



Perspectives on Newer Antiobesity Drugs (Semaglutide and Tirzepatide) among Healthcare Professionals Treating Obesity in South Asia: A Cross-sectional Survey

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Received: 27 April 2026; Accepted: 31 July 2026

[Visual Abstract](#)

ABSTRACT

Introduction: Obesity has reached epidemic proportions in South Asia, contributing significantly to metabolic diseases and economic burdens. Newer antiobesity medications (AOMs), such as semaglutide and tirzepatide, show promising efficacy but face barriers such as high costs and limited familiarity among healthcare professionals (HCPs) in low- and middle-income countries (LMICs). This study explored perceptions, prescribing practices, efficacy, safety concerns, and barriers to AOM use among HCPs managing obesity in South Asia.

Methods: A cross-sectional online survey was conducted from May to September 2025 among 552 HCPs (physicians, endocrinologists, bariatric surgeons, nephrologists, gastroenterologists, and dietitians) specializing in obesity care, recruited via social media groups using convenience sampling. The questionnaire, developed from prior surveys and pilot-tested, assessed knowledge, attitudes, and practices regarding AOMs. Descriptive analysis was performed using SPSS version 21.

Results: Of 552 responses, 86.4% were from India. Endocrinologists (62.9%) and internists (21.6%) dominated, with varied experience levels. Key factors influencing prescriptions included efficacy (83%), affordability (75.9%), and safety (58.9%). Reported efficacy was high with 51.7% of the patients achieving > 10% weight loss. Barriers encompassed high costs (93.8%), side effect fears (46.2%), and poor adherence (41.3%). Biosimilars were available to 52.7%, with 78.6% of HCPs open to them if efficacy/safety matched originators.

Conclusions: South Asian HCPs recognize AOMs' transformative potential but are hindered by costs, safety, and access. Biosimilars could enhance equity, but require robust data and regulation. Targeted education, reimbursement policies, and region-specific evidence are essential to optimize AOM integration in obesity management.

Keywords: Antiobesity medications, Biosimilars, Healthcare professionals, South Asia.

Journal of The Association of Physicians of India (2026); 10.59556/japi.74.1709

and practices related to AOMs. Data were collected between May and September 2025. The HCPs included doctors with postgraduate or higher degrees practicing as physicians, endocrinologists, bariatric surgeons, nephrologists, gastroenterologists, and dietitians specializing in obesity management with a significant practice centered around obesity and complications related to obesity.

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How to cite this article: Agarwal K, Nagendra L, Bhattacharya S, et al. Perspectives on Newer Antiobesity Drugs (Semaglutide and Tirzepatide) among Healthcare Professionals Treating Obesity in South Asia: A Cross-sectional Survey. *J Assoc Physicians India* 2026;74(9):67–70.

INTRODUCTION

Obesity rates have surged globally to epidemic levels, with South Asia being a primary contributor. Obesity rates range from 3.5% in rural Bangladesh to 36.2% in India to over 65% in the Maldives.^{1,2} Early intervention is essential not only to manage metabolic diseases but also to alleviate the economic burden of workplace absences, reduced work capacity, and premature mortality, among many obesity-linked consequences. A 2017 report from the World Obesity Federation forecasted that India could face annual costs of US\$13 billion for addressing obesity-linked conditions by 2025.³

A systematic review reported that supervised exercise and diet incur costs similar to those of pharmaceuticals such as orlistat.⁴ Previously, due to safety issues and lesser efficacy, antiobesity medications (AOMs) were used in less than 1% of individuals with obesity.⁵ Better understanding of obesity's underlying mechanisms, coupled with the

proven efficacy of newer AOMs, is paving the way for a new phase in obesity treatment.⁶ The cost of newer AOMs like tirzepatide and semaglutide remains high, limiting their use and availability, especially in low- and middle-income countries (LMICs) of South Asia.⁷

Given the economic burden on the person and healthcare system, management of obesity needs to be patient-centric, culturally appropriate and cost-effective. Previously, biosimilar liraglutide was shown to be noninferior to reference liraglutide.⁸ Given the rapid emergence of newer AOMs and their potential role in obesity management, this study aimed to investigate perceptions, prescribing practices, perceived efficacy, safety concerns, and barriers to the use of AOMs among HCPs managing obesity in South Asia.

