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Original article

BREAKING THE WEIGHT OF THERAPEUTIC INERTIA: OBESITY MANAGEMENT IN CARDIOLOGY PRACTICE

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Abstract

Introduction: Obesity is a major risk factor for cardiovascular diseases. While cardiologists play a key role in managing these patients, the extent of their involvement in obesity-related diagnosis and treatment remains unclear. This study aimed to assess the practices and approaches of cardiologists in Argentina regarding obesity management.

Materials and methods: We conducted a cross-sectional survey using a web-based questionnaire. The survey was distributed via *WhatsApp* employing convenience and snowball sampling among cardiologists practicing in Argentina.

Results: Of the 380 questionnaires sent, we received 363 responses. A total of 130 cardiologists (35.8%) were unaware of the normal body mass index (BMI) range. Most respondents did not routinely assess weight (n = 293; 80.7%) or waist circumference (n = 330; 90.9%), and only 101 (27.8%) consistently calculated BMI. Regarding lifestyle interventions, 218 cardiologists (60.1%) always recommended a healthy diet, and 306 (84.3%) always promoted physical activity. Pharmacological treatment had never been prescribed by 207 respondents (57.0%), and 237 (65.3%) had never recommended metabolic surgery. Glucagon-like peptide-1 receptor agonists were the most frequently administered treatment, reported by 123 cardiologists (78.9% of those who prescribed pharmacological treatment). In multivariate analysis, >10 years of experience was significantly associated with prescribing pharmacological treatment (OR: 2.51; 95% CI: 1.52-4.17) and referring patients for metabolic surgery (OR: 2.37; 95% CI: 1.41–3.96). Practicing in the private sector was associated with the prescription of pharmacological treatment (OR: 2.97; 95% CI: 1.04-8.49), whereas male cardiologists demonstrated a greater propensity for referring patients for metabolic surgery (OR: 1.72; 95% CI: 1.02–2.92).

Discussion: This study highlights the need for improvements in cardiologists' training and promotion of proactive behaviors in obesity management, as significant gaps in knowledge, diagnosis, and therapeutic interventions were identified.

Key words: survey, obesity, cardiologists, cardiovascular diseases

Resumen

Rompiendo el peso de la inercia terapéutica: abordaje de la obesidad en la práctica cardiológica

Introducción: La obesidad constituye un factor de riesgo mayor para las enfermedades cardiovasculares. Si bien los cardiólogos desempeñan un rol clave en el manejo de estos pacientes, no está claro en qué medida participan en el abordaje diagnóstico-terapéutico de la obesidad. El objetivo de este estudio fue evaluar las prácticas y enfoques de los cardiólogos en Argentina en relación con el manejo de la obesidad.

Materiales y métodos: Se realizó una encuesta transversal mediante un cuestionario en línea, distribuido por *WhatsApp* con un muestreo por conveniencia y bola de nieve entre cardiólogos en ejercicio en Argentina.

Resultados: De los 380 cuestionarios enviados, se obtuvieron 363 respuestas. Un total de 130 cardiólogos (35.8%) desconocían el rango normal del índice de masa corporal (IMC). La mayoría de los encuestados no evaluaba rutinariamente el peso (n = 293; 80.7%) ni el perímetro de cintura (n = 330; 90.9%), y solo 101 (27.8%) calculaba sistemáticamente el IMC. En cuanto a las intervenciones sobre estilo de vida, 218 cardiólogos (60.1%) recomendaban siempre una alimentación saludable, y 306 (84.3%) promovían consistentemente la actividad física. El tratamiento farmacológico nunca había sido prescripto por 207 encuestados (57.0%), y 237 (65.3%) nunca habían indicado cirugía metabólica. Los agonistas del receptor del péptido similar al glucagón tipo 1 fueron el tratamiento más frecuentemente prescripto, reportado por 123 cardiólogos (78.9% de quienes indicaron tratamiento farmacológico). En el análisis multivariado, tener >10 años de experiencia se asoció significativamente con la prescripción de tratamiento farmacológico (OR: 2.51; IC 95%: 1.52-4.17) y con la derivación a cirugía metabólica (OR: 2.37; IC 95%: 1.41-3.96). El ejercicio profesional en el ámbito privado se asoció con la prescripción de tratamiento farmacológico (OR: 2.97; IC 95%: 1.04-8.49), mientras que los cardiólogos de sexo masculino presentaron mayor probabilidad de derivar pacientes a cirugía metabólica (OR: 1.72; IC 95%: 1.02–2.92).

