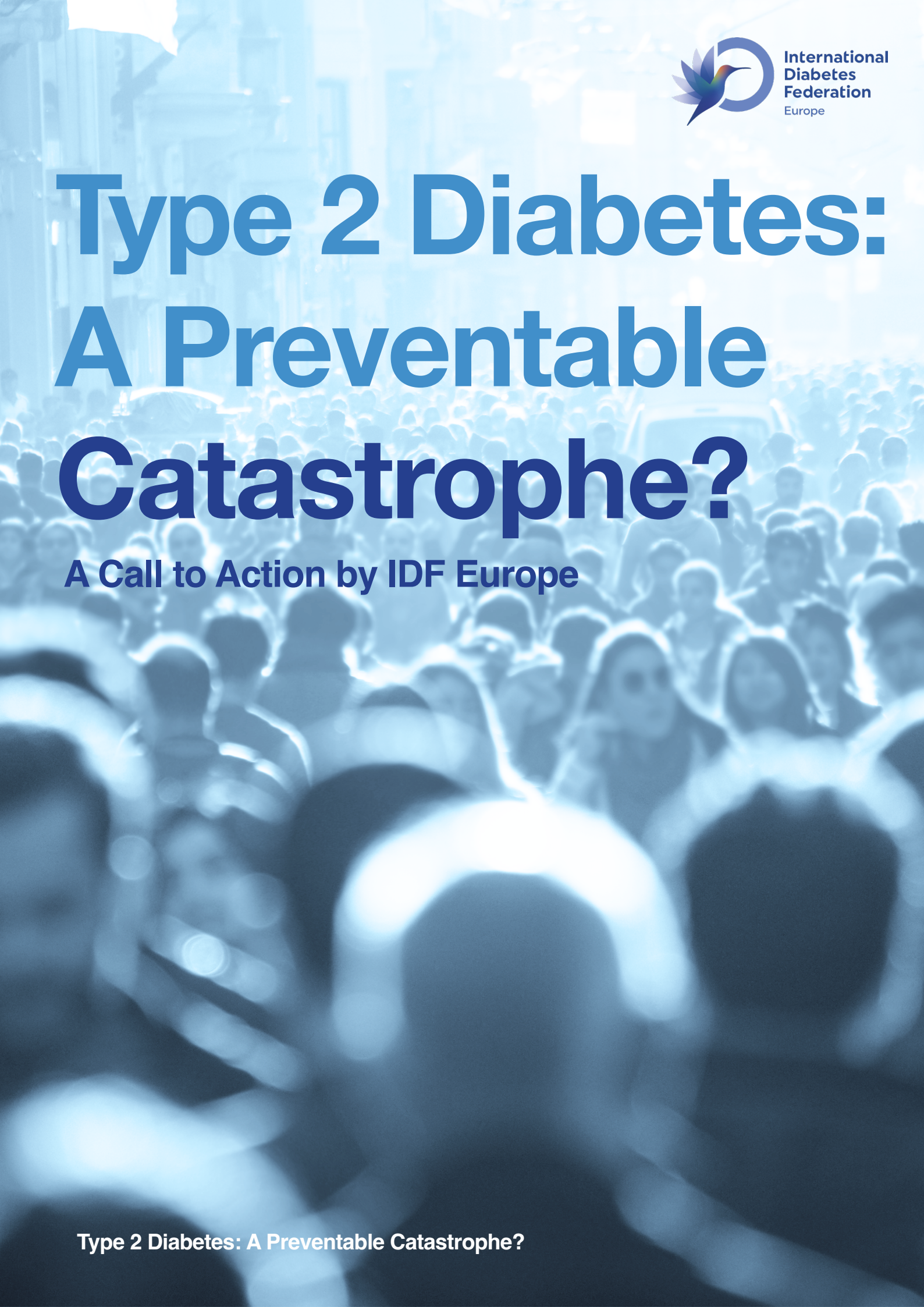
International Diabetes Federation Europe

Type 2 Diabetes: A Preventable Catastrophe?

