- I have no potential conflict of interest to report.

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INDICATIONS AND COVERAGE OF PEDIATRIC METABOLIC AND BARIATRIC SURGERY: A WORLDWIDE IFSO SURVEY COMPARING DIFFERENT NATIONAL GUIDELINES.

J. Pujol-Rafols, D. M. Felsenreich, J. Carmona-Maurici, G. Prager, R. Cohen, N. Zundel, C. Parmar, A. Alqahtani, C. Copaescu, P. Omelanczuk, J. Himpens, T. Olbers, S. Pouwels, S A. Shikora, N. Di Lorenzo, M. De Luca, M. Mazzarella, S. D'Arco, L. Angrisani, E. Pardina, J. M. Balibrea.

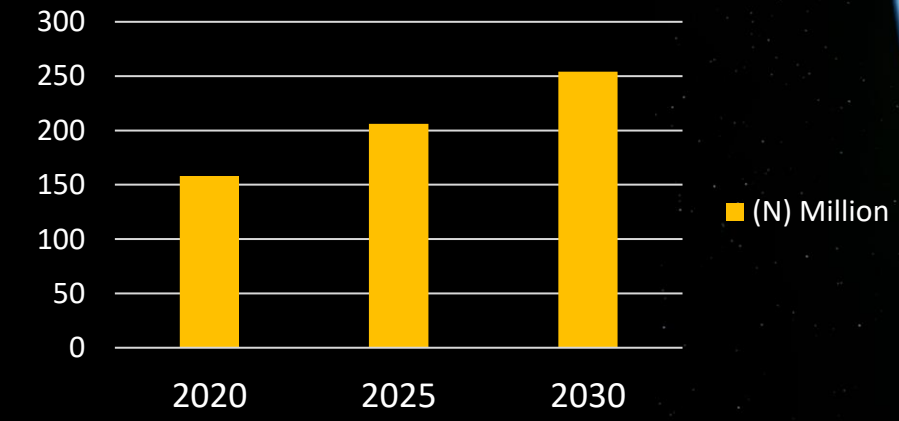
28th IFSO World Congress
2025 Santiago de Chile

The prevalence of obesity in children and adolescents worldwide is an estimated **8.5%**.

World Obesity. Global atlas on childhood obesity. Accessed May 10, 2024. https://www.worldobesity. org/membersarea/global-atlas-on-childhood- obesity

Projections indicate a continuous rise...

Global Prevalence of Overweight and Obesity in Children and Adolescents A Systematic Review and Meta-Analysis X. Zhang, 2024.



While lifestyle modifications must be considered the first-line approach, their efficacy is often modest and not durable (5-10).

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- Metabolic bariatric surgery (MBS) has consolidated as a therapeutic option for pediatric patients with obesity who do not achieve satisfactory results with conservative interventions.

Inge et al, Weight Loss and Health Status 3 Years after Bariatric Surgery in Adolescents. NEJM, 2016
Inge et al, Five-Year Outcomes of Gastric Bypass in Adolescents as Compared with Adults. NEJM 2019
Justin R. Ryder, Ten-Year Outcomes after Bariatric Surgery in Adolescents. N. engl j med 391;17 October, 2024.
Järvholm et al, Metabolic and bariatric surgery versus intensive non-surgical treatment for adolescents with severe obesity (AMOS2): a multicentre, randomised, controlled trial in Sweden. Lancet CAH, 2023
Inge TH, Jenkins TM, Xanthakos SA, et al. Lancet Diabetes Endocrinol. 2017;5(3):165–173
Olbers T, Beamish AJ, Gronowitz E, et al. Lancet Diabetes Endocrinol. 2017;5(3):174–183
Messiah SE, Lopez-Mitnik G, Winegar D, et al. Surg Obes Relat Dis. 2013;9(4):503–513
Alqahtani A, Elahmedi M, Qahtani AR. Ann Surg. 2016; 263(2):312–319

Over the last few years many different supranational societies have widen their recommendations for pediatric MBS.

Michalsky M. et al, ASMBS pediatric committee best practice guidelines. Surg Obes Relat Dis 2012;8(1):1–7.
Armstrong SC, et al. Pediatric metabolic and bariatric surgery: evidence, barriers, and best practices. Pediatrics 2019;144(6)
Pratt JSA, et al. ASMBS pediatric metabolic and bariatric surgery guidelines, 2018. Surg Obes Relat Dis 2018;14(7):882–901.
American Academy of Pediatrics: https://www.aappublications.org/news/aapnewsmag/ 2019/10/27/ bariatricsurgery102719.full.pdf.
Eisemberg D. et al. 2022 American Society for Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO): Indications for Metabolic and Bariatric Surgery. Surgery for Obesity and Related Diseases - (2022) 1–12

Pediatric patients with...

