



Indications and Coverage of Metabolic and Bariatric Surgery:

A Worldwide IFSO Survey Comparing Different National Guidelines.

J. Pujol-Rafols, J. Carmona-Maurici, D. M. Felsenreich, S. A. Shikora, G. Prager, N. Di Lorenzo, M. De Luca, O. Uyanik, M. Mazzarella, S. D'Arco, L. Angrisani, E. Pardina, J. M. Balibrea.

Obesity Surgery (2024) 34:1395–1404

I have no potential conflict of interest to report

In 1991, the US National Institute of Health gathered a group of experts in the field of obesity and introduced the first indications for surgical treatment for obesity based on the scientific evidence available at the time.

- NIH Conference: Gastrointestinal surgery for severe obesity. Consensus development conference panel. *Ann Intern Med* 1991;115:956–961.
- Gastrointestinal Surgery for Severe Obesity. *Obes Surg.* 1991 Sep;1(3):257-265.
- Gastrointestinal surgery for severe obesity: National Institutes of Health Consensus Development Conference Statement. *Am J Clin Nutr.* 1992 Feb;55(2 Suppl):615S-619S.

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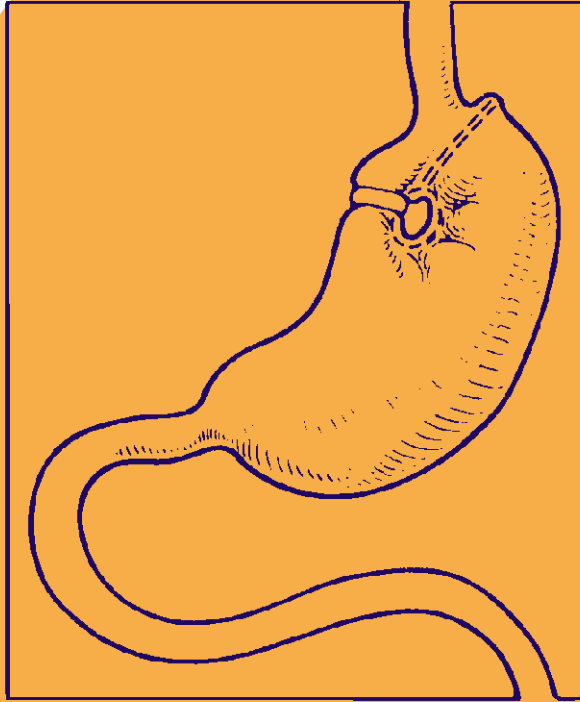


Figure 1. Vertical banded gastroplasty

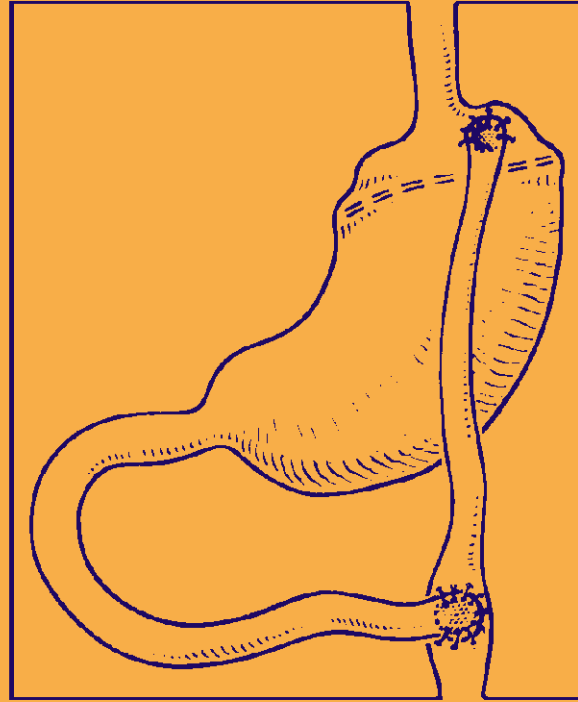


Figure 2. Roux-en-Y gastric bypass

7

*Ref: NIH Consensus Development Conference March 25–27, 1991
Volume 9, Number 1*

- Since the NIH consensus conference,
 - New procedures have been introduced.
 - Better approach routes and greater technological evolution (laparoscopy, robotic surgery, etc.).
 - We have a better understanding of the health hazards of obesity.
 - We have improved the efficacy and safety of MBS...

- Huppler L, et al.: How safe bariatric surgery is-An update on perioperative mortality for clinicians and patients. Clin Obes 2022 Jun;12(3):e12515.
- Aminian A, et al.: How safe is metabolic/diabetes surgery? Diabetes Obes Metab 2015 Feb;17(2):198-201.
- Blaine TP, et al: The history of metabolic and bariatric surgery: Development of standards for patient safety and efficacy. Metabolism 2018 Feb;79:97-107.
- Nguyen NT, et al. Proposal for a Bariatric mortality risk classification system for patients undergoing bariatric surgery. Surg Obes Relat Dis 2013 Mar-Apr;9(2):239-46.

Original article

Proposal for a bariatric mortality risk classification system for patients undergoing bariatric surgery

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Received May 27, 2011; accepted December 13, 2011

- It analyses the records of 105,287 patients undergoing bariatric surgery between 2002 and 2009.

- The number of hospital deaths per operations decreased from 4.0 to 0.6 0/00.