Discusión: Resulta imprescindible mejorar la formación de los cardiólogos y promover conductas proactivas en el abordaje de la obesidad, dado que se identificaron brechas relevantes en conocimientos, diagnóstico e intervenciones terapéuticas.

Palabras clave: encuesta, obesidad, cardiólogos, enfermedades cardiovasculares

KEY POINTS
Current knowledge

- Obesity constitutes a well-established and modifiable risk factor for cardiovascular disease, and its comprehensive management demands the proactive participation of all healthcare providers, cardiologists included. Despite this, the precise scope of cardiologists' involvement in the diagnosis and therapeutic approach to obesity remains insufficiently delineated.

Contribution of the article to current knowledge

- This study identified substantial deficiencies in cardiologists' knowledge and assessment practices related to obesity management. Pharmacological and surgical interventions were infrequently implemented. More than 10 years of clinical experience, practice in the private sector, and male sex of cardiologists were independently associated with the implementation of more intensive therapeutic interventions.

Obesity is a chronic, multifactorial, progressive, and recurrent disease characterized by an abnormal accumulation of dysfunctional adipose tissue, which negatively impacts overall health and quality of life[1]. In recent decades, the global prevalence of obesity has tripled[2], with estimates indicating that more than 100 million children and over 600 million adults are currently affected by obesity, making this condition a global pandemic[3,4].

This phenomenon aligns with shifts in economic, political, and social paradigms collectively referred to as globalization. Among its effects is the transformation of consumption patterns and behaviors, which has had unfavorable implications for population nutrition. This process has encouraged the adoption of energy-dense diets and sedentary lifestyles, contributing to the increasing prevalence of obesity worldwide[5], which poses a significant challenge for the development and implementation of public health policies[6].

Obesity and overweight constitute major risk factors for the development of cardiovascular diseases, stroke, and type 2 diabetes mellitus (T2DM)[7]. Moreover, obesity has been recognized as an independent risk factor for various types of cancer. In this context, nearly half of all cancer cases are attributable to overweight and obesity[8].

Considering that conservative estimates suggest that obesity is responsible for at least 4 million deaths annually worldwide, with more than two-thirds of these attributed to cardiovascular mortality-a major complication associated with obesity-[9] it is evident that cardiologists play a

key role in its comprehensive management. Therefore, the aim of this study was to assess the practices and approaches of cardiologists in Argentina regarding obesity management.

Materials and methods

Study design and population

A cross-sectional, web-based survey was conducted between 15 August 2024 and 10 December 2024 using an online questionnaire, which included 28 questions, and was administered via Google Forms (Mountain View, CA). Complete questionnaire can be found in Supplementary material.

The questionnaire inquired about the demographic characteristics of the participating cardiologists, including their years of professional experience, as well as their theoretical knowledge regarding definitions and recommendations from clinical guidelines. Additionally, the survey assessed their practices and behaviors concerning the diagnostic and therapeutic processes for patients with obesity.

The inclusion criteria for participation in the survey required individuals to be cardiologists currently practicing in Argentina. The questionnaire was distributed via the WhatsApp messaging application among cardiologists using a mixed recruitment approach: convenience sampling led by the principal investigators of the study and snowball sampling from initial respondents, who were asked to forward the form to their contacts. The instrument was developed *ad hoc* and structured as a self-administered questionnaire with multiple-choice questions and a Likert scale[10] ranging from 1 to 5.

Statistical analysis

Continuous variables were expressed as mean ± standard deviation or median with interquartile range, depending on their distribution, which was assessed using graphic tools (histograms and normal probability plots) and the Shapiro-Wilk test. Categorical variables were summarized as absolute frequencies and percentages. Comparisons between groups were performed using the Student's t-test or Mann-Whitney U test for continuous variables and the chi-square test or Fisher's exact test for categorical variables, as appropriate.

Associations between physicians' characteristics and their knowledge and behaviors were assessed using univariate analysis. Variables with a p value ≤ 0.1 in the univariate analysis, as well as those deemed clinically relevant by the authors based on prior evidence or expert judgment, were considered for inclusion in a multiple logistic regression model. Results from the regression analysis were reported as adjusted odds ratios (ORs) with their corresponding 95% confidence intervals (CIs). Statistical significance was defined as a p value < 0.05. All analyses were performed using STATA version 15.0 (Stata Corp., College Station, TX, EE. UU.)