A Call to Action by IDF Europe



Foreword

An urgent call for the immediate and committed adoption of recent evidence-based recommendations in the management of Type 2 Diabetes across Europe.

61 million Europeans now live with Type 2 Diabetes (T2D), accounting for about 95% of diabetes cases.

The stark reality is that every five seconds a person dies from diabetes. It is estimated that 537 million people live with diabetes in the world. In 2021, there were 6.7 million diabetes-related deaths. Globally, 3 million deaths were premature due to related and largely preventable diabetes-related complications such as stroke, heart and kidney disease.

In Europe, the number of diabetes-related premature deaths recorded in 2021 was half a million. This is the equivalent to three jumbo jets falling from European skies every single day as a result of inadequate aircraft preparation and maintenance, or lack of interaction and coordination. No aircraft would take to the skies without the careful and highly coordinated support of a maintenance team using the most up-to-date equipment, dedicated air traffic control, and highly trained crew, all focused on one purpose, which is to ensure their passengers travel safely. And yet, where premature and preventable deaths due to T2D are concerned, there is no international outcry, no deafening clamour to fix

the root cause. As I start my tenure as President of the International Diabetes Federation Europe, it is my belief that this is an unacceptable and yet preventable catastrophe that requires a committed, collective, and systematic change in approach to the way T2D is treated.

IDF Europe speaks for people across Europe living with T2D; it is time to face this terrible fact. We must raise our voice, and roar if we have to. We believe the exact same principles in the aircraft analogy should be applied, where ultimate care is taken and immediate interventions are implemented to address the slightest glitch in the system. This is just not happening for people living with T2D.

What would this look like in practice for the person living with T2D? A personalised plan must be put in place to stabilise glucose levels, blood pressure, cholesterol and excess weight effectively. This needs to happen from the point of diagnosis and be re-assessed in a timely manner. Managing risk factors earlier is essential for reducing the chance of developing irreversible complications and giving people the best possible chance for a longer and healthier life. This must go hand in hand with awareness, education, and training programmes that empower individuals with diabetes and equip healthcare professionals with the necessary tools.

The current approach that delays the use of disease-modifying therapies is out-dated and threatens the lives of more than 10% of Europe's population.

We urgently need to adjust our healthcare systems across Europe, to remove policy barriers that prevent the effective management of T2D. These barriers are preventing early and stringent glucose control, adequate management of risk factors and weight management.

This is an entirely unacceptable and preventable human catastrophe that requires an immediate, committed, and radical change.

A Preventable Catastrophe is an urgent call to action to policy makers. European lives depend on it.

Prof Nebojsa Lalic
Regional Chair, IDF Europe

Introduction

In November 2022, the European Parliament adopted with an overwhelming majority a new Diabetes Resolution calling for an EU-wide diabetes strategy. The strategy should focus on prevention, diagnosis, treatment and research. National diabetes programmes should be created, and there should be coordination and funding of European diabetes research.[1]

Type 2 diabetes was a rare disease at the beginning of the 20th century. Over the past decades, rates of T2D have skyrocketed around the world. Despite tremendous progress in understanding the treatment of diabetes, the situation is worse today than ever; the prevalence of T2D continues to rise at an alarming level across Europe causing unacceptably high numbers of premature deaths, equivalent to three jumbo jets crashing every single day.

Radical changes in our societies are needed to reverse the trend and to prevent or delay the onset of T2D. By addressing the multiple risk factors, premature deaths that are, in most cases, preventable can be halted. There is ample scientific evidence that interventions based on the most recent evidence-based recommendations can reduce life threatening complications like stroke, heart disease and renal failure. Early diagnosis, and immediate interventions to monitor and manage blood glucose, blood pressure, cholesterol and excess weight are instrumental in reducing the personal, and societal cost caused by irreversible complications.

