold of £20,000 per QALY. The study also projected that the ESG pathway provides an additional 1.23 QALYs over a patient's lifetime compared to LSM.[9]

There are no direct studies comparing cost effectiveness of ESG to laparoscopic sleeve gastrectomy (LSG) or pharmacological therapy in the UK. However, data from around the world suggest ESG is associated with significant cost savings.

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

ESG versus LSG

When compared to the surgical standard of LSG, ESG presents a compelling economic trade-off. While LSG may yield slightly greater weight loss in higher obesity classes, ESG is more cost effective and has better safety profile.[10] ESG is associated with a cost savings of $886 but a QALY loss of 0.75 compared to LSG, which indicates that ESG saves $1,181 per QALY sacrificed relative to LSG. For class III obesity, ESG is $5,489 less expensive while yielding 0.74 fewer QALYs, saving $7,379 per QALY lost versus LSG.[11] These figures establish ESG as an economically reasonable alternative, particularly for patients who prefer a less invasive option or where minimising healthcare costs is a priority. ESG's cost-effectiveness is further bolstered by procedural efficiencies, including shorter operative times (46–62.9 mins vs 72.4–99 mins for LSG), reduced hospital stays (0.87 days vs 1.45 days), and lower complication rates.[11]

ESG versus Pharmacological treatment

ESG was initially not cost-effective compared to semaglutide at a 1-year horizon because of higher upfront costs and a slight loss in QALYs (–0.002), with an ICER of $240,265 per QALY. However, by year 2, ESG became a dominant strategy over semaglutide, offering both lower costs and better outcomes (1.47 vs. 1.46 QALYs; ICER: –$347,584 per QALY). Over 5 years, ESG provided 3.66 QALYs versus 3.60 for semaglutide and was $33,583 less costly (ICER: –$595,532 per QALY). At 30 years, ESG remained dominant across all obesity classes offering up to 0.05 more QALYs and $226,216 saved (ICER: –$4,524,320 per QALY) in class III obesity.[11,12]

NHS Reimbursement

While the positive NICE guidance provides the necessary clinical endorsement for ESG, it does not constitute an automatic funding mandate from the NHS. In England, the decision to commission and fund new procedures rests with the 42 local Integrated Care Boards (ICBs). For an NHS Trust to offer the service, its clinical experts must present a robust business case to their local ICB. The initial adoption of ESG is well underway with an estimated 10 NHS centres now offering the procedure.

Conclusion

ESG marks a significant advancement in the NHS's strategy for managing obesity. As a minimally invasive procedure approved by NICE for its safety and efficacy, ESG effectively fills the gap between conservative lifestyle approaches and more invasive surgical treatments.

The economic case is evident, since ESG is highly cost-effective when compared to lifestyle interventions and offers a financially sound option for the treatment of obesity. While its early uptake within the NHS is promising, achieving equitable access nationwide depends on addressing key implementation challenges. These include expanding workforce training, ensuring commissioning support from ICBs, and establishing consistent service delivery models.

To help guide UK practice, an implementation framework has been developed by a multi-disciplinary team brought together under the auspices of the British Obesity & Metabolic Specialist Society (BOMSS), presented at their national annual conference in June 2025.

The economic case for adopting ESG within the NHS is exceptionally strong, demonstrating significant value compared to both lifestyle changes and traditional surgery

References:

[1] World Health Organization, WHO Obesity and Overweight https://www.who.int/health-topics/obesity#tab=tab_1

[2] Stierman B, Afful J, Carroll MD, et al. National Health and Nutrition Examination Survey 2017–March 2020 prepandemic data files development of files and prevalence estimates for selected health outcomes. *Natl Health Stat Report*. 2021;158.

[3] Health Survey for England, 2021: Data tables, https://files.digital.nhs.uk/05/1641EA/HSE-2021-Physical-activity-tables.xlsx

[4] World obesity atlas 2022, Section 2, Page 19

[5] https://healthmedia.blog.gov.uk/2023/06/07/government-plans-to-tackle-obesity-in-england/

[6] Public Health England- https://www.gov.uk/government/publications/weight-management-services-national-mapping

[7] Coulman KD, Margelyte R, Jones T, Blazeby JM, Macleod J, et al. (2023) Access to publicly funded weight management services in England using routine data from primary and secondary care (2007–2020): An observational cohort study. PLOS Medicine 20(9): e1004282. https://doi.org/10.1371/journal.pmed.1004282

[8] https://www.nice.org.uk/guidance/ipg783/resources/endoscopic-sleeve-gastroplasty-for-obesity-pdf-1899876520542661

[9] Kelly J, Menon V, O'Neill F, Elliot L, Combe E, Drinkwater W, Abbott S, Hayee B. UK cost-effectiveness analysis of endoscopic sleeve gastroplasty versus lifestyle modification alone for adults with class II obesity. Int J Obes (Lond). 2023 Nov;47(11):1161-1170. doi: 10.1038/s41366-023-01374-6. Epub 2023 Sep 6. PMID: 37674032; PMCID: PMC10599990.

[10] Nduma BN, Mofor KA, Tatang J, Amougou L, Nkeonye S, Chineme P, Ekhator C, Ambe S. Endoscopic Sleeve Gastroplasty (ESG) Versus Laparoscopic Sleeve Gastroplasty (LSG): A Comparative Review. Cureus. 2023 Jul 6;15(7):e41466. doi: 10.7759/cureus.41466. PMID: 37426405; PMCID: PMC10325692

[11] Saumoy M, Gandhi D, Buller S, Patel S, Schneider Y, Cote G, et al. Costeffectiveness of endoscopic, surgical and pharmacological obesity therapies: a microsimulation and threshold analyses. Gut [Internet]. 2023;72(12): 2250–9 https://pubmed.ncbi.nlm.nih.gov/37524445/

[12] Haseeb M, Chhatwal J, Xiao J, Jirapinyo P, Thompson CC. Semaglutide vs Endoscopic Sleeve Gastroplasty for Weight Loss. JAMA Netw Open [Internet]. 2024 Apr 12;7(4):E246221. Available from: https://pubmed.ncbi.nlm.nih.gov/38607627/

While LSG may yield slightly greater weight loss in higher obesity classes, ESG is more cost effective and has better safety profile

ENDO-2296801-AA

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

Patient Awareness as a Pillar of Clinical Success: A Methodological Framework

Written by Michael A. James PhD *with input from* ***Prof. Gontrand Lopez-Nava (MD, PhD, FASGE)*** *Director of Bariatric Endoscopy, Sanchinarro University Hospital, Madrid*

Introduction: The Growing Need for Patient Education on Endobariatric Weight Loss Options

The rise of endobariatric procedures, such as Endoscopic Sleeve Gastroplasty (ESG), has revolutionized weight loss treatment options. These minimally invasive techniques are increasingly recognized as effective alternatives to traditional bariatric surgery, particularly for patients seeking less invasive options.[1] With obesity rates continuing to climb globally, the demand for patient education on these innovative treatments has never been greater. A patient-centered approach is essential, ensuring individuals are fully informed about all available options, including their benefits, risks, and suitability based on individual health goals.[2] ESG can accomplish significant weight loss without surgical incisions, making it an attractive option for many patients.[3]

