INSTITUTE OF DIABETES FOR OLDER PEOPLE

Older people with type 2 diabetes

European challenges and the need for improved care

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Foreword

The incidence of type 2 diabetes mellitus in Europe is now at epidemic levels. With an estimated 66.5 million adults expected to have the condition in less than 20 years' time, individuals, governments and healthcare systems need to address the problems of obesity, sedentary lifestyle and diet among populations to help reduce the impact of the condition.

Diabetes mellitus is a highly prevalent metabolic condition in ageing societies associated with high levels of morbidity, multiple therapies and functional deterioration that challenges even the best of healthcare systems to deliver high-quality, individualised care. Despite this, international clinical guidelines have ignored the often-unique issues of frailty, functional limitation, changes in mental health and increasing dependency that characterise many aged patients with diabetes.

The original *European Diabetes Working Party for Older People (EDWPOP)* was established in December 2004 to ensure that older people in societies across the European Union have consistent and high-quality diabetes care throughout their lives.

Its latest European Guidelines address this problem and demonstrate that something can be done to ensure that older people with type 2 diabetes are treated appropriately. This means they can effectively manage their condition, while healthcare systems aren't overloaded by older people with avoidable conditions related to type 2 diabetes.

The *EDWPOP* guidelines have been launched and address care gaps identified in a Position Statement developed by the International Association of Gerontology and Geriatrics (IAGG), the European Diabetes Working Party for Older People (EDWPOP) and the International Task Force of Experts in Diabetes.

The collaborative expert group explored the key issues that affect diabetes in older people using a rigorous consensus approach, along with an evidence-based review of literature.

The Position Statement confirmed the need for specific guidelines as previous guidelines did not focus on the needs of older people.

The EDWPOP guidelines call upon all governments, healthcare systems and healthcare professionals in Europe to have a multi-dimensional approach, with an emphasis on prevention of diabetes and its complications and early intervention, in order to avert a diabetes crisis among older people.

Professor Alan Sinclair
Professor of Medicine and Director, Institute of Diabetes for Older People

66.5 Million

Introduction

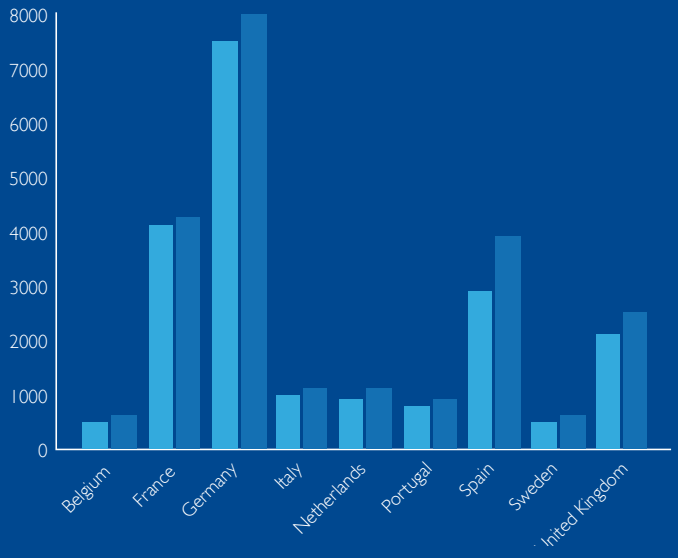
There is ample proof of the economic, social and health burden of diabetes in the elderly population. Despite this recognition, diabetes care of older people has been relatively neglected. In addition, there is little evidence of structured diabetes care in many national diabetes care systems and virtually no specific provision for those who are housebound or living in institutional care.

This report highlights the growing incidence of type 2 diabetes in Europe among older people and its impact on patients and society. The report then provides a summary of the EDWPOP guidelines aimed at providing equality of care for older people with diabetes and ensuring that treatment and care pathways are consistent across Europe to help prevent a diabetes crisis.

Diabetes
A European Epidemic

The number of people in Europe with diabetes continues to grow. In 2010, there were 55.4 million people diagnosed with diabetes – a massive 90% of those having type 2 diabetes.[1] The European average prevalence in adults equates to around 1 in 15.[1] Shockingly though, by 2030 it is estimated that prevalence will increase to 8.1%, or 66.5 million adults with diabetes, a growth of over half a million per year.[1]

