

Pharmaceutical Marketing of Antidiabetic Drugs: Promotional Strategies, Prescribing Behaviour and Emerging Market Trends

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Abstract: *Diabetes mellitus is a chronic metabolic illness requiring continuous clinical care, periodic monitoring and pharmacological intervention when indicated. The incidence of diabetes has been rising the need for dependable access to glucose-lowering medicines and has also shaped pharmaceutical distribution, sales and promotional practices. This review develops the earlier pharmacy practice-school report into a narrative discussion of antidiabetic drug classes, selected formulations and pharmaceutical sales and marketing activities. The original report described metformin, glimepiride and chlorpropamide, listed selected marketed brands, and discussed market demand, competition and the relationship among prescribers, pharmacists, patients, manufacturers and medical representatives. For publication, the material has been reframed as a narrative review because the original report does not provide a sufficiently detailed sampling method, statistical analysis or primary market dataset to support claims of representative market share. Current authoritative information from World Health Organization and International Federation of Diabetes is incorporated to provide contemporary context. The review emphasizes that ethical pharmaceutical marketing should be evidence-based, accurate, transparent and consistent with rational medicine use and patient safety. It also identifies the need for structured market-survey methods and current secondary data when reporting product availability, sales volume or market share.*

Keywords: Diabetes mellitus; antidiabetic drugs; pharmaceutical marketing; pharmaceutical sales; metformin; sulfonylureas; drug promotion; rational use of medicines; India

1. Introduction

Elevated blood glucose is a hallmark of diabetes mellitus, a chronic metabolic condition that, if left unchecked, can cause increasing harm to the kidneys, neurological system, eyes, and heart. According to the World Health Organization, the number of individuals with diabetes rose from around 200 million in 1990 to 830 million in 2022, with low- and middle-income nations bearing a disproportionate share of the burden. Type 2 diabetes affects more than 95% of people with diabetes.^[1,2]

One important source of national, regional, and international estimates of diabetes prevalence is the International Diabetes Federation (IDF) Diabetes Atlas, mortality and health expenditure. The 11th edition, published in 2025, provides updated estimates and methodological information for contemporary diabetes epidemiology.^[2]

Pharmacological management of diabetes includes several classes of medicines with different mechanisms, benefits, limitations and safety considerations. Commonly used agents include metformin, sulfonylureas, insulin, glucagon-like peptide-1 receptor agonists (GLP-1 RAs), dipeptidyl peptidase-4 (DPP-4) inhibitors, thiazolidinediones, and inhibitors of sodium-glucose cotransporter-2 (SGLT2). Treatment selection is individualized according to glycaemic status, comorbidities, adverse-effect profile, access, cost and clinical guidelines.^[3-6]

Pharmaceutical sales and promotional activities provide a communication link among manufacturers, healthcare professionals, pharmacies and healthcare systems. Medicine-related promotional information should be scientifically supported and should not encourage inappropriate

prescribing, dispensing or use. The original project report was designed as a practice-school exercise focused on antidiabetic products, brands, market demand and pharmaceutical representatives.^[7-10]

2. Materials and Methods

This manuscript was prepared as a review of storytelling based primarily on the uploaded practice-school report and supplemented with current authoritative public-health information and peer-reviewed literature. Contemporary epidemiological context was checked against the World Health Organization and the According to the latest edition of the International Diabetes Federation's Diabetes Atlas (11th edition, 2025), diabetes remains a significant global public health concern.^[1,2] Current diabetes pharmacotherapy recommendations were considered using the ADA Standards of Care, ADA/EASD consensus guidance and WHO guidance.^[3-6] Literature concerning pharmaceutical promotion and physician-industry interactions was also reviewed.^[7,14-22] Selected product examples and observations concerning pharmaceutical sales were retained only where they were explicitly present in the source report. No unreported patient-level data, sales figures, market shares or survey results were invented.