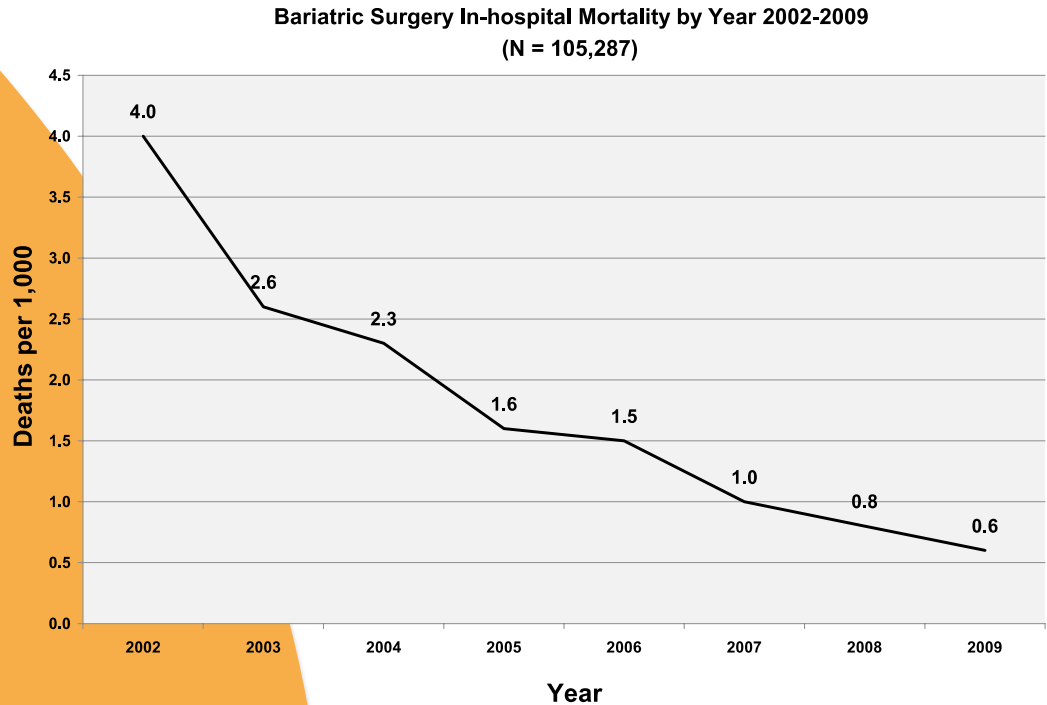
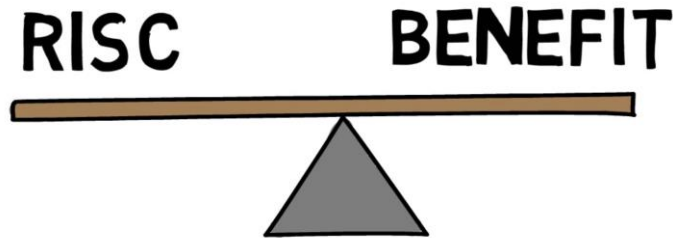


Fig. 2. In-hospital mortality according to year reported as number of deaths per 1000 bariatric operations, 2002–2009.

- Over the last 30 years, there has been an improvement in outcomes with a very significant reduction in morbidity and surgical mortality.

- **"If the safety profile improves, the indication criteria could be expanded."**



- *Lerner H. et al Benefit-risk paradigm for clinical trial design of obesity devices: FDA proposal. Surg Endosc. 2013;27:702-7.*

Treatment of Mild to Moderate Obesity with Laparoscopic Adjustable Gastric Banding or an Intensive Medical Program

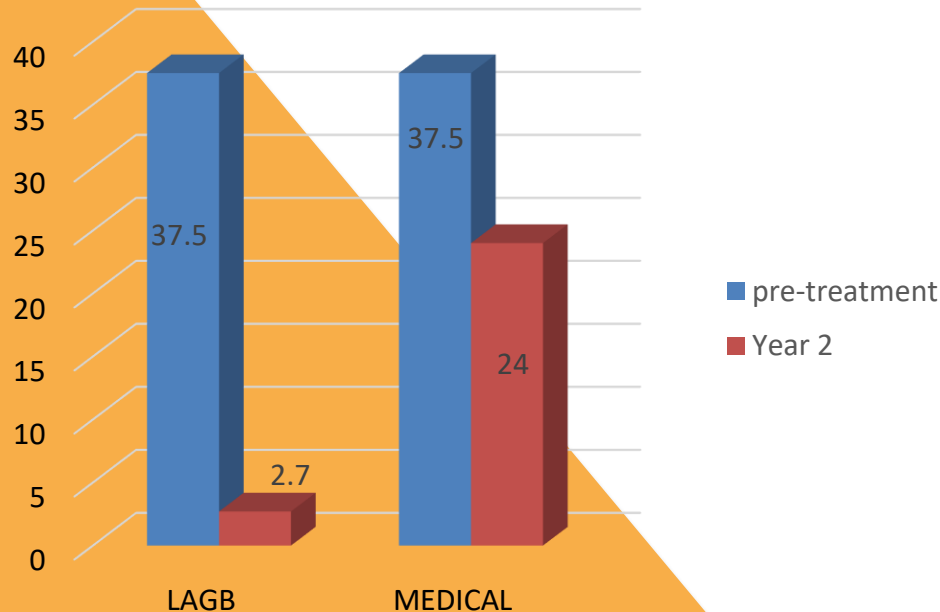
A Randomized Trial

Paul E. O'Brien, MD; John B. Dixon, MBBS, PhD; Cheryl Laurie, RN; Stewart Skinner, MBBS, PhD; Joe Proietto, MBBS, PhD; John McNeil, MBBS, MSc, PhD; Boyd Strauss, MBBS, PhD; Sharon Marks, MBBS, PhD; Linda Schachter, MBBS; Leon Chapman, MBBS; and Margaret Anderson, BHIM

- RCT study.
- LAGB + medical treatment vs. medical treatment for the control of Metabolic sd.
- BMI: 30-35.

O' Brian et al. Ann Intern. Med. (144) 2006.