What Patients Need to Know to Be Fully Educated on Endobariatric Weight Loss Options

To make informed decisions, patients require a comprehensive understanding of endobariatric procedures. This includes a clear explanation of how ESG works, the endoscopic techniques involved, and the expected outcomes. For instance, ESG achieves an average excess weight loss of over 35% at 6 months with a low complication rate.[4] Patients also need to know the eligibility criteria, such as having a BMI between 30 and 40, or being unsuitable candidates for surgery.[5] Safety data are critical as studies have shown that ESG is associated with fewer complications and a quicker recovery compared to traditional bariatric surgery.[6] Comparisons with traditional bariatric surgery, such as laparoscopic sleeve gastrectomy, should highlight the advantages of ESG. Finally, patients must understand the importance of post-procedure lifestyle changes, including dietary modifications and regular exercise, to maintain long-term weight loss.[7] Illustrating this point, a 2024 study by Lahooti et al. found that patients who adhered to post-procedure dietary guidelines maintained 80% of their weight loss at five years.[8]

Effective Patient Education Activities

Hospitals can develop a variety of educational assets to inform patients about endobariatric options. Brochures and written materials, written in clear, accessible language, can provide an overview of procedures, benefits, and risks.[9] Webinars and video content featuring expert insights, patient testimonials, and procedural walkthroughs can enhance understanding and engagement.[10] For example, a webinar series featuring different specialties of the bariatric multidisciplinary team can address common questions and concerns, such as the role of nutrition in post-procedure success. Support groups and peer-sharing sessions offer emotional support and practical advice from individuals who have undergone similar treatments.[11] Interactive tools, such as online questionnaires, can help patients assess their suitability for endobariatrics and compare it with other options.[12] One-on-one consultations with endoscopists or bariatric surgeons allow patients to ask specific questions and receive personalized advice, fostering trust and confidence in their decision-making process.[13] These approaches can help patients take an informed approach for their weight loss journey.

Embedding Endobariatric Education Across Different Hospital Departments

Integrating endobariatric education into the workflow of various hospital departments ensures that patients with obesity-related conditions are aware of all available treatment options. For example, orthopedic surgeons can educate patients with joint problems about ESG as a pre-surgical weight loss option.[14] Cardiologists can incorporate endobariatrics

A patient-centered approach is essential, ensuring individuals are fully informed about all available options, including their benefits, risks, and suitability based on individual health goals

To make informed decisions, patients require a comprehensive understanding of endobariatric procedures. This includes a clear explanation of how ESG works, the endoscopic techniques involved, and the expected outcomes

into patient education for those with heart disease and obesity, emphasizing its role in managing obesity related health conditions.[15] Transplant centers can highlight ESG as a viable option for patients needing weight loss to qualify for transplantation.[16] Primary care physicians and internal medicine specialists play a crucial role in discussing endobariatric options during routine check-ups, particularly for patients with type 2 diabetes or hypertension (Matteo et al., 2022). Even emergency department staff should be educated about ESG to inform patients presenting with obesity-related emergencies.[17]

Creating a Seamless Patient Referral Pathway

A well-defined referral pathway is essential for connecting patients with endobariatric specialists. Primary care physicians and specialists should have easy-to-use referral systems to direct interested patients to endoscopists or bariatric surgeons.[18] Coordinating care across disciplines, including nutritionists, psychologists, and exercise physiologists, ensures comprehensive support from initial consultation to long-term follow-up.[19] This multidisciplinary approach not only improves patient outcomes but also enhances satisfaction and adherence to post-procedure guidelines.[7] For example, a 2022 study by Mehta et al. found that patients who received multidisciplinary care after ESG reported higher quality of life and better mental health outcomes.[20]

Addressing Potential Barriers to Education and Awareness

Overcoming stigma and misconceptions about weight loss and obesity is critical to effective patient education. Many patients may feel judged or discouraged when discussing weight loss options, so it is essential to create a supportive, non-judgmental environment.[11] Addressing common myths, such as the belief that ESG is less effective than surgery, requires clear communication of evidence-based information.[1] Cultural sensitivity is also vital, ensuring educational materials and interactions are tailored to the diverse populations served by the hospital.[2] For instance, providing materials in multiple languages and incorporating culturally relevant dietary advice can improve patient engagement and outcomes.

Measuring the Impact of Educational Efforts

To ensure the effectiveness of educational programs, hospitals should collect patient feedback through surveys, interviews, or focus groups.[13] Tracking patient outcomes, such as weight loss success rates and improvements in obesity related conditions, provides valuable data to refine educational strategies.[8] Continuous education for healthcare providers is equally important, ensuring they stay updated on the latest endobariatric options and can effectively communicate these to patients.[17] For example, regular training sessions on the latest ESG techniques and patient communication strategies can enhance provider confidence and patient satisfaction.

Conclusion: Building an Informed, Empowered Patient Community

Comprehensive patient education is the cornerstone of successful endobariatric treatment. By developing robust, multi-channel education strategies, hospitals can empower patients to make informed decisions about their weight loss journey.[2] Long-term patient engagement, through continuous support and information sharing, ensures that individuals remain informed and committed to their treatment plans, ultimately leading to better health outcomes.[7] Ongoing multidisciplinary pre- and post-procedural support together with education is associated with favorable long-term outcomes.[19] This highlights the importance of sustained education and support in achieving long-term success.

Primary care physicians and specialists should have easy-to-use referral systems to direct interested patients to endoscopists or bariatric surgeons

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

References:

[1] Dayyeh, B.K.A. et al. (2022). Endoscopic sleeve gastroplasty for treatment of class 1 and 2 obesity (MERIT): a prospective, multicentre, randomised trial. *The Lancet*. https://doi.org/10.1016/S0140-6736(22)01280-6.

[2] Maselli, D.B. et al. (2024). The endoscopic bariatric patient: characteristics, beliefs, and fears. *iGIE*. https://doi.org/10.1016/j.igie.2023.12.004.

[3] Goyal, H. et al. (2021). Endobariatric procedures for obesity: clinical indications and available options. *Therapeutic Advances in Gastrointestinal Endoscopy*. https://doi.org/10.1177/2631774520984627.

[4] Sarkar, A. et al. (2022). Safety and efficacy of endoscopic sleeve gastroplasty for obesity management in new bariatric endoscopy programs: a multicenter international study. *Therapeutic Advances in Gastrointestinal Endoscopy*. https://doi.org/10.1177/26317745221093883.

[5] Baratte, C. et al. (2025). Position statement and guidelines about Endoscopic Sleeve Gastroplasty (ESG) also known as "Endo-sleeve." *Journal of Visceral Surgery*. https://doi.org/10.1016/j.jviscsurg.2024.12.003.

[6] Marincola, G. et al. (2021). Laparoscopic sleeve gastrectomy versus endoscopic sleeve gastroplasty: a systematic review and meta-analysis. *Endoscopy International Open*. https://doi.org/10.1055/a-1300-1085.

