Exploring diabetes management patterns in Europe

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Contents

Global burden of diabetes mellitus: prevalence and implications

The global burden of diabetes mellitus is staggering, affecting millions of individuals worldwide. According to recent estimates, over 537 million people have diabetes, accounting for nearly one in every ten adults[1]. This illness has far-reaching consequences not just for patients but also for healthcare systems, particularly in industrialized nations where diabetes is one of the most expensive chronic diseases[2]. For example, in the United States, an astounding $1 out of every $4 in healthcare costs is allocated to caring for people with diabetes[2]. The economic impact of diabetes is further exacerbated by the significant costs associated with managing its complications.

Diabetes is associated with a range of complications, both macrovascular and microvascular, which have substantial medical and economic consequences. Macrovascular complications include heart disease and stroke, while microvascular complications encompass retinopathy, neuropathy, and nephropathy[3]. The treatment of these complications accounts for a significant proportion of lifetime medical costs for individuals with diabetes, ranging from 48% to 64%[2] for macrovascular complications. Managing these complications not only imposes a substantial burden on healthcare systems but also affects the quality of life of individuals living with diabetes.

In addition to the complications and economic burdens, several challenges impede the effective treatment of diabetes. The fact that patients are frequently asymptomatic at the time of diagnosis is one of the primary challenges.

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90%

of all diabetes patients globally are suffering from type 2 diabetes.

Diabetes, as opposed to other acute diseases, can develop silently over time without manifesting any symptoms, making patients doubt the value of both non-pharmacological and pharmacological treatments. This seeming lack of urgency may lead to a delayed beginning of therapy or unwillingness to take medications and adopt lifestyle changes.

Significant but sometimes difficult to maintain long-term lifestyle changes are a crucial part of diabetes treatment. A substantial amount of effort and self-control are needed to implement dietary modifications, increase physical activity, and adopt healthy living choices. Unfortunately, for many people, maintaining these lifestyle changes over an extended period is extremely challenging, leading to detrimental effect on treatment outcomes.

Prescribed medications for diabetes management, including oral antidiabetic agents and insulin, can often cause side effects that further complicate treatment adherence. Nausea, diarrhea, and weight gain are some of the common adverse effects associated with these medications[3]. Considering that individuals with diabetes often experience little or no symptoms prior to treatment initiation, the presence of medication side effects can further discourage adherence to the prescribed regimens. Poor compliance with medication regimens compromises glycemic control and increases the risk of complications associated with diabetes.

The purpose of this paper is to examine the unique challenges associated with managing diabetes in the European market. Type 2 diabetes is the prevailing form of diabetes, representing more than 90% of all cases globally. For the purposes of this report, unless specified otherwise, our publications analysis primarily focuses on the patterns observed in the administration of treatments for type 2 diabetes.

Objective of the report

This report emphasizes how critical it is to have a detailed understanding of the burden of disease, patient demographics, and dispensing trends in pharmacies. By exploring these aspects, the report highlights key insights on patient attrition, co-prescription trends, and the overall distribution of medications in pharmacies while shedding light on the difficulties associated with diabetes in Europe.

