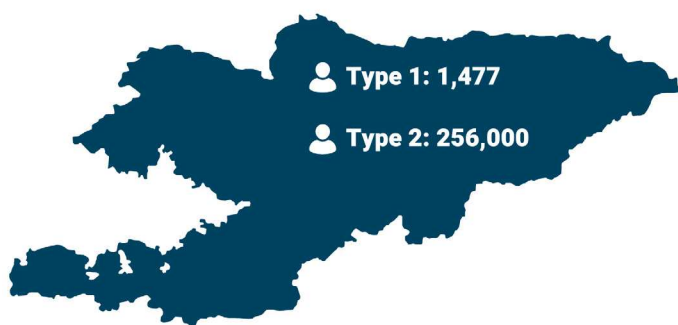


# Diabetes in Kyrgyzstan



The International Diabetes Federation estimates that there 256,000 people aged 20-79 living with type 2 diabetes (6.6% of the adult population) in Kyrgyzstan, with approximately 28% currently undiagnosed.<sup>1</sup> A further 1,477 people are estimated to be living with type 1 diabetes.<sup>2</sup>



## DIABETES CARE IN KYRGYZSTAN

### Policy Environment

- Diabetes legislation is integrated into the general basic law of Kyrgyzstan.
- State Guaranteed Benefit Programme (SGBP) guarantees people free care at all health care levels, including insulin, delivery devices and a limited number of self-glucose testing supplies.<sup>3</sup>
- Clinical [guidelines and protocols](#) in place for type 1 and type 2 diabetes.
- National health programmes with a focus on NCDs and primary health care (PHC) development a focus.

### Organisation of the Health System

- Management of people with type 1 diabetes done primarily by endocrinologist at the national and oblast levels, particularly in Bishkek and Osh.
- Complications associated with diabetes managed by specialist and frequently in hospitals.
- Family doctors not fully involved in diabetes management, particularly for type 1 diabetes, especially in remote areas.
- Health system is focused on capacity-building of PHC nurses and their role in non-communicable disease (NCD) management, including diabetes.
- Insufficient preventive work and untimely detection of diabetes at the PHC level.

### Data collection

- Patient registry exists, not currently used for planning and procurement.

### Diagnostic Tools and Infrastructure

- Basic diagnostic test carried out for free at PHC level.
- Monitoring has shown that there is a lack of appropriate diagnostic equipment in villages.
- Provision of 500 and 2000 test strips with 50% discount per year given to adults and children with diabetes within state-subsidised medicines programmes.
- Current monitoring has found that glycosylated hemoglobin (HbA1c) available in 88% of 17 facilities in the public sector. Of those facilities, free testing once a year was available in 73%.

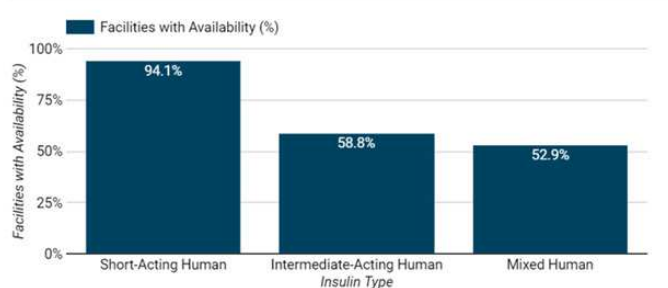
## Government Procurement and Supply

- Insulin is included in the national essential [medicines list](#).
- National distributor for procurement directly from manufacturers (including insulin) has been created.
- Issues with quantification of needs and effective procurement, distribution by health facilities and delivery to avoid supply issues.
- Metformin is now provided by the government with 50% discount for the insured (since 2021) but availability in the public sector was only 11.8% (2023).
- Since 2024, within the SGBP, all people with diabetes are entitled to receive 600 tablets of metformin for free per year.

## Availability and Affordability of Insulin and Blood Glucose Meters and Test Strips - 2023

- In 2023, using the Monitoring Access to Insulin (MAIn) tool, it was found availability of insulin in public facilities was 94.1% for regular human insulin and 58.8% for intermediate-acting (NPH) human insulin. Rapid-acting and long-acting analogue insulins were available at 70.6% of public facilities. In the private sector only NPH insulin was found, at 2.8%.

### Availability of Human Insulin: Public Sector



- Insulin is free of charge in the public sector, however, in 2023 10% of households reported paying for their insulin, the median price being US\$8.97 for 1000 IU human insulin and US\$26.16 for analogue insulins.