[7] Negi, A. et al. (2022). Nutritional Management and Role of Multidisciplinary Follow-Up after Endoscopic Bariatric Treatment for Obesity. *Nutrients*. https://doi.org/10.3390/nu14163450.

[8] Lahooti, A. et al. (2024). Improvement in Obesity-Related Comorbidities 5 Years After Endoscopic Sleeve Gastroplasty: A Prospective Cohort Study. *Gastrointestinal Endoscopy*. https://doi.org/10.1016/j.gie.2024.12.017.

[9] Maselli, D.B. et al. (2024). How to establish an endoscopic bariatric practice. *World Journal of Gastrointestinal Endoscopy*. https://doi.org/10.4253/wjge.v16.i4.178.

[10] Dave, N. et al. (2023). Endobariatrics: a Still Underutilized Weight Loss Tool. *Current Treatment Options in Gastroenterology*. https://doi.org/10.1007/s11938-023-00420-6.

[11] Normand, E. et al. (2022). Review about Psychological Barriers to Lifestyle Modification, Changes in Diet Habits, and Health-Related Quality of Life in Bariatric Endoscopy. *Nutrients*. https://doi.org/10.3390/nu14030595.

[12] Faulx, A.L. (2024). Endobariatrics and Obesity Medicine: Present Status and Future Directions. *Gastrointestinal Endoscopy Clinics*. https://doi.org/10.1016/j.giec.2024.07.004.

[13] Haddad, J.D. et al. (2023). Endoscopic Sleeve Gastroplasty: A Practice Pattern Survey. *Obesity Surgery*. https://doi.org/10.1007/s11695-023-06684-2.

[14] Aderinto, N. et al. (2023). Recent advances in bariatric surgery: a narrative review of weight loss procedures. *Annals of Medicine and Surgery*. https://doi.org/10.1097/MS9.0000000000001472.

[15] Lavie, C.J. et al. (2018). Healthy Weight and Obesity Prevention: JACC Health Promotion Series. *Journal of the American College of Cardiology*. https://doi.org/10.1016/j.jacc.2018.08.1037.

[16] Nassani, N. et al. (2024). Endobariatric systems: Strategic integration of endoscopic therapies in the management of obesity. *Indian Journal of Gastroenterology*. https://doi.org/10.1007/s12664-024-01632-z.

[17] Boškoski, I. et al. (2023). Curriculum for bariatric endoscopy and endoscopic treatment of the complications of bariatric surgery: European Society of Gastrointestinal Endoscopy (ESGE) Position Statement. *Endoscopy*. https://doi.org/10.1055/a-2003-5818.

[18] Maselli, D.B. et al. (2021). Revisional endoscopic sleeve gastroplasty of laparoscopic sleeve gastrectomy: an international, multicenter study. *Gastrointestinal Endoscopy*. https://doi.org/10.1016/j.gie.2020.05.028.

[19] Carr, P. et al. (2022). Efficacy and safety of endoscopic sleeve gastroplasty and laparoscopic sleeve gastrectomy with 12+ months of adjuvant multidisciplinary support. *BMC Primary Care*. https://doi.org/10.1186/s12875-022-01629-7.

[20] Mehta, A. et al. (2022). Quality of Life, Mental Health, and Weight Loss Outcomes Following Endoscopic Sleeve Gastroplasty. *Journal of Gastrointestinal Surgery*. https://doi.org/10.1007/s11605-021-05137-4.

Long-term patient engagement, through continuous support and information sharing, ensures that individuals remain informed and committed to their treatment plans, ultimately leading to better health outcomes

ENDO-2296602-AA

Awareness, Solutions and Inclusion: These Are the Tools We Need to Fight Stigma

*An interview with **Vicki Mooney,** Executive Director of the European Coalition for People living with Obesity (ECPO)*

As we were walking out the door, he tapped my 11-year-old son on the stomach and said, 'lose that or it will kill you'. That has put a barrier between my own son and healthcare

Editor: Hi, Vicki. Thank you for joining me. Would you please introduce yourself?
Vicki: My name is Vicki Mooney. I am a patient advocate. I'm a 47-year-old woman who has lived with obesity since childhood. It turns out my obesity is genetic. At the moment I'm an obesity patient, I'm also a diabetes patient, and I'm also a liver patient, which are all connected with obesity, and hence my work in this area. I have had various interventions for obesity; surgical, pharma, and pharmacotherapy as well. I'm originally from Dublin, Ireland. I live in Lanzarote in the Canary Islands now. I am the executive director for ECPO, which is the European Coalition for People living with Obesity. We're an umbrella organization of patients, ambassadors, and advocates across 36 countries in Europe, where we try to build and create a united patient voice to support access to not only prevention of obesity and other non-communicable diseases, but also treatment and management for patients who live with obesity across Europe.

Editor: What is your personal experience with patients dealing with the stigma of obesity?
Vicki: The stigma from the healthcare perspective side has been a barrier to my own care over the years. I can give a couple of experiences that might help with that. When I was pregnant with my first child, I was 24 years old. I was newlywed, and I was around 150 kilos in weight when I was pregnant. The look of disgust and shame on the midwife's face when she went to do my scan and the face of all of the trainees that were standing around, the interns that were standing watching, was the most embarrassing thing I think I've ever gone through, as she huffed and puffed and moved skin around on my stomach to try to find the heartbeat of my child. Not being able to lie on the bed without fear of the bed collapsing under me… The shame of putting on a gown that did not fit me and did not cover me correctly…

I think having children who also have obesity has been a part of that challenge. My own son, at 11 years old, went for an ear infection, and I brought him to my general practitioner. As we were walking out the door, he tapped my 11-year-old son on the stomach and said, 'lose that or it will kill you'. That has put a barrier between my own son and healthcare. So, the stigma is something that is strong across not only the healthcare community, but also our pharmacist community, our family communities, society as a whole, and policy makers. Stigma is everywhere we go when we're looking to get treatment because people just assume that we've done this to ourselves, that lifestyle, diet, and exercise will fix us. But if you have genetic obesity, that's like telling somebody with skin cancer, 'Here's a sunhat and factor 50, you're fine'. So, the stigma has been a strong part of the challenge that I faced in reaching out, so much so that I was actually 28 years old when I actually had the courage to go to my healthcare practitioner and ask for support.

