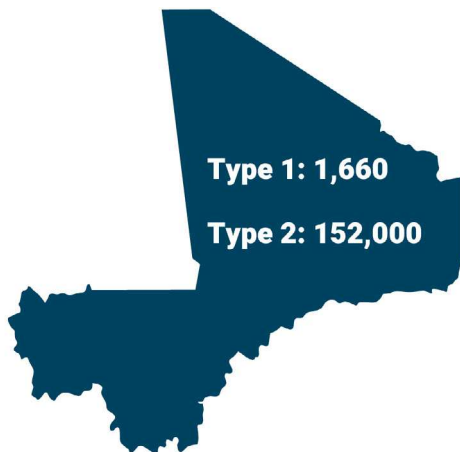


# Diabetes in Mali

The International Diabetes Federation estimates that there are 152,000 people aged 20-79 with type 2 diabetes (1.8% of the adult population) in Mali, with approximately 37% currently undiagnosed.<sup>1</sup> A further 1,660 people are estimated to be living with type 1 diabetes.<sup>2</sup>



## DIABETES CARE IN MALI

### Policy Environment

- Adopted a law on Universal Health Coverage (UHC) in 2018.
- Three different insurance mechanisms:
  - » Obligatory Medical Assistance (health insurance scheme financed by employee and employer contributions in both the public and private sectors), which covers 17% of population.
  - » The Medical Assistance Regimen (offers free services for the most vulnerable in Mali), covering 5% of population.
  - » A system of Voluntary Medical Insurance for people working in the informal sector.<sup>3,4</sup>

- Clinical guidelines and protocols in place for type 1 and type 2 diabetes.<sup>5</sup>

### Organisation of the Health System

- Households in Mali face high out-of-pocket expenditures for healthcare.
- The Malian health system is structured around Community Health Centres (Centres de Santé Communautaire, or CSCOMs), private not-for-profit associations managed by communities.<sup>6</sup>
- Overall there are 32 decentralised diabetes clinics in Mali, and each district hospital includes a diabetes unit<sup>6</sup>:
  - » People with type 2 diabetes are managed in the national hospitals and 32 diabetes clinics.
  - » People with type 1 diabetes are managed in the national hospital and 10 diabetes clinics.
- Type 1 diabetes care reliant on external support for insulin, supplies and consultants.<sup>5</sup>
- Insulin care is free for children and young adults (up to 30 years old) within this system.
- People often face long wait times for care.

### Data collection

- Specific database for type 1 diabetes developed.
- Diabetes registries and individual patient records exist thanks to the work of Santé Diabète. This diabetes data is not yet routinely collected centrally by the health system but work is ongoing to integrate this into the District Health Information Software (DHIS2).

## Diagnostic Tools and Infrastructure

- HbA1c was available in public and private sectors, but unaffordable, in the public sector the price was US\$ 12.7.<sup>5</sup>
- According data collected with the Addressing the Challenge and Constraints of Insulin Sources and Supply (ACCISS) Study's Monitoring Access to Insulin (MAIn) tool, availability for glucose meter and test strip test in a facility was 100% in the public sector, and the cost was US\$ 1.6 per test.

## Government Procurement and Supply

- Insulin is included in the [national essential medicines list](#).
- Central procurement; donations of insulin for children and youth; available at primary health care level.
- Consultations done to better define tender process in Mali and, for the first time, a biosimilar insulin was allowed to apply.
- Only human insulins procured.

## Availability and Affordability of Insulin and Blood Glucose Meters and Test Strips - 2022

- Beyond availability, affordability was also a challenge.
- According to the MAIn survey, availability of human insulin (including regular, NPH and mixed) in the public sector was 50%, while in availability was 100% in private facilities.
- In the same time period, almost all households reported having insulin in the home.
- About half of households surveyed received free insulin as they were part of a donation programmes. For those paying out-of-pocket, the median full price of a vial of human insulin (Actrapid, Protophane or Mixtard) in 2022 was \$8.18 (4975 CFA) whether purchased in public or private facilities.
- All of the households who use insulin syringes had them in the home. Nearly all obtained them for free through a donation programme or paid out-of-pocket in private pharmacies. The median price per syringe was US\$ 0.21.

- Availability of blood glucose meters was 0% in public sector facilities. Private pharmacies had 67% availability.
- Test strips for self-monitoring of blood glucose were found to be unavailable from public facilities, but available in 67% in private pharmacies. The median cost per strip was US\$ 0.58.



## Healthcare Workers

- Prior to 2018 there was a lack of trained health professionals and technical support.
- Since 2018, a total of 850 health professionals have received diabetes training and there are now two university diploma training programmes that focus on diabetes.<sup>5</sup>
- Management of type 1 diabetes in specialised sub-unit. Currently, 1,660 children and young adults are managed within this sub-unit and in 20 consultations in the country.

## Education and Empowerment

- Specific education tools and approaches have been developed through the work of Santé Diabète, as well as through support from insulin donation programmes.
- Tools are available for people with type 1 and type 2 diabetes.

## Adherence Issues

- In Mali, access to appropriate education materials and the cost of treatment were mentioned by individuals with diabetes as the main barriers to adherence.<sup>5</sup>
- In terms of average testing of glucose levels in Mali, participants in MAIn with type 1 diabetes reported testing on average 17 times, while people with type 2 diabetes using insulin reported testing two times.

## Community Involvement and Diabetes Associations

- Creation of the Malian National Federation of Diabetics (FENADIM) with its local branches in all regions (32 in total).
- Santé Diabète has taken on strong role in country from awareness raising to capacity building, implementation of projects and provision of technical expertise.

## KEY ACTIVITIES

To date, Santé Diabète has undertaken the following key activities as part of the ACCISS Study:

- Creation of National Diabetes Committee and continued support for annual meetings.
- Mapped insulin need across the country.
- Discussions with Novo Nordisk to reduce price of insulin.
- Advocated for inclusion of insulin within UHC.
- Worked to strengthen the management of type 1 diabetes in the healthcare system by building the capacity of healthcare workers through education and training, particularly opportunities as part of the [SWITCH study](#) (analysing the impact of long-acting analogues on people living with type 1 diabetes in Mali).
- Worked to improve the supply chain through analysis and improvement of the tender process.

- Provided support for a national tool for capitalising on and monitoring diabetes actions.
- Four rounds of facilities and household monitoring using MAIn tool completed.

## LESSONS LEARNED

- Non-governmental organisations play a crucial role in sustainability of diabetes actions during periods of government instability.
- Stakeholders should fully engage and work together to ensure impact and sustainability of actions.
- Government must have technical assistance to support its actions and to better define its strategies.
- People with diabetes should be at the centre of all dialogue frameworks so that they can fully carry out their advocacy.

## RECOMMENDATIONS FOR MALI

- Ensure the availability of insulin, oral diabetes medicines and diabetes related supplies in all sectors to guarantee UHC and improved diabetes management.
- Strengthen actions to continue lowering insulin prices and to reduce treatment disruptions in the public sector.
- Improve the training of health professionals and models of delivery of care to improve structure of type 1 diabetes care.
- Include the MAIn tool results in the National Santé Diabète Datahub to provide policy makers and civil society with more robust information about diabetes in Mali
- Research actions should be developed in order to better guide action strategies.

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