This is an entirely unacceptable and preventable catastrophe that requires an immediate, committed, and radical change. A Preventable Catastrophe is an urgent call to action to policy makers. European lives depend on it.

The problem

Type 2 Diabetes

Diabetes mellitus is a group of metabolic diseases characterised by high blood glucose (hyperglycaemia). T2D, which accounts for approximately 95%[2] of all diabetes cases, is a progressive disease where insulin resistance, and an inability of the pancreas to compensate are involved. High blood glucose levels sufficient to cause tissue damage can be present without clinical symptoms for many years before diagnosis. This increases the risk of developing infections and, in almost all high-income countries, T2D is a leading cause of cardiovascular disease, blindness, kidney failure, and lower limb amputation. Long-term complications can also take the form of cognitive diseases: individuals with T2D are 1.5 / 2 times more likely to develop dementia than the general population.[3]

T2D accounts for

95%

of all diabetes cases

T2D is the leading cause of:

- **Cardiovascular disease**
- **Blindness**
- **Kidney failure**
- **Lower limb amputation**

Individuals with T2D are

2x

more likely to develop dementia

European context

61 million Europeans now live with diabetes. A figure that is expected to rise to 67 million by 2030. Of those, almost half are likely to die prematurely (premature is defined by the World Health Organisation as dying before 70). It is estimated T2D decreases life expectancy by between five and ten years.[4]

1.1 million deaths across Europe were due to often preventable complications such as stroke, heart attack, kidney disease, limb and sight loss in 2021[5]. Premature deaths in Europe due to diabetes-related complications is equivalent to three jumbo jets crashing every single day[6] due to lack of modern aircraft preparation and maintenance measures.

The cost to human life, to the health economy, and to society as a whole cannot be underestimated. Were three jumbo jets to crash on the same day, there would be an international outcry, a clamour to understand why, and a stampede to ensure it couldn't happen again. And yet, when the equivalent is happening for people living with T2D, there is barely a murmur.

The cost is not just human. According to the IDF Diabetes Atlas, the cost of treatment relating to diabetes across Europe was €176 billion in 2021, 75% of which is related to healthcare costs to treat preventable complications[7]. This 75% does not include costs of medicines to treat diabetes, which account for 6% - 11% of overall cost.

Cases of T2D will rise to

67m

by 2030

The cost of T2D treatment across Europe

€176bn

in 2021

[1] https://www.europarl.europa.eu/doceo/document/B-9-2022-0492_EN.html

[2] https://www.who.int/news-room/fact-sheets/detail/diabetes

[3] https://www.diabetes.org.uk/about_us/news/premature-deaths-diabetes

[4] https://www.who.int/news-room/fact-sheets/detail/diabetes

[5] https://diabetesatlas.org/ 1.1 million deaths in Europe in 2021 as a direct result of diabetes. 95% of people have T2D = 1,045,000. 48% of people with T2D die prematurely (see footnote 6) = 501,600. 470 passengers on a jumbo jet. 501,600 / 470 / 365 = 2.92.

[6] http://www.euro.who.int/__data/assets/pdf_file/0003/98391/E93348.pdf

[7] https://www.statista.com/statistics/241831/health-care-costs-due-to-diabetes-worldwide-by-region

Inadequate preparation and management: too little, too late

Currently the most widely applied clinical approach is to maintain close to normal blood glucose levels by encouraging a 'move more, eat less' lifestyle approach combined with one or more medications designed to lower high blood glucose levels. However, almost half of people (46.4%) living with T2D do not achieve their blood glucose targets[8]. Further, only 6.5% of all individuals achieve all three targets of glycemic control, blood pressure and cholesterol. 85% of people with T2D are overweight[9].