Editor: How important is the media when it comes to obesity stigma, and how can we enforce real change there?
Vicki: The media have a huge responsibility, and they should really take accountability for the narrative that they have portrayed. They have portrayed obesity as a lifestyle, when we know it can be genetic, we know it can be environmental, it's socioeconomically affected, it is neurologically affected, psychologically affected. It can be medications that you're on. There are so many different ways obesity is affected. That the media portrayed it as this simple 'eat less and move more' is public health promotion for everybody. Everybody should be eating less, or eating healthier and exercising more, and taking care of their bodies, and the media have portrayed almost this glamorization of what the perfect body is. And then on the flip side, there is the portrayal of ugliness of people who have obesity and shaming them. Portraying them as ugly and sloppy and lazy

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

and gluttonous by using pictures from editors with their heads off. There's no head. It's just a waistline, showing people with obesity eating a burger. That is unfortunately the control the media has had, and that needs to change, because the science needs to align. First of all, the journalists need to start reading the research and the science to understand that obesity is a chronic disease, and it has been recognized as that. What they're doing is actually stigmatizing and harming other individuals, including their own family members. We have 8 billion people in the world, and 1 billion people have obesity, therefore, one in eight. So for every journalist that is portraying obesity in a negative light, they're damaging their own families, or perhaps their child, or their mother, their grandfather, their cousin, their friends, and loved ones. So they need to take accountability for what they have done in portraying and pushing that narrative out, that it is lifestyle only, and start aligning the signs and reporting correctly.

Editor: So, the real effects of that stigma on people living with obesity are obviously profound in terms of the effect on patients' psychology and their willingness to pursue healthcare. Likewise, what are the effects of stigma on healthcare professionals and healthcare commissioners? How might it affect how healthcare professionals approach care for people living with obesity?
Vicki: This is a real catch 22 because majority of our healthcare providers receive no training on obesity. There is little training given on the subject across Europe. We're talking about European member states. There is nothing in the education plan or in the system that has anything more than three hours dedicated to any [related] learning on their journey to become a primary care provider or a surgeon. What we can do is teach them what takes place when patients are stigmatized or blamed for their own disease. I think we can use studies like the Action IO survey and the action teen survey, which were global surveys done across a number of countries with healthcare professionals, patients, and caregivers.

The average person waits between six and nine years to go and have a consult with their healthcare provider, and the majority of that, when you look into the results, is due to the negative associations that healthcare providers have with obesity. They have believed that societal and media narrative of 'It's your own fault, you're not exercising enough'. If you look at the Action IO, you'll see many patients reported that they don't feel that their healthcare provider actually is listening to them or believing them. There's so much stigma there, and our healthcare provider is no different. For me, this is probably one of the biggest challenges we have in Europe and the education system.

If our healthcare providers were given the right information, they were connected correctly with some of our best in the world who can teach on obesity as a chronic disease and a gateway to other non-communicable diseases, then they would have a better understanding of what is actually going on and how to engage with their patients correctly. I think one thing that is really prominent and important for healthcare providers to look at is the works of those like Dr. Michael Crotty from Ireland, who had worked in Canada on the Canadian clinical practice guidelines. They incorporated them in Ireland to the model of care, and in that, there are five A's about how you engage a patient with obesity and how you work around that stigma [ask, assess, advise, agree, assist]. Internal bias

If our healthcare providers were given the right information, they were connected correctly with some of our best in the world who can teach on obesity as a chronic disease and a gateway to other non-communicable diseases, then they would have a better understanding of what is actually going on and how to engage with their patients correctly

By calling somebody an obese subject, you're, first of all, taking their identity away, and then you're labeling them as pretty much fat

and stigma with healthcare providers is very strong, and they're asking permission with a patient to have a conversation about obesity and going on a journey together, because we don't have a cure for obesity. Obesity is lifelong, so we're looking at, if this is going to be a part of your life journey, we need a treatment and management plan. Asking permission to have the conversation… Patients freeze up when you say the word obesity because it's addressing something in the room that we're all afraid to talk about, because we've been taught that it's our own fault. I had the fear for so many years of speaking with any medical professional, because I thought they would just shut me down and tell me that I was making excuses and I was just lazy and gluttonous, not in those words, but they would tell me to eat less and move more. They would give me a diet sheet. They would tell me to go to a swimming club, join a gym, but not listen to the amount of times that I had actually tried and tried and tried and lost weight and regained and lost weight and regained. Now we know how that yo-yo dieting and the weight loss and regain isn't beneficial for our bodies. Really and truly, we need our healthcare professionals to be looking into the likes of Action IO, to be listening to Michael Crotty and others on the five As on how to speak with a patient. So, it's a non-stigmatizing, safe environment, and there is a treatment pathway there for the patient.

Editor: Those are perfect examples of why education and awareness in healthcare providers is critical to addressing the stigma of obesity. Can you talk about the importance of person-first language in obesity care?

Vicki: Person-first language is something that I'm very passionate about. In ECPO, we launched a campaign in 2019 across Europe, and many people thought it was just changing the word obese, or perhaps in an abstract, or symposium, or in public from 'obese subjects' to 'people with obesity' or 'people living with obesity' or 'participants with obesity'. And they thought, 'Okay, well, this is easy. We just have to change the language around this', but it goes beyond that. It goes deeper than that, because by calling somebody an obese subject, you're, first of all, taking their identity away, and then you're labeling them as pretty much fat. Now, if somebody has dementia, we don't call them a demented person. We don't call somebody a cancerous person, because that in itself is just so heavily stigmatizing. We're insinuating that person is their disease. So why would we call somebody with obesity an obese person? And what happens is when you change the language and you open the language. As healthcare providers speaking with a patient, we have to have a conversation: 'When you're ready, we want to look at your overall health, because obesity is a chronic disease and we want to ensure that you're getting the right treatment plan for you as a person. In time, we will come to that. When you take that and compare it to what we have seen for years ('Your weight has gone up. You need to do something about it. Here's a diet sheet, your obese category'), the patient is out the door and not wanting to have a conversation. So, person-first language runs much deeper, because you're actually addressing the disease and not labeling the person.

It's been a campaign that we have run for six years now, and we're taking it to ECO in Malaga in a few weeks' time, and we have over 50 delegates coming from across Europe and the globe. There we will have people to say, 'Please, when you're presenting or speaking about people who have obesity, recognize that they are individuals who have obesity. They're not obese people. They're not cancerous people. They're not fatty liver people. Let's speak about them respectfully'.

Editor: As a patient yourself, do you have a perspective on the importance of having a wide range of available treatment options?

Vicki: Very much so. I believe that over the years there was obviously the lifestyle narrative and that everybody fell into the category of everybody needs to do 10,000 steps a day. They need to eat this, this, this. They need to go on that kind of diet to lose weight, but research shows us that it goes way beyond that, and that it needs to be personalized treatment. That treatment can be personalized in nutrition plans and an exercise plan for the person. I look at myself as a nearly 50-year-old lady. What I could do in my twenties, I cannot do these days, right? So, the exercise plan for a 20-year-old is different from that of a 50-year-old is different from that of a 70-year-old. So that's personalized, and that's how we'd approach it. Then we look at treatments. Why should treatments be any different? How I react to pharmacotherapy or a surgical intervention for obesity is, this needs to be personalized because my biology is different from your biology, different from my colleagues' biology. You cannot treat everybody the same way. It's exactly why we have various interventions and treatments for every other disease out there. When you look at the cardiorenal or metabolic areas, including chronic kidney and cardiovascular disease, liver disease, and diabetes, there are various treatments for various individuals. I've got a number of chronic diseases, so I need a personalized treatment that suits that and does not interfere with my diabetes medication or perhaps a plan I'm on for my liver. So personalized treatment is the only way that we're going to be able to treat obesity correctly. You cannot just blanket it all and say, 'Well, this is the latest intervention. This will work for everybody'. It doesn't work like that.