Challenges associated with diabetes management in the European market

01.
Rising prevalence and demographical differences

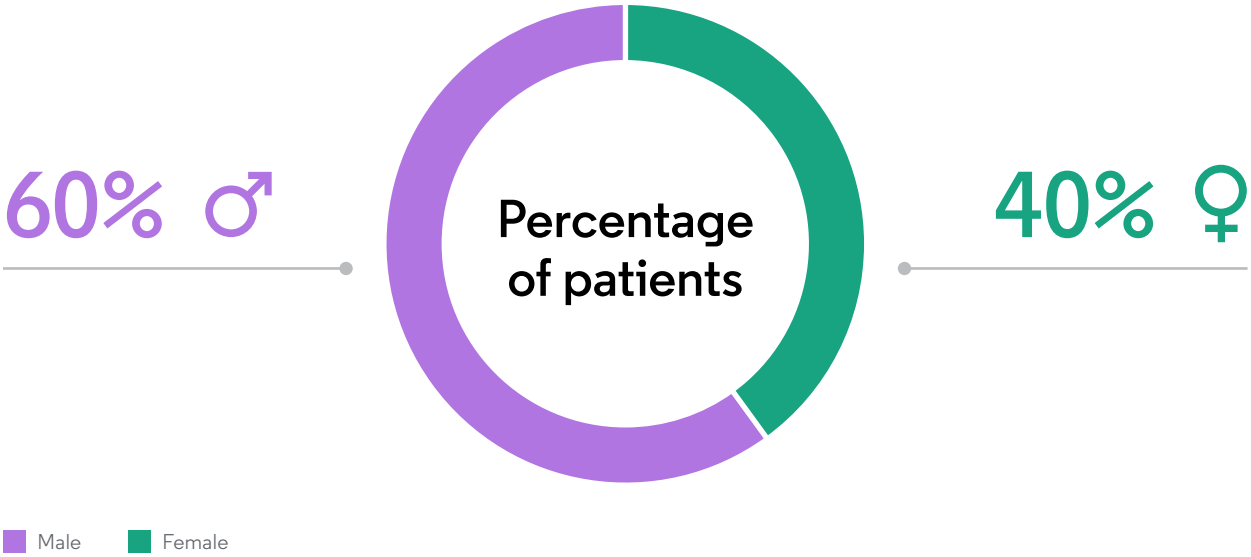
The European market is witnessing a significant rise in the prevalence of diabetes, posing a substantial burden on healthcare systems. Several studies have highlighted the escalating prevalence of the type 2 diabetes, across European countries[4]. The type 1 diabetes incidence has been on the rise in most of the countries examined[1]. However, there is now proof indicating that this upward trend is slowing down or has come to a halt in several high-income nations[1]. While type 1 diabetes is less common than type 2 diabetes overall, it accounts for the vast majority of children with diabetes[5].

Type 1 diabetes can occur at any stage in life when insulin-producing cells in the pancreas are destroyed, possibly due to infection[5].

Type 2 diabetes, typically seen in adults, is now more common in younger overweight individuals. Changing one's lifestyle can lower the chances of developing type 2 diabetes[5].

When studying the prevalence of diabetes across Europe, gender disparities must be considered. Diabetes is more prevalent in males than females in several European countries[6]. This difference may be attributed to various factors, including biological, behavioral, and socioeconomic factors. Understanding these gender-specific variations can aid in designing targeted interventions and prevention strategies in Europe.

Figure 1: Diabetes treatment A — gender profile.



Source: Clarivate Patient Data Intelligence

0.5M

packs of medication commonly used for diabetes type 2 treatment are dispensed each month in Europe.

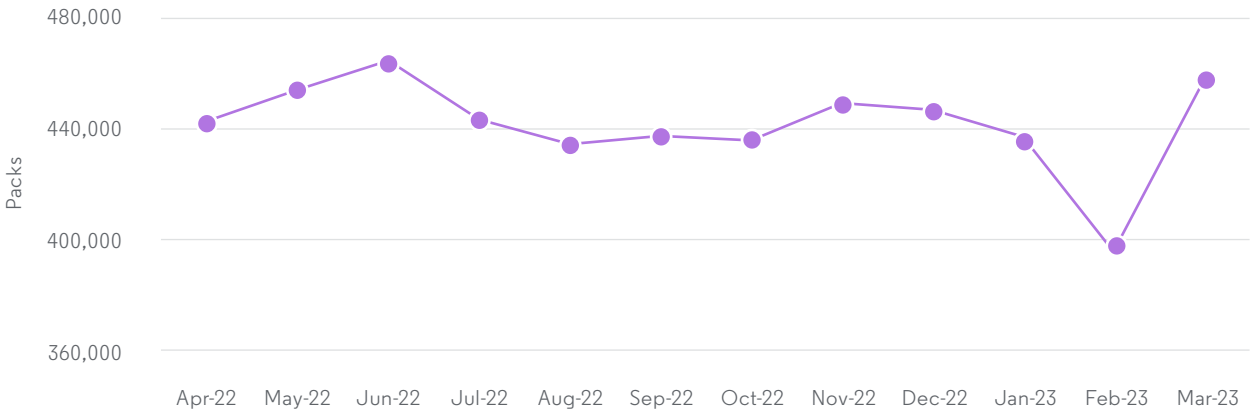
Another significant factor in managing diabetes is age. Diabetes prevalence rises with age, and the burden of diabetes is greater among the elderly. Because of age-related physiological changes, comorbidities, polypharmacy, and cognitive impairments, older patients in Europe frequently encounter unique challenges in diabetes treatment[7]. Tailoring diabetes management approaches to address the specific needs of the elderly population, such as simplified medication regimens and regular monitoring, is essential in promoting optimal outcomes in Europe.

