

Module name: Introduction to Public Health

Module code: LCHS4008

Type 1 Diabetes: Measuring, Monitoring, Disease Control and Health & Social Care Support

Student name: Lesiliza Pinto Da Graca

Student ID: 2512899

Lecturer's name: Patronella Ganza

Table of Contents

Introduction.....	3
Type 1 Diabetes Measurement and Monitoring.....	4
Disease Control of Type 1 Diabetes.....	5
Impact of Type 1 Diabetes on Individuals and the Community.....	6
Health and Social Care Services Available to Support People with Type 1 Diabetes.....	7
Conclusion.....	8
Reference List.....	9

1. Introduction

Type 1 diabetes is a long-term autoimmune condition in which the body's immune system attacks and destroys the insulin-producing beta cells in the pancreas. As a result, the body cannot produce enough insulin to regulate blood glucose levels. People with Type 1 diabetes require lifelong insulin therapy to manage the condition and prevent serious complications. Common signs and symptoms include increased thirst, frequent urination, unexplained weight loss, fatigue, blurred vision and increased hunger (NICE, 2022).

Type 1 diabetes can occur at any age but is most diagnosed in children and young adults. Millions of people worldwide are living with Type 1 diabetes, and the number of new cases continues to increase every year (International Diabetes Federation, 2025). In the United Kingdom, it is considered an important public health concern, with thousands of new cases diagnosed each year (Diabetes UK, 2024). This report will discuss the measurement and monitoring of Type 1 diabetes, how the condition is controlled, its impact on individuals and communities, and the health and social care services available to support people living with the condition.

Type 1 Diabetes Measurement and Monitoring

Monitoring is essential for individuals with Type 1 diabetes to keep blood glucose levels within the target range and reduce the risk of complications. Blood glucose levels can be measured using finger-prick blood tests or Continuous Glucose Monitoring (CGM) systems, which provide real-time glucose readings throughout the day and night. These methods allow people to make informed decisions about insulin doses, food intake and physical activity (NICE, 2022).

Another important tool used to assess diabetes management is the HbA1c blood test. It measures the average blood glucose level over the previous two to three months and is usually carried out every three months. Maintaining an appropriate HbA1c level reduces the risk of long-term complications such as kidney disease, nerve damage and cardiovascular disease (Diabetes UK, 2024).

Continuous monitoring also helps individuals recognise episodes of hypoglycaemia (low blood glucose) and hyperglycaemia (high blood glucose), allowing prompt action to prevent serious health problems. The information collected from blood glucose monitoring and HbA1c tests enables healthcare professionals to review treatment plans and make adjustments to insulin therapy when necessary. This personalised approach helps improve blood glucose control and supports effective long-term diabetes management.

People with Type 1 diabetes should also attend regular health checks, including blood pressure monitoring, kidney function tests, foot examinations and annual eye screening for diabetic retinopathy. These assessments help healthcare professionals identify potential complications at an early stage and provide appropriate treatment. Effective monitoring improves diabetes management, leads to better health outcomes and enhances the individual's quality of life.

Disease Control of Type 1 Diabetes

Effective control of Type 1 diabetes requires a combination of insulin therapy, a healthy lifestyle and regular self-management. Because the body is unable to produce insulin, people with Type 1 diabetes need lifelong insulin treatment. Insulin can be administered by multiple daily injections or through an insulin pump, depending on the individual's needs and preferences (NICE, 2022).

A healthy and balanced diet plays an important role in diabetes management. People with Type 1 diabetes are encouraged to eat regular meals, monitor their carbohydrate intake and maintain a balanced diet that includes fruit, vegetables, whole grains and lean protein. Carbohydrate counting helps individuals match their insulin doses to the amount of carbohydrate they eat, improving blood glucose control (Diabetes UK, 2024).

Regular physical activity is also recommended because it helps improve insulin sensitivity, supports cardiovascular health and contributes to maintaining a healthy weight. However, people with Type 1 diabetes should monitor their blood glucose levels before, during and after exercise to reduce the risk of hypoglycaemia.

Diabetes education is another essential aspect of disease control. Healthcare professionals provide advice on insulin administration, blood glucose monitoring, healthy eating and recognising the signs of hypoglycaemia and hyperglycaemia. By following their treatment plan and attending regular medical reviews, individuals can reduce the risk of long-term complications and maintain a good quality of life.