MATERIALS AND METHODS

The study involved HCPs who filled out an online questionnaire on knowledge, attitudes,

The questionnaire was developed based on prior published surveys and expert consensus and was pilot-tested with 20 clinicians to assess clarity and relevance.

The participants were contacted through social media groups to obtain their views about the efficacy and side-effect profile of newer AOMs, and hindrances to their use. They were asked about the strategies for addressing obesity and perceptions about it, alongside patient interactions centered on weight and obesity oversight. Their outlooks on AOMs, along with hands-on involvement in prescribing AOMs, were also assessed. It was convenience sampling based on voluntary participation and anonymity. HCPs not directly involved in obesity care were not included. Since the data required filling out an online questionnaire, no ethical approval was needed.

Descriptive analysis was performed using SPSS (version 21; SPSS, Inc., Chicago, IL).

RESULTS

Baseline Characteristics

A total of 552 responses were received, of which 477 (86.4%) were from India. Other countries included Bangladesh: 40 (7.2%), Nepal: 27 (4.9%), and Pakistan: 4 (0.7%). Most respondents were endocrinologists (62.9%), followed by internists with special interest in diabetes (21.6%). Other specialties represented included bariatric surgeons (3.4%) and nephrologists (2.7%). The group included HCPs with a wide range of experience in managing obesity. 194 (35.3%) had less than 5 years, 135 (24.4%) had 5–10 years, 68 (12.3%) had 11–15 years, 49 (8.9%) had 16–20 years, while 106 (19.2%) had more than 20 years of experience. The HCPs came from varied professional backgrounds, including government and private teaching institutes (25.9% and 23.1%), government and private nonteaching institutes (2.7% and 21.9%), private clinics (19.5%), or private clinics with additional institutional practice (11.6%). The frequency of AOM prescriptions varied from 2–9 per month in 43% of respondents, 10–49 per month in 22.6%, and > 50 in 6.3% of the respondents, while 21.9% of them recommended <1 AOM prescription/month. The availability of GLP-1 analogs varied according to country, and the summary of availability is shown in Figure 1. The most common GLP-1 analogs available include oral (87.9%) and injectable semaglutide (76.1%), tirzepatide (80.6%), and dulaglutide (66.1%). Other less common GLP-1 analogs include exenatide (15.6%) and lixisenatide (22.6%).

Factors influencing AOM Prescription

The factors influencing the decision of GLP-1 analogs are shown in Table 1. The most

significant factors that HCPs considered were efficacy in weight reduction (83%) and affordability (75.9%). Other factors included care-seeker preference (46.7%), the safety profile (58.9%), and availability (45.9%). Most HCPs reported high efficacy with the use of these drugs, with 51.7% reporting > 10% weight loss in their patients and another 44.3% reporting 5–10% weight loss in their patients. Most users reported gastrointestinal side effects (97.8%), including nausea, vomiting, and diarrhea. Other side effects reported included psychiatric (5.2%), ophthalmological (4.7%), and neurological (3.4%). The challenges faced while prescribing AOMs include high cost (93.8%), fear of side effects (46.2%), limited availability (26.6%), lack of insurance coverage (39.1%), and poor patient adherence (41.3%).

Perception of care-seekers using AOMs

Antiobesity medication users had several concerns regarding these drugs, which are summarized in Figure 2. The most common apprehensions included rebound weight gain after discontinuation (68.5%), long-term safety (47.5%), and weight loss efficacy of the AOM (38.9%). Misconceptions related to AOMs included the belief that they work without lifestyle changes (74.6%), that they should be used only in extreme obesity

(23.5%), or that their use causes dependency (21%).

Perceptions regarding Biosimilar AOMs

Biosimilars were available to 52.7% of the doctors. 78.6% of the HCPs opined they would prefer biosimilars once efficacy and safety data are comparable. Major concerns regarding the use of biosimilars are shown in Figure 3. These included a lack of long-term safety data (64.7%), differences in efficacy compared to the original molecule (56.9%), and regulations around their approval and quality (48.7%).