Ethical considerations

This study was conducted in accordance with the ethical principles outlined in the World Medical Association and the Declaration of Helsinki. Prior to their participation, all respondents were provided with comprehensive information regarding the study's objectives and methodology, with particular emphasis on the voluntary nature of their involvement. It was explicitly stated that all data would be treated anonymously, in full compliance with both national and international data protection laws.

All participating physicians provided authorization for the use of their data exclusively for academic and research purposes.

Results

We received 363 completed questionnaires out of the 380 distributed. The characteristics of the cardiologists who participated in this survey are presented in Table 1. The median age of the professionals was 43 years (36–54), with 229 (63.1%) being male. The majority of cardiologists (n = 202; 55.6%) had been practicing for more than 10 years at the time of the survey, primarily in the private sector. A total of 220 cardiologists (60.6%) reported that their healthcare institution lacks a dedicated cardiometabolic unit implementing a multidisciplinary approach to patient management.

Assessment of knowledge among surveyed cardiologists

Notably, a total of 130 cardiologists (35.8%) were unaware of the normal body mass index (BMI) range. No statistically significant association was observed when this knowledge was evaluated in relation to the years of professional experience (OR: 0.75, 95% CI: 0.56–1.01, p = 0.06). Moreover, 231 participants (63.6%) lacked knowledge regarding the prevalence of obesity among adults in Argentina, as reported in the Fourth National Risk Factor Survey. However, 196 cardiologists (54.0%) were aware of the initial weight loss target following the initiation of obesity

treatment. Additionally, 318 participants (87.6%) recognized the term "ultra-processed foods," while 249 participants (68.6%) demonstrated an understanding of the concept and implications of metabolic surgery. Finally, 198 respondents (54.5%) reported familiarity with the World Health Organization's recommendations on aerobic physical activity for adults.

Table 1 | Baseline characteristics of the surveyed cardiologists

Surveyed cardiologists (n)	363
Age (years), median (IQR)	43 (36-54)
Male, n (%)	229 (63.1)
Experience in cardiology	
<5 years, n (%)	78 (21.5)
5-10 years, n (%)	83 (22.9)
>10 years, n (%)	202 (55.6)
Geographical area of professional practice	
Autonomous City of Buenos Aires, n (%)	130 (35.8)
Province of Buenos Aires, n (%)	102 (28.1)
Others provinces, n (%)	131(36.1)
Healthcare sector	
Public, n (%)	25 (6.9)
Private, n (%)	218 (60.1)
Public and private, n (%)	120 (33)

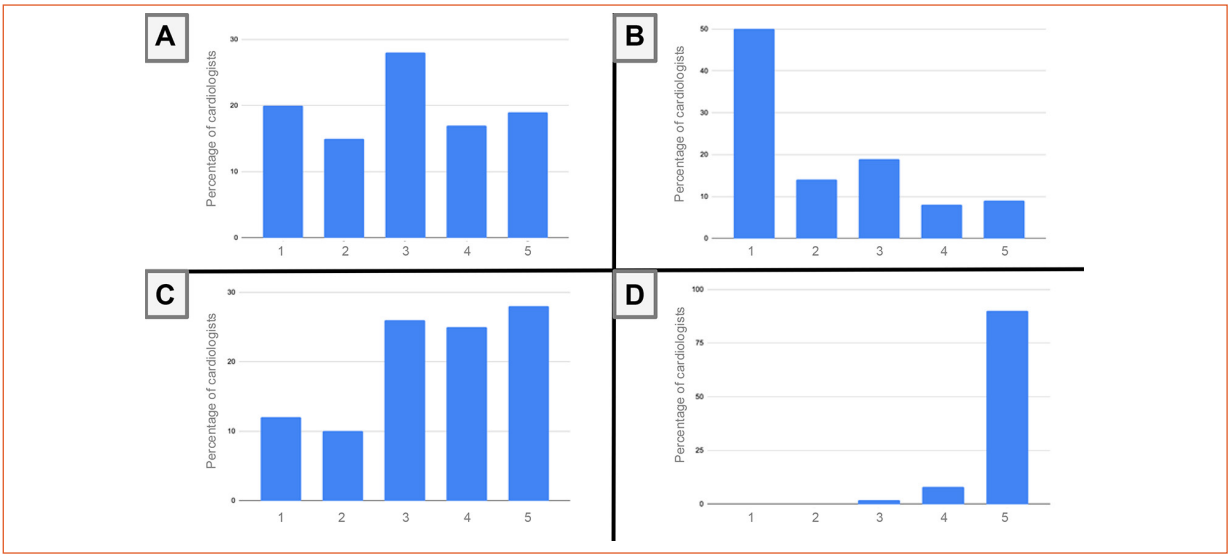
Evaluation of diagnostic approaches to obesity

