Diabetes

The Policy Puzzle: Towards Benchmarking in the EU 25

FEND
Federation of European Nurses in Diabetes

International Diabetes Federation
European Region

TABLE OF CONTENTS

FOREWORD

In the EU today more than 25 million people are estimated to be living with diabetes. All of them threatened by serious, disabling diabetes-specific complications leading to damage or even complete failure of target organs - kidneys, nervous system and the eyes. Diabetes is a major contributor to cardiovascular disease, for example myocardial infarction and/or stroke. Thus diabetes is recognised as a major threat to people's lives and well-being.

The reported EU average prevalence rate is 7.5% among adults aged 20 or over. Furthermore, it is estimated that up to 50% of people with diabetes are undiagnosed or are unaware of their condition. Today Europe finds itself in the midst of a diabetes epidemic. In Germany for instance, the prevalence of people with diabetes under medical treatment grew in the years 1988 to 2001 by 43%.[1]

In the next 20 years, the number of cases of diabetes is expected to increase by 71% worldwide, by 21% in the European Region according to the World Health Organisation (WHO), and by 16% across the European Union according to the IDF Atlas. This increase will be largely driven by the growing prevalence of Type 2 diabetes. Now is the time to act. The fact that our children are at the forefront of this epidemic makes the need for action all the more urgent.

While national efforts to deal with obesity are welcome, diabetes requires its own targeted programmes backed by resources. Only in this way will it be possible to prevent the multiple complications (of which cardiovascular disease is the main one) that lead to premature death among people with diabetes.

The International Diabetes Federation-European Region (IDF-Europe) and the Federation of European Nurses in Diabetes (FEND), have joined forces to support this audit of diabetes across EU member states. It is presented as a contribution to EU politicians to the work of the Austrian Presidency in the first half of 2006 and beyond. The aim of this audit is to help establish a coherent EU strategy and policy that can provide a solution to the diabetes problem across the EU.

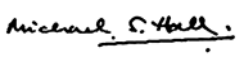
This report is intended to present a snapshot of the actual picture in 2005, easily digested, of the Type 2 diabetes situation in the EU, intended primarily to be a guide for future EU policy development. The undertaking of this inventory shows considerable variation in approaches taken by EU member states today, hoping that this will be used as a basis for a benchmarking process to follow in the near future.

We sincerely hope that this audit helps Europe find its way towards developing an EU framework for diabetes. While the St Vincent Declaration remains valid 16 years after it was signed, it is only with the adoption of an EU Council Recommendation, by all EU member states, that countries will finally implement the declaration's recommendations on diabetes.

At a time when it is imperative for the EU to make itself directly relevant to its citizens, the Commission, Members of the European Parliament and Council of Ministers are invited to take note of these findings and build on the Irish EU Presidency's report to the Health Council in June 2004 that «diabetes requires the development of a comprehensive, integrated programme of prevention, care and rehabilitation» – and to take EU action.

IDF Europe and FEND are delighted with Austria's decision to make the fight against Type 2 diabetes one of its priorities during its EU Presidency (January – June 2006). We hope that Austria's efforts will represent a watershed in Europe's commitment to halting the Type 2 diabetes epidemic.

We thank the Editorial Board for their valuable input and recommendations. We also thank Novartis for providing expertise and funding to make the audit possible.



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EXECUTIVE SUMMARY

THE SIZE OF THE DIABETES EPIDEMIC IN THE EU

- Diabetes mellitus is a mounting public health issue. Being a chronic and progressive process from hyperglycemia at its beginning to cardiovascular and so-called micro-angiopathic complications, the consequences of «the diabetes process» cannot be overestimated. The severity of the problem is largely accentuated by the growing prevalence of Type 2 diabetes, and, to a lesser extent, Type 1 diabetes.

- Today, over 25 million people living with diabetes within the 25 EU member states are affected by the disease. The current EU average prevalence rate is estimated to be 7.5% of the total population aged 20 and above with all indications pointing to a continued increase in the coming years.

- Prevalence rates in the new member states lie around 9% and beyond.

- Based on population screening programmes, it is estimated that up to 50% of all people with diabetes are undiagnosed: for every known diabetes case, a hitherto unknown one is detected.

- There is an alarming rise in the number of children diagnosed with Type 2 diabetes. This audit revealed the incompleteness of existing data regarding this problem, and moreover, the lack of specific programmes to address it.

THE PERSONAL AND BUDGETARY COSTS OF THE DIABETES PROBLEM IN THE EU

- Diabetes mellitus is a major and growing epidemic with high cost and negative health implications, yet several EU governments lack a clear view of the disease's epidemiological burden, economic, personal, and societal impact.

- The total cost of diabetes across the EU is estimated to account for 2.5% – 15% of total healthcare spending (over half of member states have reported estimates of their spending on diabetes).

- Evidence of the dramatic costs of treating diabetes and its complications are found in the CODE-2 study, which estimated the total direct costs of Type 2 diabetes to be 29 billion Euros in 1998 for 10 million people with Type 2 diabetes in eight EU countries (Belgium, France, Germany, Italy, the Netherlands, Spain, Sweden and the UK).

- Around 50% of the people with Type 2 diabetes have already developed at least one complication by the time of diagnosis. Cardiovascular diseases leading to myocardial infarction and/or stroke, eye disease or retinopathy (the leading cause of blindness), kidney failure, neuropathy and diabetic foot disease (predisposing to ulceration and limb amputation) are some of the most common complications of diabetes.

- On average, those with Type 2 diabetes will die 5-10 years before those without diabetes; most of this excess mortality is due to cardiovascular disease.[2] About 80% of all people living with diabetes die of cardiovascular disease.

- Cardiovascular disease consumes by far the greatest proportion of direct costs and more than half of the mortality-related costs of diabetes.

- The largest single item of diabetes expenditure is hospital admissions for the treatment of long-term complications such as heart disease, stroke, kidney failure and foot problems. Many of these complications are potentially preventable given prompt diagnosis of diabetes, effective patient and professional education and comprehensive long term care of people with diabetes.

- The cost-effectiveness of diabetes management programmes depends on several factors such as diabetes epidemiology, healthcare organisation and delivery of care.

- With regard to general screening, questions remain over long-term benefits. Experts suggest that a more targeted approach towards high risk groups is probably the best and most profitable way forward.

POLICIES IN PLACE TO ADDRESS THE DIABETES PROBLEM IN THE EU

- 11 out of the 25 member states (Austria, Czech Republic, Denmark, Finland, France, Germany, Italy, Portugal, Slovakia, The Netherlands and United Kingdom) are reported to provide a national framework or plan for diabetes prevention and care. Spain is unique as it has several regional diabetes plans but no national framework.

- 10 member states are addressing diabetes, either under the national obesity plan, or by developing national diabetes plans or screening programmes. Of these, seven member states are expected to have national diabetes plans in place by 2006 (Austria, Ireland, Germany, Lithuania, Luxembourg, Spain and Poland).

- Finland is a model for other member states because it has addressed the high prevalence of diabetes and associated healthcare costs. Germany and Slovenia have indicated their intention to model national programmes on the Finnish example: however, outcome data from the Finnish programme are not available.

- The Netherlands report one of the lowest prevalence rates (3.7%) and the lowest healthcare diabetes costs (2.5% of total healthcare budget) among all EU member states. Nevertheless, it has recently developed a national plan for improved diabetes care focusing on a multi-disciplinary approach.

- Most member states (19 out of 25) have nationwide clinical evidence-based guidelines for Type 1 and/or Type 2 diabetes.

- Prevention of obesity together with secondary prevention and intervention measures are key factors in delaying and reducing the risk of complications such as cardio-vascular disease, blindness or amputations.

- All 25 EU member states (with the exception of Cyprus) adopted the St Vincent Declaration in 1989. Even when member states have established national plans, these as such are not a measure of success unless they are being implemented; the level of resources and implementation of plans was reported to be unsatisfactory in many countries.

- Progress made with strategies addressing cancer and cardiovascular disease, at both national and international levels, demonstrates the wisdom of addressing equally devastating conditions such as diabetes in a similarly co-ordinated, strategic and comprehensive way.

PURPOSE AND METHODOLOGY

This policy audit is the first of its kind undertaken across all 25 EU states. It seeks to help shape European policy by providing a snapshot of the current situation across the EU. It looks at the prevalence and cost of diabetes, where it ranks on the political agenda of each member state government and at how diabetes is dealt with. Where possible we have identified the priorities and recommendations of stakeholders in these countries.

The audit is designed to provide a snapshot of current prevention and care policies, to highlight best practice and to lead to wider support for improved prevention, screening, diagnosis and control of diabetes to prevent its devastating and costly complications.

It was undertaken from May to September 2005 in all 25 member states by Burson-Marsteller in Brussels, a public affairs counselling firm, on behalf of IDF-E and FEND and supported by an unconditional grant from Novartis.

The research was carried out in two phases:

- Firstly, information on the burden and cost of diabetes in each country, and on the relevant policies, guidelines and practices was gathered through government sources, published scientific literature and enquiries made to a wide range of diabetes stakeholders and relevant public health non-governmental organisations.

- Secondly, over 90 telephone interviews were conducted with Health Ministry officials, key diabetes experts, diabetes professional and patient associations and public health institutes across the 25 countries. The interviews gathered data on the burden and cost of the disease, information on the status of diabetes plans and initiatives and where possible, identified areas of improvement and future action. The relevant representatives interviewed were identified based on their knowledge of and/or involvement in national diabetes policies and initiatives. Within Health Ministries, officials were in charge of diabetes or chronic diseases in some cases. The interviews were conducted anonymously. A list of organisations and bodies that provided input into the audit is annexed.

THE DATA: A PRECAUTIONARY TALE

- Prevalence rates were gathered from the «IDF World Atlas 2003 Edition» which is the only comparative tool available to date. Unfortunately, even the World Health Organisation does not provide prevalence figures for diabetes for each of the EU 25 countries. As a result, the figures provided in this report may not correspond with national prevalence estimates provided by national professional associations or Health authorities.

- There is acceptance that there are large variations in prevalence estimates within each country. There is a genuine lack of up to date, coherent, reliable and comparative data on the epidemiological burden of the disease.

- Furthermore there are very few comparable diabetes healthcare cost data across the EU 25 countries from direct published research. When this is the case they are referenced in the report.

- Overall, we point to the weakness of data on which policy decisions are being made, but they provide a starting point for benchmarking in the future.

THE EDITORIAL BOARD

To ensure that the picture provided by this audit respects high standards for research, comment and analysis, it was reviewed by an editorial board of experts. The Board comprised the following members:

Dr. Michael Hall
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PART I: EU OVERVIEW

EU OVERVIEW

INTRODUCTION

Diabetes mellitus is a chronic disease affecting around 7.5% of the EU adult population according to the 2003 IDF Atlas. Type 2 diabetes accounts for 85-95% of all cases of diabetes. The prevalence of Type 2 diabetes is increasing due to a number of reasons including ageing population and lifestyle factors such as low physical activity and obesity.

There are more than 25 million people with diabetes mellitus in the EU 25. Estimated prevalence rates of the total population above 20 years old range from the lowest, 3.4% in Ireland, to the highest, 10.2% in Germany. Prevalence rates in all 10 new EU member states are around 9%.

It is generally accepted that 50% of all people with diabetes are unaware of their condition. Studies estimate that Type 2 diabetes may be present for on average seven years prior to diagnosis.

In several EU countries, diabetes is the cause of death which has shown the greatest increase over the past 20 years.

Diabetes is ranked among the leading causes of cardiovascular disease, blindness, renal failure and lower limb amputation. About 75-80% of people with diabetes die of cardiovascular disease, the number one cause of death in Europe. People with Type 2 diabetes have a 2-4 times higher risk of coronary heart disease than the rest of the population, and their prognosis is poorer. The risk of death due to heart disease is increased by 2–3 times in men with Type 2 diabetes.

The biggest concern is that children and adolescents are already developing Type 2 diabetes due to increasing levels of childhood and adolescent obesity. Estimates show that 1 in 5 children in Europe is overweight. Each year 400,000 children become overweight. Some countries have an even higher proportion of overweight children than the United States (estimated at 30%). Experts have noted a rapid acceleration in the increase of excess-weight and obesity prevalence: from 0.2% in the 70s, today it is rising by 2% a year.

While diabetes is reported to be the fourth main cause of death,[3] these statistics are an underestimate given the total number of patients in Europe. These diabetes related deaths are based on death certification, which only records deaths directly attributable to diabetes rather than to its long term complications and other associated co-morbidities such as cardiovascular disease.

