

Diabetes Trends in France (2021–2023): A Descriptive Study Based on the THIN Database

Cheikh Tamberou, Sr., MSc¹, Arnaud Kpakpo, MSc¹, Hugues Delamare, MD¹, Simon Pilet, MSc¹, Ilyes Mohammed Chikouche, MSc¹, Safiatou Ouattara, MSc¹, Elise Arnée, PharmD¹, Stephane Honore, PharmD, PhD, HDR², Romain Leguillon, PharmD², Nemanja Milenkovic, MD², Thierry Morvan, MD², Nicolas Huiban, MSc¹, Pascal Staccini, MD, PhD, HDR².

1 Clinityx by GERSData, Boulogne-Billancourt, France, 2 Comité Scientifique et Ethique de l'entrepôt THIN du groupe CEGEDIM, Boulogne-Billancourt, France

BACKGROUND

Diabetes is a major chronic metabolic disease associated with high morbidity and mortality, and represents a growing burden on healthcare systems in France and worldwide.

OBJECTIVES

Estimate the prevalence of diabetes in France between 2021 and 2023, and to describe the epidemiological and clinical characteristics of patients.

METHODS

The **THIN** (The Health Improvement Network) database compiles primary care data from **electronic medical records of general practitioners**, thereby representing a sample of medicalized data from the French population updated on a daily basis, and providing unique insight into medical intent and real-world use. Patients were included based on at least one recorded diagnosis of diabetes (based on ICD-10 codes and treatments) between January 2021 to December 2023 in their medical history. Extrapolation used a weighting factor based on age and sex according to the French population estimates.

RESULTS

A total of **120,627 patients** with diabetes were identified between 2021 and 2023, giving an extrapolation number of **4,144,553 patients in France**, for an overall prevalence of 6.27% (7.46% in men and 5.14% in women). Diabetic patients had a mean age of 70 years (sd: ± 12.4 ; median: 71) and a mean Body Mass Index (BMI) of 30.7 kg/m^2 (sd: ± 6.3 ; median: 26.5).