Although the majority of surveyed cardiologists reported having access to a weighing scale (n = 277; 76.3%) and a measuring tape for waist circumference assessment (n = 208; 57.3%) in their offices, most reported that they did not routinely weigh their patients (n = 293; 80.7%) or measure waist circumference (n = 330; 90.9%), considering a score of 5 on the Likert scale as indicative of a routinely performed practice. Furthermore, 101 respondents (27.8%) reported consistently calculating BMI during patient consultations (score of 5 on a Likert scale). On the other hand, 326 respondents (89.8%) reported always inquiring about the patient's physical activity or sports participation during consultations (score of 5 on a Likert scale) (Fig. 1).

Evaluation of therapeutic approaches in the management of obesity

Regarding behaviors that promote positive habit changes, 218 cardiologists (60.1%) reported consistently providing recommendations for a healthy diet during medical consultations, while 306 (84.3%) routinely prescribed or recommended physical activity to their patients, considering a score of 5 on a Likert scale. Furthermore, 264

Figure 1 | Distribution of responses reported by cardiologists on the frequency with which they perform selected clinical practices related to obesity management during patient consultations



Responses were collected using a 5-point Likert scale: 1 = Never, 2 = Hardly ever, 3 = Sometimes, 4 = Almost always, and 5 = Always. A: Patient weighing. B: Measurement of waist circumference. C: Calculation of body mass index (BMI). D: Inquiry about physical activity or sports participation.

respondents (72.7%) demonstrated a tendency to frequently refer these patients to a nutritionist. Conversely, 207 cardiologists (57.0%) reported that they have never prescribed pharmacological treatment for overweight or obesity. In this regard, 237 respondents (65.3%) stated that they have never recommended metabolic surgery for obese patients. Among the cardiologists who have ever recommended pharmacological treatment, we observed that the majority (n = 123; 78.9%) most frequently prescribed a glucagon-like peptide-1 receptor agonist (Table 2).

In the multivariate analysis, more than 10 years of professional experience emerged as the only variable significantly associated with both prescribing pharmacological treatment (OR: 2.51; 95% CI:1.52-4.17) and referring patients for metabolic surgery (OR: 2.37; 95% CI: 1.41–3.96) for obesity. On the other hand, practicing in the private healthcare sector was significantly associated with the prescription of pharmacological treatment (OR: 2.97; 95% CI: 1.04–8.49). Additionally, male sex among the surveyed cardiologists was linked to a 72% increased likelihood of recommending metabolic surgery (OR: 1.72; 95% CI: 1.02–2.92) (Table 3).

Perceptions of the surveyed cardiologists.

Regarding the self-perception of training among the surveyed cardiologists in relation to the management of patients with obesity, the majority of respondents (n = 270; 74.4%) rated their training between scores of 1 and 3, with a score of 5 representing the highest level of adequate training (Fig. 2). When asked about the main limiting factor for achieving proper evaluation and treatment of this condition, 178 cardiologists (49%) identified lack of time during consultations as the primary cause, while 126 (34.7%) cited inadequate medical education.

Discussion

To the best of our knowledge, this is the first published survey specifically designed to assess cardiologists' clinical approach to obesity management. Our findings reveal several critical gaps in knowledge and practice. First, one-third of cardiologists were unaware of the normal BMI range. Second, most did not routinely measure weight or waist circumference, and only one in three consistently calculated BMI. Third, despite the widespread use of lifestyle modification strategies, two-thirds never prescribed