Editor: That kind of touches on the next question, but perhaps you can expand on how industry can work together to change the current landscape in that regard.

Vicki: So this is where industry has to work together to change that. Currently, in the patient community, we see patients in support groups having conversations about this drug or this pharmacotherapy is offering 25% weight loss, and everybody thinks, 'Okay, that's a golden ticket'. Then you hear, 'Okay, well this surgical procedure is offering 40% weight loss' or 'I had these results', and everybody's flocking there. The reason for that is that patients are not informed correctly. They're not informed correctly because we've siloed treatments. Industry needs to actually start collaborating and say that we're all working together to provide various interventions to treat obesity. It's probably something that frustrates me the most that we see a trend of, for example, bariatrics, where everybody is taught that this is the golden ticket, and once they have bariatric surgery, they will be fixed. They're cured. But weight regain is so incredibly common. Even for myself. I had bariatric surgery in 2005, and then I had surgical intervention again in 2021. I had a revision because surgery changes and is updated, and there's new surgical interventions available. In between that there's pharmacotherapy that's available that could work with me right now as I'm in menopause or have other non-communicable diseases. Really and truly, when it comes to treatments, you need to personalize them. I think of my colleague, who is similar age. We've both had obesity for most of our lives now. If you were just to look at our basic outline with our BMI and everything, you'd provide the same treatment; endobariatric treatment that's non-invasive because Vicki suffers from infections post-surgery. The problem is that if you were to just give one intervention for the two of us, you'd think that's okay. My colleague is perimenopausal and has had retinopathy because she had diabetes. She has hyperlipidemia and, therefore, she needs a very different intervention than I need. On the outset, in regard to BMI, waste circumference, and everything else, we're the same. You could literally put us hand in hand, but we need very different interventions that need to be personalized and tailored for us.

Editor: What is your vision for the future, and what will this mean for people living with obesity?

Vicki: My vision for the future is that obesity is recognized as a chronic disease that is progressive, that has no cure, but has preventative measures, treatments, and a lifelong management pathway. Because otherwise, we're just ignoring a community and a disease that is a gateway to over 230 other non-communicable diseases. This is where I kind of go back down the rabbit hole of if our industry partners can work together to realize that the Vickis, Susies and Andrews of the world, who all look the same in black and white on the data sheet to a primary care provider, need different interventions. How is that any different from the treatments that we have out there for other non-communicable diseases? Why aren't we approaching obesity as we are other non-communicable diseases? I still believe firmly that stigma is that barrier that explains why people still believe obesity is a lifestyle and don't realize that it is a disease. My wish for the future: Obesity is treated like other non-communicable diseases with the same treatment and management pathways.

Editor: Vicki, I want to thank you for meeting with me today and thank you for your effort in improving the lives of patients living with obesity.

How I react to pharmacotherapy or a surgical intervention for obesity is, this needs to be personalized because my biology is different from your biology, different from my colleagues' biology

For more information: the ECPO website can be viewed here, where Vicki addresses the issue of obesity stigma: https://eurobesity.org/fr/video/stigma-in-obesity-the-patients-perspective/

ENDO-2296901-AB

Don’t Leave Patients Behind: They Will Still Need Us After Primary Surgery

Written by Michael A. James PhD *with input from* ***Christine Stier (MD),***
Department of Surgery, interdisciplinary Endoscopy, University Medical Centre, Heidelberg University, Mannheim, Germany

For patients who experience significant weight regain after LSG or RYGB, revisional endobariatric (EB) procedures, such as revisional endoscopic sleeve gastroplasty (ESG) or transoral outlet reduction (TORe), offer a minimally invasive alternative to traditional surgical revisions

Weight regain after bariatric procedures such as Roux-en-Y gastric bypass (RYGB) and laparoscopic sleeve gastrectomy (LSG) is a common and emotionally challenging issue for patients. Many perceive it as a personal failure, leading to feelings of shame and hopelessness, which can deter them from seeking further treatment.[1] This emotional burden is compounded by the societal stigma surrounding obesity, making it essential for healthcare providers to approach recurrent weight gain with empathy and understanding. Patients often feel isolated and discouraged, believing they have “failed” their procedure, which can lead to disengagement from follow-up care and lifestyle interventions.[2]

For patients who experience significant recurrent weight gain after LSG or RYGB, revisional endobariatric (EB) procedures, such as revisional endoscopic sleeve gastroplasty (ESG) or transoral outlet reduction (TORe), offer a minimally invasive alternative to traditional surgical revisions. These procedures are designed to address anatomical changes that contribute to recurrent weight gain while preserving the stomach’s structural integrity.[3] This approach is particularly appealing for patients who are reluctant to undergo additional surgery or who are at high risk for complications associated with revisional bariatric surgery.[4]

Continuous support from a multidisciplinary team is crucial to help patients navigate challenges following bariatric procedures. Surgeons, dietitians, psychologists, and exercise physiologists must work collaboratively to provide comprehensive care that addresses both the physical and emotional aspects of recurrent weight gain.[5] Regular follow-ups, virtual check-ins, and support groups can maintain motivation and adherence to lifestyle changes, creating a sense of accountability and community for patients. Education on the role of diet, exercise, and mental health in sustaining weight loss is vital for long-term success, as patients often struggle with emotional eating, body image issues, and the psychological impact of weight fluctuations.[6] By fostering a supportive environment, clinicians can help patients reframe recurrent weight gain as a manageable part of their journey rather than a definitive failure.

Managing Plateaus in Weight Loss or Recurrent Weight Gain

Weight loss plateaus and gain are common in the post-procedure journey, affecting up to 30% of patients within 2-3 years after RYGB or LSG.[1] These plateaus can be frustrating and demoralizing, particularly for patients who have invested significant effort into their weight loss journey. However, practical solutions such as dietary adjustments, increased physical activity, and psychological support can help patients overcome these hurdles. Dietitians play a critical role in tailoring meal plans to optimize macronutrient intake, reviewing caloric needs, and addressing specific nutritional deficiencies that may contribute to plateaus.[7] For example, adjusting protein intake or incorporating more fiber-rich foods can help patients feel fuller and maintain metabolic efficiency.

Exercise physiologists can design personalized activity programs to boost metabolism and break through plateaus. Incorporating strength training, high-intensity interval training (HIIT), or even low-impact activities like yoga can help patients overcome stagnation in their weight loss progress.[5] Psychological support is equally critical, as emotional eating and mental roadblocks often contribute to recurrent weight gain. Therapy or counseling can help patients manage stress, address underlying emotional triggers, and develop healthier coping mechanisms.[2]

Unfortunately, dietary, lifestyle, pharmaceutical, and psychological interventions for recurrent weight gain and control of dumping are not always successful, indicating revisional procedures. In these instances, EB can provide minimally invasive options that are effective and safer than bariatric revisions.