Numbers (in thousands) of adults with diabetes in Europe, 2010 and 2030



Country	Numbers/000s (Prevalence) 2010	Numbers/000s (prevalence) 2030	Mean annual increment
Europe	55,400 (6.9%)	66,500 (8.1%)	550,000
Belgium	610 (8.0%)	750 (9.6%)	7,000
France	4,164 (9.4%)	4,201 (11.0%)	52,000
Germany	7,494 (12.0%)	8,014 (13.5%)	26,000
Italy	978 (12.2%)	1,143 (14.4%)	8,000
Netherlands	922 (7.7%)	1,178 (9.5%)	12,800
Portugal	795 (9.9%)	911 (11.5%)	5,800
Spain	2,939 (8.7%)	3,866 (11.1%)	46,000
Sweden	484 (7.3%)	556 (8.0%)	4,000
United Kingdom	2,140 (4.9%)	2,549 (5.4%)	20,000

Shaw 2010

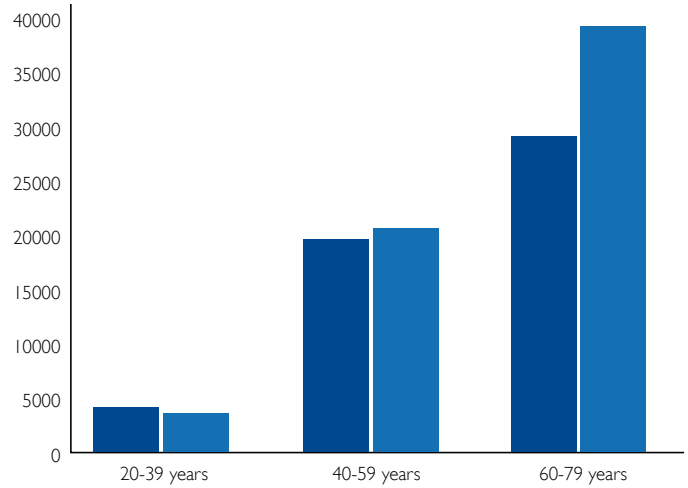
“by 2030, it is estimated that prevalence will increase to 8.1%”

Rosli Othman / Shutterstock.com

Diabetes
Increases with age

Up to one in five older people has diabetes, and a similar proportion may have undiagnosed diabetes. This is not a trivial disease and it poses many significant challenges to the delivery of effective care. In people over 60 years, the prevalence of diabetes is nearly seven times that of the 20-39 age group[1] and over half (54%) of all people with diabetes in Europe are aged over 60.[1] It is estimated that over 60% of diabetics will be aged over 60 by 2030.[1]