- **The surgery group...**

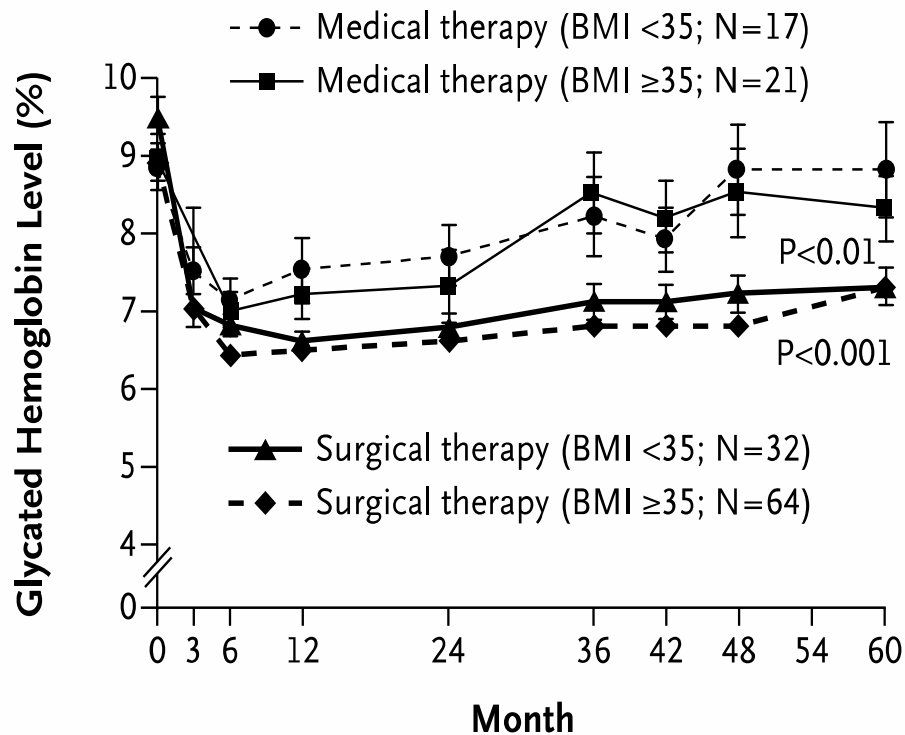


- Obtained higher %EWL (87% vs. 22%; $p < 0.001$).
- Achieved a significantly better improvement in co-morbidities (93% vs. 36%; $p < 0.002$).

O' Brian et al. Ann Intern. Med. (144) 2006.

- **Courcoulas et al, Ikramuddin et al, Parikh et al and Schauer et al** showed significantly better weight loss and diabetes improvement when medical treatment was combined with surgery in patients with BMI <35 kg/m².

D Glycated Hemoglobin According to Body-Mass Index



Parikh et al, Annals of Surgery. 2014; 260 (4).
 Courcoulas AP, et al. JAMA Surg 2015;150(10).
 Ikramuddin S, et al. Diabetes Care 2016;39(9).
 Schauer PR, (2017) N Engl J Med 376(7).

Over the last few years, several medical societies have proposed expanding the 1991 indications based on the updated evidence...

2013



ASMBS statements/guidelines

Bariatric surgery in class I obesity (body mass index 30–35 kg/m²)

ASMBS Clinical Issues Committee*

Received September 12, 2012; accepted September 13, 2012

"For patients with BMI 30-35, who do not achieve improvement with non-surgical methods, bariatric surgery should be an available option".

2013



Clinical Information

Interdisciplinary European Guidelines on Metabolic and Bariatric Surgery

1. With a BMI ≥ 40 kg/m².
2. With BMI 35-40 kg/m² with comorbidities.
3. BMI >30 and <35 kg/m² with T2DM.

2014



Bariatric Surgery in Class I Obesity

A Position Statement from the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO)

Luca Busetto • John Dixon • Maurizio De Luca •
Scott Shikora • Walter Pories • Luigi Angrisani

- "Patients with grade I obesity, who are unable to achieve adequate weight loss with conservative treatment, should be considered for bariatric surgery".



- Rubino lead two Diabetes Surgery Summits bringing together 45 medical and scientific societies from around the world, including the **International Diabetes Federation** and the **American Diabetes Association**.

3RD WORLD CONGRESS
ON INTERVENTIONAL
THERAPIES FOR
TYPE 2 DIABETES



Metabolic Surgery in the Treatment Algorithm for Type 2 Diabetes: A Joint Statement by International Diabetes Organizations

Diabetes Care 2016;39:861–877 | DOI: 10.2337/dc16-0236

*Francesco Rubino,¹ David M. Nathan,² Robert H. Eckel,³ Philip R. Schauer,⁴ K. George M.M. Alberti,⁵ Paul Z. Zimmet,⁶ Stefano Del Prato,⁷ Linong Ji,⁸ Shaukat M. Sadikot,⁹ William H. Herman,¹⁰ Stephanie A. Amiel,¹ Lee M. Kaplan,² Gaspar Taroncher-Oldenburg,¹¹ and David E. Cummings,¹² on behalf of the Delegates of the 2nd Diabetes Surgery Summit**

- "Surgery should be considered as an option to treat type 2 diabetes in patients with grade I obesity who are inadequately controlled despite medical treatment".

2020

Surgical Endoscopy (2020) 34:2332–2358
<https://doi.org/10.1007/s00464-020-07555-y>



GUIDELINES



Clinical practice guidelines of the European Association for Endoscopic Surgery (EAES) on bariatric surgery: update 2020 endorsed by IFSO-EC, EASO and ESPCOP

Nicola Di Lorenzo¹ · Stavros A. Antoniou^{2,3} · Rachel L. Batterham^{4,5} · Luca Busetto⁶ · Daniela Godoroja⁷ · Angelo Iossa⁸ · Francesco M. Carrano⁹ · Ferdinando Agresta¹⁰ · Isaias Alarçon¹¹ · Carmil Azran¹² · Nicole Bouvy¹³ · Carmen Balaguè Ponz¹⁴ · Maura Buza¹⁵ · Catalin Copaescu¹⁵ · Maurizio De Luca¹⁶ · Dror Dicker¹⁷ · Angelo Di Vincenzo⁶ · Daniel M. Felsenreich¹⁸ · Nader K. Francis¹⁹ · Martin Fried²⁰ · Berta Gonzalo Prats¹⁴ · David Goitein^{21,22} · Jason C. G. Halford²³ · Jitka Herlesova²⁰ · Marina Kalogridaki²⁴ · Hans Ket²⁵ · Salvador Morales-Conde¹¹ · Giacomo Piatto¹⁶ · Gerhard Prager¹⁸ · Suzanne Pruijssers¹³ · Andrea Pucci^{4,5} · Shlomi Rayman^{21,22} · Eugenia Romano²³ · Sergi Sanchez-Cordero²⁶ · Ramon Vilallonga²⁷ · Gianfranco Silecchia⁸



The European Association for Endoscopic Surgery (EAES) coordinated a joint work with the European Chapter of IFSO (IFSO-EC), the European Association for the Study of Obesity (EASO) and the European Society for the Perioperative Care of the Obese Patient (ESPCOP).

2020

"Surgery should be considered in patients with BMI between 30-35 kg/m² and T2DM and/or hypertension with poor control despite medical treatment".