- **BMI ≥40 kg/m2 or >140% of the 95th percentile.**
- **BMI ≥35 kg/m2 or >120% of the 95th percentile with clinically significant co-morbid conditions.**

...should be considered for surgery.

Dan Eisenberg et al. Surg Obes and Relat Dis (2022) 1–12

- They do not consider any age limit.
- “MBS does not negatively impact pubertal development or linear growth, and therefore a specific Tanner stage, growth development or bone maturity should not be considered a requirement for surgery”.

Dan Eisenberg et al. Surg Obes and Relat Dis (2022) 1–12

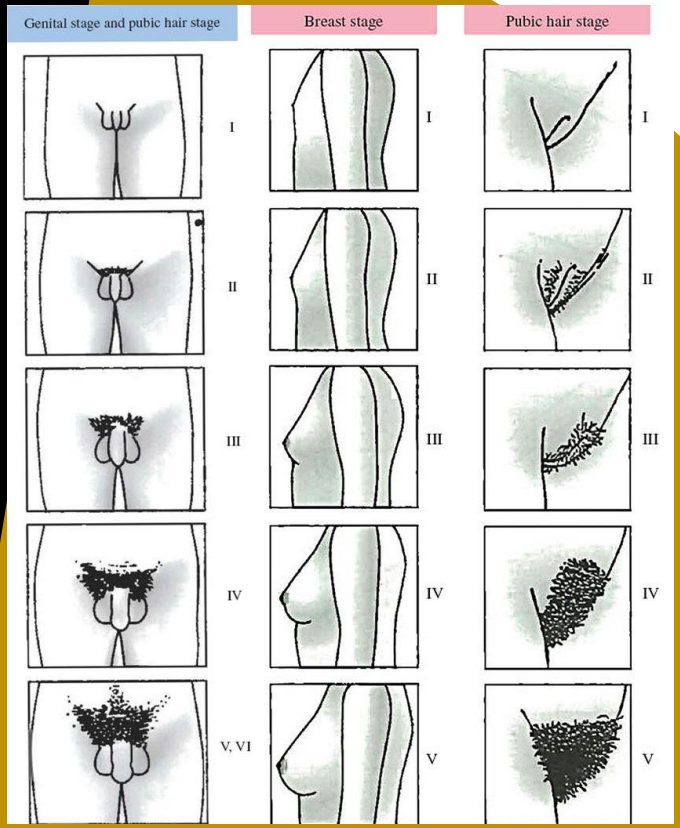

Fig: A schematic drawing of the five Tanner stages for girls and boys.

However, due to the large number of national societies that make up IFSO and their diverse socio-economic and cultural contexts, national-level indications may not fully adhere to these recommendations and could vary from one country to another.

- Objective: IFSO aimed to analyze which are the indications for pediatric 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 public health service or any health insurance company.

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

J. Pujol-Rafols, D. M. Felsenreich, J. Carmona-Maurici, G. Prager, R. Cohen, N. Zundel, C. Parmar, A. Alqahtani, C. Copaescu, P. Omelanczuk, J. Himpens, T. Olbers, S. Pouwels, S A. Shikora, N. Di Lorenzo, M. De Luca, M. Mazzarella, S. D'Arco, L. Angrisani, E. Pardina, J. M. Balibrea.

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

- METHODOLOGY: A survey consisting of 19 questions was emailed by IFSO secretary to the 76 national societies that are members of IFSO between August and November 2024.
- The results of the study were analyzed globally and also grouped according to the 5 different geographical chapters of IFSO.

