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1. Introduction

1.1 Overview

The long-term conditions (LTCs) are diseases that need constant care and are substantially affected by individuals, families, and healthcare systems. These are chronic in nature which means that they have their course of over a year and in most cases the patients need routine therapy and management of their lifestyles (Marín-Maicas et al., 2021). Along with a significant contribution to the National Health Service (NHS), in the United Kingdom long-term conditions take up about 70% of the total healthcare spending and half of all general practice visits, attesting to having a significant influence on it (Limiri, 2025). One of such conditions is Type 2 Diabetes Mellitus (T2DM), which is one of the most widespread and fastest expanding chronic conditions worldwide.

1.2 Global Prevalence

Diabetes type 2 is a metabolic condition which is typified by insulin resistance and relativity and insulin deficiency creating high blood glucose (Galicía-García et al., 2020). As opposed to Type 1 diabetes, where diabetes is caused by autoimmune destruction of insulin producing pancreatic beta cells, Type 2 diabetes is progressive and as such, results with lifestyle, genetic, and environmental problems (Abel et al.,

2024). The Diabetes UK (2023) explains that there are about 4.6 million individuals with diabetes in the UK and nearly 90% of these instances include Type 2 diabetes (Diabetes UK, 2023). Also, only 850,000 of them are diagnosed, and thus, the true burden is possibly much greater.

1.3 UK Prevalence

The population with diabetes is estimated by the World Health Organization (WHO) to be more than 537 million over the age 20 years old to 79 years as at 2021, and it is estimated to rise to 783 million by 2045 (Magliano and Boyko, 2021). Diabetes are one of the significant morbidity and mortality rates, especially with cardiovascular disease, kidney failure, blindness, and lower-limb amputations as complications. Diabetes cost to the economy is massive in the UK; due to the disease, the NHS budgetary expenditure is equivalent to over 10% in the UK amounting to more than 10 billion pounds each year (NHS England, 2022). The rising rates of diabetes and its complicated effects demand efficient management approaches in the long term. The booklet elaborates the causes, effects, management strategies, theoretical models, and policy responses to Type 2 diabetes in the UK and has given emphasis on the person-centered care and

better outcomes of individuals living with this chronic disease.

2. Type 2 Diabetes definition and Aetiology

2.1 Definition

Type 2 diabetes mellitus may be defined as a metabolic disorder that leads to hyperglycaemia through insulin resistance and the lack of its secretion. Insulin is a hormone that is produced by the pancreas, and it controls the level of blood glucose by enhancing the uptake of glucose in body cells (Rahman, 2021). In the event of insulin resistance, the insulin does not work well in response by the cells, leading to glucose buildup in the blood. There are several interrelating factors that lead to the development of Type 2 diabetes such as genetics, lifestyle, and environmental factors. Obesity, especially central or abdominal obesity, is one of the greatest risk factors. Studies show that people having a Body Mass Index (BMI) more than 30% are at utmost chance of contracting Type 2 diabetes relative to those with healthy BMI (Gray et al., 2015).

2.2 Causes and Risk Factors: Lifestyle Factors

Physical inactivity is also another significant contributing factor. The lack of exercise predisposes the body to lower the

level of glucose utilisation resulting in the growth of insulin resistance (Zahalka et al., 2023). Poor behaviours in the modern lifestyle, which are typified by sedentary living, a lack of physical activity and consumption of processed foods, have played an important role in the increase in cases of diabetes across the globe. Type 2 diabetes is also related to diet, as high levels of refined carbohydrates, saturated fat and sugary drinks promote the chance of obesity and metabolic malfunction (Goyal, Jialal and Singhal, 2023). Research has found out that consuming sugary beverages on a regular basis can cause diabetes risk to rise by about 26% (Malik et al., 2010).