2022 American Society of Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) Indications for Metabolic and Bariatric Surgery

Dan Eisenberg¹ · Scott A. Shikora² · Edo Aarts³ · Ali Aminian⁴ · Luigi Angrisani⁵ · Ricardo V. Cohen⁶ · Maurizio de Luca⁷ · Silvia L. Faria⁸ · Kasey P.S. Goodpaster⁴ · Ashraf Haddad⁹ · Jacques M. Himpens¹⁰ · Lilian Kow¹¹ · Marina Kurian¹² · Ken Loi¹³ · Kamal Mahawar¹⁴ · Abdelrahman Nimeri¹⁵ · Mary O’Kane¹⁶ · Pavlos K. Papasavas¹⁷ · Jaime Ponce¹⁸ · Janey S. A. Pratt^{1,19} · Ann M. Rogers²⁰ · Kimberley E. Steele²¹ · Michel Suter^{22,23} · Shanu N. Kothari²⁴

Published online: 7 November 2022

- **MBS is recommended for individuals with BMI ≥ 35 kg/m² , regardless of the presence, absence or severity of comorbidities.**
- **MBC should be considered for individuals with metabolic disease and BMI 30-34.9 kg/m²*.**

(*adjusted in the Asian population).

Eisenberg, D et al. *SOARD*. (2022) 1-12. & *Obes Surg* 33, 3-14 (2023).

However, due to the large number of national societies that make up IFSO and their different socio-economic contexts, the indications for MBS at a national level may not follow these recommendations to 100% and could vary from one country to another.

Obesity Surgery (2024) 34:1395–1404
<https://doi.org/10.1007/s11695-024-07142-3>



ORIGINAL CONTRIBUTIONS



Indications and Coverage of Metabolic and Bariatric Surgery: A Worldwide IFSO Survey Comparing Different National Guidelines

J. Pujol-Rafols¹ · J. Carmona-Maurici² · D. M. Felsenreich³ · S. A. Shikora⁴ · G. Prager³ · N. Di Lorenzo⁵ · M. De Luca⁶ ·
O. Uyanik⁷ · M. Mazzarella⁸ · S. D'Arco⁸ · L. Angrisani⁹ · E. Pardina² · J. M. Balibrea^{10,11}





Indications and Coverage of Metabolic and Bariatric Surgery: A Worldwide IFSO Survey Comparing Different National Guidelines

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O. Uyanik⁷ · M. Mazzarella⁸ · S. D'Arco⁸ · L. Angrisani⁹ · E. Pardina² · J. M. Balibrea^{10,11}

- Objective: IFSO aimed to analyze which are the indications for MBS recommended by each of the different national societies.
- The second objective was to assess whether the costs of MBS procedures were covered by their national health services.

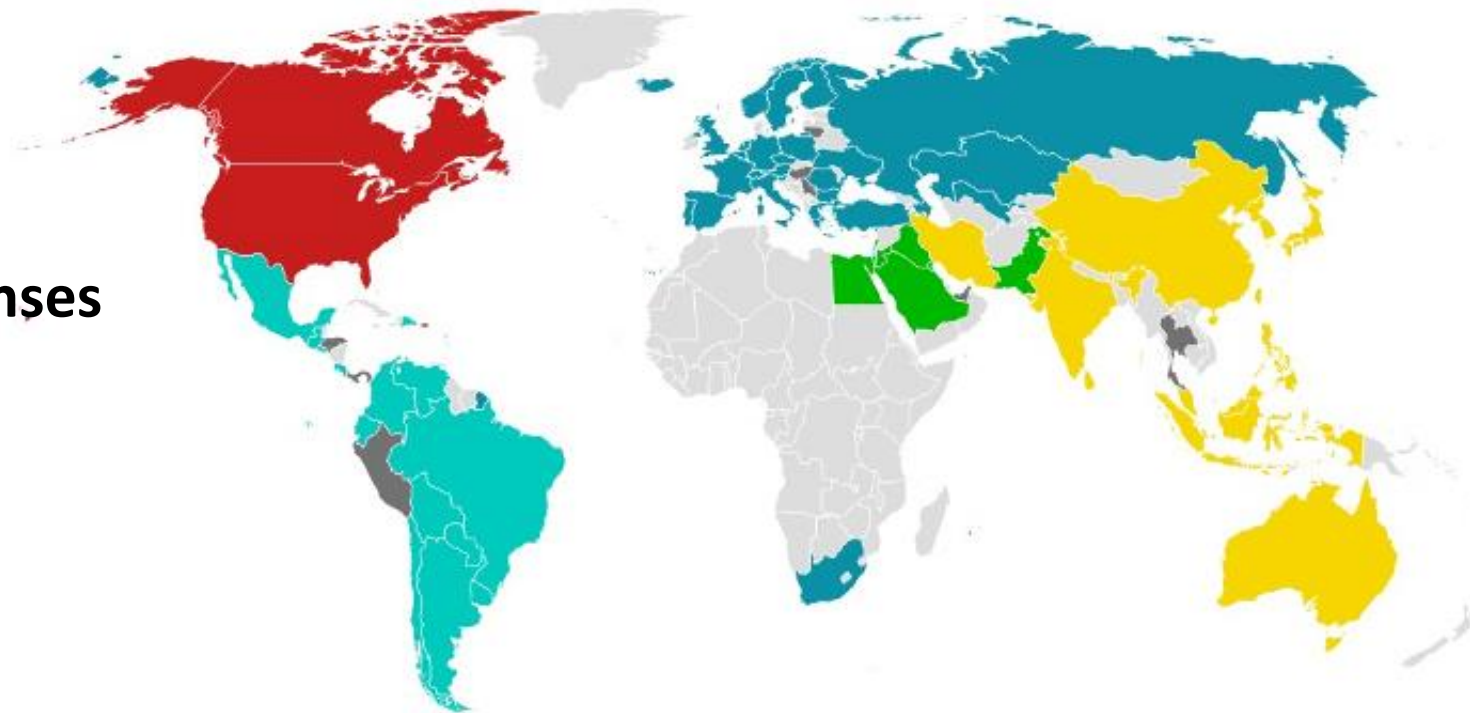
Materials and Methods

A questionnaire was developed in order to obtain information on national guidelines and the type of financial coverage they have in each country.

