World Health Organization
European Region

Improving the quality of care of diabetes and prevention of complications in Kyrgyzstan

In the WHO European Region an estimated 64 million adults aged over 18 years, and around 300 000 children and adolescents, live with diabetes, and rates are rising. People with diabetes can live well – and longer. However, quality of care – and life – is too often held back by health-care systems that lack person-centredness, give poor access to essential medicines and basic technologies, and offer ineffective patient and provider education.

Diabetes is generally underdetected, undertreated and undercontrolled. Many complications are avoidable, as are the associated health and social care costs. Simple measures such as frequent foot care can reduce the risk of amputation. Systematic diabetic retinopathy screening, together with timely treatment, can reduce visual impairment and blindness. And while people with diabetes are up to four times more likely to have a heart attack, better detection and intensive management of cardiovascular (CVD) risk factors can reduce the risk.

In Kyrgyzstan, analysis of available data suggests that challenges exist with the quality of diabetes care. The International Diabetes Federation estimates that 256 400 people in Kyrgyzstan have diabetes (6.6%) and only 60% of people with diabetes are diagnosed.

Baseline analysis of data from over 7000 people with diabetes in Kyrgyzstan found that in 2021/22:

- less than one in four people with diagnosed diabetes had good glycaemic control;
- around one in four people with diabetes had not had a blood glucose measurement in the previous year;
- 267 amputations occurred in 2022 in people with diabetes;
- treatment of diabetic retinopathy was not possible in the public sector, as no lasers were available;
- while almost nine in 10 people with diabetes had had at least one blood pressure measurement in the previous 12 months, only six in 10 had good blood pressure control (< 140/90mmHg);
- around half had had a cholesterol measurement;
- less than one in five people with diabetes had had their weight or BMI recorded at least once in the previous 12 months, and of those assessed, four in 10 were obese.

The overall aim was to improve the quality of care of diabetes and prevention of complications (eyes, feet, CVD) in Kyrgyzstan. Action would take place both at national level and within a demonstration area in Chui Oblast over three years (2022–24) through a project cofunded by WHO and the World Diabetes Foundation. Three results were envisaged by the end of the three years:

Result 1. Improving clinical practice and quality of care

- Use evidence-based interventions to improve clinical practice, including training and supportive supervision of primary health care (PHC) providers in use of clinical protocols for integrated management of main noncommunicable diseases (NCDs) (local).
- Apply evidence-based medicine through clinical audits and use of information systems to support quality improvements (local).
- Prevent NCD complications by improving pathways, follow-up and coordination among providers (national; local).

Result 2. Strengthening self-management

- Train nurses and other relevant providers in therapeutic patient education (local).
- Support NCD patient associations and schools of patients (national; local).
- Review scope of practice of nurses in different clinical settings (national; local).

Result 3. Enhancing evidence-based NCD policies and clinical governance

- Develop, with key actors and stakeholders, a roadmap to prevent complications in people with diabetes (national; local).
- Document evidence and achievements to inform policies and regulations (local).
- Develop policy guidance to promote policy dialogues around findings (national; local).

The desired results and activities indicate the desired transformations:

- more person-centred care and more meaningful engagement of people with lived experience
- better quality of care and reduction in avoidable complications
- better-equipped PHC workforce with appropriate task-sharing
- better use of data to drive improvement and increasing digitalization.

"Well, you can live with diabetes, but you know over time doctors have taught us that you have to fight it in order to live a long and painless life. We know that diabetes leads to health deterioration: eyesight deterioration, problems with feet and weight loss. In recent years, our doctors and nurses have become very effective in managing diabetes. When you come to the polyclinic, nurses measure your blood glucose, weight and height, and fully examine your feet."

Maksat Zholdoshev,
person with diabetes

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One of the keys to the success of the initiative to date has been the active involvement of key stakeholders, including people with diabetes, health-care workers and policy-makers, in identifying the problem, shaping the solution and implementing the change.

People with diabetes in Kyrgyzstan have had an active role since the beginning.