Because the original report does not describe a predefined sampling frame, number of pharmacies or physicians surveyed, questionnaire validation, inclusion/exclusion criteria, dates of data collection, statistical methods or a reproducible market-share dataset, it is not appropriate to present the original observations as a representative primary market study. Accordingly, the manuscript is classified as a narrative review/overview. Future primary research should use a predefined sampling method, standardized data-

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collection instrument and appropriate statistical analysis.
[23,30]

Overview of Antidiabetic Drug Therapy

Antidiabetic therapy primarily focuses on maintaining blood glucose levels within the recommended range and minimizing the likelihood of complications related to diabetes. Contemporary diabetes care considers outcomes beyond glucose reduction, including cardiovascular and renal effects, changes in body weight and hypoglycaemia risk. Lifestyle modification remains fundamental to diabetes care, while drug therapy is selected according to the patient's clinical circumstances.^[3-6,11]

The original report focused particularly on metformin, glimepiride and chlorpropamide. Metformin is a biguanide and has historically been a central medicine for type 2 diabetes. Sulfonylureas such as glimepiride stimulate insulin secretion and can be effective glucose-lowering medicines but may cause hypoglycaemia and weight gain. Chlorpropamide is a first-generation, long-acting sulfonylurea and is less prominent in contemporary diabetes pharmacotherapy because of its prolonged action and safety limitations.^[12,13]

Selected Antidiabetic Drugs Discussed in the Original Report

Selected Marketed Brands Reported in the Source

The original report lists examples of brands and manufacturers observed or recorded during the practice-school exercise. These examples should be treated as historical/project observations rather than a current national market list. Brand availability, ownership and formulation status can change over time and therefore require verification from current manufacturer or regulatory sources before publication as current market data.

Pharmaceutical Sales and Marketing

Pharmaceutical sales and marketing involve communication of information about medicines, products and services to appropriate stakeholders. In the original report, the pharmaceutical sales representative was described as an important link between the manufacturer and healthcare professionals. The representative may communicate approved product information, availability and relevant scientific evidence, while maintaining professional relationships with doctors, pharmacists and other stakeholders.^[31-33]

Ethical marketing is particularly important for prescription medicines. Promotional information should be accurate, balanced and supported by appropriate evidence. Commercial objectives should not override patient safety, rational prescribing or the professional independence of healthcare practitioners. WHO ethical criteria state that Promotional statements must be supported by verifiable evidence and should convey information that is accurate, honest, balanced, relevant, and consistent with current scientific knowledge.^[7,14-17]

The antidiabetic medicine market is shaped by disease prevalence, prescribing behaviour, prices, generic competition, product availability, supply systems, prescriber

preferences, affordability and newer therapeutic options. Current market discussions also need to distinguish unit volume, sales value, molecule-level sales, brand-level sales and market share because these measures are not interchangeable.^[2,18,19]

Factors Influencing the Antidiabetic Market

Increasing prevalence and improved detection of diabetes.
Growing demand for long-term pharmacological treatment.
Availability and affordability of generic medicines.
Introduction of newer drug classes and combination products.
Physician prescribing preferences and clinical evidence.
Patient adherence, treatment persistence and affordability.
Distribution and availability through pharmacies and healthcare facilities.
Competition among manufacturers and brands.
Regulatory requirements and ethical standards for medicine promotion.
Increasing importance of outcomes beyond glycaemic control, including cardiovascular, renal and weight-related considerations.

Role of Pharmaceutical Sales Representatives

Pharmaceutical representatives may support appropriate medicine use by providing current, balanced and accurate information within the approved indications of a product. Their responsibilities include professional communication, appropriate product knowledge, collection of legitimate feedback and adherence to applicable regulatory and organizational requirements. Such communication should complement, rather than substitute for, the independent clinical judgement of a qualified prescriber.^[7,15-17,20-22]

The original report emphasized relationships among doctors, patients, pharmacists, marketing representatives and manufacturers.^[23] In a modern publication context, this relationship should be described as a professional communication network in which patient welfare and evidence-based treatment remain central. Evidence from systematic reviews indicates that professional interactions between healthcare providers and pharmaceutical industry representatives can affect clinicians' medication-prescribing decisions, emphasizing the importance of transparent and ethical communication.^[18-22,24]