The public health challenge posed by diabetes is comparable to cancer, which has received the attention of EU institutions for many years. The 25 EU countries accounted for two million new cancer cases in 2004 and 1.2 million deaths.[4] Cancer is reported to be the second leading cause of death after cardiovascular disease.

There is an urgent need to improve public awareness concerning diabetes. Early detection and management will be a key factor in stabilising individuals afflicted with diabetes, in addition to reducing the financial costs that arise due to later complications.

1. DIABETES POLICIES IN THE EU– PREVENTION AND TREATMENT

While we see the emergence of disease-specific national policies in some member states, in others the process is still in its infancy, with the burden having to be determined before policy decisions are made. There is evidence to show that by the time diabetes is diagnosed, 50% of people with diabetes suffer from at least one complication. Evidence suggests that governments need to develop and financially support policies that allow for the identification of people at high risk and for the provision of systematic screening among this group to prevent complications. Such a policy has been successfully developed in Finland.

PLANS AND GUIDELINES ACROSS THE EU

Only **11 out of 25 member states have a national framework or plan** for diabetes. Member states' national diabetes plans vary significantly in their quality and value in reducing the disease burden and its costly complications. National plans often lack specific targets and/or a monitoring system to assess implementation and effectiveness. We also established that there is generally a lack of adequate allocation of human and financial resources to implement them.

COUNTRY	NATIONAL FRAMEWORK PLAN FOR DIABETES
Austria	«National Diabetes Plan»
Czech Republic	«National Diabetes Plan» and systematic evaluation
Denmark	«Diabetes Action Plan» with 1.9 million Euros allocated to implementation in 13 regions. Priorities are patient self-care and reduction of complications
Finland	«Dehko Type 2 Diabetes Prevention» is a unique comprehensive prevention programme with emphasis on early diagnosis and management
France	«Plan National Diabetes»: emphasis on medical education and training of healthcare professionals in hospitals
Germany	2002 Legal basis for «Disease Management Programmes»
Italy	«National Prevention Plan 2005 – 2009» includes a diabetes strand
Portugal	«National Diabetes Plan» under evaluation for better implementation
Slovakia	«National Diabetes Programme» with emphasis on early detection; a large-scale screening programme underway
Spain	«Regional Diabetes Plans» in Madrid, Catalonia, Valencia
The Netherlands	«National Diabetes Care Plan 2005 – 2009» to be implemented focused on a multidisciplinary approach to diabetes care
United Kingdom	«National Service Framework for Diabetes»: increase eye screening to 100% by 2007; financial incentives/sanctions for the healthcare trusts

EU OVERVIEW

There are currently **9 member states that are addressing diabetes** in different ways (under the national obesity plan, or by developing national diabetes plans or screening programmes). Of these, 7 member states expect to have a national diabetes plan in place by 2006.

COUNTRY	NATIONAL DIABETES PLAN
Belgium	Diabetes tackled under the obesity plan 2006
Cyprus	Expected national diabetes plan following the healthcare reforms
Germany	National Diabetes Programme by 2010
Hungary	Screening study on prevalence in 2005
Ireland	National diabetes policy expected in 2005
Lithuania	National Plan expected in 2006
Luxembourg	National Diabetes Plan expected
Poland	Ministerial Decree for national diabetes programmes expected in 2005
Spain	Framework Programme «Integrated Approach to Diabetes» expected

The **percent prevalence rates** of five member states **where diabetes has not been specifically addressed**, despite reported high prevalence, are:

COUNTRY	PREVELANCE
Estonia	9.7 %
Greece	6.1 %
Latvia	9.9 %
Malta	9.2 %
Slovenia	9.6 %

There are **19 member states with non-binding clinical guidelines** for Type 2 diabetes; most of them are based on the 1999 IDF Global Guidelines. These national guidelines tend to be updated every 2 – 3 years and they largely agree on general management of patients with Type 2 diabetes.

POLICY TOOLS IN PLACE

Country	Burden Data	Cost Data	Professional Guidelines	National Plan	Implementation Stage	Assessment/ Monitoring Mechanism
Austria	•		•	2005		
Belgium	•	•	•			
Cyprus			in process			
Czech Republic	•	•	•	1996	•	Review 2006
Denmark	•	•	•	2003	•	Review 2005
Estonia	•		•			
Finland	•	•	•	2003	•	Review 2006
France	•	•	•	2004	•	Review 2008
Germany	•	•	•	2002		
Greece			•			
Hungary	•	•	•			
Ireland	•	•		in process		
Italy	•	•	•	2005		
Latvia			•			
Lithuania		•	•	in process		
Luxembourg	•			in process		
Malta	•					
Poland	•	•	•	in process		
Portugal		•	•	•	•	Review 2006
Slovakia				•	•	
Slovenia	•		in process	in process		
Spain	•	•	•	in process	•	
Sweden	•		•		•	
The Netherlands	•	•	•	2005		
United Kingdom	•	•	•	2001	•	

Burden Data
Knowledge of disease burden can help determine where investment should be targeted. The extent and magnitude of present and future burden of diabetes is generally estimated.
Cost Data
Cost burden data can help governments prioritise spending and allocating resources.
Professional Guidelines
Clinical practice guidelines «are systematically developed statements to assist practitioner and patient decisions for specific clinical circumstances.» Guidelines have no legal status.
National Plan
Reversing the diabetes trend requires comprehensive national diabetes plans (NDP) outlining prevention and control strategies including nationwide health targets. NDPs are supported by financial resources and tend to indicate the priority given to the disease.
Monitoring/Assessment
Indicates whether there is a systematic review of the implementation.

MODEL NATIONAL PLANS

Finland is viewed at international level as a model in diabetes prevention and treatment. The government has now moved to the implementation and assessment of the «Development Programme for the Prevention and Care of Diabetes, Dehko 2000 – 2010» (see full description in the annexes). The programme is derived from a unique co-operation and financing scheme involving the Finnish Diabetes Association, the Department of Health, the Finnish Slot Machine Association, the pharmaceutical industry, hospitals and districts, the food industry and the National Public Health Institute. Dehko sets outcome targets by 2010 to:

- Improve glucose control so that at least 50% of people with diabetes are reaching recommended targets.
- Reduce the incidence of CVD among sufferers by at least one third.

The UK National Service Framework for Diabetes, established in 2001, also provides a model for other countries as it sets out a ten-year programme of change to deliver systematic care and support for all people living with diabetes. The NSF exemplifies the approach to patient-focused services. One of its aims is to increase eye screening coverage up to 100% (for people diagnosed with diabetes) by 2007.

2. TOTAL DIRECT COST OF DIABETES IN THE EU

Diabetes is a costly disease because of its progressive chronic nature, the severity of its complications and the means required to control it.[5] Diabetes has significant health-economic consequences, and the costs involved have a considerable impact on the economy. Governments and diabetes associations need to be aware of the current and future economic impact of the disease on the healthcare sector, the individual and family, and society as a whole in order to shape policy decisions.
Direct costs of diabetes healthcare are estimates of two types of costs, the direct diabetes-related costs and the direct diabetes-unrelated costs.

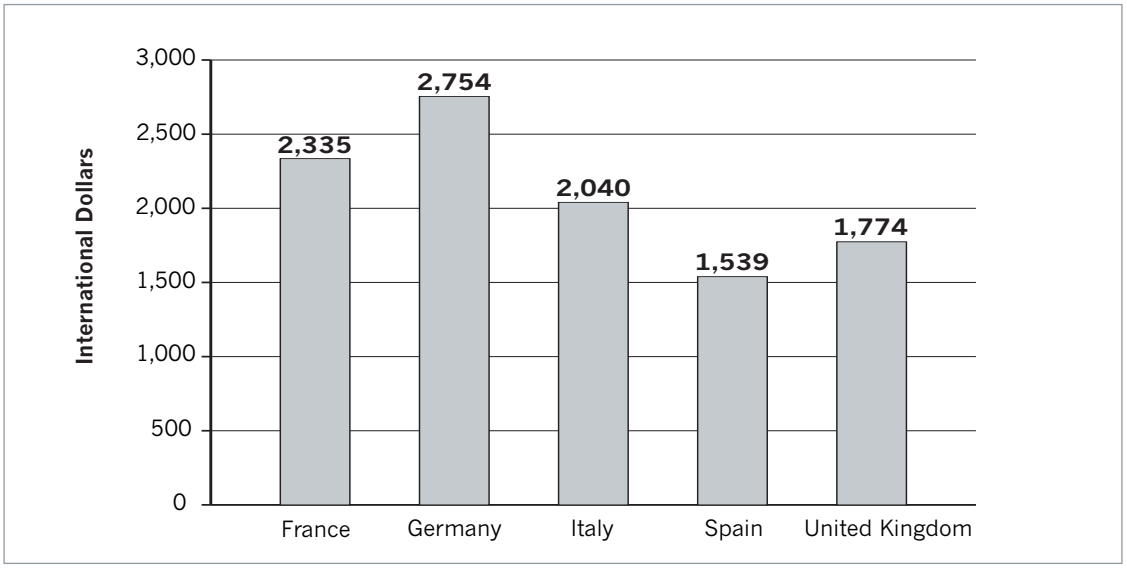
- Diabetes-related direct healthcare costs reflect «the cost element that is attributable to diabetes itself or to the complications of diabetes». It clearly includes the costs of hospital admissions and other healthcare episodes for diabetic ketoacidosis (diabetic coma), hypoglycaemia and other direct results of diabetes or its therapy. The healthcare costs of diabetic neuropathy, retinopathy and nephropathy are also usually included. It is less clear, however, how much of the costs of care for such things as a myocardial infarction or stroke in a person with diabetes should be attributed to diabetes *per se*.[6]
  - It is accepted that «excess direct costs» due to complications are part of total healthcare costs from which it is possible to achieve savings.
- Diabetes-unrelated direct healthcare costs reflect the «the estimate of care for people with diabetes in which the main reason for the encounter is apparently unrelated to diabetes. The latter would include, for example, surgery for appendicitis or hip replacement or treatment for breast cancer in people with co-existing diabetes.»

In Europe, and globally, direct healthcare costs of diabetes range from 2.5% to 15% of annual healthcare budgets, depending on local diabetes prevalence and the sophistication of the treatment available. The direct cost of caring for people with diabetes in Europe was estimated at 29 billion Euros annually for eight countries alone in 1989 (Belgium, France, Germany, Italy, Spain, Sweden, The Netherlands and United Kingdom).[7]

EU DIABETES DIRECT HEALTHCARE COSTS – CODE 2 MULTI-COUNTRY STUDY, 1998

The «CODE 2» study evaluated 7,000 patients with Type 2 diabetes in eight countries – Belgium, France, Germany, Italy, Spain, Sweden, The Netherlands and United Kingdom and provided the first ever estimated direct diabetes-related healthcare costs for 10 million people with diabetes.[7]

- The estimated average yearly cost per patient was 2,834 Euros. Of these costs, hospitalisations accounted for the greatest proportion (55%, range 30–65%) totalling 15.9 billion Euros for the eight countries.
- During the six-month evaluation period, 13% of patients with Type 2 diabetes were hospitalised, with an average of 23 days in hospital projected annually.
- In contrast, drug costs for managing Type 2 diabetes were relatively low, with anti-diabetic drugs and insulin accounting for only 7% of the total healthcare costs for Type 2 diabetes.
- In The Netherlands, diabetes healthcare costs have been estimated to be a modest 2.5% of the total healthcare budget.[8]
- In the UK, estimates vary: the financial burden of Type 2 diabetes was estimated at just under 5% of the nation's healthcare budget in 1998 in the CODE 2 study. Recent estimates, however, point to 9% of the annual NHS budget. This represents a total of approximately £5.2 billion a year.[9]
- In Sweden, early findings from extrapolations of the European CODE 2 study showed that the cost of caring for all patients with Type 2 diabetes amounted to approximately 5% of the total costs of healthcare in Sweden (SEK 7 billion) in 1998.[10]
- For most countries, the largest single item of diabetes expenditure is hospital admissions for the treatment of long-term complications, such as heart disease and stroke, kidney failure and foot problems. Many of those are potentially preventable given prompt diagnosis of diabetes, effective patient and professional education and comprehensive long term care.



Source: International Diabetes Federation (http://www.eatlas.idf.org) Calculated Cost Estimate per patient per year.
*Available in five member states.
The international dollar is a common currency unit that takes into account differences in purchasing power of various currencies. International dollars are calculated using purchasing power parities (PPP), which are rates of currency conversion constructed to account for differences in price level between countries.