In part, this may be due to a 'blame and shame' culture where T2D is seen as a self-imposed disease associated with inactivity, excess weight, tobacco, and alcohol consumption. Anxiety and stress may also be considered contributory factors[10]. However, there remain many unknowns as to the triggers for T2D including a genetic predisposition[11]. The medical profession is gradually moving towards a position where focusing only on personal responsibility "is pointless". According to Professor Jonathan Valabhji, National Clinical Director for Obesity and Diabetes at NHS England, "This angle has been relied on for the past few decades as a sole strategy. It's not adequate."

A reliance on personal responsibility is especially challenging in an age of deeply entrenched inequalities.

Relying only on people with T2D to take personal responsibility and radically adapt their lifestyles, with (or without) a medicine to lower blood glucose often proves insufficient or ineffective. This generally results in the acceleration of complications that are almost always irreversible once they have set in. Published evidence shows that people living with T2D frequently experience significant delays in treatment intensification despite inadequate blood glucose control.[12]

8 Stone MA, e al. Diabetes Care. 013;36(9):2628-2638

9 https://news.harvard.edu/gazette/story/2012/03/the-big-setup/#:~:text=Studies%20have%20shown%20that%20becoming,per-cent%20of%20diabetics%20are%20overweight

10 https://www.diabetes.org.uk/professionals/resources/shared-practice/psychological-care/emotional-health-professionals-guide/chap-ter-anxiety#:~:text=Therefore%2C%20it%20is%20possible%20that,symptoms%20or%20an%20anxiety%20disorder

11 https://www.diabetes.co.uk/diabetes-and-genetics.html

12 https://diabetesjournals.org/care/article/36/11/3411/38071/Clinical-Inertia-in-People-With-Type-2-DiabetesA

The solution

Over the past 100 years, diabetes management has been largely dependent on understanding the association of high blood sugar levels with long-term complications, development of safe and effective therapeutic options, and monitoring capabilities.

A number of studies have shown that maintaining blood glucose levels close to normal values delays and slows the onset of chronic complications from diabetes. Subsequent studies demonstrated the impact of stabilising not just blood glucose but also blood pressure on reducing microvascular and macrovascular complications. More recently, studies have used the legacy effect as a phenomenon to describe the prolonged benefits of earlier and intensified management of blood glucose, blood pressure, cholesterol and body weight 'that reduces the risk of longer-term complications as well as overall mortality[13].

"There is excellent evidence from clinical trials supporting the importance of achieving multiple risk factor control".

Data from a study of over 100,000 people with T2D has associated a significant increase in the risk of myocardial infarction, stroke, heart failure and composite cardiovascular events to a one-year delay in achieving tight glycaemic control[14]. Other studies have also found a similar legacy effect with blood pressure and lipid lowering therapies.

The barriers to translating scientific evidence into practice, and to overcoming therapeutic inertia, are many. They are multifactorial, resulting from factors at the person, healthcare professional and health systems levels. Thus, they require bold societal and policy changes across many health- and non-health areas, including, for example, acting on the social determinants of health, and fostering health-enabling environments.

[13] Khunti, K., Kosiborod, M., & Ray, K. K. (2018). Legacy benefits of blood glucose, blood pressure and lipid control in individuals with diabetes and cardiovascular disease: time to overcome multifactorial therapeutic inertia?. Diabetes, Obesity and Metabolism, 20(6), 1337-1341.

[14] Khunti, K., Kosiborod, M., & Ray, K. K. (2018). Legacy benefits of blood glucose, blood pressure and lipid control in individuals with diabetes and cardiovascular disease: time to overcome multifactorial therapeutic inertia?. Diabetes, Obesity and Metabolism, 20(6), 1337-1341.