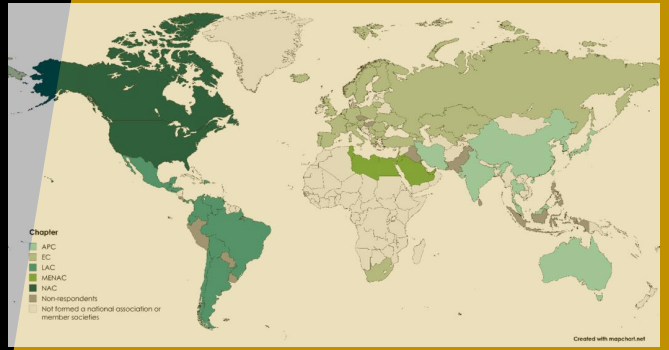
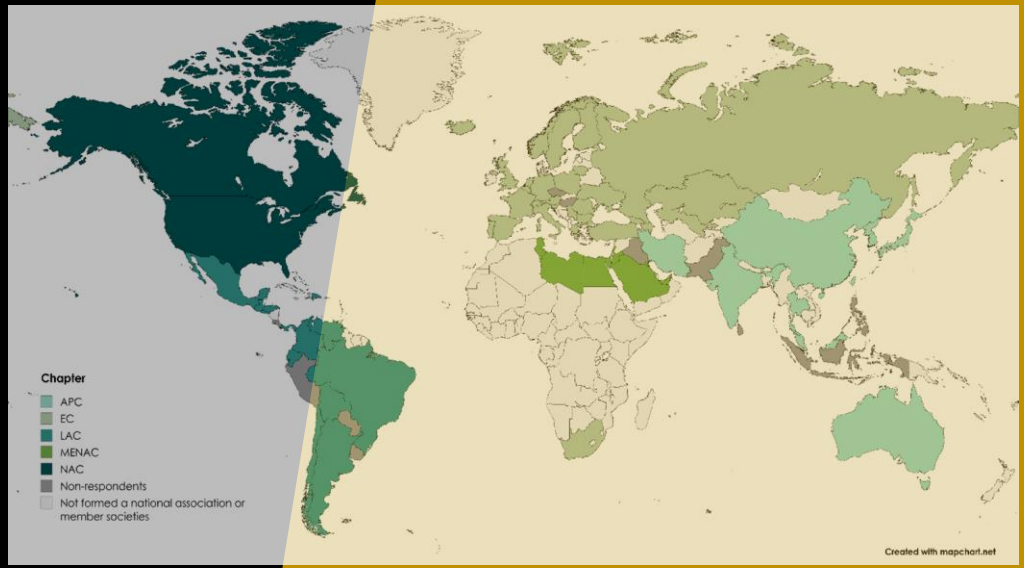


Figure 1. Distribution of responding IFSO societies around the world by chapters.
Abbreviations: APC Asian Pacific Chapter, EC European Chapter, LAC Latin American Chapter, MENAC Middle East and North African Chapter, NAC North American Chapter.

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

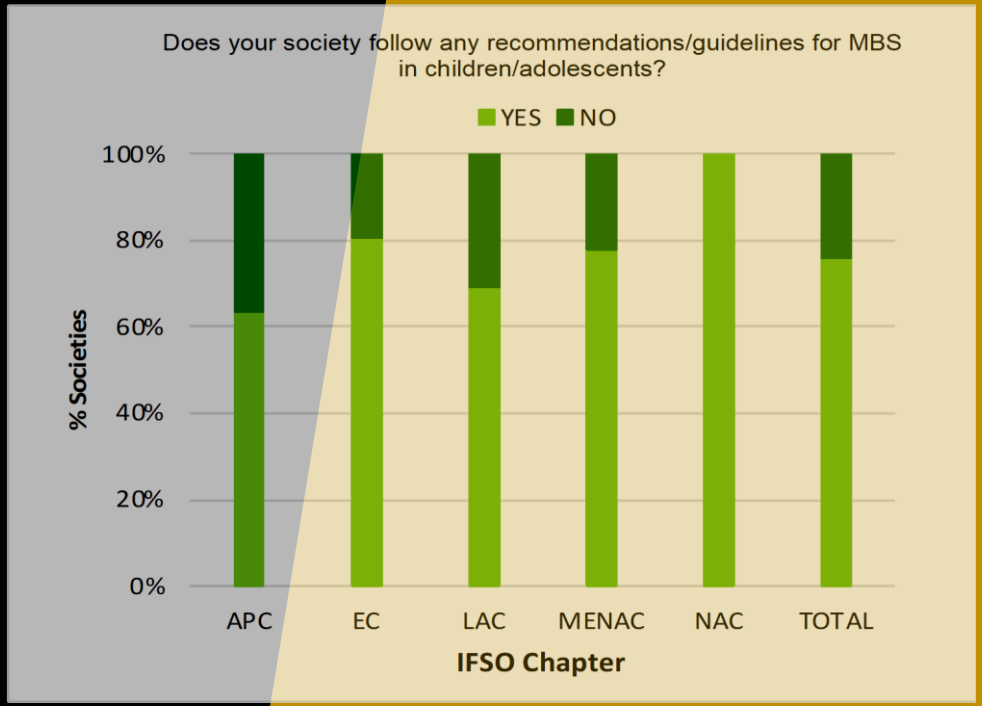
- Total responses 66 / 76 (**87%).**
- Participation in each chapter exceeded 76%.
- 10 countries* did not respond and were excluded from the data analysis .