- For the high-level launch event in March 2022, a compilation of interviews conducted with people with diabetes was shown on video, to convey their perspectives and lived experience.
- The diabetes associations of Kyrgyzstan and Chui Oblast were represented on the project Steering Committee and Working Group.
- A representative of the Chui Diabetes Society participated in all meetings and exercises to review and redesign the care pathway.
- Powerful patient stories featured prominently in the high-level national policy dialogue on diabetic retinopathy screening in January 2023. In close collaboration with the WHO Country Office and the national team, the patient representative played an active role in the follow-up with the Ministry of Health and other relevant actors, leading to the procurement of national funds for the first public sector laser for diabetic eye treatment.
- Capacity-building for the diabetes associations has been a feature throughout. This included, for instance, meetings with representatives from the diabetes associations of Portugal and Finland at which experience and approaches were shared.
- At a special session with the Kyrgyz diabetes associations, the results of the baseline analysis of the state of diabetes care in the country were presented and a fact sheet with key findings was produced for them to use in their work.
- The diabetes associations are an integral part of the monitoring and evaluation task group; regular (quarterly) monitoring of care takes place, with feedback to practitioners on what is working well and areas for improvement.
- In October 2023 patients participated with health-care workers in an introductory workshop on therapeutic patient education, a priority area going forward.

"Of course it was new, we've never had patients on the same level as doctors and nurses. This is a complete transformation in Kyrgyzstan. Nurses now have a completely different approach to our patients – they have completely transformed treatment and the way they manage our patients, it's all different now."

Chinara Abelsova,
Chair, Chui Diabetes Society

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A broad range of health-care workers were involved throughout the project, at national, regional, district and facility levels: medical specialists such as endocrinologists, cardiologists and ophthalmologists; family and specialist nurses (eye care); family doctors; facility managers; etc.

- Multilevel and multidisciplinary representation on the Steering Committee, Working Group and relevant task groups ensured that different workforce perspectives were included in co-design and delivery throughout.
- Training on diabetes care, CVD risk assessment and management, and foot care was given to almost all PHC professionals in the intervention area in Chui Oblast.
- Relevant national/regional/district/facility health workers were interviewed and then represented at all meetings and exercises in which diabetes care pathways and team-based care were reviewed and designed.
- There was similar consultation and representation in devising, reviewing and implementing the approach for diabetic retinopathy screening.
- The findings from the baseline analysis were presented and discussed with a multilevel, multidisciplinary group, exploring implications for practice and opportunities for improvement.
- Developing team-based care and potential task-sharing have been features throughout – for example, exploring who (other than an ophthalmologist) might carry out retinal screening or equipping nurses to carry out CVD risk assessment or foot care.

"We had to overcome difficulties in stereotypical thinking not only of the doctors and nurses, but also of the patients, who were used to exclusively visiting endocrinologists. Doctors and nurses have really started to look at patients in a different way, they now try to attract them and provide help in a center for family medicine close to patients' houses, rather than send them here several kilometres away."

Asel Adamalieva, Deputy Director, Chui Regional Center for Family Medicine

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The Kyrgyz Ministry of Health, the official partner of WHO in the transformation process, has been actively involved in governance, guidance and oversight of the project. The Minister of Health co-signed the initial agreement to launch the project, is co-chair of the Steering Committee, and has approved membership of the Steering Committee and Working Group. The Ministry of Health has also appointed chief specialists (endocrinology, cardiology, ophthalmology) at national and regional level. The Ministry of Health, Ministry of Economy, President's Office and Parliamentarians all participated in high-level policy dialogue on diabetic eye screening. And the Ministry of Health has been active in linking and aligning the work with digital health and other relevant policy areas.

This project has allowed us to **build on previous work with the Center for eHealth on capacity-building**, helping them to make better use of their database to improve clinical care. For example, for the baseline analysis of diabetes care, we worked with the Center to carry out a review of the medical records of nearly 150 000 patients. We are also exploring how they can routinely monitor the quality of diabetes care against standard indicators, and looking into building on the telemedicine facilities in transmission of retinal images for grading.

During this project, we have also been **capacity-building and exploring with the Mandatory Health Insurance Fund** how it might measure and monitor diabetes complications and their (avoidable) costs. We have also explored with them how to link databases and track patient care through primary and secondary health care.

Building trust has been a feature of the transformation in multiple ways. We needed to build trust between different types of specialists; for example, in the area of diabetic retinopathy screening, endocrinologists and ophthalmologists needed to have a better understanding of each other's perspective. Better trust was also needed between diabetes associations/patient representatives and clinicians, so that the latter would recognize the contribution that patients could make to the process; and between family doctors and specialists, so that the latter could believe that family doctors were capable of delivering diabetes care. Also, patients needed confidence that nurses, and not just doctors, were competent to carry out some of the tasks.

The main authors of this case study are:
Jill Farrington,
Regional Medical Officer, CVD and Diabetes,
WHO Regional Office for Europe

World Health Organization
Regional Office for Europe
UN City, Marmorvej 51
DK-2100, Copenhagen Ø, Denmark
Tel: +45 45 33 70 00
Fax: +45 45 33 70 01
Email: eurocontact@who.int
Website: www.who.int/europe