- This survey was sent by email to the representatives of the different national societies.
- The results were analyzed as a whole and also grouped according to the different geographical chapters of the federation.

Chapter

APC EC LAC MENAC NAC non-respondents



- **Total Responses**

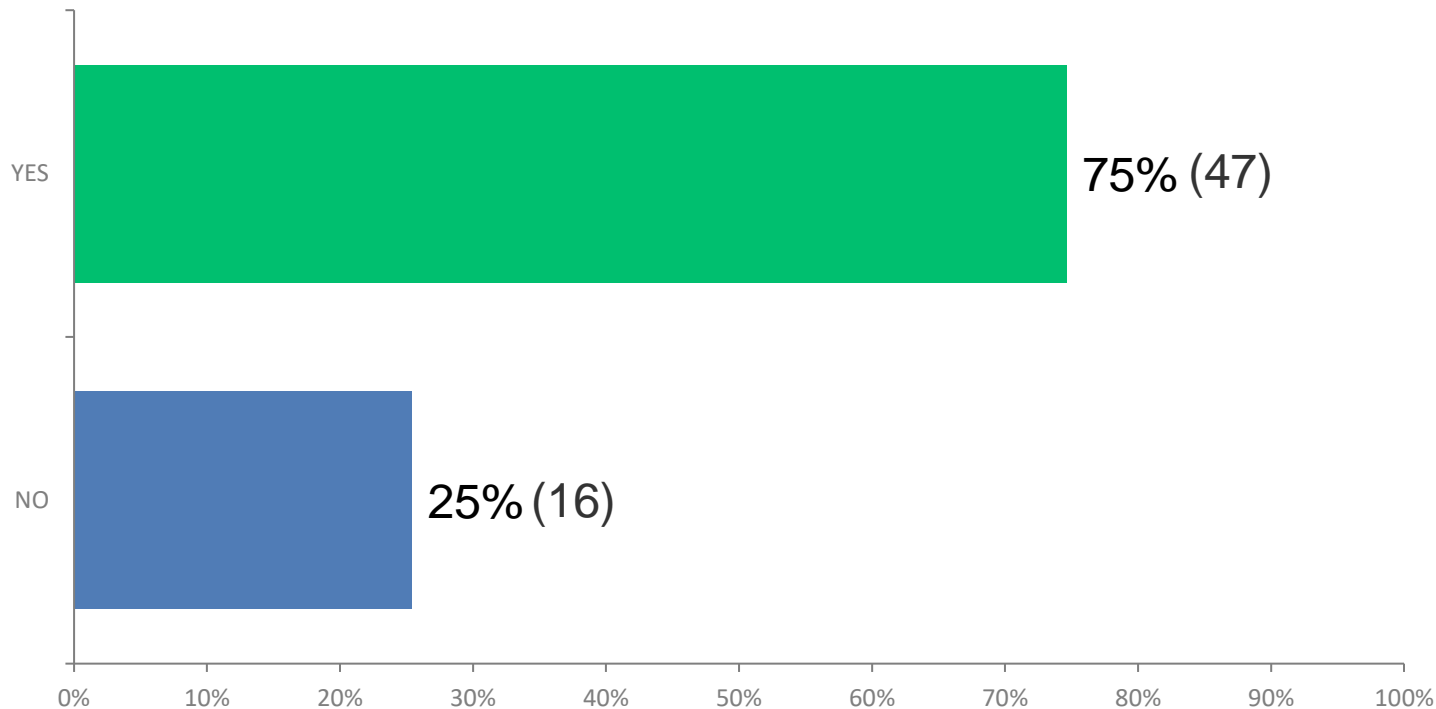
63/72
(88%)

- For each chapter, the participation was $\geq 75.0\%$.

- **RESULTS:**

Q1: Does your national MBS society have any recommendations about candidates for Bariatric and Metabolic Surgery?

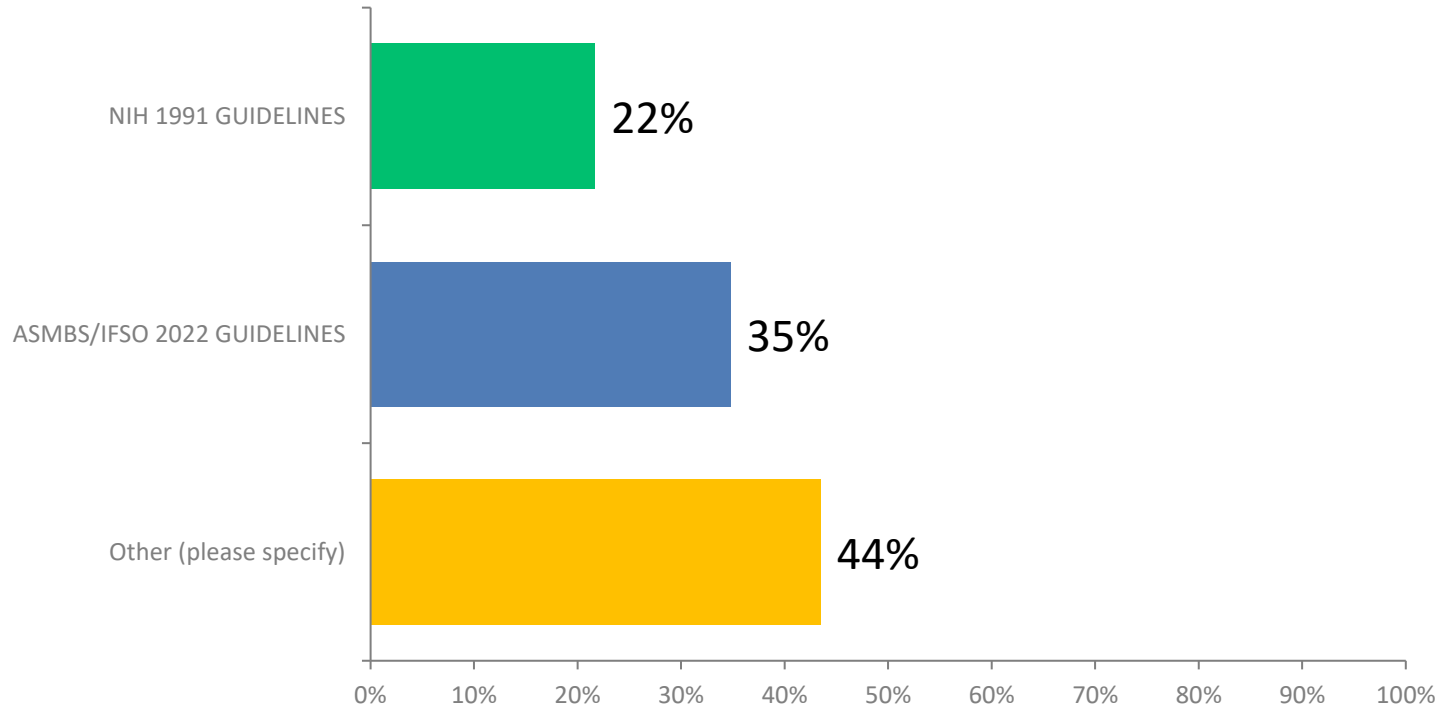
Q1: Does your national MBS society have any recommendations about candidates for Bariatric and Metabolic Surgery?