- Availability of syringes was 88% and 75% in the public and private sectors, respectively, while pen needles were 76.5% public sector and 0% private sector.
- In the public sector glucose meters for self use were found to be available in 17.6% of facilities and 11.8% for test strips. Glucose meters were available 63.9% of private sector facilities, and test strips in 75%.
- The median price households reported paying for test strips was USD\$0.24, while 20% of households reported having to go to three or more facilities to get their supply of test strips.



## Healthcare Workers

- Specialists still carry out most of management of people with type 1 diabetes.
- Despite increase in training, family doctors not prepared to support management of people using insulin (all type 1 and some type 2).
- Monitoring has shown insufficient implementation of clinical guidelines and protocols due shortage of doctors and inadequate medical equipment at the PHC level in villages.\*
- Efforts have been made to increase the role of nurses in managing diabetes in terms of early detection, management of care and education, but further training is required.
- Most diagnoses still results from self-referral to health centres.

\*[Report](#) on monitoring the implementation of clinical guidelines and protocols on diagnostics, treatment and management of type 1 diabetes and its complications at all health care levels. Available at <http://hpac.kg>

## Education and Empowerment

- Diabetes schools exist at the central level only, they do not work at the PHC level.
- Insufficient social support for people with diabetes (lack of social workers, psychologists).

## Adherence Issues

- Annual increase of number of diabetes complications of 10% of all people with diabetes.
- MAIn monitoring found the frequency of self-glucose testing was 25.7 and 3.7 times a week for people with type 1 diabetes and type 2 diabetes using insulin, respectively.

## Community Involvement and Diabetes Associations

- There are diabetes associations and patient communities, but no common vision and limited sustainability of financing.

## KEY ACTIVITIES

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

- Role in development of health legislation.
- Coordinated the development of clinical guidelines and protocols for diabetes.
- Conducted training and monitoring of family doctors and nurses on the diabetes clinical guidelines and protocols.
- Advocated for inclusion of metformin within the national insurance programme.
- Supported diabetes organisations on awareness and education programmes.
- Monitored availability and affordability of insulin and delivery devices self-glucose monitoring devices and supplies in facilities and households.
- Carried out a number of studies associated with effectiveness of performance payments at the PHC when diabetes-related services are delivered. Visit: <http://hpac.kg>
- Arranged policy dialogues on the diabetes-related activities and best practices.

## LESSONS LEARNED

- Close cooperation with the Ministry of Health and other key stakeholders is essential to the successful implementation of the planned activities.
- While training family doctors using the diabetes clinical guidelines has raised awareness, they are not ready to start managing people with type 1 diabetes and people with type 2 diabetes who use insulin.
- Implementation of the clinical guidelines and protocols trainings to nurses were well-timed and relevant.
- While trust of nurses by people with diabetes has increased, their practical skills require further strengthening including training in aspects of care such as diabetic foot and visual acuity examination techniques.
- Work is needed to improve early detection of diabetes.
- Working with patient communities increases adherence and awareness of people living with diabetes.

## RECOMMENDATIONS FOR KYRGYZSTAN

- Scale up of patient registration system to improve quantification of insulin needs as well as health system planning.
- Build capacity at the primary health care level through the continued implementation, revision and monitoring of clinical guidelines and protocols trainings.
- Strengthen roles of nurses in diabetes management, particularly in remote areas.
- Continue to monitor prices and availability of insulin, oral diabetes medicines and diabetes related supplies in all sectors.
- Strengthen the role of diabetes associations in addressing the wider economic, social and psychological aspects of diabetes.

1. International Diabetes Federation. IDF Diabetes Atlas 10th Edition. Brussels: International Diabetes Federation; 2021.
2. T1DIndex, Country Dashboard - <https://t1dindex.shinyapps.io/dashboard/> (accessed 25 April 2024)
3. World Bank. Toward a More Pro-Poor and Explicit Health Benefit Package in the Kyrgyz Republic: A Critical Review of the State Guaranteed Benefit Package and Options for Its Revision. World Bank; 2019
4. Report on monitoring the implementation of clinical guidelines and protocols on diagnostics, treatment and management of type 1 diabetes and its complications at all health care levels, 2023.

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**Disclaimer:** The ACCISS Study is supported by The Leona M. and Harry B. Helmsley Charitable Trust. The analysis included in this summary is that of the authors alone and does not necessarily reflect the views of the Helmsley Charitable Trust. All references and conclusions are intended for educational and informative purposes and do not constitute an endorsement or recommendation from the Helmsley Charitable Trust.