Figure 1: Sex Distribution of Diabetic Patients

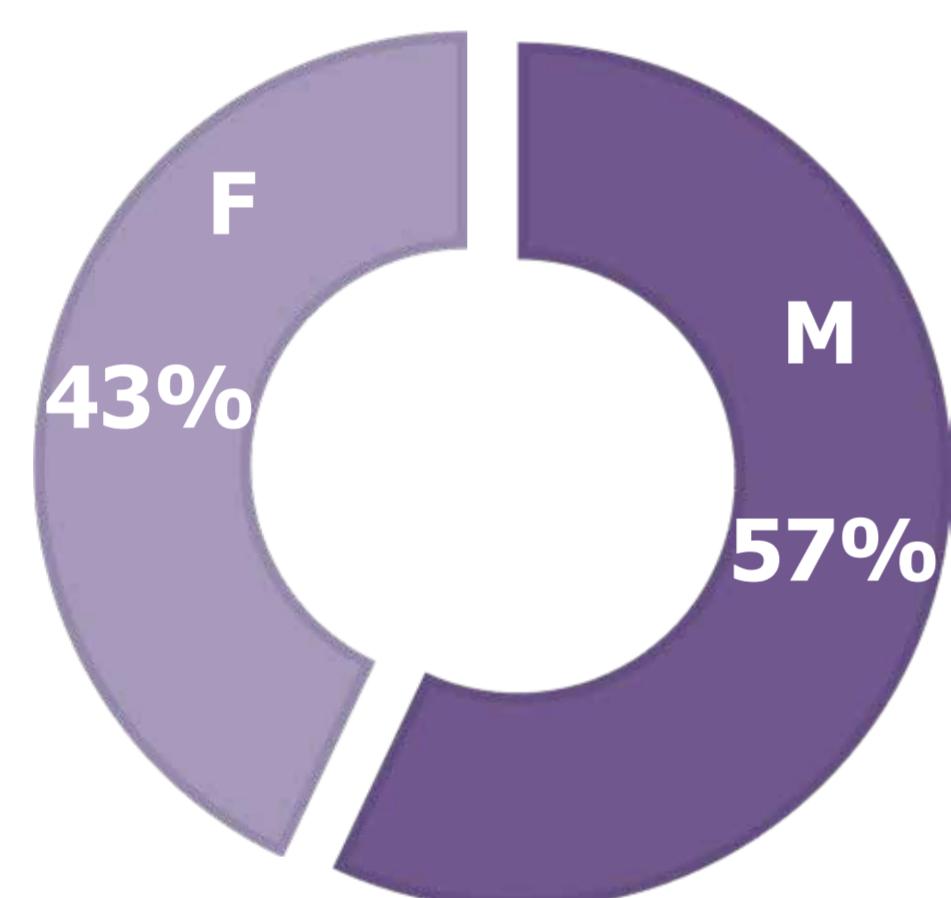
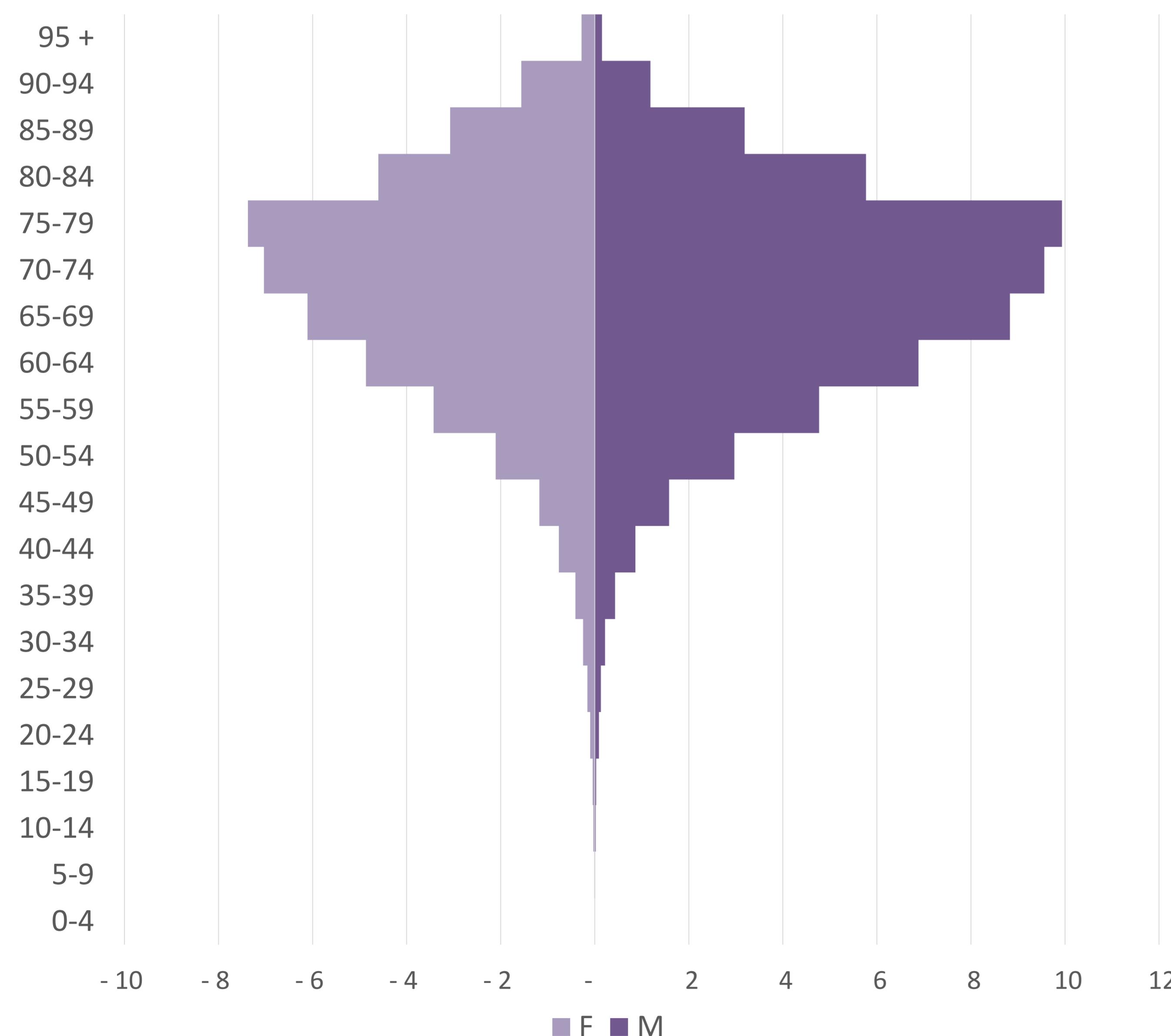


Figure 2: Age and Sex Distribution of Diabetic Patients



The **Charlson Comorbidity Index reflected a high comorbidity burden** with a mean score of 4 (sd : ± 2 ; median: 4), predominantly cardiovascular, followed by respiratory, psychiatric, and oncologic conditions (table 1).

Glycemic control was evaluated in 17,173 patients (figure 3; table 2), with a mean HbA1c level decreasing from 7.2% (sd : ± 1.25 ; median: 6.9) in 2021 to 7.0% (sd : ± 1.1 ; median: 6.8) in 2023 ($p < 0.001$). Similarly, the proportion of patients with $\text{HbA1c} \leq 7\%$ increased from 56.2% to 60.9% ($p < 0.001$), the distribution was more spread out, indicating greater glycemic variability and higher values.