FINLAND – DIRECT HEALTHCARE COSTS, HELSINKI STUDY, 1997

The direct healthcare costs of diabetes in Finland were measured through a case controlled cross-sectional study in 1997 for the hospital district of Helsinki. Results were extrapolated to the whole country. All costs of in-patient hospital care and out-patient healthcare, medications, self-care equipments and other healthcare costs were meticulously identified with social security numbers. Total and incremental (excess) direct healthcare costs were calculated with valid prices. Dental, occupational and psychiatric healthcares were not studied.

- The total healthcare costs of patients with diabetes represented 11.0% of total annual healthcare expenditure in Finland in 1997 or at least 857.8 million Euros out of a total healthcare budget of 7.79 billion Euros (7.3% of GNP).[11]
- Distribution of costs included out-patient care (22.1%), self-care equipment (2.4%), all medication (15.6%), travel etc. costs (2.7%), long-term in-patient care (7.7%), diabetes-related in-patient hospital care (20%) and diabetes non-related in-patient hospital care (29.4%).
- The excess cost of healthcare of patients with diabetes was at least 410.9 million Euros and representing 55% of the total direct costs or 6.0% of the total healthcare costs in Finland. These «excess (incremental) direct costs represent the actual effect of diabetes on healthcare costs. They represent that part of total healthcare costs from which it is possible to achieve savings».
- If, as estimated, Type 2 diabetes increases by 70% by 2010 and Type 1 diabetes increases at an annual rate of 2.8%, the projected increase in healthcare costs resulting from diabetes is estimated at 19.3% of total costs of public healthcare by 2010.

OTHER DIABETES HEALTHCARE COST ESTIMATES[12] IN THE EU

The percentage of total direct diabetes costs to the healthcare budget was gathered based on the best available information at national level. Member states can be ranked from highest to lowest diabetes spending as a percentage of their healthcare budget as follows (see country reports for references):

Czech Republic	15%
Finland	11%
Lithuania	11%
Ireland	10%
UK	9%
Hungary	10%
Poland	8%
Denmark	7%
Belgium	7%
Italy	6%
Spain	6%
Sweden	5%
Portugal	5%
France	5%
The Netherlands	3%

3. IDENTIFIED GAPS IN DIABETES POLICIES

- The starting point for any comprehensive and credible policy is the availability of data on the extent and magnitude of the problem, i.e. an accurate diagnosis is the key.

- There is a lack of cost data in many countries, such as Cyprus, Estonia, Greece, Latvia, Luxembourg, Malta, Slovakia, Slovenia and Sweden. Governments, diabetes associations, health professionals and people living with diabetes need to be aware of the current and future economic impact of the disease.

- National diabetes registers (NDRs) of people with diagnosed diabetes are helpful so that effective diabetes care can be delivered and outcomes monitored as outlined in the targets of the St Vincent Declaration. We found that very few countries have developed NDRs. Furthermore, according to experts the lack of electronic record linkage or sophisticated monitoring facilities should not prevent diabetologists and general practitioners continuing to refine their data collection on these patients.[13]

- Several member states have *ad hoc* screening programmes to reduce complications. However, only a few member states have set national screening targets, such as the UK, Finland and France.

- There is no collection of data on hard outcomes following the implementation of programmes; CVD and mortality rates are not measured, leading to inability to assess cost-effectiveness of programmes.

- The development of information technology is necessary if the scale of the epidemic and outcomes are to be properly recorded.

4. POLICY RECOMMENDATIONS FOR DIABETES PREVENTION AND CONTROL

POLICY RECOMMENDATIONS AT EU LEVEL

Article 152 of the EU Treaty of Nice provides that EU action is to complement national policies and be directed towards improving public health, preventing human illness and diseases and obviating sources of danger to human health. Such action shall support the fight against the major health scourges by promoting research into their causes and their prevention as well as health information and education. EU action in public health shall respect fully the responsibilities of member states for the delivery of health services and medical care.
In this context, the proposed EU Programme of action in the field of health and consumer protection 2007 – 2013 seeks to improve the health of citizens throughout their lives, improve health as a human right and encourage investment in health, including the promotion of policies that lead to a healthier way of life and help to reduce the incidence of major diseases.
However, as it stands this programme fails to address diabetes specifically as a disease that requires attention and community action.

- There is a definite need to identify diabetes as a priority disease at EU and national level and to encourage the exchange of best practice to optimise resources while raising the standards across Europe as regards prevention, screening and treatment. Currently there is no forum of exchange of such practices within the EU other than ad hoc forums created by Council Presidencies.
- We urge the European Commission and European Parliament to examine the current epidemiological evidence and the policy gaps across Europe with regard to diabetes.
- We call on the European Commission to address the European epidemic by developing a coordinated and comprehensive EU strategy for diabetes which could make a significant contribution to the reduction of public health expenditures in all 25 EU member states.
- Based on the precedent of EU action in the field of cancer and the EU Council Recommendation on Cancer Screening, we specifically encourage the EU Commission to present an EU Council Recommendation on diabetes prevention and screening for adoption by member states. Although non-binding for member states, such a Recommendation would provide an EU legal framework for action to improve the collection of data, to take appropriate primary prevention measures, to encourage the development of screening programmes and finally to monitor and evaluate outcomes – while respecting member states' responsibility for the delivery of health services and medical care.

POLICY RECOMMENDATIONS AT NATIONAL LEVEL

- It is crucial that member states improve the collection of epidemiological data on a regular basis. The EU should provide common criteria for the collection of such data so as to be able to compile and report comparative data at EU level. National registers of diabetes patients are a useful tool both from an individual perspective – they enable all those with diabetes to be identified – as well as from a public health perspective.
- All member states should gather comprehensive economic data about the costs of diabetes prevention and treatment. This is essential if policy decisions are to be taken to optimise limited resources. Such data are also needed to evaluate the effectiveness of different approaches to prevention and disease management.
- Member states should each have a national plan for diabetes prevention and care with measurable targets and an evaluation system to track health outcomes and cost-effectiveness of measures.
- Specific primary prevention programmes covering the whole population should be developed to promote a healthy lifestyle. Specific policies for school children should be developed, and particularly for children at increased risk of developing obesity and diabetes (genetic and/or socio-economic factors, overweight, poor diet and lack of exercise).
- The development of primary screening and diagnosis programmes should be encouraged. Member states need to define targeted populations – based on local epidemiology and available resources – and screening policies to identify individuals at risk of developing diabetes and those with undiagnosed diabetes who risk developing costly complications.
- The implementation of secondary screening and prevention of complications in patients with diagnosed diabetes should be encouraged. Nationally-agreed guidelines with targets for disease management should be established and measured for health outcomes.
- A holistic approach to management of the disease is required where healthcare professionals work with patients and across sectors, i.e. Primary care, Community care, Secondary care, Social Services and Education institutes. Diabetes care requires an integrated approach.
- Investment in specific education and training of healthcare professionals in this disease area (physicians, diabetes specialist nurses, specialist dieticians, and other specialists) is essential to ensure that they can deliver high quality prevention, screening and care. Additional education and training at regular intervals should be made available to non-specialist healthcare professionals to maintain safe practice.
- All people with diabetes should have an agreed individualised care plan which includes education, self management plan, review schedule and a named healthcare specialist.
- Member states need to make the political commitment to invest in the systems of care and infrastructure to ensure adequate implementation of national frameworks and to provide quality of care. Information technology is also needed to ensure good implementation and measurement of outcome data. Healthcare systems could save lives as well as billions of Euros annually with widespread use of healthcare information technology.

PART II: MEMBER STATES' REPORTS

The views and opinions expressed in the country reports do not necessarily reflect the views of IDF-E or FEND as organisations nor of their member associations.

Wherever possible we have analysed data from published sources referenced throughout the reports. However, complementary information was gathered from interviews with individuals from Health Ministries, Public Health Institutes, healthcare professional associations and patient associations. By its very nature, this data may not necessarily always reflect established opinion.

AUSTRIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[14]	9.6% (IDF Atlas database for Austria unclear)
Total diabetes prevalent cases (according to an estimation in the Austrian Diabetes Report 2004)[15]	300,000 – 315,000 treated; proportion of undiagnosed cases unknown
Cost of diabetes	Not Estimated
POLICY FRAMEWORK	
National Plan	National Diabetes Plan published 2005
Guidelines	Österreichische Diabetes Gesellschaft, ÖDG, published 2004
Planned Actions	Disease Management Programme for Diabetes

1. INCIDENCE/PREVALENCE OF DIABETES

According to the 2004 Austrian Diabetes Report, 300,000 – 315,000 people are treated for diabetes, an estimated 10% of them for Type 1 diabetes. The proportion of undiagnosed cases is not known due to the nature of the Austrian health system; however, it is probably lower than international estimates of 50 – 60%. The number of adults including younger adults with Type 2 diabetes seems to be increasing.
The WHO forecasts that from 2000 – 2025, the number of people living with diabetes will rise by 28% among women and 49% among men. Projections according to the Austrian Diabetes Report 2004 speak of a 47% or even 55% increase of self-reported diabetes cases and hospital discharges, respectively, by 2050. The self-reported frequency of diabetes is slightly higher in women (2.1%) than in men (1.9%).
The estimated incidence rate of diabetes in children under 15 years is 0.25 for Type 2 and 12.4 for Type 1 per 100,000.
The standardised death rate for diabetes mellitus in 2002 was 12.42 per 100,000 (15.11 per 100,000 for men and 10.20 per 100,000 for women). However, these statistics only include cases where diabetes was recorded as a primary cause of death, ignoring deaths where diabetes is the secondary, underlying cause. The statistics show a decrease in diabetes mortality since 1991.

2. COST OF DIABETES CARE

There were 173% more prescriptions and 131% higher costs for anti-diabetic medication than in 1993.[15] Hospitalisation costs for diabetes as well as the total cost of diabetes to the healthcare budget remain unclear.

3. GOVERNMENT PRIORITIES

The government has made diabetes a health priority both at national and EU level during its EU Presidency in the first half of 2006.
At national level, a working group of public health experts, endocrinologists and general practitioners was formed within the framework of the Austrian Diabetes Report 2004 to develop a strategy paper on prevention and therapy of Type 2 diabetes.[16] The strategy paper identified the following objectives:

- Primary prevention: Identify risk groups and modify lifestyles.
- Secondary prevention: Decrease the number of undiagnosed, improve early detection of Type 2 diabetes and metabolic syndrome, ensure timely treatment and prevent long-term complications. Strategies include screening, therapy to reduce risks and metabolic evaluation of patients.

- Tertiary prevention: Early detection and reduction of complications, vaccinations against influenza and pneumococcus bacteria; quality of treatment, education of patients, cooperation with self-help groups, evaluation of outcomes, measures and their evaluation, as well as calculation of costs.

4. POLICY FRAMEWORK

In 2005, the Ministry for Health and Women has been working to develop an Austrian Diabetes Plan focusing on the establishment of a diabetes register, research, prevention and treatment, and implementation of a national disease management programme. As part of this process, a working group was formed, supported by the Austrian Diabetes Association, Österreichische Diabetes Gesellschaft (ÖDG), and their findings resulted in the publication of the Austrian Diabetes Plan (Österreichischer Diabetesplan)[17] in August 2005.
The plan focuses on the improvement of lifestyle through further education and training for carers, nurses, doctors, and those at risk. It is divided into the following four main working areas:

1. Disease Management Programs: Improving resources for diabetes carers/nurses, with emphasis on co-ordination of the Disease Management Programme.
2. Information on the epidemiology with a focus on improving resources for the collection of data and the use of a diabetes register.
3. Diabetes in social groups, in children and juveniles with a focus on obesity and gender issues.
4. Research on Diabetes Mellitus and application of research results.

The Plan includes specific project plans with timelines and budget allocation for each project. Pilot programs for disease management are being tested in Styria and Upper Austria.

5. GUIDELINES

In 2004 the ÖDG published a comprehensive set of guidelines on diabetes mellitus for doctors[18] including systematic screening, diagnosis and recommendations for treatment of complications.

6. REIMBURSEMENT

Only an estimated 300,000–315,000 Austrians are being treated for the disease of which 270,000 are treated with medication. The remaining 20–30% of Type 2 diabetes patients are treated by diet.[19] In Austria the patient does not bear additional costs for treatment. However, the financing of the healthcare system is complex and fragmented. When a patient sees a GP, the cost is borne by the social insurance system. The costs of hospitalisation are borne by the region and treatment at university clinics is financed by the federal level.

OUTLOOK

Stakeholders have identified various necessary improvements in diabetes care which are expected to be included in the upcoming national management programme on diabetes:

- Country-wide screening studies and better documentation of diabetes mellitus, including cost data.
- A standardised register for Type 1 and Type 2 diabetes and the metabolic syndrome has been called for, as well as standardised evaluation of the data across the country.
- School doctors involvement in screening and prevention of diabetes in children and adolescents.
- Better training for general practitioners.
- Education of patients and the wider public about diabetes.
- A positive contribution by the EU, particularly on the exchange of best practice.