Impact of Type 1 Diabetes on Individuals and the Community

Type 1 diabetes can have a significant impact on a person's physical, emotional and social wellbeing. Managing the condition requires daily blood glucose monitoring, insulin injections and careful planning of meals and physical activity. These responsibilities can be challenging and may affect a person's confidence, independence and overall quality of life (Diabetes UK, 2024).

Type 1 diabetes can also have an emotional impact. Some individuals experience stress, anxiety or diabetes-related distress because they must constantly manage their condition and worry about developing complications such as hypoglycaemia or hyperglycaemia. Children and young people may find it difficult to manage diabetes at school or during social activities, while adults may experience challenges in the workplace or when travelling.

The condition can also affect families and carers, who often provide emotional support and assist with daily diabetes management. Parents of young children with Type 1 diabetes may have additional responsibilities, including monitoring blood glucose levels and administering insulin.

Type 1 diabetes also has an impact on the wider community and healthcare services. Considerable healthcare resources are required for routine medical appointments, diabetes education programmes and the treatment of diabetes-related complications. Poor blood glucose control and diabetic emergencies may lead to hospital admissions, increasing healthcare costs and placing additional pressure on health services. However, effective diabetes management, early intervention and ongoing support can help reduce complications, improve health outcomes and enable individuals to lead active and independent lives (NICE, 2022).

Health and Social Care Services Available to Support People with Type 1 Diabetes

People with Type 1 diabetes require ongoing support from a range of health and social care professionals to help them manage their condition effectively and maintain a good quality of life. A multidisciplinary approach ensures that individuals receive person-centred care that meets their physical, emotional and educational needs (NICE, 2022).

The General Practitioner (GP) is usually the first point of contact and is responsible for monitoring the individual's overall health, prescribing medication and referring patients to specialist services when appropriate. Diabetes Specialist Nurses (DSNs) provide education on insulin administration, blood glucose monitoring and lifestyle management. They also support individuals in recognising and managing episodes of hypoglycaemia and hyperglycaemia.

Other members of the multidisciplinary team include endocrinologists, dietitians, podiatrists and ophthalmologists. Dietitians provide advice on healthy eating and carbohydrate counting to help individuals maintain stable blood glucose levels. Podiatrists carry out regular foot examinations to help prevent foot complications. Ophthalmologists perform annual eye screening to detect diabetic retinopathy at an early stage. Endocrinologists provide specialist care for people whose diabetes is difficult to manage or who develop diabetes-related complications.

Community services and organisations, such as **Diabetes UK**, also play an important role by providing education programmes, emotional support, information and peer support groups. These services help individuals develop the knowledge and confidence needed to manage their condition independently. By working together, health and social care professionals can improve health outcomes, reduce the risk of complications and enable people with Type 1 diabetes to live healthy, active and independent lives.

5. Conclusion

Type 1 diabetes is a lifelong condition that requires continuous monitoring, effective disease management and ongoing support from health and social care professionals. Regular blood glucose monitoring, insulin therapy, healthy lifestyle choices, routine health checks and screening are essential for maintaining good diabetes control and reducing the risk of long-term complications.

Type 1 diabetes can have a significant impact on an individual's physical, emotional and social wellbeing, as well as on families and healthcare services. However, with appropriate education, early intervention and person-centred care, individuals can successfully manage their condition and maintain a good quality of life.

A multidisciplinary approach involving healthcare professionals, community services and support organisations is essential to achieving better health outcomes for people with Type 1 diabetes. By promoting effective self-management and providing ongoing support, health and social care services enable individuals to live healthy, active and independent lives while reducing the risk of future complications.

Reference List

Diabetes UK. (2024) *Type 1 diabetes*. Available at: <https://www.diabetes.org.uk/about-diabetes/type-1-diabetes> (Accessed: 1 August 2026).

International Diabetes Federation (IDF). (2025) *IDF Diabetes Atlas*. 11th edn. Brussels: International Diabetes Federation.

National Institute for Health and Care Excellence (NICE). (2022) *Type 1 diabetes in adults: diagnosis and management (NG17)*. London: NICE. Available at: <https://www.nice.org.uk/guidance/ng17> (Accessed: 1 August 2026).

NHS. (2024) *Type 1 diabetes*. Available at: <https://www.nhs.uk/conditions/type-1-diabetes/> (Accessed: 1 August 2026).

World Health Organization (WHO). (2025) *Diabetes*. Geneva: World Health Organization.