Prevalence of Weight Loss Plateaus and Recurrent Weight Gain

Approximately 20–30% of patients who undergo RYGB or LSG experience recurrent weight gain, with factors such as poor diet adherence, physical inactivity, and metabolic adaptation playing significant roles.[8] Older patients and those with comorbid conditions like type 2 diabetes are at higher risk for gain, highlighting the need for personalized care plans that address individual patient needs.[1] Biological factors, such as hormonal changes and metabolic adaptation, can also contribute to plateaus and gain, making it essential for clinicians to monitor patients closely and adjust treatment plans as needed.[9]

Dumping syndrome, a common complication of RYGB, can further complicate weight management by causing nausea, diarrhea, and hypoglycemia, which may deter patients from adhering to nutritional guidelines.[10] This condition can significantly impact a patient’s quality of life, making it difficult to maintain a balanced diet and leading to unintended weight fluctuations. These challenges underscore the importance of less invasive, organ-sparing alternatives such as revisional EB procedures, which can address recurrent weight gain without the risks associated with surgical revisions. By offering scalable and repeatable solutions, EB procedures provide a viable option for patients who are reluctant to undergo additional surgery or who are at high risk for complications.[11]

Clinical Impacts of Endobariatric Weight Loss Procedures

EB procedures, such as revisional ESG and TORe, as minimally invasive alternatives to surgical revisions for recurrent weight gain after RYGB or LSG, are performed in an ambulatory setting, are repeatable, and pose minimal complications.[4] Studies have shown that revisional ESG can achieve 15-20% total body weight loss in patients with recurrent weight gain, with low rates of adverse events.[3] TORe has been shown to achieve up to 14% total body weight loss (TBWL) at 6 months in patients with recurrent weight gain, again with low rates of adverse events.[12,13] Unlike surgical revisions, EB procedures preserve gastric anatomy, allowing for future interventions if needed. This scalability is particularly beneficial for patients who may require multiple interventions over their lifetime to manage obesity.[11]

Additionally, EB procedures can be combined with anti-obesity medications (AOMs) to enhance outcomes, providing a flexible and adaptable treatment strategy.[14] For instance, combining revisional ESG with medications like GLP-1 receptor agonists can help patients overcome plateaus and achieve more significant weight loss. This integrated approach addresses both the mechanical and physiological aspects of weight regain, offering a comprehensive solution for patients who have struggled with traditional methods.[15] By leveraging the strengths of both EB procedures and AOMs, clinicians can provide personalized care that maximizes patient outcomes while minimizing risks.

Post-Procedure Follow-Up Care

Structured follow-up care is essential for long-term success after EB procedures. Regular check-ins with the clinical care team, blood tests for nutrient deficiencies, and support for mental health and lifestyle changes can help patients maintain weight loss and address

By fostering a supportive environment, clinicians can help patients reframe weight regain as a manageable part of their journey rather than a definitive failure

EB procedures, such as revisional ESG and TORe, as minimally invasive alternatives to surgical revisions for weight regain after RYGB or LSG, are performed in an ambulatory setting, are repeatable, and pose minimal complications

emotional barriers to adherence.[16] Continuous education on proper nutrition, exercise, and realistic expectations is also crucial, as patients must understand that weight loss is a journey with potential plateaus and setbacks.[5] Encouraging patients to keep follow-up appointments and engage with support groups can help them stay motivated and achieve their weight loss goals.

Patient education should focus on the importance of maintaining a balanced diet, incorporating regular physical activity, and addressing psychological factors that may impact weight management. For example, patients should be informed about the role of protein intake in preserving muscle mass and supporting metabolism, as well as the benefits of mindfulness practices in reducing stress and emotional eating.[17] By providing patients with the tools and knowledge they need to succeed, clinicians can empower them to take an active role in their weight loss journey and achieve sustainable outcomes.

Conclusion

Revisional EB procedures, such as revisional ESG and TORe, offer a less invasive, scalable, and repeatable solution for managing recurrent weight gain after RYGB or LSG. By combining these techniques with multidisciplinary support , clinicians can provide patients with a flexible and effective approach to long-term weight management, addressing both the physical and emotional challenges of obesity.[18] A collaborative care model involving surgeons, dietitians, psychologists, and exercise specialists ensures that patients receive comprehensive support tailored to their individual needs, reinforcing the importance of continuous engagement and tailored care plans for long-term success.[19]

Ultimately, the key to successful weight management lies in maintaining a patient-centered approach that prioritizes empathy, education, and ongoing support. By helping patients reframe recurrent weight gain as a manageable part of their journey rather than a definitive failure, clinicians can foster resilience and motivation, enabling patients to achieve their health and wellness goals. Through a combination of innovative procedures, personalized care, and a commitment to long-term follow-up, healthcare providers can make a meaningful difference in the lives of patients struggling with recurrent weight gain after bariatric surgery.

References:

[1] Noria, S.F. et al. (2023). Weight Regain After Bariatric Surgery: Scope of the Problem, Causes, Prevention, and Treatment. *Current Diabetes Reports*. https://doi.org/10.1007/s11892-023-01498-z.

[2] Normand, E. et al. (2022). Review about Psychological Barriers to Lifestyle Modification, Changes in Diet Habits, and Health-Related Quality of Life in Bariatric Endoscopy. *Nutrients*. https://doi.org/10.3390/nu14030595.

[3] Maselli, D.B. et al. (2021). Revisional endoscopic sleeve gastroplasty of laparoscopic sleeve gastrectomy: an international, multicenter study. *Gastrointestinal Endoscopy*. https://doi.org/10.1016/j.gie.2020.05.028.

[4] Abboud, D.M. et al. (2022). Endoscopic Management of Weight Recurrence Following Bariatric Surgery. *Frontiers in Endocrinology*. https://doi.org/10.3389/fendo.2022.946870.

[5] Negi, A. et al. (2022). Nutritional Management and Role of Multidisciplinary Follow-Up after Endoscopic Bariatric Treatment for Obesity. *Nutrients*. https://doi.org/10.3390/nu14163450.

[6] Mehta, A. et al. (2022). Quality of Life, Mental Health, and Weight Loss Outcomes Following Endoscopic Sleeve Gastroplasty. *Journal of Gastrointestinal Surgery*. https://doi.org/10.1007/s11605-021-05137-4.

[7] Tewksbury, C. and Isom, K.A. (2022). Behavioral Interventions After Bariatric Surgery. ***Current Treatment Options in Gastroenterology***. https://doi.org/10.1007/s11938-022-00388-9.

[8] Salazar, J. et al. (2024). Weight Regain after Metabolic Surgery: Beyond the Surgical Failure. ***Journal of Clinical Medicine***. https://doi.org/10.3390/jcm13041143.

[9] Tamboli, R.A. et al. (2014). Early weight regain after gastric bypass does not affect insulin sensitivity but is associated with elevated ghrelin. ***Obesity***. https://doi.org/10.1002/oby.20776.