Clarivate experts examined the distribution patterns of a commonly used diabetes type 2 treatment in various European countries. Findings revealed that nearly half a million packs of this specific medication are dispensed each month.

The analysis also indicates a noticeable decline in the distribution of this medication after individuals reach their sixth decade of life.

Tailoring diabetes management approaches to address the specific needs of the elderly population is essential in promoting optimal outcomes in Europe.

Figure 2: Diabetes treatment A — extrapolated monthly dispensed volumes.



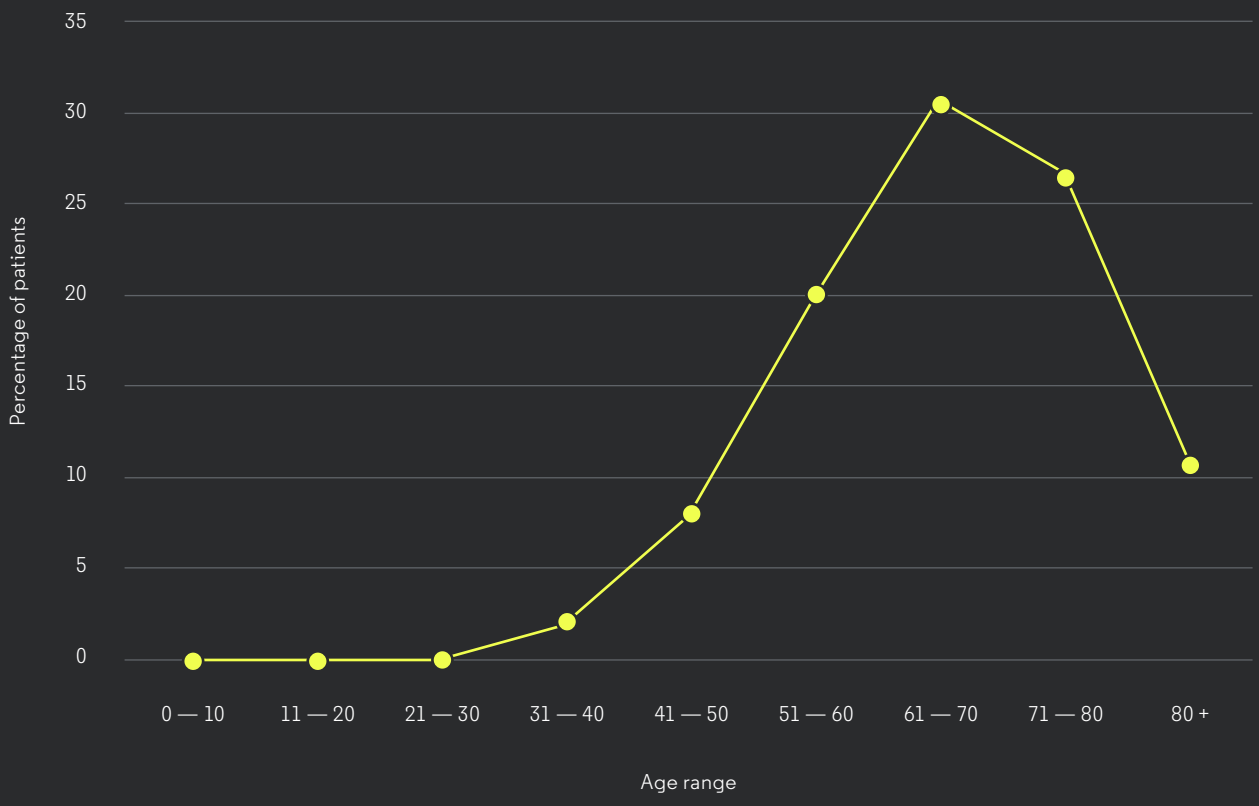
Source: Clarivate Patient Data Intelligence