• Answered: 63 Skipped: 0

Q2: Which are your guidelines?

Q2: Which are your guidelines?



Others:

Some countries have recommendations halfway between those of 1991 and those of 2022.

(*) EASO, ADA, IFSO-EC 2013, EAES 2020.

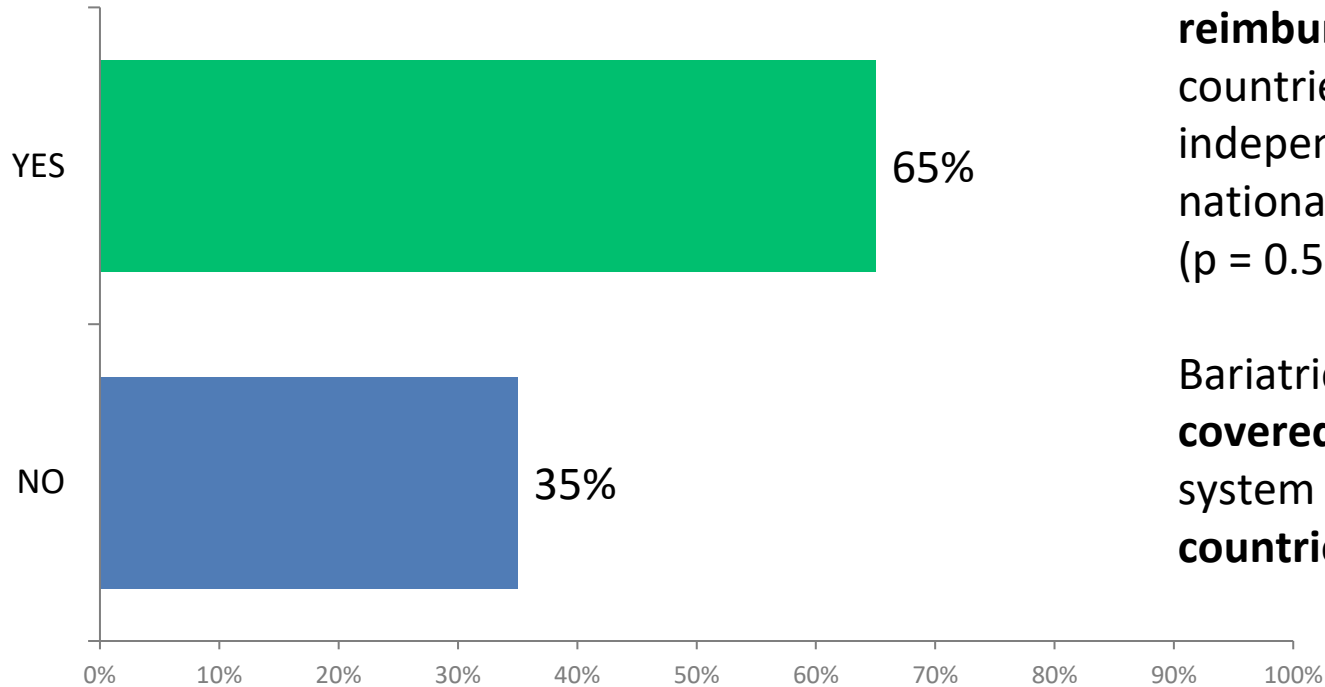
(**) IFSO APC 2011 guidelines.

(***) Age, 18 years of age or older, or when bone growth is completed

30 kg/m ² + T2D 35 kg/m ² + comorbidities. >40Kg/m ² (*)	France Germany Italy
>27.5 + T2D >30 + comorbidities BMI >35 (**)	Hong Kong India Korea (***)
>32 + DM or 2 other comorbidities. >37	Malaysia
>30 kg/m ² + T2D > 35 kg/m ²	Switzerland
>35 + comorb. >32,5 + T2D & 1 other comorb.	Japan
>30 + T2D or reproductive dysfunction. >35 + comorb. >40	Kazakhstan
>30 + comorbidities. >40	Venezuela

Q3: Does your national/public health system financially cover MBS?