[10] Auge, M. et al. (2022). Long-term complications after gastric bypass and sleeve gastrectomy: What information to give to patients and practitioners, and why? ***Journal of Visceral Surgery***. https://doi.org/10.1016/j.jviscsurg.2022.02.004.

[11] Goyal, H. et al. (2021). Endobariatric procedures for obesity: clinical indications and available options. ***Therapeutic Advances in Gastrointestinal Endoscopy***. https://doi.org/10.1177/2631774520984627.

[12] Bulajic, M. et al. (2021). Endoscopic therapy of weight regain after bariatric surgery. ***World Journal of Gastrointestinal Surgery***. https://doi.org/10.4240/wjgs.v13.i12.1584.

[13] Maselli, D.B. et al. (2023). Transoral outlet reduction: Outcomes of endoscopic Roux-en-Y gastric bypass revision in 284 patients at a community practice. *World Journal of Gastrointestinal Endoscopy*. https://doi.org/10.4253/wjge.v15.i10.602.

[14] White, M.E. and Kushnir, V. (2024). Combination Therapies: Anti-Obesity Medications and Endoscopic Bariatric Procedures. *Gastrointestinal Endoscopy Clinics*. https://doi.org/10.1016/j.giec.2024.06.003.

[15] Imam, A. et al. (2023). Weight Loss Effect of GLP-1 RAs With Endoscopic Bariatric Therapy and Bariatric Surgeries. ***Journal of the Endocrine Society***. https://doi.org/10.1210/jendso/bvad129.

[16] Budny, A. et al. (2024). Long-Term Follow-Up After Bariatric Surgery: Key to Successful Outcomes in Obesity Management. ***Nutrients***. https://doi.org/10.3390/nu16244399.

[17] Mathews, A.L. et al. (2023). Patient perspectives on post-bariatric surgery nutritional supplementation. ***Surgical Endoscopy***. https://doi.org/10.1007/s00464-023-09994-9.

[18] Pessorrusso, F. et al. (2024). Update on Endoscopic Treatments for Obesity. ***Current Obesity Reports***. https://doi.org/10.1007/s13679-024-00551-6.

[19] Xie, J. and Wang, Y. (2024). Multidisciplinary combined treatment based on bariatric surgery for metabolic syndrome: a review article. ***International Journal of Surgery***. https://doi.org/10.1097/JS9.0000000000001320.

ENDO-2296902-AB

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

Endoscopic Sleeve Gastroplasty (ESG) as a “Gap Therapy”: Endorsement by the Global Bariatric Surgery Community

Brian J. Dunkin, MD, FACS, *Chief Medical Officer & VP of Medical Affairs Boston Scientific, Endoscopy*

Introduction

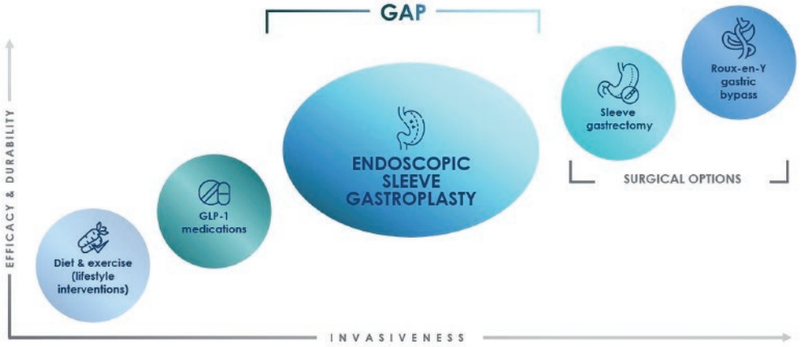
The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) is a federation of 76 national professional associations comprised of bariatric surgeons and integrated health professionals organized into five regional chapters (Asia-Pacific, Europe, Latin America, Middle East-North Africa, and North America). Its mission is to unify the global scientific, surgical, and integrated health communities to disseminate knowledge and establish universal standards for the treatment of patients suffering from adiposity-based chronic diseases.

As part of this mission, IFSO periodically publishes position statements on important topics in obesity care to guide the clinical community on the latest approaches for treatment. In September of 2024, the IFSO Bariatric Endoscopy Committee published an evidence-based review and position statement on endoscopic sleeve gastroplasty (ESG) for obesity management, endorsing the procedure.[1] The manuscript included a systematic review and meta-analysis of the current published literature and concluded that ESG is an “effective and valuable” treatment for obesity, particularly for patients with class I and II obesity, as well as those with class III obesity who are not suitable candidates for metabolic bariatric surgery or who are unwilling to undergo surgery. The committee also pointed out that there review and recommendation is for the use of the OverStitch™ Endoscopic Suturing System (Boston Scientific, Marlborough, MA, USA) to perform ESG based on the maturity of the technique using this device, the fact that it is the only device to have regulatory clearance for the indication of weight loss in those suffering from obesity, and has been shown to be cost-effective.

Background

Before 2021, patients who sought medical care from their physician for the management of obesity were essentially left with two options – lifestyle modification (LSM) or bariatric and metabolic surgery (BMS). LSM, even in a medically supervised environment, lacks durability and is difficult to comply with. On average, over 50% of lost weight is regained within 2 years and over 80% at 5 years.[2] In addition, individuals who are overweight or suffering from obesity attempt 4 – 7 weight loss efforts per year, usually without success.[3] Alternatively, while MBS is a highly effective

Before 2021, patients who sought medical care from their physician for the management of obesity were essentially left with two options – lifestyle modification (LSM) or bariatric and metabolic surgery (BMS)



ESG as a gap therapy between non-surgical and surgical interventions

Today, GLP-1 type medications have resulted in more people than ever engaging the healthcare system for the management of their obesity

intervention for the treatment of obesity and its associated co-morbidities, only 1% of the eligible patient population chooses this intervention.[4] As a result, a significant treatment gap existed between LSM and MBS, causing most people suffering from obesity to not seek or receive medical care for their disease. In 2021 semiglutide 2.4mg (Wegovy®, Novo Nordisk, Denmark) was approved by the US Food and Drug Administration as an adjunct to a reduced calorie diet and increased physical activity for chronic weight management in adults with an initial body mass index (BMI) of 30 kg/m² or greater (obesity), or 27 kg/m² or greater (overweight) in the presence of at least one weight-related comorbid condition (e.g., hypertension, type 2 diabetes mellitus, or dyslipidemia).[5] In 2023, tirzepatide (Eli Lilly and Company, Indiana, USA) was approved by the FDA for similar indications with even greater weight loss reported. The effectiveness of these drugs and ease of use resulted in millions of patients seeking medical care for their obesity. By 2024, the Kaiser Family Foundation Health Tracking Poll indicated that 12% of US adults had at least tried a GLP-1drug and that 6% were currently taking them.[6]

Today, GLP-1 type medications have resulted in more people than ever engaging the healthcare system for the management of their obesity. And while encouraging, the medications still leave a significant treatment gap. Rodriquez et al. demonstrated that 12 months after starting a GLP-1 medication for the purposes of weight loss, over 53% of patients had discontinued taking it. By 24 months discontinuation exceeded 72%.[7] These findings are particularly concerning given that patients who stop their GLP-1 medication regain 66% of their lost weight within four months.[8]

Bariatric endoscopists have proposed that ESG can help fill the obesity treatment gap, positioned between non-surgical and surgical intervention (Figure). As a purely endoscopic procedure done in an outpatient setting with return to full activity within days, ESG could help those patients who don't want to take life-long GLP-1 medications or want to discontinue them. It could also help patients who are eligible for BMS but want to avoid surgery. To validate this reasoning, the Bariatric Endoscopy Committee of IFSO embarked on the creation of a Position Statement on the use of ESG for obesity management.