Adults with diabetes (thousands) in Europe, 2010 and 2030

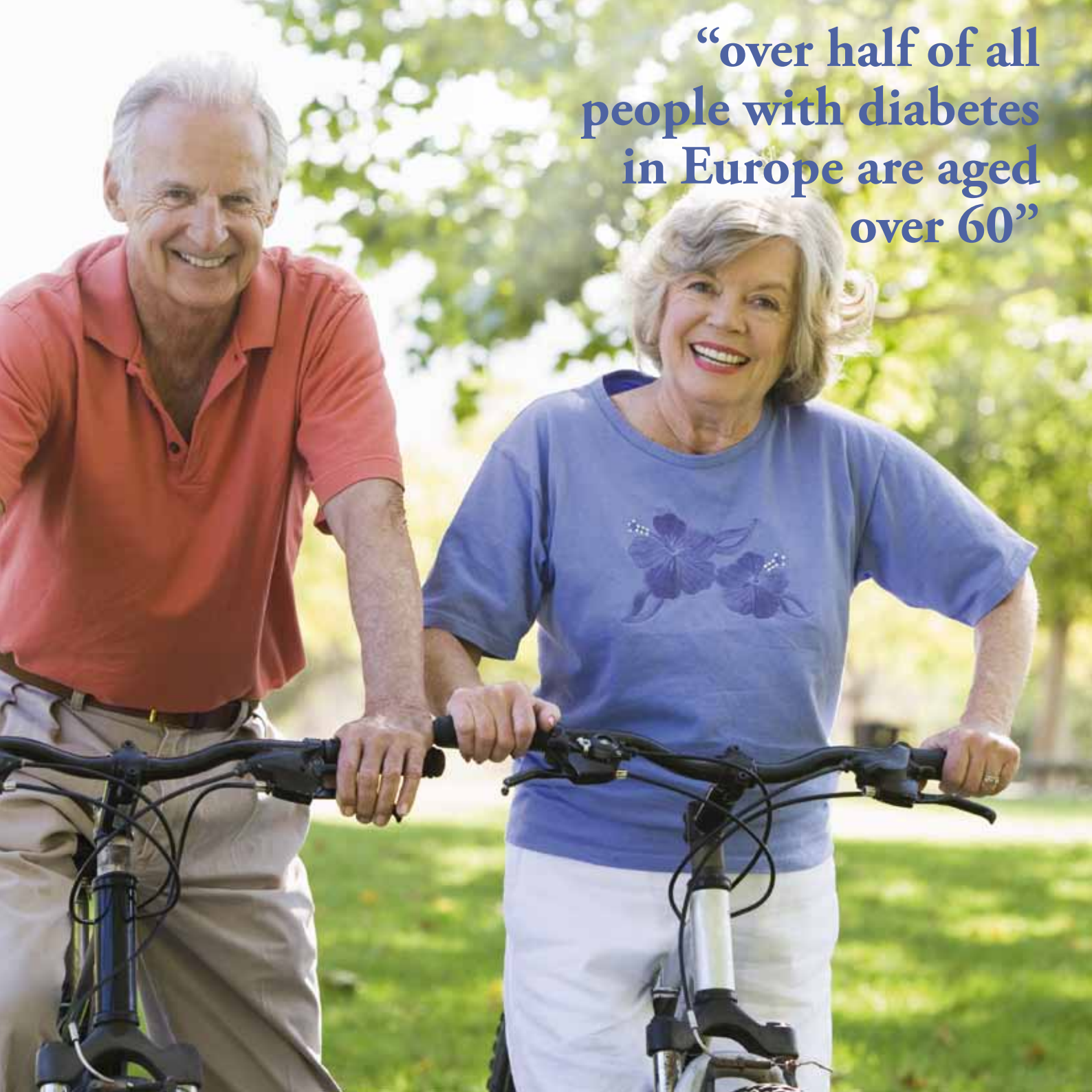


	Numbers of adults with diabetes, thousands, 2010		
	20 - 39 years	**40 - 59 years**	**60 - 79 years**
Europe	4,473 (8.1%)	20,739 (37.6%)	29,982 (54.3%)
European prevalence	0.7%	3.2%	4.6%
	Numbers of adults with diabetes, thousands, 2030		
Europe	3,713 (5.6%)	21,839 (33%)	39,831 (60.2%)
European prevalence	0.6%	3.3%	6.0%

Shaw 2010

	Numbers of adults with diabetes, thousands, 2010		
	20 - 39 years	**40 - 59 years**	**60 - 79 years**
Belgium	10	168	433
France	209	1210	2745
Germany	652	2,792	4,050
Italy	121	1,224	2,581
Netherlands	15	267	641
Portugal	50	296	449
Spain	161	1,009	1,770
Sweden	37	137	311
United Kingdom	149	684	1,306

Shaw 2010


“over half of all people with diabetes in Europe are aged over 60”

Complications of Diabetes are devastating, but largely avoidable

According to the International Diabetes Federation, complications due to diabetes are a major cause of disability, reduced quality of life and death. Diabetes complications can affect various parts of the body, manifesting in different ways for different people.

- Good management of diabetes reduces the risk of complications.[2]
- People with diabetes have around twice the risk of developing cardiovascular disease compared to those without.[3]
- Almost one in three people with type 2 diabetes develop overt kidney disease[4] and diabetes is the single most common cause of end stage renal disease.[5]
- Diabetes is the leading cause of blindness in people of working age in the UK.[6,7] People with diabetes are twice as likely to have cataracts or glaucoma[8] and 10 to 20 times more likely to go blind than people without.[9]
- Diabetes is the most common cause of lower limb amputations[10] with 100 amputations a week being carried out due to diabetes.[11] Worldwide, the rate of leg amputations in people with diabetes is at least 15 times higher than in people without.[12] Up to 70% of people die within five years of having a diabetes-related amputation.[13]

"Diabetes is the most common cause of lower limb amputations"

Diabetes care consumes around 10% of European healthcare budgets

The demographic changes outlined in this report will produce a wave of older people with diabetes up to 2030 and beyond which will significantly stretch public health resources. People with diabetes incur average expenditures per year that are ~2.3 times higher than those for people without diabetes (€8,900 per year).[14]

- €80 billion is spent on diabetes in Europe.[15]
- This is equivalent to 10% of total healthcare expenditure and is projected to rise to €94 billion by 2030.[15]
- All European countries are facing an increase in health spending on diabetes ranging from around 8% to over 30% in some cases.

The estimated average yearly cost per patient in Europe is €2,834.[16] Of these costs, hospitalisations account for the greatest proportion, 55%, with the average length of stay in hospital annually being 23 days. In contrast, drug costs are relatively low, accounting for only 7% of the total healthcare costs for diabetes.[16]

In a Europe-wide study, 72% of diabetic patients had at least one complication. The most common microvascular complications were neuropathy, renal damage and retinopathy.[17] The single factor having the largest impact on costs with type 2 diabetes is the management of diabetes-related late complications.[16] Management of complications increases the cost of care by a factor of 2 to 3.5.[16]

More than three-quarters of the global expenditure in 2010 was used for persons between 50 and 80 years of age. Expenditure will grow more quickly than the population because the prevalence of diabetes will increase as a result of ageing. The prevalence of diabetes is much higher in older age-groups, and because people who have lived with diabetes for many years have higher rates of complications, which are expensive to treat.