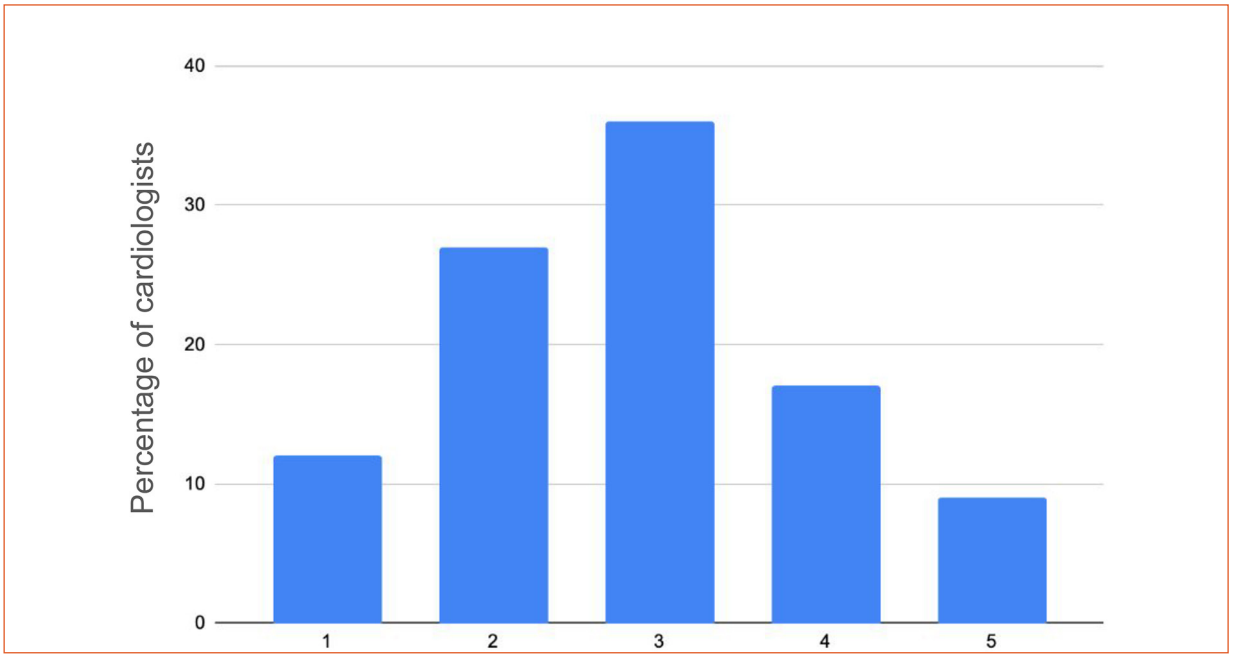
Table 2 | Anti-obesity drugs most commonly prescribed by surveyed cardiologists

The most commonly prescribed pharmacological agent by cardiologists	n (%)
Glucagon-like peptide-1 receptor agonist	123 (78.9)
Orlistat	25 (16)
Bupropion and naltrexone	8 (5.1)

Table 3 | Univariate and multivariate analysis

Outcome: Pharmacological treatment prescription	Univariate analysis		Multivariate analysis	
	OR (95% CI)	p	OR (95% CI)	p
Male gender	1.39 (0.85-2.26)	0.19	1.24 (0.74-2.06)	0.41
Private healthcare sector	3.27 (1.18-9.02)	**0.02**	2.97 (1.04-8.49)	**0.04**
> 10 years of experience	2.69 (1.72-4.20)	**<0.01**	2.51 (1.52-4.17)	**<0.01**
Outcome: Referral for metabolic surgery	**Univariate analysis**		**Multivariate analysis**	
	OR (95% CI)	p	OR (95% CI)	p
Male gender	1.92 (1.15-3.21)	**0.01**	1.72 (1.02-2.92)	**0.04**
Private healthcare sector	1.43 (0.57-3.58)	0.44	1.28 (0.49-3.33)	0.62
> 10 years of experience	2.79 (1.75-4.43)	**<0.01**	2.37 (1.41-3.96)	**<0.01**

Figure 2 | Distribution of responses regarding self-perceived expertise in obesity management among surveyed cardiologists, based on a 5-point Likert scale



Response options were defined as follows: 1 = Inadequate, 2 = Slightly inadequate, 3 = Moderately adequate, 4 = Substantially adequate, and 5 = Fully adequate.

anti-obesity medications or recommended metabolic surgery. Fourth, more than ten years of experience was linked to a higher likelihood of prescribing pharmacotherapy and referring for bariatric surgery, while private practice was associated with increased use of medication, and male sex among cardiologists was correlated with a higher referral rate for surgery. Finally, barriers to effective management included time constraints and insufficient training.

Despite the wide range of available therapeutic strategies, obesity management has remained relatively underemphasized in comparison to other modifiable cardiovascular risk factors over the past decades, particularly within the field of cardiology[11]. Physicians, equipped with effective pharmacological tools for managing lipids, blood pressure, and glycemic control –validated through large randomized trials– may prioritize treating these established cardiovascular risk factors over addressing their underlying cause: high-risk adiposity[12].