At the level of people living with diabetes, barriers can include misperception about medication use and side effects, but also the impact of social determinants of health. At the healthcare professional level, physicians may experience competing priorities, lack of time, overconfidence in the quality of care and adherence to guidelines, lack of awareness of therapeutic inertia, delay in adopting new guidelines, lack of familiarity with new medications, and misperception about PwD's adherence to medication changes. With regard to health systems, barriers can include the cost of new medications, formulary limitations and non-medical switching of therapeutics due to insurance formulary changes.[15]

Successful interventions require PwD to have access to diabetes self-management education and support (DSMES) at time of diagnosis and throughout the life course - as well as regular communication with their care team, which can be supported by the use of technology such as telemonitoring, text messaging, virtual visits or mobile applications. Continuous and affordable access to medications, devices and technologies needs to be ensured. Health systems should also be reorganised to allow better integration of the various levels of care, putting the person living with diabetes at the centre.

These are priorities to be tackled by all stakeholders, including PwD, health care providers, policy makers, payers and industry.

These changes won't happen overnight. Some immediate tactical and practical steps, though, can and should be adopted as an imperative in the management of T2D. These include:

- **Establishing personalised management plans**
- **Establishing, managing, and monitoring targets for blood glucose levels early**
- **Managing and monitoring blood pressure early**
- **Managing and monitoring cholesterol levels early**
- **Addressing excess weight early**
- **Assessing the health outcomes every three to six months**

These simple steps, supported by adequate education and support, have the potential to drastically reduce the risk of life-threatening complications. New models of care and more intervention in the earliest stages of the disease are needed for better diabetes management and to improve the outcome of patients with T2D.

[15] Powell, R. E., Zaccardi, F., Beebe, C., Chen, X. M., Crawford, A., Cuddeback, J., ... & Khunti, K. (2021). Strategies for overcoming therapeutic inertia in type 2 diabetes: A systematic review and meta-analysis. Diabetes, Obesity and Metabolism, 23(9), 2137-2154.

In their latest consensus report, the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) concluded with these words:

"Until science and medicine bring us further insights, we recommend empathic, person-centered decision-making and support informed by an understanding of local resources and individual social determinants of health. Combined with consistent efforts to improve health behaviors (nutrition, activity, sleep, and self-monitoring) and to provide DSMES, these form the foundation of diabetes management.

In this context, acceptance of, adherence to, and persistence with medical and behavioral interventions to support cardiorenal health, cardiovascular risk reduction, and attainment of glycemic and weight goals will prevent complications and optimize quality of life. We must establish and refine quality improvement efforts in diabetes care at the local level to equitably implement evidence-based interventions for the benefit of all people with T2D."

Conclusion
and call to action

While there are systemic issues that will likely take years to resolve, hundreds of thousands of European lives are being compromised and ending too soon. To avoid preventable premature deaths of people living with diabetes, we call for united and immediate action to:

- **Empower people living with T2D with education, support and technology to ease the self-management of diabetes;**
- **Put the person living with T2D at the centre of their care, respecting their individual needs, preferences and beliefs;**
- **Equip healthcare professionals with the tools and knowledge to implement the most recent evidence-based recommendations;**
- **Ensure early access and timely adoption of modern and effective diabetes care to manage and monitor all risk factors (blood glucose, blood pressure, cholesterol and excess weight);**
- **Remove barriers to the implementation of the latest scientific recommendation into clinical practice.**

We would never accept three jumbo jets crashing every single day. We simply cannot accept the same number of people dying prematurely because of preventable diabetes-related complications. We can do something about that. And we must.

This policy paper was developed by IDF Europe with the invaluable contribution – underpinned throughout by resources, feedback and comments – of the Editorial Committee composed by Prof. Kamlesh Khunti, Prof. Tadej Battelino, Dr. Vipan Bhardwaj, Prof. Nebojsa Lalic, Dr. Niti Pall and Type 2 Diabetes advocates Konstantinos Tagkalos and Erik Werson.

The design and content of this report was guided by Salix & Co.

IDF Europe received support for the publication of this paper from Eli Lilly and Company. The editorial board maintained editorial control of the content and the authors did not receive any compensation for their contributions. The opinions expressed in the publication are those of the authors only.
May 2023.