Market Research: Recommended Approach

The original report includes objectives related to market demand, competition, market share, brands and doctors, but it does not provide sufficient methodological detail to establish representative market estimates. A publishable primary market study should specify the geographic area, study period, sampling frame. The study methodology should specify the number of participants, eligibility requirements for inclusion and exclusion, instruments used for data collection, the origin of sales-related data, and the statistical techniques applied for data analysis. A future study could prospectively survey a defined sample of community pharmacies and healthcare professionals. Data could include generic name, dosage form, strength, brand availability, manufacturer, approximate dispensing frequency and price category. Market-share calculations should be based on a clearly defined denominator and an identifiable data source.

If proprietary sales data are used, the data provider and analysis period should be stated.

3. Discussion

The source practice-school report provides an introductory description of antidiabetic products and sales activities, although its evidence base is primarily educational rather than that of a formal research investigation. Its strongest contribution is the practical description of marketed formulations and the perceived role of pharmaceutical representatives. However, several numerical statements and market claims in the original report are dated or insufficiently referenced and should not be presented as current national estimates without verification.^[23]

Recent evidence continues to demonstrate a considerable and increasing global burden of diabetes. WHO reports 830 million people living with diabetes in 2022, while the IDF 11th edition provides updated 2024 estimates and country-level data.^[1,2] This changing epidemiological environment increases the importance of efficient medicine supply, affordability, rational prescribing and responsible pharmaceutical communication.^[31-33]

The market for antidiabetic medicines is also evolving beyond traditional oral agents. Newer medicines and combination formulations have broadened therapeutic choices, while

generic competition may affect accessibility and cost. Evidence from major clinical trials evaluating cardiovascular and kidney outcomes has established significant clinical benefits for certain sodium–glucose cotransporter-2 (SGLT2) inhibitors and glucagon-like peptide-1 (GLP-1) receptor agonists, highlighting the importance of incorporating recent therapeutic evidence into discussions of diabetes management and pharmaceutical market trends.^[3,5,25–29]

4. Conclusion

Sales and marketing contribute to the communication and distribution of antidiabetic medicines; however, these activities should remain evidence-based, ethical and focused on patient welfare. The original practice-school report provides a foundation for understanding selected antidiabetic drugs, marketed brands and the role of pharmaceutical representatives. For journal publication, however, the work is better presented as a narrative review unless a complete primary market dataset and methodology are available. Contemporary diabetes statistics and current therapeutic developments should replace outdated estimates, and all market-share or product-availability claims should be supported by traceable sources. Future studies using structured pharmacy and prescriber surveys, explicit sampling procedures and validated market datasets could generate stronger evidence regarding the Indian antidiabetic medicine market.

Table 1: Selected Antidiabetic Drugs Discussed in the Original Report

Drug	Class	Role/description in source report	Publication note
Metformin	Biguanide	Reported as an oral antidiabetic drug; 500 mg and 850 mg formulations were discussed.	Dose statements should be checked against current guidelines/product information.
Glimepiride	Sulfonylurea	Reported for type 2 diabetes with selected marketed brands.	Current safety and place in therapy should be supported by contemporary references.
Chlorpropamide	First-generation sulfonylurea	Reported as a long-acting sulfonylurea with prolonged hypoglycaemia risk.	Historical/limited contemporary relevance; verify current availability before describing it as marketed.

Table 2: Selected Marketed Brands Reported in the Source

Drug/formulation	Brand examples reported	Manufacturer reported in source
Metformin 500 mg	Glycomet; Gluconom; Melmet; Metsmall; Okamet 500	USV; Lupin; Microlabs; Dr. Reddy's Laboratories; Cipla
Glimepiride	Accuglim; Amaryl; Asoride; Azulix; Bepride	Cadell Healthcare; Solitaire Pharmacia; Cipla; Torrent Pharma; Sun Pharma
Chlorpropamide	Copamide; Chlorid Care; Chlorpropamide; Diabinese	Dey's; Adva Care Pharma; Mylan; Pfizer

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