Therapeutic inertia is traditionally characterized as the failure to initiate or intensify treatment in accordance with established clinical guidelines, thereby contributing to suboptimal disease management and delays in the implementation of more effective strategies[13,14]. According to Phillips et al., therapeutic inertia arises from at least three key factors: an overestimation of the appropriateness and effectiveness of provided medical care, reliance on non-evidence-based justifications to defer treatment intensification, and deficiencies in education, training, and healthcare system organization necessary to achieve optimal therapeutic goals[14]. In this regard, it is noteworthy to emphasize certain points that link the previously mentioned factors, the responses gathered from the surveyed cardiologists, and the natural history of obesity.

Issues identified in this survey, such as a lack of knowledge regarding the normal BMI range, insufficient adherence to practices like weighing, calculating BMI, and measuring waist circumference in patients, are further compounded by the challenge of establishing an optimal definition of obesity. BMI, widely regarded as the

gold standard for defining and classifying obesity, is commonly used for initial risk stratification and monitoring adiposity changes over time[15]. However, it fails to fully account for factors such as muscle mass, fat distribution, and body composition, potentially overestimating adiposity in muscular individuals and underestimating it in those with excess visceral fat, thus leading to variations in cardiometabolic risk among individuals with similar BMI values[16]. Accordingly, a recently published consensus document proposes a more comprehensive definition of obesity. This revised definition extends beyond BMI to incorporate additional anthropometric parameters, such as waist circumference, waist-to-hip and waist-to-height ratios, as well as direct assessments of body fat composition using dual-energy X-ray absorptiometry (DXA)[17].

On the other hand, the surveyed cardiologists demonstrated a high level of adherence to lifestyle modifications, including diet and physical activity, while showing considerably less inclination toward other interventions, such as pharmacotherapy or metabolic surgery. However, while lifestyle modifications are essential components of obesity management, they generally result in only a modest reduction in body weight of approximately 3-5%[18]. As with other chronic diseases, the sole implementation of healthy behaviors proves inadequate as a comprehensive treatment for obesity. In this sense, the current clinical practice guidelines emphasize the importance of exploring more intensive adjunctive interventions, such as cognitive behavioral therapy, pharmacotherapy, and bariatric surgery[11,19].

Glucagon-like peptide-1 receptor agonists, including liraglutide and semaglutide, are effective pharmacological options for weight management[20-28]. Semaglutide has demonstrated significant cardiovascular benefits, even in obese individuals without diabetes[29]. In Argentina, both liraglutide and semaglutide are approved for obesity treatment; however, the 2.4 mg weekly formulation (Wegovy™) has not been introduced, and the use of Ozempic™ for obesity in non-diabetic patients remains off-label[11]. High costs and limited insurance coverage restrict access, confining pharmacotherapy largely to economically privileged populations. As observed in the present survey, practicing medicine in the private healthcare sector was significantly associated with a higher prescription rate of anti-obesity pharmacological treatments, with glucagon-like peptide-1 receptor agonists being the most frequently prescribed drugs by cardiologists. While tirzepatide (a dual glucose-dependent insulinotropic polypeptide and glucagon-like peptide-1 receptor agonist) may represent the most effective pharmacological treatment for weight loss[30-32], the National Administration of Drugs, Food, and Medical Technology (ANMAT) in Argentina has not yet approved its use for the treatment of obesity.

The deficiencies observed in our study regarding the management of obesity by cardiologists appear to extend to other medical specialties, such as general and family practitioners, as reported by Lau et al. The authors propose that limited familiarity with clinical practice guidelines, along with concerns and skepticism regarding the long-term efficacy, accessibility, and sustainability of obesity treatments, constitute key barriers to optimal obesity management, limiting actions to lifestyle recommendations[13].

Our findings suggest that greater experience in the specialty positively influences the intensification of obesity treatment, extending beyond lifestyle change recommendations. This may be attributed to increased awareness of cardiovascular risks in obese patients and greater confidence in utilizing newer pharmacological therapies, fostering a more proactive and comprehensive approach. Finally, we observed that male physicians were more likely to refer their obese patients for bariatric surgery. Similar gender-based differences in clinical decision-making have been noted in other procedures, such as coronary catheterization[33], which may suggest that male physicians are more inclined to recommend invasive interventions.