2.3 Causes and Risk Factors: Genetic, Demographic, and Socioeconomic Factors

Genetic predisposition is another cause of the condition. The risk of individuals developing diabetes is significantly higher in persons whose relatives have diabetes. Studies show that the risk of Type 2 diabetes in the personality of the child is about 40% when one parent has this diabetes and about 70% when there are the parents affected (Kim et al., 2002). Another factor that is related to the development of Type 2 diabetes is age. The condition may happen at any age but is prevalent among those adults who are over the age of 45

years (Cleveland Clinic, 2023). This has, however, changed in the past couple of years with reports of rising diagnoses among younger adults, and even adolescents mainly because of the increased levels of obesity. The risk levels also depend on ethnicity, as there is a two to four times higher likelihood of Type 2 diabetes among the people of South Asian, African, and Caribbean ancestry in the UK as opposed to the White Britons (Farmaki et al., 2021). Socioeconomic deprivation also makes people vulnerable because of decreased access to healthy foods, physical activity, and inequalities of health care.

3. Prevalence and Burden of Diabetes

3.1 Global and UK Prevalence

Type 2 diabetes is one of the significant health problems in the world. The International Diabetes Federation (IDF) reports that right now some 1 out of 10 adults in the world has diabetes (IDF, 2025). Population growth, urbanisation, ageing populations, and lifestyle changes have seen the prevalence of obesity in the world increase drastically over the last thirty years. The level of diabetes prevalence in the UK keeps on increasing. According to Xie et al., (2026), over 4.3 million individuals are diagnosed with

diabetes, which is approximately 6.4% of the population of the UK.

3.2 Economic Burden and Healthcare Costs

Approximately 12 million people in the UK are estimated to have a high level of sugar in the blood, when undiagnosed cases are also figured in, as well as those who are at risk (prediabetes). The health costs of diabetes are not only limited to prevalence but also manifest themselves as considerable economic and health costs. Complications associated with diabetes make up a big amount of hospitalization and treatment expenditures. As an illustration, it is estimated that in the UK alone there are approximately 135 amputations per week due to diabetes: with most of the diagnoses coming to pass because of improperly controlled blood sugar levels and vascular limit (Diabetestimes, 2015).

3.3 Health Complications and Long-Term Burden

Also, diabetes has a strong predisposing factor on cardiovascular disease. The patient is two or three times at higher risk than the patient without diabetes to get heart disease or stroke. Another frequent complication is chronic kidney disease

where a significant number of cases of end-stage renal disease (30 to 40%) is attributed to diabetes (Alemu, Hailu and Adane, 2020). The NHS has a heavy economic burden. Approximately, it is estimated that a sum of about 1 million pounds per hour is used in the UK through caring about diabetes related issues such as complicating the condition, medication and healthcare in the hospital (Health Awareness, 2019). In the next decades, these costs should considerably rise in case of the lack of effective prevention and management strategies.

4. Effects of Type 2 Diabetes on patients and their families

Being a long-term patient with diabetes has far-reaching effects it has on individuals but also on families and communities.

4.1 Physical Impact

Physically, Type 2 diabetes has a very strong influence, and this may have both the short-term effects as well as the long-term complications (Goyal, Jialal and Singhal, 2023). These typical traits are excessive thirst, frequent urination, fatigue, suffering eyesight, and slow healing of wounds. When it is not treated or addressed properly, diabetes may create severe complications with many organ systems. A nerve damage that may result in pain,

numbness, and loss of sensation in the feet is one of the worst complications, diabetic neuropathy (CDC, 2024). This poses risks of getting ulcers and infections which can lead to amputations. It is also a condition known as diabetic retinopathy that is the most common cause of preventable blindness in working-age adults in the UK. Another big issue is cardiovascular disease. High blood sugar levels cause impairment of blood vessels, as well as a high likelihood of heart attacks, strokes and peripheral artery disease (NIDDK, 2021). Moreover, diabetes may lead to diabetic nephropathy, which is a type of kidney damage that might later need to be dialysed or transplanted into the kidneys.

4.2 Psychological Impact

There are psychological complications of diabetes besides physical complications. Treatment of diabetes involves regular blood sugar checking, maintaining a diet, pharmaceutical treatment, and lifestyle change (Asif, 2014). Such continuous tasks may cause emotional issues, anxiety and depression. The studies show that diabetic patients have a higher tendency to depression than the normal population with a ratio of two to one. The so-called diabetes distress is a widely adopted notion that is used to define the emotional strain linked to living with a long-term condition (Alwani

et al., 2024). The mental wellbeing can also be impacted by fear of complications and necessity to be treated throughout a person's life. Frustration, guilt, or burn out may be the reactions of those patients, who are trying to adhere to strict lifestyle changes.