This decrease is likely attributed to the drug's associated side effects, which are less tolerable among older patients who face a higher risk of compromised hypoglycaemic awareness and falls.

Our findings reveal that over 60% of the dispensing of this medication is observed in men, while women account for around 40%. These ratios are consistent with recent research on the gender breakdown among individuals affected by diabetes.

Study reveal that diabetes medication is dispensed more frequently to men compared to women.

Figure 3: Diabetes treatment A — age profile.



Source: Clarivate Patient Data Intelligence

02.
Patient attrition

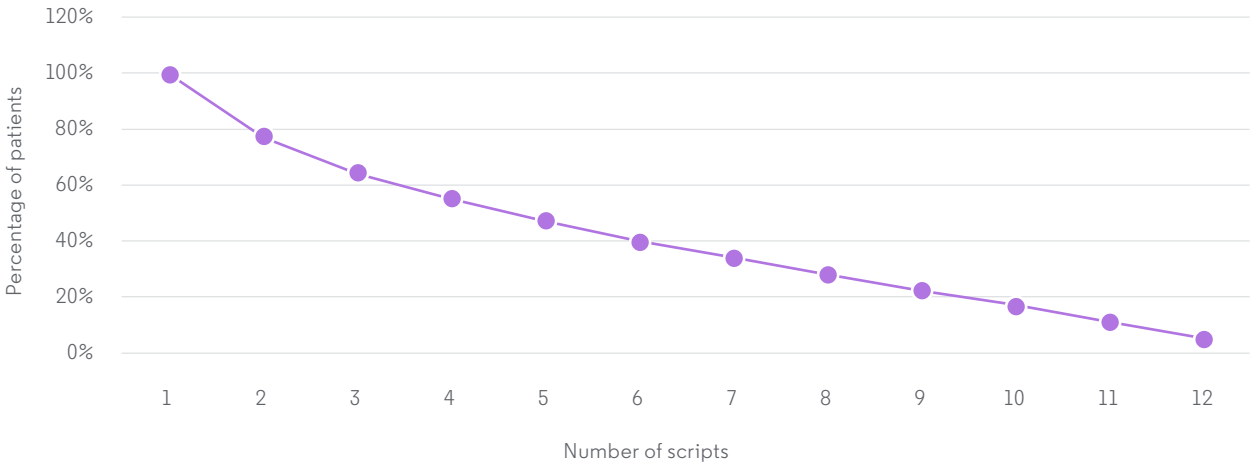
Patient attrition, or the discontinuation of medications or treatment, is a significant concern in diabetes management. Studies conducted on patients in Europe have shown that a considerable proportion of individuals with diabetes discontinue their prescribed medications, leading to suboptimal glycemic control and increased risk of complications[8]. Several factors contribute to patient attrition, including medication side effects, perceived lack of efficacy, and poor understanding of the importance of treatment adherence.

Effective diabetes management relies heavily on patient education and health literacy. Limited health literacy can impede understanding of self-management strategies, medication adherence, and awareness of complications, leading to substandard disease control. Implementing targeted educational initiatives and improving health literacy can empower individuals with diabetes to make informed decisions and actively participate in their care.

Examination of the patient attrition curve for this specific diabetes medication reveals a 25% decrease in compliance following the initial prescription. This rate declines even further, dropping to less than half after the fifth prescription. These observations provide valuable insights into patient behavior and can guide future research endeavors.

Educational initiatives and improving health literacy can empower patients.