BELGIUM

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[14]	4.2%
Total diabetes prevalent cases	315,000
Cost of diabetes (% of total healthcare budget)	6.7%
POLICY FRAMEWORK	
National Plan	Obesity Plan
Guidelines	• Belgian diabetes associations • General practitioners associations
Planned Actions	• National plan against obesity implemented by mid 2006 • Updated Guidelines of Flemish Diabetes Association & Scientific Association of Flemish GPs expected end 2005

1. INCIDENCE/PREVALENCE OF DIABETES

Today there are 400,000[20] – 500,000[21] Belgian people living with diabetes, or 4 – 5% of the population, with 250,000 to at least 300,000 known cases. The Belgian Diabetes Registry estimates that about 10 new cases per 100,000 inhabitants are identified each year among those less than 40 years old. There is a rise in diabetes among young people and a decrease among older people. The number of people with diabetes increases by about 5% each year.

2. COST OF DIABETES CARE

According to the INAMI (National Institute for Sickness and Invalidity Insurance) diabetes is an expensive disease. Diabetes costs alone represent one seventh of the INAMI spending.
According to the «Code 2 Study» (Costs of Diabetes in Europe, Type 2) the general health-care cost per patient in Belgium is $1,495 (International dollars). The additional cost due to the presence of diabetes is $1,647 and the annual cost per patient with Type 2 diabetes is $3,142. The total costs of diabetes care in Belgium in 1997 amounted to 6.7% of the total healthcare expenses, according to the same study.[22]
Diabetes sufferers cost two to three times more to the Belgian health system than those without diabetes, whereas those patients with micro- and macro-vascular complications cost 3.5 times more.[23]
According to 2003 estimates, the yearly costs related to self-monitoring programmes for diabetes patients amount to about 26,817 Euros for the individual's health insurance company. These costs should nevertheless be recuperated 16 times over as patients should no longer depend on the daily home-services of a nurse. Self-monitoring will save 410,120 Euros annually.[24]

3. GOVERNMENT PRIORITIES

Diabetes is addressed under the obesity plan.

4. POLICY FRAMEWORK

The current policy framework is quite extensive.

National Nutrition and Health Plan 2005-2010:[25] In recognition that 12% of the Belgian population is considered obese and 32% suffered from excess weight, in February 2005 the government announced the National Nutrition and Health Plan for 2005–2010. The objective of this plan is to fight physiological disorders linked to inappropriate food and lack of physical activity, i.e. obesity, cardiovascular diseases, hypertension, Type 2 diabetes and certain types of cancers.

Regional diabetes programmes: From 2004 until 2007, two pilot projects for primary care of Type 2 diabetes are running in Flanders aimed at improving diabetes education and reimbursement at the first line of action (i.e. primary care/GPs), unlike most initiatives so far.

INAMI Convention – 1986:[26] The INAMI/RIZIV (National Institute for Sickness and Invalidity Insurance) is the government body responsible for funding the treatment of diabetes through the health insurance system. The INAMI is also responsible for issuing rules (and restrictions) on reimbursement and prescriptions.
From 1986 until 2007 a Diabetes Convention covering self-monitoring for diabetes patients has been in place between the INAMI and diabetes centers in Belgian hospitals. According to members of the Flemish Diabetes Association, it is the most important diabetes project currently functioning in Belgium. This Convention offers self-monitoring programmes to diabetes patients treated with at least two insulin injections a day. The Convention is designed to reinforce the collaboration between convention centres and GPs in diabetes care. Unfortunately, the INAMI Convention does not cover patients who are not insulin-dependent and/or who take only one daily insulin injection. Since 2001 the «Diabetes Convention Centres» in Belgium have participated every 12–18 months in a survey called «Initiative for the Promotion of Quality and Epidemiology of Diabetes mellitus». This survey aims to optimise the quality of care; to provide general advice concerning care for diabetes patients to the health authorities and finally to collect Belgian data for use in epidemiological studies. It is the only structured programme in Belgium that evaluates and promotes the quality of diabetes treatment.

The Belgian Diabetes Registry (BDR) – 1989:[27] Set up in 1989 to map and register diagnosed diabetes patients under the age 40 and living in Belgium, with a specific focus on newly diagnosed cases and on close (first degree) relatives. The Registry plays a major role at international level because it is one of the few European registries that include new patients under 39. The objective of the Registry is to improve prevention and fight against diabetes by mapping risk factors and carrying out scientific research.

Diabetes individual care plans «Passport» – 2003:[28] The passport became operational on 1 March 2003 and in its first year 86,017 passports were granted. The passport is a notebook valid for three years and includes all the diabetes patient's medical data, the doctors in charge of his/her treatment and a summary of the treatment in progress as well as the therapeutic objectives to be achieved. The objective of the passport is to help the patient manage the disease in collaboration with his/her doctor and, by keeping a record of the services received, avoid complications.

5. GUIDELINES

New guidelines expected to be published in October 2005 will serve as recommendations for good medical practice for the care of people with Type 2 diabetes.

BELGIUM

6. REIMBURSEMENT

According to the INAMI, all medicines for patients with diabetes are fully reimbursed, being listed on Belgium's «A Code,» referring to expensive medicines for the treatment of either chronic diseases (diabetes) or serious diseases (cancer). The Belgian Diabetes Association considers the reimbursement of medicines for diabetes to be very good.
The Royal Decree of 10 March 2003[29] stipulates that the diabetes passport gives the holder the right to two visits to a dietician and two visits to a chiropodist (for patients presenting with a risk of diabetic foot) all at the expense of the health insurance system. For people with diabetes treated in the framework of a convention (i.e. insulin-dependent with a minimum two injections/day) self-monitoring material, external administration and quality control are reimbursed.

OUTLOOK

Belgian experts consider that it is now time for EU member states to agree on common European guidelines by sharing experience and best practices. They very much rely on the Austrian Presidency to achieve this objective.
Belgian GPs request more financial support and improved reimbursement, particularly for non-insulin dependent diabetes patients or for those who are not covered by the Convention.
The Flemish Diabetes Association criticises the premiums that diabetes patients have to pay when applying for a life and/or hospitalisation insurance. Diabetes patients still face discrimination through sometimes being required to pay three times the price for hospitalisation or life insurance.
Belgian patients with diabetes and experts support:

- Only one spokesperson and one official group of diabetes experts endorsed by the government and advising the Belgian health authorities
- Only one structured national diabetes programme
- More focus on and financial support for primary care of diabetes
- A system of «shared care» among healthcare professionals (specialists, GPs, nurses, etc.)

CYPRUS

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[30]	5.1 – 10.3%
Total diabetes prevalent cases	27,700 – 170,000
Cost of diabetes (% of total healthcare budget)	Not estimated
POLICY FRAMEWORK	
National Plan	–
Guidelines	In progress
Planned Actions	Healthcare reforms Diabetes National Plan

1. INCIDENCE/PREVALENCE OF DIABETES

In 2001, the (growing) number of people in Cyprus living with diabetes was estimated at more than 60,000 with a further 60,000 undiagnosed.[31] Comprehensive data is scant for the Republic of Cyprus as, until the diabetes register is completed, there are no records.

The estimated diabetes prevalence was 5.1% in 2003 according to the IDF Atlas. According to the Cyprus Diabetes Association, diabetes prevalence today is estimated at 10.3%, with more than 70,000 people living with diabetes. Furthermore, the WHO predicts that the prevalence of diabetes in Cyprus will increase by 74% between 2000 and 2030.[32]

Diabetes is thought to represent around 2.1% of the disease burden in Cyprus and approximately 2.3% of total deaths. These numbers underestimate the importance of diabetes because they do not take account of diabetes as a secondary cause of death. For example, cardiovascular disease, one of the many serious complications associated with diabetes, represents 17% of the disease burden in Cyprus, and is estimated to account for around 41% of deaths in the country.

Obesity is one of the high risk factors for the onset of diabetes and up to 23% of 13 – 17-year olds in Cyprus are obese or overweight.[33,34] With respect to obesity, Cyprus shares second place in the EU with Greece, Italy, and Ireland.

2. COST OF DIABETES CARE

Expenditure on health (excluding capital spending) has increased during the last ten years, reaching 5.8% of GDP in 2002[35] against 2.8% in 1980. It is estimated by the Cyprus Diabetic Association that the annual cost of treatment of a person with diabetes in Cyprus is £C3,000 per year. The growth rate for the last five years is estimated at 2.3%.

3. GOVERNMENT PRIORITIES

Reform of the healthcare sector is currently a high priority for the Government of the Republic of Cyprus. The present system has been criticised for the fragmentation of services and lack of coordination between the public and private health sectors. The Strategic Plan 1999 – 12003 aimed to improve the level of coordination of the two sectors, improve public health and preventative activities, create a medical school, encourage medical research and create a district level authority for decentralisation.[36]

On 20 April 2001, the House of Representatives enacted a law for the introduction of a National Health Insurance System (NHIS), which is currently being implemented and is intended to provide free healthcare at the point of delivery. It will be universal as regards population coverage and will be financed by contributions

from the state, employers, employees, the self-employed, pensioners and all those who have non-employment incomes.
As part of these reforms, the Government is also considering the development of a national plan for diabetes that is intended to evolve in line with the new national healthcare system.

4. POLICY FRAMEWORK

In 2003, the «National Coordinating Committee for Diabetes» Committee proposed a «Plan of Action for Diabetes» to the Ministry of Health: this is still under discussion. The programme would include the creation of a «Diabetes Register», including an immediate epidemiological survey on diabetes prevalence.
The government is developing specialised diabetes clinics in hospitals throughout Cyprus to be staffed by specialised healthcare professionals.

5. GUIDELINES

The Health Ministry is currently finalising guidelines for health professionals, particularly in the newly-created diabetes clinics.

6. REIMBURSEMENT

People with Type 1 or Type 2 diabetes are eligible for free medication from the Government Hospitals, i.e. insulin (human, all types with pen injector), tablets for monitoring diabetes and any other drugs for complications caused by diabetes, as well as strips for blood glucose analyses.
In March 2005 the Ministry of Health introduced a new policy designed to reduce the costs of pharmaceuticals in Cyprus. Patients suffering from diabetes should benefit by a reduction of up to 53 % in the price of treatment.[37]

OUTLOOK

The treatment of diabetes in Cyprus suffers from inadequate cooperation between the Ministry of Health and the private sector. The national diabetes association strongly hopes that EU Health Commissioner M. Kyprianou will be able to contribute to addressing the diabetes epidemic through EU action.

CZECH REPUBLIC

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[38]	9.5%
Total diabetes prevalent cases	534,000 – 687,000[39]
Cost of diabetes (% of total healthcare budget)	15%
POLICY FRAMEWORK	
National Plan	1996 National Diabetes Programme
Guidelines	Ceská Diabetologická Spolecnost (Czech Diabetes Society) Standards of Care
Planned Actions	NDP evaluated in 2006 Epidemiological survey/Assessment of Guidelines – expected in 2007

1. INCIDENCE/PREVALENCE OF DIABETES

The prevalence rate is estimated to be 9.5% according to the IDF Atlas. Over the last 30 years the number of people living with diabetes has more than doubled.[40]
In 1975 there were 234,000 people living with diabetes, rising to 687,137 in 2003. In 2003 Type 2 diabetes represented 91.6% of cases.[41]
There is a growing incidence rate in both Type 2 and Type 1 diabetes, notably among children.[42]
Between 2000 and 2003, the number of people with diabetes increased by 5%. If this trend continues, by 2010 there will be an estimated 800,000 people living with diabetes, with a considerable number of undiagnosed, and an estimated 1,100,000 by 2020 (or a prevalence of 11%).[43]
Of major concern is that each year there is a growing number of patients with complications (173,000 in 2002 and 178,000 in 2003). The most frequent complications are retinopathy, nephropathy and insufficient blood supply in the legs. Women constitute a consistently higher proportion of people living with diabetes (by about 10%).[44]

2. COST OF DIABETES CARE

According to the Czech Diabetes Society there are no accurate data, but estimates show that total expenditure on diabetes accounts for about 15% of the total budget for healthcare.

3. GOVERNMENT PRIORITIES

Diabetes is seen as a government priority in addition to oncology and cardiology and the cooperation with the states' administration in this field is satisfactory. However, there remains room for improvement in prevention and early detection.