4.3 Social Impact

Diabetes social effects may influence associations, work, and life. People should be able to re-arrange their working rhythms to fit in their visits to healthcare facilities, blood sugar level control, or insulin injections (ElSayed et al., 2023). Certain ones can have the stigma of their condition or discrimination at work. Families are also relevant in helping patients with diabetes. The members of the family usually help with dietary control, advising about medication, and emotional support. Caregiving duties are, however, a source of extra stress and economic penalties to families. Indicatively, a parent with a child with diabetes or an adult with older parents can be required to juggle between employment and their children or the aged parents respectively (Karakus et al., 2023). This underscores the need to support the community as well as healthcare services available.

5. Evidence-Based Healthcare in Medical Services

Treatment of Type 2 diabetes aims at maintenance of normal blood glucose and complications and enhancing the quality of life. This has been a comprehensive approach of the NHS which involves lifestyle interventions, medication, monitoring, and patient education.

5.1 Lifestyle Interventions

The initial treatment of patients with Type 2 diabetes includes lifestyle modification. This involves eating habits, physical exercise and weight control. It has been indicated that a 5-10% reduction in body weight may be found to greatly help regulate the amount of glucose in the blood and decrease the complications (Brown et al., 2015). The NHS suggests a minimum of 150 minutes of activity of moderate intensity during a week for example brisk walking, cycling or swimming. Exercise increases insulin sensitivity and assists in the regulation of blood glucose (NHS, 2024). The dietary management aspect aims at minimizing sugar and refined carbohydrates and maximally enhancing the intake of whole grains, fruits, and vegetables and lean protein. The NHS Diabetes Prevention Programme (NHS DPP) has proven to be successful in assisting people who have high risks of

having diabetes to experience healthier lifestyles (NHS England, 2023).

5.2 Medication

Lifestyle interventions cannot manage the level of glucose in the blood; hence, medications are given. Metformin is the most frequently prescribed drug that decreases the amount of glucose generated in the liver and increases insulin sensitivity (Lv and Guo, 2020). There are also sulfonylureas, DPP-4 inhibitors, SGLT2 inhibitors and GLP-1 receptor agonists (El Mouhayyar et al., 2020). These drugs act in various ways to stabilise the level of glucose in the body. In other instances, oral medication may not be more than enough resulting in insulin therapy being taken. The programs and continuous glucose monitoring devices as well as medical insulin pens are some of the modern insulin delivery systems that have increased the management of diabetes (Yoo and Kim, 2023).

5.3 Monitoring and Screening

Demonstrating that diabetes is effectively controlled is essential because of regular blood glucose levels monitoring. The patients are advised to check their blood sugar levels with the help of glucose meters or continuous glucose level monitors (Russell, 2023). Regular screening of

diabetes-related complications is also available in the NHS. These consist of yearly examinations of diabetic retinopathy eye screenings, foot checks to reveal neuropathy and kidney functioning screening to check kidney health.

6. Long-Term Condition Management Theoretical Models

LTC needs well synchronised healthcare systems and involvement of patients in managing their long-term conditions like diabetes. The most common models are the International Chronic Care Model. and the NHS Long-Term Conditions Model. (UK).

6.1 Chronic Care Model (International)

Wagner and colleagues developed the Chronic Care Model (CCM) to ensure better returns in people with chronic illnesses. The model focuses on six hotspots, they include: Healthcare organisation, community resources, self-management support, design of the delivery system, decision support, and clinical information systems (Center for Accelerating Care Transformation, 2024). The model remains practical with its emphasis on informed and engaged patients actively collaborating with active healthcare teams. Studies have demonstrated that Chronic Care Model has

led to substantial improvements in the outcomes of diabetes in healthcare systems such as improved glycaemic control and less hospital admissions (Goh et al., 2022).