Future Developments

Despite these limitations, the HCPs were hopeful about the future of antiobesity therapy. 58% of them believed that new AOMs will revolutionize obesity management, while 15.9% of the respondents thought that the impact will be limited by cost and accessibility. When asked about the possible improvements in the current AOM landscape, better affordability (87.2%), fewer side effects (49.7%), and longer duration of action (48%) were possible areas of improvement. 61.2% of HCPs wanted real-world data from South Asia to make better-informed decisions.

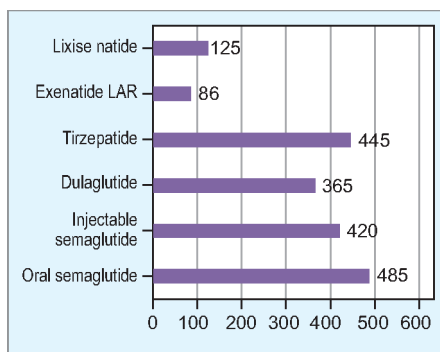


Fig. 1: Availability of GLP-1 analogs to doctors

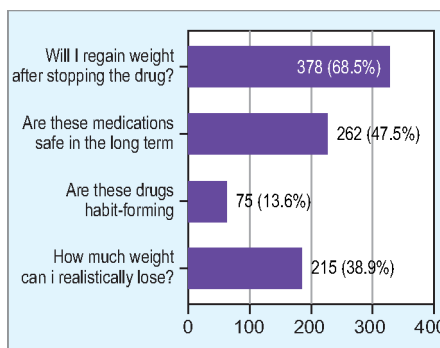


Fig. 2: Patients' concerns regarding GLP-1 analogs

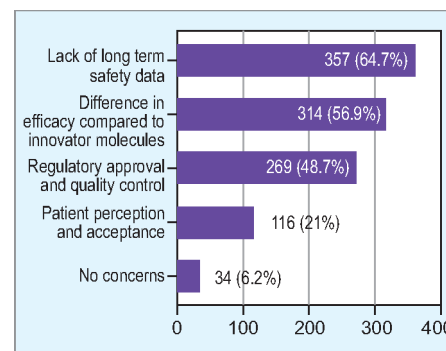


Fig. 3: Concerns regarding biosimilars of GLP-1 agonists

Table 1: Factors influencing use of GLP-1

Factor	Count	Percentage (%)
Efficacy in weight reduction	458	83
Cost and affordability	419	75.9
Insurance/ reimbursement availability	89	16.1
Safety profile and side effects	325	58.9
Patient adherence in your country	254	46.1
Patient preference/ request	258	46.7

DISCUSSION

This was a survey across multiple countries in South Asia regarding the use of newer AOMs by HCPs. The rising obesity rates have driven the global obesity drug market, projected to cross 100 billion dollars by 2030, while battling shortages due to increased demand. LMICs face an unusual double burden of malnutrition and obesity, with most of the healthcare expenditure borne by care-seekers. Given this situation, lower cost of AOMs will ensure equitable distribution of these drugs.

The HCPs most likely to prescribe AOMs were endocrinologists (62.9%) and internists (21.6%). While they had considerable experience in managing obesity, the frequency of AOM use remained around 2–9 per month in 43% of respondents. A study involving 197 physicians revealed that even when HCPs consider weight loss to be important for the management of a particular disease, such as osteoarthritis, polycystic ovary syndrome, and obstructive sleep apnea, they are likely to advise lifestyle measures, placing the burden of weight loss solely on the individual.⁹ HCPs usually initiate AOM use after failure or noncompliance with diet and exercise.¹⁰ The overestimation of standalone lifestyle approaches may trace back to longstanding paradigms in prior clinical directives, which prioritized such methods amid fewer alternatives available previously.¹¹

The important factors that the doctors considered were efficacy in weight reduction (83%), affordability (75.9%), patient preference (46.7%), the safety profile (58.9%), and availability (45.9%). This was similar to another large survey where expense and insurance coverage were the biggest concerns regarding AOM use.¹² Similarly, Rubino et al. reported that 71–93% of HCPs were willing to prescribe AOMs if reimbursed.⁹ For better insurance coverage, we need to evaluate the costs and indirect gains from averting obesity-linked secondary conditions. A small study has shown that incremental cost-effectiveness exceeded the threshold for semaglutide.¹³