4. POLICY FRAMEWORK

The Ministry of Health approved the 2nd National Diabetes Programme (NDP) prepared by the Czech Diabetes Society (representing doctors) in 1996. The 1st NDP dated from the 1980s.
The NDP was based on the St. Vincent Declaration and covers treatment and prevention, education of healthcare workers, social and legal aspects and science and research.[45] The NDP is implemented in cooperation with the Ministry of Health, the Czech Diabetes Society,

patients associations, the Coordination Group of the St. Vincent Declaration, the Ministry of Social Affairs and scientific and research centres. The Programme is due to be assessed in 2006.
Through a well-functioning monitoring system,[46] the Czech Republic has a relatively good picture of the evolution of diabetes.

5. GUIDELINES

The NDP is complemented by a comprehensive set of standards prepared by the Czech Diabetes Society. These guidelines, published in 2004 in the Czech Journal «Diabetes, Metabolism, Endocrinology, Nutrition»[47], cover, *inter alia*, standards for diagnosis and care of Type 1 and Type 2 diabetes and diabetes during pregnancy, self-control levels for blood sugar, care of diabetic nephropathy, care of patients with diabetic foot, treatment of diabetic retinopathy and its complications, and nutrition recommendations for people with diabetes. The guidelines are implemented nationwide and are subject to an update every two years.
The Czech Diabetes Society is currently undertaking a study on the «Evaluation of Diabetes Care in the Czech Republic» to measure the effectiveness of the guidelines. This epidemiological survey will cover a sample of 3,600 patients and will be repeated in 2006. Full results of the study are expected in 2007.

6. REIMBURSEMENT

Health insurance provides nearly 100% reimbursement for diabetes care (insulin is covered by 90–100%; basic oral agents by 100%, and 400 glucose strips by 100%). Since 1 July 2005 the number of strips has been increased as a consequence of negotiations between the Czech Diabetes Society and the Ministry of Health.

OUTLOOK

- Stakeholders are generally satisfied with National Diabetes Programme implementation.
- The National Diabetes Programme is due for scheduled assessment in 2006.
- The Czech Diabetes Society is currently working on evaluation of the implementation of the guidelines. The results of the study are expected in 2007.

DENMARK

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)	6.9%
Total diabetes prevalent cases	264,900
Cost of diabetes (% of total healthcare budget)	7% (control & treatment of diabetes and complications)[48]
POLICY FRAMEWORK	
National Plan	2003 Diabetes Action Plan implemented by 13 regions
Guidelines	1994 National Board of Health Guidelines
Planned Actions	2007 Structural and Regional reforms

1. INCIDENCE/PREVALENCE OF DIABETES

The Danish Ministry of Health estimates that 200,000 – 400,000 people suffer from diabetes (Types 1 and 2) representing about 6.9% of the Danish population. The Ministry suggests that prevalence reflects both unhealthy and inactive lifestyles and an ageing population.[49] The diabetes growth rate is estimated at between 3.5%-7%[50] every year.

About 25,000 people in Denmark suffer from Type 1 diabetes, of which just under 1,000 are children.[51] The prevalence of Type 1 diabetes among children has grown slightly during the past 10 years. People with newly diagnosed Type 1 diabetes are closely monitored and educated in self-care techniques. Stricter blood sugar controls are slowing the development of complications among people with Type 1 diabetes; blindness nevertheless affects most of them sooner or later.

According to the National Board of Health (NBH), 100,000 – 150,000 people in Denmark have Type 2 diabetes, but it is estimated that just as many go undiagnosed. Each year between 10,000 and 20,000 new people with Type 2 diabetes are diagnosed. Lately, there has been a rise in the incidence rate among the 20 – 30 year olds. Certain groups of immigrants have a significantly higher prevalence of Type 2 diabetes than the native Danish population.

2. COST OF DIABETES CARE

It is estimated that around 7% of the national healthcare budget is spent on control and treatment of diabetes and complications.[52]

3. GOVERNMENT PRIORITIES

The government and Parliament have prioritised diabetes at the same level as cancer.[53] The political focus is centred on Type 2 diabetes prevention through healthier lifestyles whereas specific guidelines cover the prevention of late complications of both diabetes types.

4. POLICY FRAMEWORK

In 2003 the Danish Government published a Diabetes Action Plan that includes a number of actions for the prevention of Type 2 diabetes to be implemented by 13 regions. From 1 January 2007 the number of regions will be reduced to five large ones.

The plan includes initiatives worth a total of 9.4 million Euros.

In 2005, the NBH carried out an assessment establishing that most regions have implemented the plan and the 1994 guidelines.[54] However, weak areas include eye screening and treatment of the foot.[55] The education could be organised better and for most regions the education is not followed up.[56]

5. GUIDELINES

The activities of the regional authorities, which are responsible for the day to day functioning of Danish healthcare, are based on the set of guidelines and recommendations developed by the National Board of Health in 1994.[57] Prevention of late complications is a primary objective that can be achieved through:

- Education for self-care and better monitoring of blood sugar.
- Organisation of diabetes clinics.
- Communication between primary and secondary carers.

6. REIMBURSEMENT

Denmark provides healthcare cover to all citizens through its national health insurance system.[58] In general there is free access to hospital services and general practitioners (GP). A large proportion of co-payments are covered by supplementary private insurance.[59] Consumer co-payments are calculated on a patient's annual rate of consumption. This so called «need-based» reimbursement system was introduced in March 2000. It is be possible to receive a reimbursement rate of 100% if annual consumption is above 2,700 Euros (DKK 20,000) (which would otherwise correspond to a yearly co-payment of 486 Euros), after authorisation by the Danish Medicines Agency. There are no co-payments for the medicines administered in hospitals.

About 90% of the consumption of prescription medicines is covered by government funding. Some over the counter products may also be reimbursed if prescribed by a GP to a pensioner or to a person with a chronic disease. In some regions, if a GP prescribes physical activities they too can be reimbursed. Currently, the question of whether people with diabetes should receive funding for healthy food is under discussion.

OUTLOOK

According to NBH, due to differences in the healthcare systems within the EU, any EU recommendation on diabetes would have to be flexible in order to accommodate these differences.[60] The Danish Diabetes Association welcomes EU action. Indeed, it believes that significantly more resources need to be directed to achieving EU policy relating to diabetes.[61]

ESTONIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[62]	9.7 %
Total diabetes prevalent cases	96,300
Cost of diabetes (% of total healthcare budget)	Not estimated
POLICY FRAMEWORK	
National Plan	Estonian Sick Fund «Diabetes Treatment Guidelines for the Family Doctor» for Type 2 diabetes Estonian Diabetes Association Guidelines
Guidelines	1994 National Board of Health Guidelines
Planned Actions	Not identified

1. INCIDENCE/PREVALENCE OF DIABETES

The prevalence of diabetes in Estonia is estimated to be 9.7 %, one of the highest rates in Europe after Latvia with 9.9 %. Among the three Baltic States, Estonia has the lowest prevalence for excess weight and obesity for both sexes and all age groups (excluding men aged 19-34 years).[63]
The proportion of patients with diabetes complications was very high at 73.5 % with most suffering from cardiovascular diseases. Foot ulcers or gangrene were observed in 11.6 % of cases.

2. COST OF DIABETES CARE

Not available. 5.9 % of GDP is spent on healthcare in Estonia.

3. GOVERNMENT PRIORITY

Diabetes is not considered as a government priority.

4. POLICY FRAMEWORK

The government has introduced a multitude of disease specific programmes including a «programme for preventing high blood pressure» lasting until 2009.

5. GUIDELINES

The Estonian Sick Fund has issued «Guidelines on Diabetes Type 2 Treatment for Family Doctors». The Estonian Diabetes Association adopted guidelines for diabetes care, based on the IDF guidelines from 1991, addressed to endocrinologists and referred to by the Estonian health authorities. In practice, of patients who have been treated for diabetes for about nine years after clinical diagnosis, the average HbA1c level is 7.3% (<7 % is the recommended level in many European association guidelines).[64]

6. REIMBURSEMENT

All prescribed diabetes treatment is reimbursed by the Estonian healthcare system. There is, however, an obligatory patient co-payment for each drug purchase. According to a study[65], the overall proportion of patients treated with insulin was 29.8% and with anti-hypertensive drugs was 26.5%.

OUTLOOK

Specialists in the area are looking to the European public health agenda for direction.

FINLAND

COUNTRY OVERVIEW[66]

FACTS	
Estimated prevalence (% of total population above 20 yrs old)[67]	7.2 %
Total diabetes prevalent cases	273,500
Cost of diabetes (% of total healthcare budget)	857.8 million Euros (11.1 % of total healthcare costs in 1997)

POLICY FRAMEWORK

National Plan

- Development Programme for the Prevention and Care of Diabetes (Dehko) 2000-2010
- Programme for the Prevention of Type 2 diabetes in Finland 2003 – 2010
- Implementation Project of the Programme for the Prevention of Type 2 Diabetes in Finland (FIN-D2D) 2003-2007

Guidelines

- Duodecim Handbook for GP´s:
  - Principal therapeutic recommendations for Type 2 diabetes management
  - Finnish Diabetes Association's treatment recommendations of all diabetes care areas for healthcare professionals (latest Type 1 diabetes, 2005)
- Dehko's quality criteria for healthcare on optimal diabetes management in children, adolescents and adults, on diabetes foot care, patient education and life style management strategies

Planned Actions

- Diabetes care quality monitoring system and full diabetes registry completed in 2007 (Dehko)
- Registry and benchmarking system of diabetes prevalence, complications and mortality completed already 2005 (Dehko)
- 1st Diabetes Barometer of Finland published end of 2005

1. INCIDENCE/PREVALENCE OF DIABETES

Currently there are over 270,000 people in Finland (population 5.2 million) who suffer from diabetes. The blood sugar level that is considered the limit for diabetes in Finland is 6.1 mmol/l.

Type 2 diabetes is a growing health problem. At the end of 2003, 160,000 people in Finland had Type 2 diabetes.[68] Of these, 120,000 received a special reimbursement for their medication. The increase in the number of people suffering from Type 2 diabetes in Finland has been spectacular: in 1969, 50,000 Finns suffered from Type 2 diabetes. The number has grown four-fold over the past 30 years. If current trends continue, Finland will have over 400,000 people living with diabetes in 30 years.

The incidence of Type 1 diabetes in Finland is the highest in the world and continues to increase by 2.5 – 3 % each year. The average cost of treatment for a child with Type 1 diabetes in Finland is 1 million Euros over his/her lifetime.

Considerable research is underway in Finland taking account of genetic factors and lifestyle (external) factors. Three clinical trials aiming to reduce Type 1 diabetes are currently in progress in Finland (the international TRIGR study, Finnish FINDIA study and the Diabetes Prediction and Prevention – DIPP – study).

2. COST OF DIABETES CARE

The direct healthcare costs of diabetes in Finland were measured through a case controlled cross-sectional study in 1997 for the hospital district of Helsinki. Results were extrapolated to the whole country.

- The total healthcare costs of patients with diabetes represented 11.0% of total annual healthcare expenditure in Finland in 1997 or at least 857.8 million Euros out of a total healthcare budget of 7.79 billion Euros (7.3% of GNP).[69]
- Total healthcare cost of diabetes for the Helsinki district was 72.9 million Euros of which Type 2 diabetes was 64.3 million Euros and Type 1 diabetes 8.63 million Euros.
- Distribution of costs included out-patient care (22.1%), self-care equipment (2.4%), all medication (15.6%), travel etc. costs (2.7%), long-term in-patient care (7.7%), diabetes-related in-patient hospital care (20%) and diabetes non-related in-patient hospital care (29.4%).
- The excess costs of healthcare of patients with diabetes were at least 410.9 million Euros and represented 55% of the total direct costs or 6.0% of the total healthcare costs in Finland. These «excess (incremental) direct costs represent the actual effect of diabetes on healthcare costs. They represent that part of total healthcare costs from which it is possible to achieve savings».
- Diabetes and its complications account for 58% of the total annual cost of diabetes care, or a total of 505 million Euros. The remaining 42% of total costs is spent on the management of diseases other than diabetes, indicating the cost of care «excluding diabetes».
- According to the Helsinki study on diabetes costs[70], hospitalisation is the greatest expense, accounting for about 56% of the total cost of diabetes care. Most of the hospital care of diabetes (73%) consists of treatment for cardiovascular diseases.
- If the current trends persist and if, as estimated, Type 2 diabetes increases by 70% by 2010 and Type 1 diabetes increases at an annual rate of 2.8%, the projected increase in healthcare costs resulting from diabetes is estimated at 19.3% of total costs of public healthcare by 2010.