6.2 NHS Long-Term Conditions Model

In the UK, the Long-Term Conditions Model of the NHS pays attention to person-centred care and integrated healthcare services. The model focuses on three care levels: self-management support, disease management, and case management (Timpel et al., 2020). There is a specific need among diabetes patients in self-management support since the choices of willingness in the lifestyle of the patients play an important role in the results of the disease. To assist patients to become positive copies of their condition, the NHS offers well-organized educational programmes like DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) in which patients are taught to acquire the necessary skills to deal with their illness successfully (Skinner et al., 2006).

7. Policy and Health Care Initiatives in the UK

National health strategies and government policies are important in dealing with the increasing burden of diabetes. According to

the NHS Long Term Plan (2019), diabetes prevention and management are among the priorities (Ravindrarajah et al., 2023). The NHS Diabetes Prevention Programme (NDPP) is one of the significant initiatives, it targets people who are considered at high risk of getting Type 2 diabetes (McManus et al., 2022). The programme offers individual counselling on lifestyle changes, such as diet, physical activity, as well as weight management. Such change programs as Change4Life discuss healthier lifestyles by means of public health programs. These programs aim at minimizing the sugar intake, physical activities, and obesity. Also, in 2018, the UK government has launched the sugar tax (also known as the Soft Drinks Industry Levy) to cut down on the use of sugar and finally fight obesity (BBC, 2025). Since the introduction, most beverage manufacturers have cut down on sugar composition of their products, and this has enhanced better health results among the population.

8. Recommendation to Improve Person-Centred Care

To improve the management of diabetes, a holistic care approach should be carried out concerning medical, psychological, and social requirements.

- To begin with, the healthcare systems ought to enhance patient

education programmes to enhance self-management skills. Designed education programmes like DESMOND are supposed to be made as much available as possible to every individual who is diagnosed with diabetes (Davies et al., 2008).

- Second, digital health technologies can be utilized to improve monitoring and support of diseases. Patients can be engaged more effectively, and a patient can be tracked using mobile health applications, remote monitoring systems, and telemedicine services (Vudathaneni et al., 2024).
- Third, mental health should be incorporated into diabetes care through healthcare. Peer support groups and psychological counselling could assist the patients to deal with emotional issues that come with the long-term management of the disease (Jena, Kalra and Yeravdekar, 2018).
- Lastly, the preventive health measures and strategies should be a continued investment by policymakers to limit obesity to lessen the health threats and advance a healthier lifestyle among

the population (Tiwari and Balasundaram, 2023).

9. Conclusion

Diabetes Type 2 carries a significant burden as a long-term illness with millions of individuals worldwide living with this disease and putting strain on the individual, family and medical processes. The condition is degenerated because of a convergence of lifestyle behaviours, genetic orientation and environmental forces such as inappropriate diet, lack of physical exercise, obesity and ageing. Type 2 diabetes has been on the increase in the United Kingdom whereby it has become a significant public health issue and a primary priority of the National Health Service (NHS). Otherwise, the condition may result in serious complications (cardiovascular disease, kidney failure, nerve damage, and vision impairment), which can greatly decrease the quality of life. Technological management of Type 2 diabetes must be a holistic and long-term approach that incorporates principles of lifestyle change, pharmacotherapy, frequent monitoring, and patient education.

The lifestyle interventions, including a healthy diet, physical activity, and weight loss, are vital in regulating the level of glucose in the blood and the complications. Effective glycaemic control is also

supported using medical interventions such as the use of medications such as metformin and insulin therapy where expected. Also, regular screening of complications and continuous monitoring would contribute to the detection of complications at an early stage and timely treatment. The NHS has embarked on various initiatives to deal with the increasing challenges of diabetes where prevention programmes, schemes of patient education and integrated care models have been developed that ensure good levels of coordination between healthcare professionals and patients. Even with these efforts, more is needed in this regard to improve patient engagement, preventive measures, and person-centred care. All in all, the evidence-based approach to treatment, supportive healthcare policies, and patient empowerment should be combined to decrease the effects of Type 2 diabetes and enhance the health outcomes in the long-term.

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