A recently published review has emphasized the impact of systemic barriers—such as limited time and inadequate training—on healthcare providers' ability to deliver effective lifestyle counseling in the management of chronic diseases. Consistent with these observations, our study found that the majority of surveyed cardiologists identified these limitations as the primary challenges in addressing obesity man-

agement[34]. These findings highlight the urgent need for institutional and educational reforms to better support clinicians in this critical area of care[35]. To enhance cardiologists' involvement in obesity management, targeted strategies should focus on hands-on training based on clinical practice guideline recommendations, driven by leading scientific societies. Such initiatives would enable the integration of evidence-based therapies into routine clinical practice, while also addressing prevalent misconceptions and apprehensions that influence physicians' decision-making processes. Furthermore, the incorporation of comprehensive obesity education into medical school curricula and residency programs may promote a more proactive approach among clinicians, including cardiologists, ensuring early intervention and ultimately contributing to the prevention of obesity-related chronic diseases.

This study has several limitations that may affect the generalizability and interpretation of its findings. The survey was conducted exclusively among Argentine cardiologists, limiting its applicability to other populations and healthcare systems. The reliance on self-reported data introduces the potential for response bias, while the cross-sectional design precludes causal inferences or long-term assessments. Additionally, the influence of cardiologists' subspecialties was not evaluated, and the sample size and response rate may not fully capture the diversity of practitioners. Finally, unaccounted confounding factors, such as institutional policies and healthcare system constraints, may have influenced the reported approaches to obesity management.

In conclusion, our survey highlights the deficiencies in obesity management among cardiologists, influenced by factors such as experience, healthcare sector, and physician gender. Notable gaps in knowledge, diagnosis, and treatment underscore the need to promote proactive clinical behaviors through the implementation of evidence-based education from medical training to professional practice, ensuring a comprehensive and standardized approach to obesity care.

Conflict of interest: None to declare

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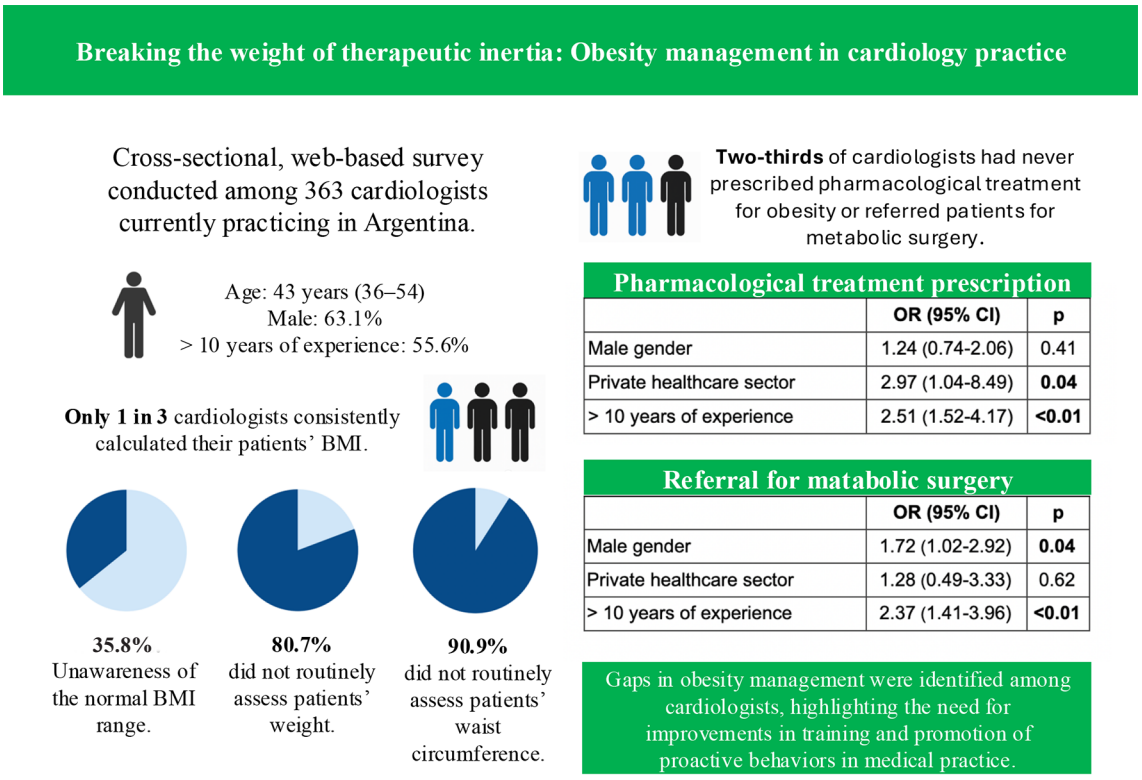
Graphical abstract