Figure 4: Diabetes treatment A — cumulative patient attrition.



Source: Clarivate Patient Data Intelligence

03. Comorbidity and complex treatment regimens

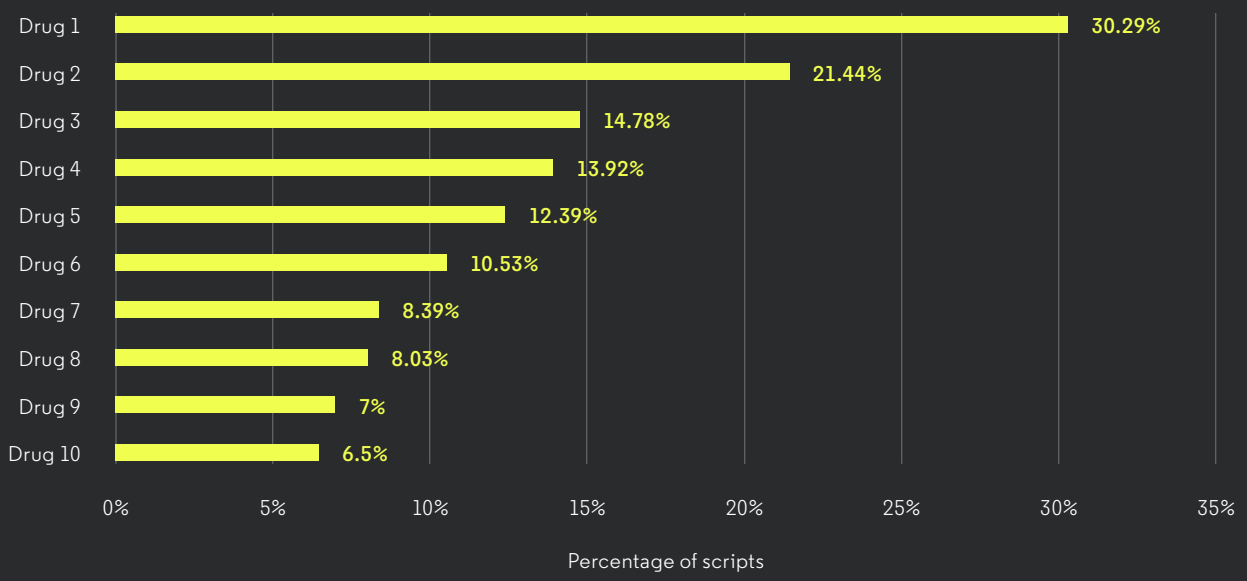
Diabetes often coexists with other chronic conditions, such as hypertension, dyslipidemia, and cardiovascular disease. Managing multiple chronic conditions simultaneously poses unique challenges in treatment decision-making and medication adherence. The complexity of treatment regimens, including polypharmacy and potential drug interactions, further exacerbates the issue.

Studies conducted in Europe have indicated that patients with diabetes are frequently prescribed multiple medications.

The risk of polypharmacy was two times higher in patients with cardiovascular comorbidities, respiratory diseases, and mental disorders, and three times higher in those with musculoskeletal diseases[9].

Managing multiple chronic conditions poses challenges in treatment decision-making.