3. GOVERNMENT PRIORITIES

Finland is viewed by all EU member states as a model in diabetes prevention and treatment. The government has moved to the implementation and assessment of the national diabetes programme, Dehko, and in particular of the Implementation Project of the Programme for the Prevention of Type 2 Diabetes (FIN-D2D) 2003 – 2007.

4. POLICY FRAMEWORK

Development Programme for the Prevention and Care of Diabetes, Dehko (2000–2010)
Dehko was approved in January 2000 as the National Diabetes Programme of Finland for 2000-2010. The initiator was the Finnish Diabetes Association, acting also as coordinator for the preparation 1998 – 2000, and now as coordinator for the implementation of the programme. The Ministry of Social Affairs and Health endorsed the programme and as a result the major part of its financial support comes from a governmental organisation, the Finnish Slot Machine Association. In addition, all main pharmaceutical companies in the diabetes field provide financial and other support.
Dehko is not a treatment guideline for healthcare professionals but a comprehensive development programme as a basis for primary prevention of Type 2 diabetes and prevention and care of diabetes complications both in people with Type 1 and Type 2 diabetes. Dehko is implemented in three main areas:

- Primary prevention of Type 2 diabetes
- Improvement of diabetes care (both Type 1 and 2 diabetes) and its quality, and as third,
- Supporting self-care of people with diabetes.

The Development Programme for the Prevention and Care of Diabetes has eight objectives concerning the organisation of care in 2000 – 2010 and 25 recommended actions. All of the 25

FINLAND

actions are in the implementation process, and many already have been achieved:

- There will be a quality system of diabetes care in each care unit, a natural part of which is regular and comprehensive diabetes training within primary healthcare.
- Measures aimed at the prevention of Type 2 diabetes will be a permanent function of primary healthcare.
- There will be a computerized diabetes registry in each care unit and in each district, as well as a national diabetes registry.
- The care organisation for people with diabetes will be based on smooth-running care chains, shared responsibility for care between primary healthcare and specialized medical care, and flexible consultation practices.
- Each person with Type 1 diabetes will have access to individual, high-quality self-care.
- All people with Type 2 diabetes will receive sufficient education in self-care, and their cardiovascular risk factors will be treated along with their hyperglycaemia.
- People with diabetes will have the skill required for self-care and have a high level of satisfaction with their care.
- The cooperation between the healthcare system and the diabetes associations in supporting self-care will become established as a permanent form of activity.

Five external assessments on the Dehko programme have already been conducted; the mid-term review was published in June 2005. By 2010 the programme seeks to achieve the following health outcome objectives:

- Glycaemic control of people with diabetes will have improved so that at least 50 per cent of both people with Type 1 and Type 2 diabetes have optimal glycaemic control, and no more than 30 % have unsatisfactory and 20 % poor glycaemic control.
- Incidence of cardiovascular disease among people with diabetes will drop by at least one-third.
- Complications related to diabetes will decrease according to the objectives of the European St Vincent Programme:
  - Leg amputations at least by half
  - Diabetic retinopathy at least by one-third
  - Diabetic nephropathy at least by one-third

The mid-term review of the Dehko programme resulted in the «Dehko advances 2005-2007», an assessment report recommending further measures in the following areas:

- Prevention, early detection and treatment of Type 2 diabetes and auxiliary diseases
- Improving glycaemia (blood glucose) control of Type 1 diabetes
- Building up a monitoring system to improve the quality of diabetes care
- Supporting diabetic self-care
- Improving the diabetes knowledge of care personnel

At the end of 2005 the first Finnish «Diabetes Barometer» will be published. It will include the frequency of diabetes and of related diseases, diabetes deaths, quality of treatment and its results and resources.

Programme for the Prevention of Type 2 Diabetes (2003 – 2010)

The prevention programme is based on evidence derived from the Finnish Diabetes Prevention Study (DPS). DPS was the first study in the world to show that the risk of diabetes can be markedly reduced by lifestyle modification.
The goals of the Prevention of Type 2 Diabetes Programme for 2010 are implemented through three concurrent strategies:

- **Population Strategy** (healthy eating and increased physical activity): aimed at promoting the health of the entire population by means of nutritional interventions and increased physical activity so that the risk factors for Type 2 diabetes, such as obesity and metabolic syndrome, are reduced in all age groups. This strategy comprises both society-oriented measures and measures targeting individuals with the important aim of preventing obesity.

- **High-Risk Strategy:** individual-oriented measures are targeted at individuals at a particularly high risk of developing Type 2 diabetes. This strategy provides a systematic model for the screening, education and monitoring of people at risk. People at risk will be screened using the Type 2 Diabetes Risk Assessment Form developed by the National Public Health Institute.
- **Strategy of Early Diagnosis and Management:** directed at persons with newly diagnosed Type 2 diabetes. Its aim is to bring these people into the sphere of systematic treatment, thus preventing the development of diabetic complications that reduce the affected person's quality of life and are expensive to manage. This strategy offers practical instructions for intensive lifestyle management.

The Programme for the Prevention of Type 2 Diabetes includes 12 key measures for achieving the goals of the Population Strategy, the High-Risk Strategy and the Strategy of Early Diagnosis and Management.
The implementation of the programme requires wide-ranging cooperation among various players for promoting healthy nutrition and physical activity, as well as improvement of the preparedness of the Finnish healthcare system and restructuring of health-promotion activities.
Cooperation under the Population Strategy will encompass the entire range of Finnish non-governmental organisations.
The feasibility and cost-effectiveness of the prevention programme is assessed in four hospital districts within a five-year Implementation Project (2003–2007). Training and materials related to the prevention programme will be made available throughout the country.
Two of Dehko's programme objectives, the diabetes registry and quality monitoring system, are in the implementation stage and will be entirely completed in 2007. Registry of diabetes prevalence, complications and mortality is already available. In addition, data on quality of care of children in specialized healthcare and adults in primary healthcare is available.

5. GUIDELINES

During over 20 years treatment, the Finnish Diabetes Association has published recommendations, for health professionals dealing with diabetes, to promote care based on the latest research and to harmonise care practices across the country. Over 15 recommendations have been issued including the latest recommendation on Type 1 diabetes management.
The Finnish scientific society, Duodecim, has developed guidelines using the latest evidence-based data for Type 2 diabetes. Guidelines for retinopathy, gestational diabetes and nephropathy will be published in 2005–2007. These guidelines will be available at www.kaypahoito.fi.
A benchmarking system for the treatment/care of diabetes will also be put in place during 2005–2007. Dehko will promote good prevention and treatment practices in all healthcare units.

6. REIMBURSEMENT

Dehko recommends that «the criteria for granting preferential reimbursement of drugs are altered to favour the lowering of cardiovascular risk factors. People with diabetes should be able to start using anti-lipidaemia and anti-hypertensive drugs with preferential reimbursement on less strict indications than those required for non-diabetic people.»
The entire medicine reimbursement policy in Finland is currently under review.

OUTLOOK

The Diabetes Association and Health Ministry believe that other countries could use the Finnish experience to develop their own programmes. A Ministry representative pointed out that some of the causes of diabetes are already being tackled through European initiatives (e.g. smoking and obesity) and that this work could lead to improvements in diabetes prevention. He also mentioned that the EU should consider tackling the broad issue of metabolic syndrome, which is very important for diabetes.

FRANCE

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[71]	6.2%
Total diabetes prevalent cases	2,653,000
Cost of diabetes (% of total healthcare budget)	4.7%
POLICY FRAMEWORK	
National Plan	Plan National Diabetes
Guidelines	• AFSSAPS[72] and ANAES[73] • By the Société Française de Cardiologie[74] and ALFEDIAM[75]
Planned Actions	Early screening of retinopathy and foot disease

1. INCIDENCE/PREVALENCE OF DIABETES

More than two million people in France currently suffer from diabetes. Nearly two million of these diabetes patients are treated with medication (hypoglycaemic pills and/or insulin) and approximately 200,000 are treated by diet and exercise measures only. Of the total about 1.8 million people suffer from Type 2 diabetes. It is estimated that between 200,000 – 500,000 diabetes patients have not yet been diagnosed.[76]

Diabetes is the primary cause of blindness and of amputations for people under 65 years. It is also one of the main reasons for dialysis and an important cause of cardiovascular disease. The prevalence of diabetes grew 3.2% per year between 1998 and 2000. France is seriously affected by the rise in Type 2 diabetes.

The prevalence of obesity in France has risen from 8.2% in 1997 to 11.3% in 2003. The spectacular rise in childhood obesity (14% today against 8% in the 1980s) is likely to lead to an increasing number of young people in France developing Type 2 diabetes.

2. COST OF DIABETES CARE

The total healthcare cost for diabetes patients is estimated at 4.9 billion Euros[77], which represents 4.7% of the total spending of the national health insurance. According to figures from 2001, annual healthcare spending for each diabetic patient was between 4,092 and 4,414 Euros[78]. The costs of diabetic care are increasing in line with the rise in the number of patients treated, as well as the changes in the mode of treatment and patient care. The cost rose by 22.5% between 1998 and 2000.

It is estimated that a person with diabetes spends 1.7% more on healthcare than someone from the general population. According to the CNAMTS, 10% of people with diabetes account for half of the spending.

The allocation of the total yearly spending linked to diabetes is as follows: hospitalisation: 39%; pharmaceutical costs: 29%; nurses/physiotherapists: 10%; equipment: 6%; GP consultations: 5%; specialist consultations: 4%; biological: 3%; other: 4%[79].

3. GOVERNMENT PRIORITIES

Diabetes has been a public health priority in France since 1998 when the Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (CNAMTS)[80] launched a survey entitled ENTRED[81] to assess the state of health and care of diabetes patients.

- France is completing a three-year programme launched in 2002 for the prevention and management of Type 2 diabetes. The main objectives of this programme are: prevention, screening, quality and organisation of care, epidemiological monitoring (via the ENTRED survey) and medical education.
- Diabetes prevention is also part of the National Programme for Nutrition and Health (Programme National Nutrition Santé or P.N.N.S.) launched by the Ministry of Health in 2001, aimed at reducing excess weight and obesity in adults and children.
- In February 2003 a new Nursing Act established weekly clinical monitoring and prevention for insulin-dependent diabetes patients over 75 years old.
- Medical education is recognised as key to ensuring high quality monitoring of all chronic diseases including diabetes. In 2002 for example, 3.5 million Euros was allocated for therapeutic education in hospitals for diabetes, cardio-vascular diseases and asthma.

5. POLICY FRAMEWORK

In 2004 France adopted a public health law which aims for the continuity of the National Diabetes Programme by:

- Ensuring that by 2008 follow-up care for 80% of diabetes patients respects good clinical practices as defined by ALFEDIAM, AFSSAPS and ANAES.
- Reducing the frequency and seriousness of complications linked to diabetes, and in particular cardio-vascular complications.

In 2005 the Health Ministry launched experimental actions designed to reduce diabetes complications through:

- Yearly screening for diabetic retinopathy
- Screening, management and prevention of foot complications linked to diabetes
- Patient follow-up to ensure that it respects good clinical practices.

Diabetes networks play a key role. They are financed by the *Dotation nationale du développement des réseaux* (a national grant dedicated to financing the networks) and coordinated at national level by the *Association nationale de coordination des réseaux diabète* (ANCRED, the National Association for the Coordination of Diabetes Networks). The 69 networks bring together healthcare professionals (GPs, hospital doctors, dieticians, nurses, podologists and pharmacists) as well as patients around a protocol on common care and initiatives to better organise healthcare. In March 2004, the networks adopted a common programme for action to promote:

- Improvement in the quality of follow-up via a yearly check-up by the patient's practitioner for all patients suffering from diabetes
- Development of therapeutic education of doctors practicing in urban areas
- Prevention of amputations, thanks to the implementation of specific coordinated care including the screening for the risk of lesions, a free foot care offer for patients at risk and rapid access to a specialised unit in case of lesions.

6. GUIDELINES

In 1999 the AFSSAPS and the ANAES issued specific guidelines for the treatment of Type 2 diabetes. The guidelines are part of a larger «Strategy for management of people with Type 2 diabetes, excluding management of complications».
ALFEDIAM and the Société Française de Cardiologie (SFC) have also issued recommendations that are specific to the management of diabetes patients in relation to cardio-vascular risks and complications.

FRANCE

7. REIMBURSEMENT

The overall level of healthcare reimbursement is usually 65% for prescription drugs. However, there are some exceptions. The level of reimbursement for treatment of diabetes in France depends on whether it is insulin-dependant or not, and whether it is considered a long-term condition (registered as ALD 30 or Affection de Longue Durée)[82].