BMI: body mass index

Supplementary material

Survey on obesity management among cardiologists in Argentina

1. Are you a cardiologist?
   - Yes, I am a cardiologist
   - No, I am not a cardiologist
2. Age (years)
3. Gender
   - Male
   - Female
   - Other
4. Where do you practice your profession?
   - Buenos Aires
   - Autonomous City of Buenos Aires (CABA)
   - Catamarca
   - Chaco
   - Chubut
   - Córdoba
   - Corrientes
   - Entre Ríos
   - Formosa
   - Jujuy
   - La Pampa
   - La Rioja
   - Mendoza
   - Misiones
   - Neuquén
   - Río Negro
   - Salta
   - San Juan
   - San Luis
   - Santa Cruz
   - Santa Fe
   - Santiago del Estero
   - Tierra del Fuego, Antarctica, and South Atlantic Islands
   - Tucumán
5. In which healthcare sector do you work?
   - Public
   - Private
   - Public and private
6. How many years have elapsed since you completed your specialization?
   - Less than 5 years
   - 5 to 10 years
   - More than 10 years
7. What is the normal body mass index?
   - 15-18.5
   - 15-20
   - 18.5-25
   - 20-25
   - 25-30
   - 30-35
   - I don't know

8. According to data from the 4th National Risk Factor Survey, what do you believe is the prevalence of obesity in Argentina among individuals over 18 years of age?
   - 5%
   - 15%
   - 25%
   - 35%
   - I don't know
9. Regarding the intervention and follow-up of patients with obesity: How do you self-assess your training to address obesity treatment?
   - 1 Inadequate
   - 2
   - 3
   - 4
   - 5 Adequate
10. What initial weight loss goal should be set with the initiated treatment?
    - A reduction of at least 5% of the initial weight within 6 months
    - A reduction of 5-10% of the initial weight within 6 months
    - A reduction of 10-15% of the initial weight within 6 months
    - A reduction of 15-20% of the initial weight within 6 months
    - I don't know
11. Do you have a scale in your office to weigh your patients?
    - Yes
    - No
12. Do you have a measuring tape in your office to measure your patients' waist circumference?
    - Yes
    - No
13. Do you weigh your patients during consultations?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
14. Do you calculate the body mass index of your patients?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
15. Do you record waist circumference during consultations?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
16. What do you consider to be the main limitation in achieving an adequate evaluation and treatment of this disease by cardiologists?
    - Lack of time during consultations
    - Patient-related barriers
    - Insufficient medical training on the topic
    - Perception that this issue falls outside the scope of the specialty
    - Fear of patient discrimination or stigmatization
17. Do you refer patients to a nutrition specialist?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes

- 4: Almost always
- 5: Always

18. Do you take an active approach during consultations regarding recommendations for a healthy diet?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
19. Are you familiar with the concept of "ultra-processed foods"?
    - Yes
    - No
20. During the medical consultation, do you ask whether the patient engages in physical activity or sports?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
21. Do you prescribe physical activity or recommend sports to your patients?
    - 1: Never
    - 2: Hardly ever
    - 3: Sometimes
    - 4: Almost always
    - 5: Always
22. According to the WHO guidelines, what is the minimum recommendation for moderate-intensity aerobic physical activity in adults?
    - 50-100 minutes per week
    - 100-150 minutes per week
    - 150-300 minutes per week
    - 300-450 minutes per week
    - I do not know
23. What do you believe is the prevalence of low physical activity in adults in Argentina according to data from the 4th National Risk Factor Survey?
    - 45%
    - 55%
    - 65%
    - 75%
    - I do not know
24. Have you ever prescribed any pharmacological treatment aimed at overweight/obesity?
    - Yes
    - No
25. Which medication have you most frequently prescribed for overweight/obesity?
    - Orlistat
    - Glucagon-like peptide-1 receptor agonist
    - Bupropion and naltrexone
    - I have never prescribed pharmacological treatment
26. Are you familiar with the term "metabolic surgery"?
    - Yes
    - No
27. Have you ever recommended metabolic surgery for a patient with obesity?
    - Yes
    - No
28. Does your center have a Cardiometabolism Unit?
    - Yes
    - No