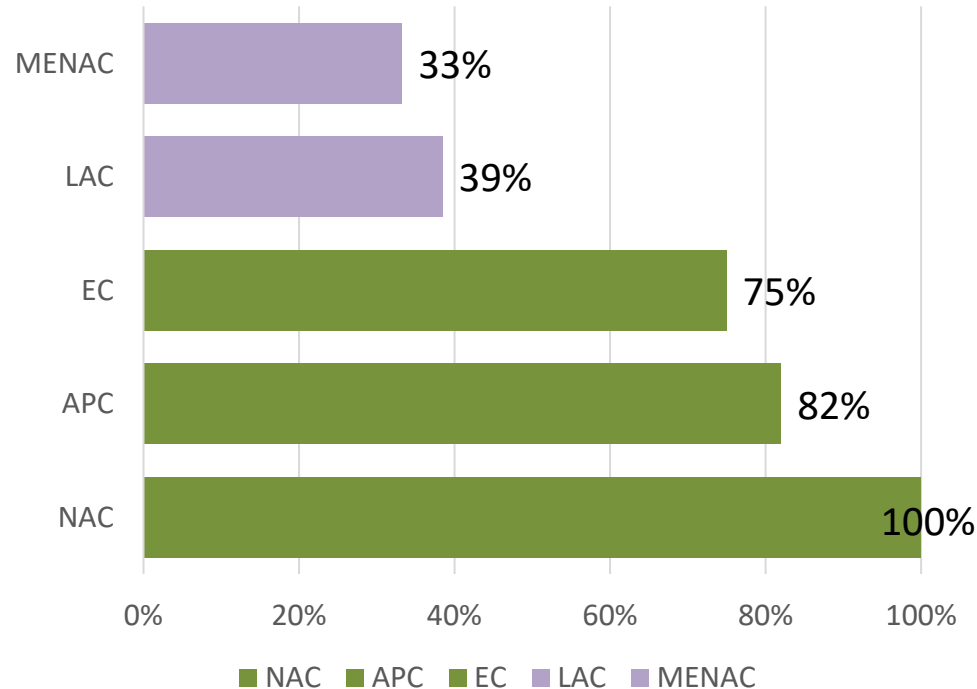
Q3: Does your national/public health system financially cover MBS?



MBS was totally or partially **reimbursed in 65%** of the countries, and the coverage is independent of having or not national guidelines ($p = 0.546$).

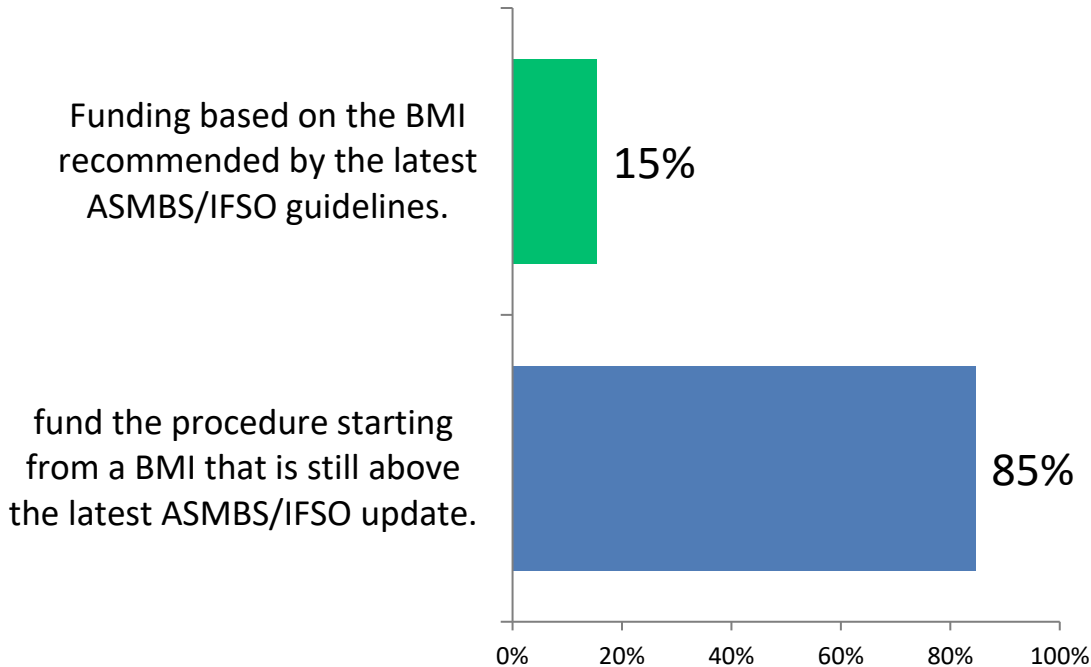
Bariatric surgery is **not covered** by the public health system **in 35% of the countries** that make up IFSO.

Percentage of countries with MBD financially covered by the public health system in different IFSO chapters.



- There were statistical differences in the coverage between chapters ($p = 0.035$).
- In the **Middle East** and **Latin America** there are fewer countries where bariatric surgery is covered by the public health system.

Q3: Does your national/public health system financially cover BMS?



Only 15% of the countries fund the surgical procedure based on the BMI recommended by the latest ASMBS/IFSO guidelines.

85% fund the procedure from a BMI that is still above the latest ASMBS/IFSO recommendations.

In many countries insurance coverage also limits those who can undergo surgery based on age.

- Coverage approval was granted in less than half of pediatric cases in US. In contrast, payers approved 80% to 85% of adults who met similar criteria.
- Age under 18 years was the most frequent reason for denial of financial coverage in adolescents (73%).

Inge et al. Obesity (2014) 22, 2593–2597.

- In other countries, such as Korea or the Netherlands, MBS coverage is limited to age 18 or older.

Sang Kuon L, Korean' guidelines.