Most respondents reported high efficacy with the use of AOMs, with 51.7% reporting > 10% weight loss. The most common side effects reported were gastrointestinal (97.8%). High cost (93.8%) and fear of side effects (46.2%) remain the biggest challenges for HCPs prescribing AOMs. In a study by Fadel et al.,¹⁴ 65% of the gastroenterologists felt that the risks and side effects of AOMs precluded their widespread use despite being effective. Kaplan et al.¹² reported that side effects (26.1%) and high cost and lack of insurance coverage (11.2%) were the most common reasons for discontinuing AOMs.

For AOM users, the biggest concerns were weight gain after stopping the drug (68.5%) and long-term safety (47.5%). In a similar study from Saudi Arabia,¹⁵ the most common concern was potential side effects (68.5%), but more than half (53.5%) were open to AOM use if their HCP prescribed it. Kaplan et al.¹² reported long-term side effects (57.5%), negative impact on health (56.3%), and interactions with other medicines (54.4%) as the biggest concern among the patients.

While biosimilars were available to 52.7% of the HCPs, most (78.6%) were open to the idea of biosimilars once long-term safety data (64.7%) and quality (48.7%) were ensured. It has been shown that the newer AOMs can be manufactured at a cost lower than the currently marketed one, and that the prices vary between countries.⁷ Previously, biosimilar liraglutide was shown to be noninferior to reference liraglutide.⁸ Factors influencing the choice of a particular biosimilar include pedigree of the manufacturers, their policies regarding the cold chain maintenance, shelf-life, precision and comfort of the delivery device, studies regarding safety, cost, physicians' and peer experience with the brand.¹⁶

For the future, better affordability (87.2%), fewer side effects (49.7%), and longer duration of action (48%) remained the real goals for AOMs and their biosimilars. In a survey by Lin et al.¹⁰ in China, the future perspectives included better efficacy (26%) and safer long-term use (26%). In another survey, HCPs flagged tolerance to AOMs (46.6%), dependence on AOMs for weight management (36.3%) as potential concerns.¹²

The strengths of the study are the wide category of HCPs who have been covered, including endocrinologists, internists, dietitians, nephrologists, and bariatric surgeons. However, the study has various limitations. The one-time snapshot risks temporal bias, and self-reports invite memory errors. HCPs were approached in common groups on social media and may not be representative of all doctors. While every effort was made to ensure representation from all parts of South Asia, most responders are from India. Patient-level outcomes were not analyzed. While the results may not be generalizable, the data represent the views of the doctors at the forefront of obesity management and show the shifts in obesity treatment paradigms. Future research should focus on how socioeconomic position, racial and ethnic backgrounds, and geographic locations influence health and prescription of AOMs.

This study highlights many policy implications. It is high time we recognize obesity as a chronic noncommunicable disease that demands long-term supervised medical treatment. High costs and lack of insurance coverage prioritize the need for simplified reimbursement policies and inclusion of AOMs in various public health initiatives. There is a need to establish regulatory guidelines and post-marketing surveillance for successful adoption of biosimilar AOMs. Nevertheless, continued medical education of healthcare providers and culturally relevant public education are essential to addressing misconceptions and promoting the ethical use of AOMs.

CONCLUSION

The survey highlights that HCPs from South Asia recognize that obesity treatment has entered a new era with the availability of newer AOMs with improved efficacy. Despite this recognition, the study identifies several barriers to the use of AOMs, including limited acceptance of obesity as a chronic disease. Cost and safety concerns remain the most important deterrents among HCPs to the use of AOMs. Biosimilar GLP-1 receptor agonists are likely to feature prominently in the AOM landscape in South Asia, pending efficacy and safety data. Bridging the gap between access and efficacy through improved affordability, targeted education of HCPs and the public, appropriate biosimilar regulation, and generation of real-world evidence will be pivotal to realize the full potential of AOMs in South Asia.

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