Methodology and Results

To inform their position statement, IFSO conducted a comprehensive systematic review and meta-analysis, done in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and the Cochrane Handbook for Systematic Reviews of Interventions.[1] Eligible studies included case series (n ≥10), cohort studies, case–control studies, and randomized controlled trials (RCTs) published between January 1, 2013, and October 1, 2022. Studies were required to report outcomes for ESG performed using the OverStitch™ device. Articles had to include safety and/or efficacy data with results at standardized time points (6, 12, 18, 24, 36, or >36 months). To evaluate the quality of evidence, the GRADE (Grading of Recommendations Assessment, Development and Evaluation) framework was employed. Each outcome was rated based on study design, risk of bias, inconsistency, indirectness, imprecision, publication bias, effect size, and other modifying factors.

The search yielded 3015 non-duplicate records, which were screened by title and abstract. Of these, 100 articles were selected for full-text review. A total of 44 studies met all eligibility criteria and were included in the final qualitative and quantitative analyses. Together, these studies encompassed 15,714 patients who underwent ESG, with a wide range of follow-up durations and reporting on outcomes including weight loss efficacy, adverse events,

Summary of Weight Loss Outcomes After Endoscopic Sleeve Gastroplasty (ESG)

Time Point	Mean % Excess Weight Loss (%EWL)	Mean % Total Body Weight Loss (%TBWL)
6 months	48.0%	15.7%
12 months	53.1%	17.6%
18 months	58.0%	16.3%
24 months	46.6%	15.2%
36 months	53.2%	14.1%
60 months	45.3%	15.9%

and metabolic improvements. The results of this systematic review and meta-analysis are summarized in the table above.

These data demonstrate that ESG provides meaningful weight loss with a durability to five years. These results were achieved with a low pooled serious adverse event rate of 1.25%. Based on this, IFSO endorses ESG as an "effective and valuable intervention for managing obesity" stating that it is particularly effective for patients with class I or II obesity as well as those with class III obesity who are not suitable candidates for MBS. IFSO also points out that it is important to integrate and complement any obesity intervention such as ESG with a comprehensive, longitudinal healthy-living program.

Impact

It is noteworthy that a federation of bariatric surgical societies with worldwide representation endorses an endoscopic procedure for the treatment of obesity. This federation includes societies that are the voice of BMS in many countries including the USA (American Society for Metabolic and Bariatric Surgery), France (Société Française et Francophone de Chirurgie de l'Obésité et des Maladies Métaboliques), Italy (Società Italiana di Chirurgia dell'Obesità e delle malattie metaboliche), Spain (Sociedad Española de Cirugia de la Obesibad), United Kingdom (British Obesity & Metabolic Surgery Society), Argentina (Sociedad Argentina de Cirugia de la Obesidad), Australia and New Zealand (Australian & New Zealand Obesity Surgery Society), Brazil (Sociedade Brasileira de Cirurgia Bariátrica e Metabólica), Mexico (Colegio Mexicano de Cirugía para la Obesidad y Enfermedades Metabólicas), and China (Chinese Society for Metabolic & Bariatric Surgery) to name a few. This endorsement is reflected in the growing list of national organizations around the world who have published their own guidelines on the role of ESG in the treatment of patients suffering from obesity. This list includes the UK, USA, France, Saudi Arabia, Spain, and Italy and grows monthly.

Obesity care specialists now have guidance to understand the safety, efficacy, and durability of ESG and where it fits into the treatment armamentarium for their patients. Adding "tools" to the treatment toolbox for obesity is essential, as it is for any lifelong, chronic medical condition.

Summary

The endorsement of ESG by a worldwide federation of obesity surgery societies is a powerful statement. This group has provided clear guidance that it is an "effective and valuable intervention for the management of obesity" for those patients with class I or II obesity (or selectively for class III) who don't want lifelong medication or surgery. The obesity treatment gap narrows.

To evaluate the quality of evidence, the GRADE (Grading of Recommendations Assessment, Development and Evaluation) framework was employed

References:

[1] Abu Dayyeh B, Stier C, Alqahtani A, et al. IFSO bariatric endoscopy committee evidence-based review and position statement on endoscopic sleeve gastroplasty for obesity management. Obesity Surgery 2024; Published online https://doi.org/10.1007/s11695-024-07510-z.

[2] Anderson, J. W., Konz, E. C., Frederich, R. C., & Wood, C. L. (2001). Long-term weight-loss maintenance: A meta-analysis of US studies. American Journal of Clinical Nutrition, 74(5), 579–584.

[3] Yaemsiri, S., Slining, M. M., & Agarwal, S. (2011). Trends and patterns in weight loss attempts among US adults. *JAMA*, *306*(9), 920–922.

[4] Liu, N., & Funk, L. M. (2020). Bariatric Surgery Trends in the U.S.: 1% Is the Loneliest Number [Commentary]. Annals of Surgery, 271(2), 210–211.

[5] Novo Nordisk Inc. (2021). Wegovy (semaglutide) injection, for subcutaneous use: Prescribing information. U.S. Food and Drug Administration. https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/215256s000lbl.pdf

[6] Kirzinger, A., Lopes, L., Sparks, G., & Brodie, M. (2024, May 10). KFF Health Tracking Poll – May 2024: The public's use and views of GLP-1 drugs. KFF. https://www.kff.org/health-costs/poll-finding/kff-health-tracking-poll-may-2024-the-publics-use-and-views-of-glp-1-drugs/

[7] Rodriguez, P. J., Zhang, V., Gratzl, S., Do, D., Goodwin Cartwright, B., Baker, C., Gluckman, T. J., Stucky, N., & Emanuel, E. J. (2025). Discontinuation and Reinitiation of Dual-Labeled GLP-1 Receptor Agonists Among US Adults With Overweight or Obesity. JAMA Network Open, 8(1), Article e2457349.

[8] Wilding, J. P. H., Batterham, R. L., Davies, M., Van Gaal, L., Kandler, K., Claudius, B., … Rubino, D. M. (2022). Weight regain and cardiometabolic effects after withdrawal of semaglutide: The STEP 1 trial extension. Diabetes, Obesity and Metabolism, 24(8), 1553–1564.

ENDO-2296802-AA

NOTES

BARIATRIC ENDOSCOPY IN CLINICAL PRACTICE: INCREASING ACCESS AND OPTIONS FOR PEOPLE LIVING WITH OBESITY

NOTES