(*) Costa Rica, Hungary, Indonesia, Iraq, Pakistan, Paraguay, Peru, the Philippines, Sri Lanka, and Uruguay.

1- Does your metabolic and bariatric surgery (MBS) National society follow any recommendations/guidelines regarding indications/candidates for metabolic and bariatric surgery in children/adolescents (age <18 years)?

- 76% of the countries follow some local guidelines for MBS in children or adolescents.



(Preliminary data.)

- Contrary to the international recommendations, 32% of countries set a minimum level of physical development (based on age, pubertal stage, or bone growth) before a patient can be considered for surgery.

COUNTRY	AGE OR MATURITY DEGREE
Kuwait, UAE	≥ 12y
Egypt, Finland, Greece, Israel, Japan, US	≥ 13y
Australia, Austria, Turkey	≥ 14y
Azerbaijan, Sweden	≥ 15y
Brazil, Lithuania, Singapore	≥ 16y
Chile, Finland, Russia, Singapore, Switzerland	Tanner stage IV-V
Czech Republic, Israel, Slovenia	Physical development, squeletal maturity or after puberty

Table 2. Age and maturity degree criteria for MBS by countries.

❖ Contrary to the international recommendations, 32% of countries set a minimum level of physical development (based on age, pubertal stage, or bone growth) before a patient can be considered for surgery.

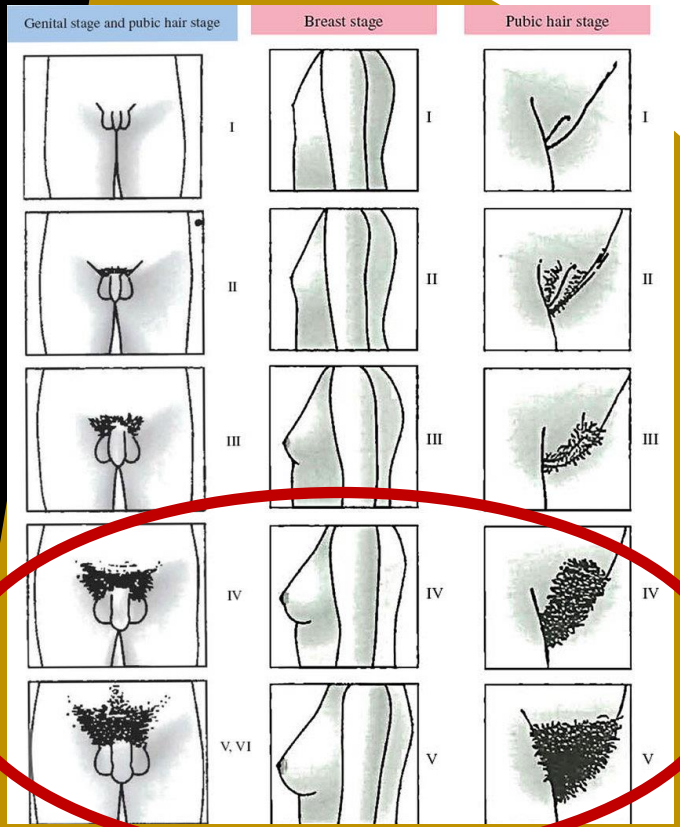


Fig: A schematic drawing of the five Tanner stages for girls and boys.

- BMI is still a commonly used parameter to indicate MBS and is typically used as a threshold for eligibility.

(Preliminary data.)

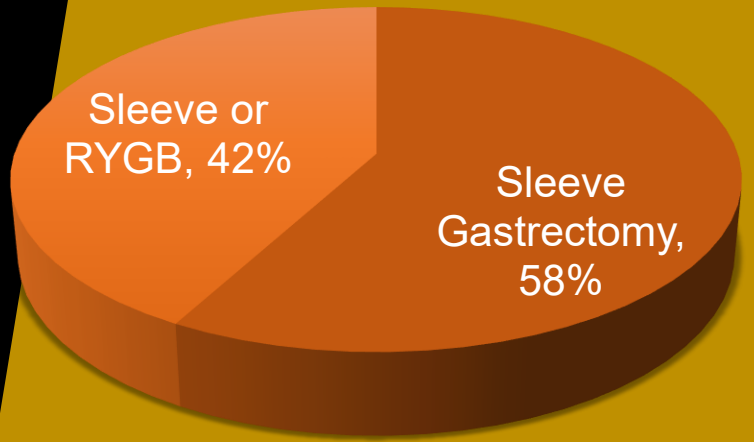
The indications varied across countries...