For insulin-dependent diabetes the level of healthcare reimbursement is generally 100% for a minimum of five years. During medical check-ups, the practitioner will assess whether treatment is properly followed by the patient, which determines in part whether to renew his/her right to full reimbursement.

For non insulin-dependent diabetes, the practitioner can request 100% reimbursement for the patient under certain conditions: the practitioner has to assess the patient's medical health over a six-month period, during which the patient introduces recommended dietary and life-style changes. Full reimbursement is envisaged only if the patient's blood glucose level remains despite the changes.

OUTLOOK

Despite France's ambitions, stakeholders consulted identified several gaps the need for:

- Better training and education regarding treatment: 59% of practitioners consider that they do not have material that is adapted and up to date for the specific needs of people with diabetes
- Better screening of the disease
- Continuation the ENTRED survey
- Better reimbursement of medical expenses linked to diabetes (dietician consultations, podologists consultations and medical care).
- The AFD would welcome a European initiative provided it does not undermine what France has achieved so far. The association favours a common EU fight against diabetes but warns that the objectives of this fight need to match the ambition of French objectives.

GERMANY

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[83]	10.2%
Total diabetes prevalent cases	6,294,300
Cost of diabetes	30 Billion Euros
POLICY FRAMEWORK	
National Plan	2002 Legal Basis for Disease Management Programmes
Guidelines	Deutsche Diabetes Fachgesellschaft (German Diabetes Experts Society, DDG)
Planned Actions	National Diabetes Programme by 2010 by the National Action Forum

1. INCIDENCE/PREVALENCE OF DIABETES

The estimated prevalence of diabetes is 10.2% according to the IDF Atlas.
The «National Action Forum for Diabetes Mellitus» speaks of about six million people affected by Type 2 diabetes and an estimated further 2–3 million undiagnosed cases (January 2005), with the number of people with diabetes growing annually by 5%.[84]

2. COST OF DIABETES CARE

The Deutsche Diabetes-Union speaks of 25 billion Euros being spent annually on diabetes treatment as well as indirect costs.[85]
A recent study estimates the total economic cost of diabetes at 30 billion Euros per year.[86] According to the study, the costs will explode within the next 15 years, with the number of patients doubling to 10–11 million if the current trend is not brought under control.
The costs arising from the treatment of Type 2 diabetes patients in Germany in 1998 amounted to 16 billion Euros. The majority of these costs (61%) were covered by statutory and private health insurances. The annual costs to the Gesetzliche Krankenversicherung (GKV, Statutory Health Insurance) for these patients amounted to 9.4 billion Euros. Of these costs, half were spent on inpatient treatment, 13% on ambulatory care and 27% on medication. Diabetes medication (insulin, oral anti-diabetic drugs) accounted for only 7% of total GKV costs.

3. GOVERNMENT PRIORITIES

The German perspective on diabetes is that it is an area where primary care has recently come to the fore following the recent introduction of disease management laws.
Since 2001, adequate diabetes treatment and provisions form a primary health policy objective for the Government.
In July 2002 the government established the legal basis for the introduction of Disease Management Programmes (DMP). Type 2 diabetes and breast cancer were the first two diseases to be covered by such a programme.
In April 2003 the first DMP for patients with Type 2 diabetes was accredited. The evaluation of the DMP is essential and has been made obligatory in Germany by the Fifth Book of Social Code.
By 2004 there were approximately 2,690 Disease Management Programmes for Type 2 diabetes approved by the Federal Agency for the Social Insurance (Bundesversicherungsamt),

covering about 815,000 patients in the «Western Länder» and 318,000 in the Länder of the former East Germany. The programmes are currently under review to evaluate their impact on quality of treatment.

4. POLICY FRAMEWORK

In October 2004 the National Action Forum Diabetes Mellitus was founded to facilitate, co-ordinate and consolidate various initiatives to fight diabetes.[87] Co-ordinated and supported by the Federal Ministry of Health and Social Security and the German Diabetes Union (Deutsche Diabetes-Union, DDU, the umbrella organisation for diabetes organisations), the Action Forum comprises representatives from Government institutions, healthcare specialists, and diabetes organisations. The Forum is working to develop a National Diabetes Programme by 2010.
In February 2005, the government tabled a draft Health Prevention Act to strengthen health prevention across the country. This Act aims to raise health prevention as the fourth pillar of the German healthcare system alongside acute therapy, rehabilitation, and nursing. By setting health prevention targets, the Act also sets out to establish concrete prevention measures. The draft Act was rejected by the Bundesrat (Upper House representing the Länder).

5. GUIDELINES

The Federal Ministry of Health has developed recommendations and criteria for Disease Management Programmes for Type 2 diabetes.[88] The guidelines cover diagnosis and therapy.
The Deutsche Diabetes Gesellschaft (German Diabetes Experts Society, DDG) has developed evidence-based guidelines for prevention, diagnosis, therapy and long-term treatment of diabetes mellitus and accompanying diseases. The objective is to put in place a comprehensive and integrated set of guidelines with versions for experts and general practitioners as well as for patients and the wider population.[89]
In 2003 the German Medical Association (Bundesärztekammer, BÄK), the German Diabetes Experts Society (DDG) and other organisations jointly published national guidelines for Type 2 diabetes. The guidelines cover a wide range of aspects from diagnosis through screening and prevention to therapy.[90]

6. REIMBURSEMENT

Diabetes medicines are fully reimbursable as are all visits to doctors. Recently the Committee revised the guidelines to exclude from reimbursement special nutrition for people with diabetes. Reimbursement for blood glucose test strips is also under debate.

OUTLOOK

The way forward lies with the continued implementation of the National Action Forum and the search for solutions that are both efficient in terms of quality of treatment, and economically viable. The Deutsche Diabetes-Union e.V. (German Diabetes Union, DDU) would also like to see development in Germany of a long-term national diabetes programme.

GREECE

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[91]	6.1 %
Total diabetes prevalent cases	493,000
Cost of diabetes	Not estimated
POLICY FRAMEWORK	
National Plan	–
Guidelines	2003, Greek Endocrinology Society for Type 2 Diabetes
Planned Actions	–

1. INCIDENCE/PREVALENCE OF DIABETES

Currently there are approximately 500,000 people in Greece suffering from diabetes, which represents 6.1 % of the population.[92] The WHO estimates the prevalence will grow by 26 % between 2000 and 2030.[93]
Greece holds the second place for the number of obese teenagers, representing 23% of 13 – 17 year-olds.

2. COST OF DIABETES CARE

According to the WHO survey, in 2002 Greece's expenditure on health amounted to 9.5 % of GDP, of which 4.5 % accounted for private health expenditure.

3. GOVERNMENT PRIORITIES

The Greek government does not consider diabetes as a priority.

4. POLICY FRAMEWORK

There is no national plan for diabetes in Greece. Diabetes benefits from the Dietary Guidelines for adults[94] issued by the Ministry of Health, which reflect concerns that the high prevalence of tobacco smoking and some aspects of urbanisation have contributed to increased adult morbidity.
The Hellenic National Diabetes Centre (HNDC), working under the supervision of the Hellenic Ministry of Health and Welfare, was established to manage systematically and provide follow-up to patients with diabetes. It also co-ordinates and assists all research activities linked with prevention and treatment of diabetes. The HNDC is the body responsible for programming, coordination and supervision of the services offered by primary, secondary and tertiary care to patients with diabetes.
Since 1990 the country has had a legal framework to create specific outpatient departments and training of physicians and nursing staff. Thanks to this initiative almost every hospital now has a specific out-patient department or unit for diabetes run by doctors trained at least one year on the subject at diabetes centres.[95]

5. GUIDELINES

The Greek Endocrinology Society adopted scientific guidelines in 2003 for diabetes diagnosis and monitoring of Type 2 Diabetes.[96] These guidelines are based on the 1999 IDF guidelines for diabetes care, the 1999 WHO Consultation report on the definition, diagnosis and classification of diabetes and the 2002 American Diabetes Association standards of medical care. The guidelines are aimed at healthcare professionals and healthcare providers.
The guidelines provide criteria for the diagnosis of diabetes mellitus primarily looking at symptoms of diabetes and at blood glucose levels. Criteria for the diagnosis of metabolic syndrome are provided, based on the WHO guidelines. Criteria for screening for Type 2 diabetes include:

- People over 45 years old, and if levels are normal, testing for Type 2 diabetes is recommended only every three years.
- People who are at high risk being screened earlier and more often.

6. REIMBURSEMENT

In the Greek healthcare system, once a medicine is on the so-called «Positive List» it can be reimbursed. In place since April 1988, the system is revised every two years by a Working Group (Moutsopoulos Group) commissioned by the Ministry of Health.
The rate of co-payment for a prescription drug is uniform and set at 25%.[97] Some exemptions apply, as in the case of diabetes. The standard test and insulin for Type 1 diabetes are reimbursed 100% by the government. Insulin for Type 2 diabetes (which is the most common in adults) and drugs for treatment are reimbursed at 75% by public insurance.

OUTLOOK

The Hellenic Centre for Diabetes Prevention considers that screening tests for diabetes prevention are essential and should be financed by national Government.
The Pan-Hellenic Federation of People with Diabetes, a patients` association, believes that one of the biggest challenges in the control of the disease is the lack of education and available information.

HUNGARY

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[98]	9.7%
Total diabetes prevalent cases	711,400
Cost of diabetes	Not estimated
POLICY FRAMEWORK	
National Plan	–
Guidelines	2002 Advisory Board of Internal Medicine Guidelines (Type 1 & 2) updated end 2005
Planned Actions	Not identified

1. INCIDENCE/PREVALENCE OF DIABETES

Over 700,000 people in Hungary are estimated to live with diabetes, of which about 300,000 have been diagnosed. As in other EU countries, more than 90% of these people have Type 2 diabetes. The prevalence of diabetes is as high as 9.7% of the population aged 20 years and more.
A recent pilot screening study revealed surprising results in terms of the high prevalence of obesity, metabolic syndrome and previously undiagnosed diabetes among the population. In autumn 2005 this screening study will be extended to representative population groups across the country to establish a clearer epidemiological picture of the disease.

2. COST OF DIABETES CARE

The total cost of diabetic care has not been estimated. The National Health Insurance Fund provided the total cost for medicines only, which amounted in 2003 to 154 million Euros. Of this total, the National Health Insurance Fund financed 121.5 million Euros with the remainder covered by the patient. Diabetes medication represents 9.5% of total healthcare spending on drugs. Of people with Type 2 diabetes, 45% are treated with medication, 10% are treated with insulin, and 45% are treated with diet.

3. GOVERNMENT PRIORITIES

The National Public Health Programme up to 2010 establishes as the main government priorities, smoking, cardiovascular diseases, different types of cancers and their screening, as well as the promotion of healthier nutrition. Within the nutrition objective, the programme states that one reason for encouraging healthier nutrition is «to maintain the growth rate of diabetes at the current level of 5%».

4. POLICY FRAMEWORK

There is no diabetes policy framework in place. In Hungary, diabetes care is provided mainly by general practitioners. About 150 specialised diabetes outpatient centres treat a smaller group (Type 1 or problematic Type 2 cases). Those centres are located either in outpatient units of hospitals or they collaborate closely with hospitals. As such, they are able to handle emergency cases and are relatively well-equipped. National diabetes centres also play an important role by organising postgraduate training for family doctors.
The Hungarian Diabetes Society plays an important role in diabetes care. The Society has developed training courses for doctors and nurses to specialise in diabetes treatment and care.

5. GUIDELINES

In 2002, the Diabetes Advisory Board of the Executive Board of Internal Medicine produced Guidelines on Adult Diabetes Diagnostics and Treatment. The guidelines address healthcare professionals, educators, patient organisations and decision-makers. They address the prevention and treatment of both Type 1 and Type 2 diabetes. The implementation of the guidelines has been weak because of their non-binding character, non-specified responsibilities, and failure to update in line with medical innovations. The guidelines are currently being updated and are expected to be published towards the end of 2005.

6. REIMBURSEMENT

Everyone with diabetes in Hungary who needs insulin can get it free of charge. Patients also have access to subsidised medication and diabetes equipment.

OUTLOOK

Stakeholders consulted argue that more support is needed from the government – not just in financial terms but above all in raising public awareness.