Cost of care impact

	Prevalence	Impact on average cost of care compared to patient without complication	Average direct medical cost
No complications	28%	-	€1,100
Only microvascular complications	19%	1.7	€1,900
Only macrovascular complications	9.6%	2.0	€2,400
Both types of complication	24%	3.5	€4,000

Caring for the older person with Diabetes

The effective management of the older patient with diabetes requires an emphasis on safety, diabetes prevention, early treatment for vascular disease and functional assessment of disability because of limb problems, eye disease and stroke. Additionally, in older age, prevention and management of other diabetes-related complications and associated conditions, such as frailty, cognitive dysfunction, functional dependence and depression, become a priority.

There is a need for specific guidelines as previous guidelines did not focus on the needs of older people:

- No special discussion of frail older people.
- Absence of glucose targets for patients with cognitive, depressive or significant physical disability.
- No insight into the development of best clinical practice in subjects with both diabetes and dementia, or those at end of life.
- Little practical advice in tailoring therapy to minimise 'hypoglycaemia'.

> "The effective management of the older patient with diabetes requires an emphasis on safety"

Diabetes Mellitus in Older People: Position Statement on behalf of the International Association of Gerontology and Geriatrics (IAGG), the European Diabetes Working Party for Older People (EDWPOP) and the International Task Force of Experts in Diabetes

Most international clinical guidelines in diabetes ignore the issues of frailty, functional limitation, changes in mental health and increasing dependency that characterise many older people with diabetes.

In response to this, a collaborative expert group of the IAGG and EDWPOP and an International Task Force explored the key issues that affect diabetes in older people using a rigorous consensus approach, along with an evidence-based review of literature. The aim of the group is to influence the clinical behaviour and approach of all health professionals who deliver diabetes care to older people.

The result is the first comprehensive expert-based review of the management of diabetes in older people in which evidence-based recommendations have been developed.

During the course of the review, major research areas within diabetes of old age were identified that need attention. These are summarised in priority order as follows:

- The use of exercise-, nutrition- and glucose-lowering therapies in the effective management of type 2 diabetes in older people.
- Practical community-based interventions to reduce hospitalisation.
- Methods to decrease hypoglycaemia rates in various clinical settings.
- Health economic evaluations of metabolic treatment.
- Interventions to delay/prevent diabetes-related complications that are important in older age, such as cognitive impairment and functional dependence.
- Development of technical devices that help to maintain autonomy and safety for older people with diabetes.

These issues need to be part of the foundation for future policy development in this area and should influence the clinical behaviour and approach of all health professionals engaged in delivering diabetes care to older people.

Diabetes Mellitus in Older People: Position Statement on behalf of the International Association of Gerontology and Geriatrics (IAGG), the European Diabetes Working Party for Older People (EDWPOP), and the International Task Force of Experts in Diabetes. Sinclair A, Morley J, et al. July 2012.

Summary of EDWPOP 2011 Guidelines

The EDWPOP guidelines provide an evidence-based and detailed summary of what healthcare professionals across Europe should be doing now to give patients the best diabetes care possible. They include:

- An evidence-based review of treatment for older people with diabetes, and are intended as a resource for clinical decision making.
- A user-friendly set of recommendations for primary care, the community and secondary care settings.
- Guidance in 18 areas of clinical interest, such as screening and diagnosis, prevention, secondary complications, hypoglycaemia, cognitive impairment, falls and immobility.

A section on *enhancing the practice and quality of diabetes care* includes advice on aims of care, education and nutrition, screening and diagnosis, prevention and lifestyle changes.

- All recommendations are supported by sound evidence and are intended to help carers and clinicians identify problems at an early stage and reduce the risk of further complications and disability.

Older patients often have a number of co-existing conditions for which they may be taking multiple medications. *Recommendations for treatment provides:*

- Clear guidance on glucose regulation in these patients taking into account their lifestyle, diet, level of frailty, other medical conditions and the need to minimise hypoglycaemia. Hypoglycaemia is undesirable in any patient, but in the vulnerable older person it may be particularly dangerous if it leads to confusion and falls.

A high percentage of people in care homes have diabetes but care is often not well-structured, leading to high rates of admission to hospital.

- The guidelines provide practical advice on how to manage diabetes in the care home based around regular monitoring and education.

Finally, the guidelines deal with special categories such as diabetic foot disease, cognitive impairment, falls and immobility.

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