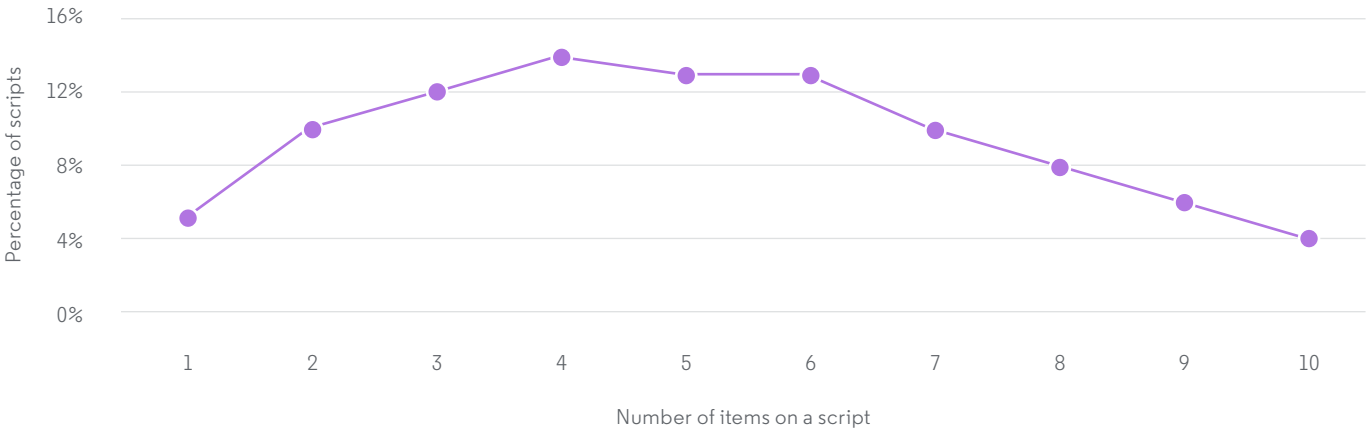
Figure 5: Diabetes treatment B — co-prescribed drugs bar graph.



Source: Clarivate Patient Data Intelligence

Healthcare providers need to carefully evaluate the appropriateness of each medication, considering the potential benefits and risks, and ensure that the regimen is manageable for patients.

Figure 6: Diabetes treatment B — number of co-prescriptions.



Source: Clarivate Patient Data Intelligence

Through the analysis of co-prescribed medications, our observations enable us to evaluate the combinations of drugs that patients are using. This provides additional information regarding potential interactions and side effects, as well as how these factors might impact treatment adherence.

Upon examination of the number of co-prescriptions for this diabetes medication, it is evident that the majority of patients receive prescriptions for up to six additional drugs.

This polypharmacy approach aims to address the complex health needs of individuals with diabetes and reduce the risk of associated complications. However, it is essential to strike a balance between effective disease management and medication burden in the European market. Polypharmacy increases the risk of medication interactions, side effects, and non-adherence. Therefore, healthcare providers need to carefully evaluate the appropriateness of each medication, considering the potential benefits and risks, and ensure that the medication regimen is manageable for patients.

04.
Technological advancements and digital health solutions

Technological advancements have revolutionized diabetes management in the European market by introducing various devices to assist individuals in monitoring and controlling their blood glucose levels. Continuous Glucose Monitoring (CGM) systems, smartphone applications, and wearable devices offer promising opportunities for real-time data collection, remote monitoring, and personalized interventions.

Integrating these technologies into routine care can enhance self-management, improve glycemic control, and facilitate timely clinical interventions. In real-world scenarios, three European studies analyzing patient charts of individuals with type 2 diabetes who were undergoing basal bolus insulin therapy reached the same conclusion: the implementation of flash glucose monitoring for a period of 3-6 months led to a significant reduction in HbA1c levels[10].

However, ensuring the accessibility and affordability of these innovations for all individuals remains a challenge.

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Key takeaways

Comprehensive and patient-centered approaches are crucial for effective diabetes management.

Prioritizing early detection, education, and support for individuals at risk of or living with diabetes is essential.

Improving treatment adherence and mitigating medication side effects should be a priority for healthcare systems.

Tailoring interventions based on demographics, prevalence rates, patient attrition, and co-prescription practices can enhance diabetes management outcomes.

Patient education, regular monitoring, and support from healthcare professionals play a vital role in fostering patient engagement and long-term treatment success.

Equitable access to care, prevention strategies, and the adoption of innovative solutions can mitigate the burden of diabetes on individuals and society.

Addressing challenges related to rising prevalence, socioeconomic disparities, limited health literacy, complex treatment regimens, and the integration of technological advancements is crucial.

Interdisciplinary collaborations between healthcare providers, pharmacists, and other stakeholders can optimize diabetes care and dispensing patterns in pharmacies.

Patient education, regular monitoring, and support from healthcare professionals play a vital role in fostering patient engagement and treatment success.

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