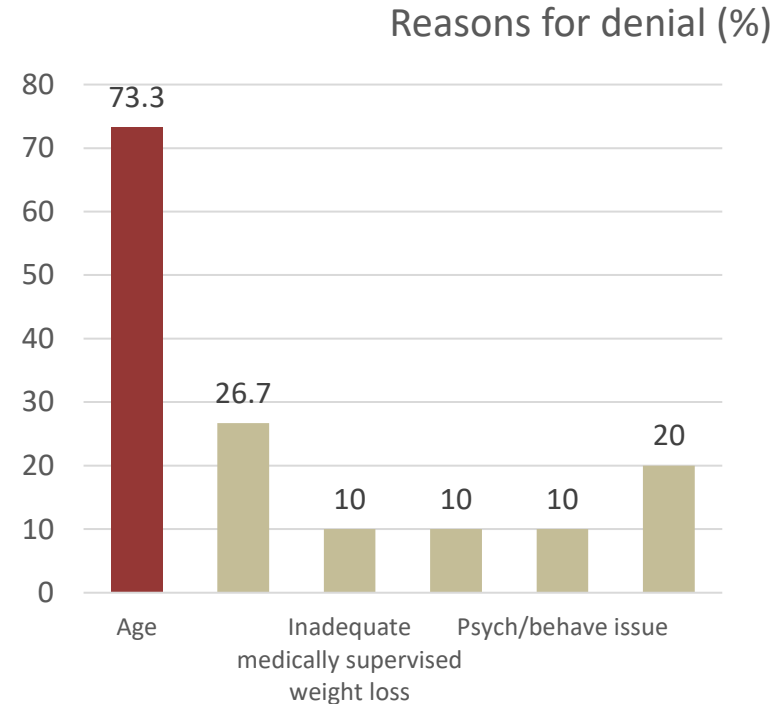
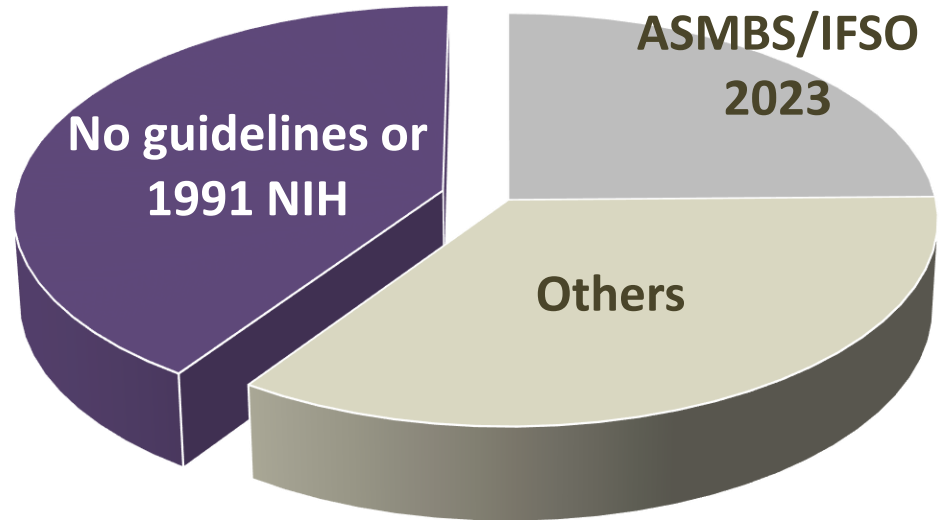


Fig: Inge et al. Obesity (2014) 22, 2593–2597.

Conclusion:

Conclusion:

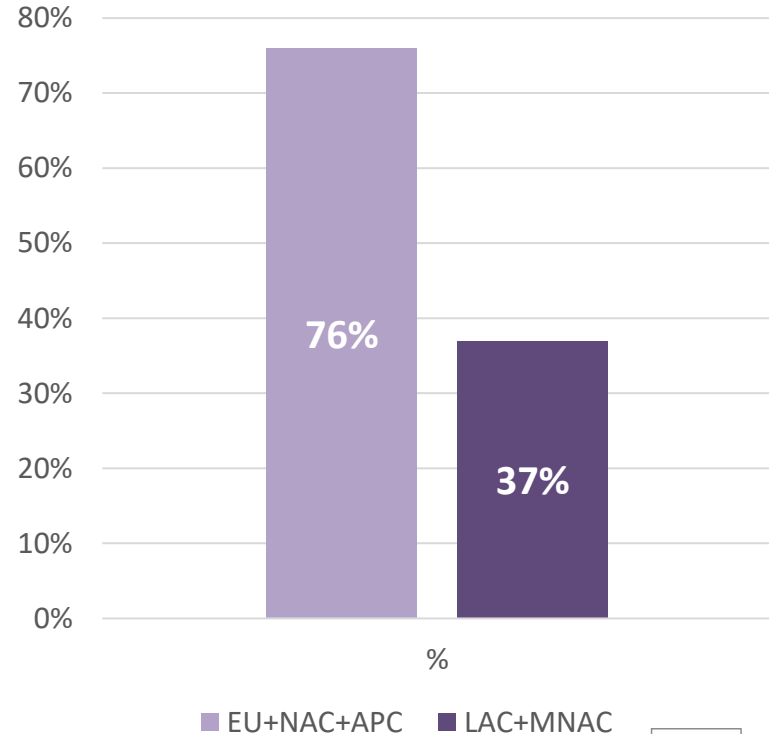
- Most of the IFSO member societies (75%) do have MBS guidelines (with no difference between chapters).
- 25% of them have already shift to the most updated ASMBS/IFSO 2022 guidelines.
- There is still 41% of countries with 1991 guidelines or without any guidelines.



Conclusion:

- There are still **35% of IFSO member national societies** where **MBS is not covered** by the public health system.
- Most are in the **Middle East** and **Latin America**, where only 37% of their countries cover MBS.

% of countries per chapter where MBS is already covered by public health system



Closing remarks:

- IFSO is doing a lot of work to disseminate the new clinical guidelines.
- We must continue to encourage some of the national societies that make up IFSO to develop or update their clinical guidelines.
- We need to intensify our contacts with insurance companies, policy makers and health care payers to achieve global coverage.



13th Congress of the International Federation for the Surgery of Obesity (IFSO) European Chapter

15-17 May 2025 | Venice, Italy



[IFSO-EC2025.COM](https://www.ifso-ec2025.com)

xxvii ifso World Congress



Melbourne 2024

Coauthors & Acknowledgements:

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Harraca J.L, Chisholm J, Beckerhinn P, Omarov T, Dillemans B, Bakry H, Valezi A, Grozdev K, Garneau P, Muñoz R, Wang C, Lopez L, Murillo J, Haluzík M, Lazala E, Mendoza J, Moustafa A.A, Velarde T, Salminen P, Pattou F, Dietrich A, Skroubis G, Behrens E, Simon W, Sigurdsson A, Kular K.S, Rudiman R, Kermansaravi M, Mukhtar R, Sakran N, Zappa M, Matsubara H, Ahmad S, Ospanov O, Lee S.K, Al jarallah M, Mcheimeche H, Ritza Kosai N, Rodriguez J, Emous M, Kristinsson J, Maher M, Rodriguez A, Oliveros E, Tarnowski W, Santos J, Khatsiev B, Alqahtani A, Pintar T, Van der Merwe T, Sánchez-Pernaute A, Garcia ruiz de Gordejuela A, Wijeratne T, Olbers T, Bueter M, Wang W, Taskin E, Andriy L, Menon V, LaMasters T, Rodriguez Temesio G, Tshaev O, Level L.



IFSO

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XXVII IFSO World Congress
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J. Pujol Ràfols, et al.