Figure 3: Distribution of HbA1c in Diabetic Patients in 2023

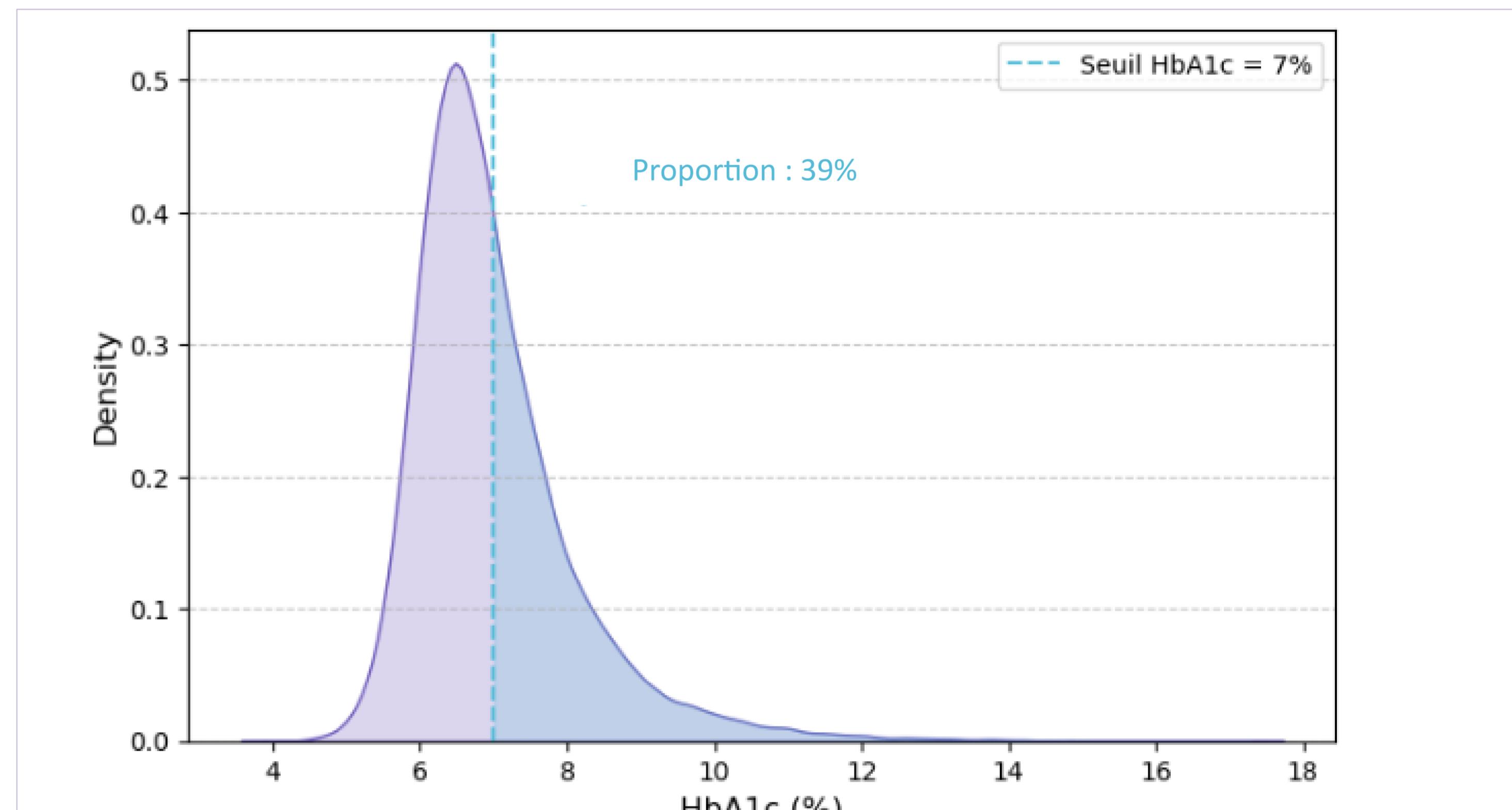


Table 2: HbA1c Metrics Over Time

HbA1c					
Mean	Q1	Mediane	Q3	Nb pat HbA1c <= 7	Nb pat HbA1c > 7
7.2	6.4	6.9	7.7	9 646	7 527
7	6.3	6.8	7.5	10 454	6 719

A total of 117,046 patients had at least one diabetes-related complication, mainly cardiovascular, but also ophthalmologic and renal (table 3).

Table 3: Diabetic complications

Chronic Complications	Patients	Proportion
Cardiovascular	75 651	65%
Diabetic retinopathy	11 551	10%
Diabetic nephropathy	13 475	11%
Total patients	117 046	

CONCLUSION

This study updates the estimated prevalence of diabetes in France and comorbidities affecting these patients. A **significant decrease in mean HbA1c values** and an **increased proportion of patients achieving target glycemic control** ($\text{HbA1c} \leq 7\%$) were observed, possibly linked to improved disease management. Therapeutic goals should continue to be individualized based on each patient's specific characteristics.