%	Country	BMI criteria
46%	Argentina , Australia, Bahrain, Bolivia, Brazil, Canada, Chile, El Salvador, Finland, France, Honduras, Jordan, Lithuania, Poland, Portugal, Romania, Russia, Saudi Arabia, Slovenia, Spain, Turkey, UAE, US.	BMI ≥40, or 140% of the 95th percentile for age and sex or BMI ≥35, or 120% of the 95th percentile for age and sex if comorbidities exist.
2%	Lebanon	BMI ≥ 35 kg/m^2 or BMI ≥ 32,5 kg/m^2 with comorbidities
12%	Georgia, Greece, Kazakhstan, Sweden, Switzerland, Tunisia	BMI ≥35 kg/m^2
4%	India, Uzbekistan	BMI ≥ 40 kg/m^2
10%	Ecuador, Germany, Israel, Kuwait, Singapore	BMI ≥ 50 kg/m^2 or BMI ≥ 40 kg/m^2 with comorbidities.
8%	UK, Nederland, South Korea, Italy	MBS not recommended, except in exceptional circumstances or clinical trials.
18%	Austria, Azerbaijan, Czech Republic, China, Colombia, Dominican Republic, Japan, Serbia, Thailand	Specific BMI threshold for children or adolescent MBS not reported.

❖ Are there any recommendations/ restrictions regarding the technique to be used in children/adolescents?

- 58% recommend LSG.
- 42% recommend LSG or RYGB.
- None recommend performing hypoabsortive techniques.

40% reported the presence of some technical restrictions regarding the use of MBS in children or adolescents.



- Is pediatric MBS covered in your country?

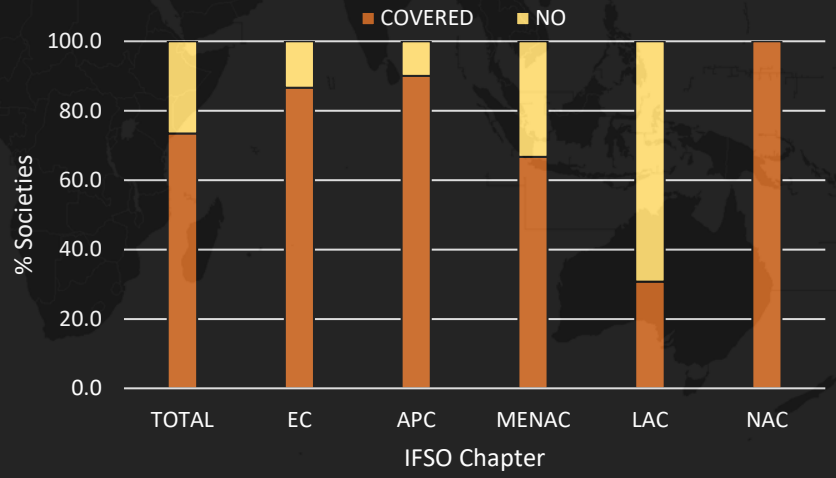
- Is pediatric MBS covered in your country?

- **59%** of countries offer some form of coverage for pediatric MBS.
- **50%** of countries provide public coverage for children, which is lower than the 67% that provide it for adults.
- Private health insurance companies also cover pediatric MBS in **21%** of countries. In **9%** of these, coverage is available exclusively through private insurers, with no support from the national health system.

- Finally, 40% countries reported having no coverage at all for these procedures.

- Higher coverage was found in NAC, APC and EC (with more than 85% of countries with coverage).

- The lowest coverage was found in LAC (covered only in 31% of the countries).



(p = 0.0018)

Take-home message:

- Pediatric bariatric surgery practices remain highly inconsistent worldwide, with major disparities in eligibility criteria and access to care.
- A unified, evidence-based approach led by IFSO and other professional societies is urgently needed to standardize indications, promote safe techniques, and ensure equitable access for children and adolescents with severe obesity.

Coauthors & Acknowledgements:

J. Pujol-Rafols, D. M. Felsenreich, J. Carmona-Maurici, G. Prager, R. Cohen, N. Zundel, C. Parmar, A. Alqahtani, C. Copaescu, P. Omelanczuk, J. Himpens, T. Olbers, S. Pouwels, S A. Shikora, N. Di Lorenzo, M. De Luca, M. Mazzarella, S. D'Arco, L. Angrisani, E. Pardina, J. M. Balibrea.

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IFSO
European Chapter

14th Congress of the International Federation for the Surgery of Obesity & Metabolic Disorders European Chapter (IFSO-EC)

6 - 9 May 2026 | Málaga, Spain

Save the date!

ifso-ec2026.com

Thank you very much for listening.

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