IRELAND

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[99]	3.4% – 6%
Total diabetes prevalent cases	89,800 – 200,000
Cost of diabetes (% of total healthcare budget)	10%
POLICY FRAMEWORK	
National Plan	–
Guidelines	Irish College of General Practitioners Guidelines on Diabetes Care
Planned Actions	National Diabetes Plan expected in 2005

1. INCIDENCE/PREVALENCE OF DIABETES

The estimated diabetes prevalence is 3.4% of the total adult population according to 2003 WHO figures. The Diabetes Federation Ireland (DFI) estimates the prevalence as high as 6%. Figures published by DFI indicate that up to 200,000 people have been diagnosed with diabetes in Ireland, and another 200,000 are unaware that they have the condition.[100]
Type 2 diabetes accounts for approximately 90% of all cases of diabetes in Ireland. The prevalence of Type 2 diabetes is rapidly increasing due to the ageing population, a rise in sedentary lifestyles, obesity and inappropriate diet. The Diabetes Federation of Ireland estimates that 250,000 – 300,000 people have pre-diabetes. The number of Irish people suffering from diabetes is expected to double by 2010.
No data on the disease growth rate is available. However, the Diabetes Centre practice at St. James Hospital in Dublin has seen an increase of 20% each year of patients diagnosed with Type 2 diabetes.

2. COST OF DIABETES CARE[101]

In Ireland, a study[102] assessed that direct medical expenditure for diabetes care amounts to 350.5 million Euros each year – about 10% of the total healthcare budget. Of this, 59% is spent on managing preventable complications and 16% on the management of diabetes. The remaining 25% is spent on ambulatory care. Hospitalisation costs accounted for 48.5% of 170 million Euros of direct medical expenditure and were the highest contributing factor to direct medical costs. Overall, 16.6% of patients were hospitalised for over eight days. Drug costs (147 million Euros) accounted for 41.9% of total costs and ambulatory costs accounted for the remainder (34 million Euros). Visits to specialists other than the patient's usual clinic diabetologist accounted for more than half of ambulatory costs.
Total per patient costs were 2,945 Euros; however, the costs of patients with both macrovascular and microvascular complications were 2.5 times those with no complications. Costs of complications contributed 58.9% of overall per patient costs, management of diabetes accounted for 15.7% and other management costs 25.3%.
Non-medical and indirect costs are difficult to measure and were not included in the study. The sum of 350.5 million Euros is therefore a conservative estimate.

3. GOVERNMENT PRIORITIES

The healthcare system in Ireland is currently undergoing a thorough reform designed to improve healthcare services. A new unified structure, the Health Service Executive, aims to provide a more coherent service across Ireland and, as a consequence for diabetes patients, better screening and treatment.

4. POLICY FRAMEWORK

The Irish government currently puts strong emphasis on the prevention of obesity and cardiovascular diseases.[103] Unfortunately diabetes has not been included in these prevention programmes despite the fact that, according to a diabetes professional, this would have been quite easy to do. The disease «creeps» into the Irish population and leads to more spectacular conditions such as cardiovascular diseases but diabetes per se is not visible enough.
The Department of Health and Children insists that it has put diabetes at the top of its agenda; it is about to present the National Diabetes Strategy, in autumn 2005. The strategy will focus on improvement of primary care service and shared care of diabetes.

5. GUIDELINES

General practitioners and other primary care professionals refer to the «Current Guidelines for Diabetes Care in the Community» established by the Irish College of General Practitioners in 2000 and updated in 2003. These guidelines derive to a great extent from the IDF Guidelines.
Diabetes specialists are said to refer to the American Diabetes Association Clinical Practice Recommendations, which are updated every year.

6. REIMBURSEMENT

The country's reimbursement scheme allows patients diagnosed with any of 15 named chronic illnesses, including diabetes, to receive medication free of charge.[104] Some 31% of Irish people have free access to medical care. The government funds reimbursement schemes for the rest of the population.

OUTLOOK

Stakeholders believe, even before its publication, that the much anticipated National Diabetes Strategy will be unworkable.
Diabetes specialists feel that awareness needs to be raised among GPs. Actions suggested include the establishment of more accurate data on diabetes across Europe and an effective assessment of primary care service related to diabetes.
An EU Recommendation should also promote professional education, early screening for high risk groups and work towards a guaranteed access to healthcare in urban and rural areas.

ITALY

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[105]	6.6%
Total diabetes prevalent cases	2,880,100
Cost of diabetes (% of total healthcare budget)	6%
POLICY FRAMEWORK	
National Plan	• 2005 CCM National Prevention Plan • Ministerial Decree (passed on July 1, 2004)
Guidelines	–
Planned Actions	Implementation of CCM Plan

1. INCIDENCE/PREVALENCE OF DIABETES

Diabetes is the most frequent metabolic disease in Italy, with approximately three million people diagnosed with either Type 1 or Type 2 diabetes. The Ministry of Health estimates that about two million people remain undiagnosed. The prevalence is estimated at 6.6%. However, the Ministero della Salute puts the incidence of diabetes at 3%, and at 12% for people over 65. Each year 200,000 people are diagnosed with diabetes of which 15,000 are Type 1 and 185,000 are Type 2. Incidence in Italy ranges from 4.4 – 10.1 new cases/100,000 people/year to 35 new cases/100,000 inhabitants/year in Sardinia, which has highest incidence rate. Type 2 diabetes is more frequent than Type 1 with a ratio of 9:1.
Diabetes is estimated to reach 3,903,800 Type 2 diabetes prevalent cases and 2,693,600 Type 2 diabetes diagnosed cases (69%)[106] by 2013.

2. COST OF DIABETES CARE

In Italy, healthcare costs for diabetic care are estimated at 5.5 billion Euros, representing about 6% of overall expenditure.
The Italian arm of the CODE 2 study covered 1,263 patients and found that 59.8% of costs are due to hospitalisation while the costs for treatment represented about 21.7% of the total (9.8%, oral anti-diabetic drugs; 9.5%, insulin). Cardiovascular drugs, administered for diabetes complications accounted for 34.1% of treatment costs.

3. GOVERNMENT PRIORITIES

Diabetes benefits from the National Prevention Plan set out in the mandate of the National Centre for Disease Prevention and Control (CCM) created by Ministerial Decree of July 1, 2004.[107] The mandate of the CCM covers diabetes in its priority to promote healthy lifestyles, which also covers infectious diseases, vaccines, cancer screening, accidents and bioterrorism.
This legislation also led to the creation of the Centro Nazionale per la Prevenzione e il Controllo delle Malattie (CCM – Italy's National Centre for Disease Prevention and Control) within the Ministry of Health. The CCM's main objectives are actively to prevent disease by

promoting healthy lifestyles and screening but also to confront a variety of health emergencies ranging from new infections such as SARS and avian influenza to bioterrorism.

4. POLICY FRAMEWORK

Following the Agreement in March 2005 (in the Conferenza Stato-Regioni which coordinates policy between the central and regional governments), the regional authorities have to implement National Prevention Plan objectives, intended to lower national health service costs. The main areas of concern of the approved three-year National Prevention Plan (2005 – 2007) are:

- Cardiovascular risk prevention
- Diabetes complications prevention (disease management)
- Cancer screening
- Accidents prevention
- Vaccination plan

5. TREATMENT GUIDELINES

The medical associations, SID, the Associazione Medici Diabetologi (AMD), and Societá Italiana di Endocrinologia e Diabetologia Pediatrica (SIEDP)[108] have defined clinical guidelines for the 21 regional health systems in Italy. These clinical guidelines are overseen by the Agency for Regional Health Services (ASSR). It is worth noting that screening for high-risk groups is optional according to the guidelines.

6. REIMBURSEMENT

Patients diagnosed with diabetes are fully reimbursed, although due to budgetary restrictions this is not always the case in all regions. Reimbursement covers periodic controls, clinical follow-up, treatments and expenses for related-complications and disease. diabetes patients receive a personal card from each regional health system that exempts him/her from paying any health cost related to the disease.

OUTLOOK

Patient organisations consider that the government should better understand that it costs less to prevent diabetes than to cure it. FAND would welcome an EU initiative to encourage better screening and prevention policies across Europe.

LATVIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[109]	9.9%
Total diabetes prevalent cases	173,600
Cost of diabetes (% of total healthcare budget)	Not available
POLICY FRAMEWORK	
National Plan	–
Guidelines	2002 Guidelines Type 1 & 2
Planned Actions	–

1. INCIDENCE/PREVALENCE OF DIABETES

Currently there are close to 45,000 registered people suffering from diabetes in Latvia, which represents almost 2% of the population[110] – though IDF Europe puts the prevalence at 9.9% for those over 20 years old. According to WHO estimates, the prevalence of diabetes in Latvia will grow by 9% between 2000 and 2030.[111]

2. COST OF DIABETES CARE

The annual health budget in Latvia in 1999 represented 9% of total government spending. According to a study conducted by the European Commission, in 1998 Latvia had the lowest healthcare expenditure as a percentage of the GDP of all the EU and accession countries.[112]
The estimated cost of diabetes care per capita in 2003 was $398.[113]

3. GOVERNMENT PRIORITIES

The priorities for healthcare are AIDS, HIV and cardiovascular diseases, according to the Latvian Health Ministry.

4. POLICY FRAMEWORK

There is no national diabetes plan in Latvia.

5. GUIDELINES

Diabetes in Latvia is treated only by endocrinologists and not by general practitioners. The Latvian Association of Endocrinologists, in cooperation with the Latvian Diabetes Association, has issued guidelines for the diagnosis and treatment of Type 2 diabetes. For Type 1 diabetes, the Latvian Diabetes Association translated IDF's Guidelines into Latvian in 1997.

6. REIMBURSEMENT

All Latvian citizens are entitled to state-funded healthcare. Diabetes treatment is fully reimbursed by the social security system; therefore patients receive insulin and oral medicines without charge.

According to the Latvian Ministry of Health[114], the state budget reimburses half of the cost of test strips for patients using insulin to monitor glucose level in the blood. Patients must therefore pay LVL 6 – 50 (8.6 – 71 Euros) each month depending on the treatment scheme. Many patients cannot afford to monitor the disease. As a result the risks of complications – such as loss of sight, renal complications and gangrene – are increasing.

The government sets out in a Regulation the general principles for the pharmaceutical reimbursement system.[115] Reimbursement is provided according to the nature and severity of the disease.

OUTLOOK

According to the Latvian Diabetes Association, the main problems in diabetes care in Latvia are:

- Insufficient level of knowledge and information about diabetes, which often causes delays in diagnosis.
- Lack of state finance to supply people living with diabetes with self-monitoring equipment
- The small number of patients education centres.
- Insufficient state funding for medicines.

The Ministry of Health is concerned at the insufficient number of physicians specialised in endocrinology in rural areas and also that patients are insufficiently informed about the importance of early screening and prevention.

LITHUANIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[116]	9.4%
Total diabetes prevalent cases	248,900
Cost of diabetes (% of total healthcare budget)	10.6%
POLICY FRAMEWORK	
National Plan	Expected 2006
Guidelines	• National guidelines on diagnostic and treatment methodology,» Ministry of Health, 2002, reviewed in 2005 • Reimbursement Guidelines, Ministry of Health, 2002
Planned Actions	National Plan for diabetes expected in 2006

1. INCIDENCE/PREVALENCE OF DIABETES

The diabetes prevalence is estimated at 9.4% with close to 300,000 people in Lithuania suffering from diabetes.[117] Diabetes is a growing health problem in Lithuania and, according to the WHO the incidence is estimated to grow by 28% between 2000 and 2030.[118]

2. COST OF DIABETES CARE

According to the Lithuanian Diabetic Association diabetes compensation in 2002 amounted to approximately 10 million Euros, representing 10.6% of total annual healthcare expenditure. Statistics from the World Health Organisation (WHO) show that the total health expenditure represented 5.9% of GDP in 2002. The total expenditure on health per capita was $549 in 2002.

3. GOVERNMENT PRIORITIES

While the government allocates money for reimbursement of diabetic treatment drugs, it does not invest in either education or in promoting self-testing programmes. The Lithuanian Diabetes Association is encouraging the government to take a more active role in financing prevention and promoting early diagnosis.

4. POLICY FRAMEWORK

There is no national plan for diabetes in Lithuania.
The Lithuanian Health Programme for 1997-2010 gives priority to healthcare quality by way of certification of quality systems and audits.[119] This programme makes only a few references to diabetes, in particular related to the need to reduce eye complications and amputations.
An earlier National Diabetes Plan for the period 1991 to 1996 sought to introduce a system of medical and social care for people with diabetes, to improve diagnosis and to reduce complications and the number of resulting disabilities. Though it led notably to the creation

of Outpatient Clinics with Foot Care rooms and a National St. Vincent Diabetes Task Force, these no longer exist.
A new plan is now under development by the Institute of Endocrinology of the Ministry of Health. The programme is expected to be ready for approval and implementation in 2006.

5. GUIDELINES

The Ministry of Health in 2002 approved national guidelines on diagnostic and treatment methodology, which were revised in 2005.[120]
According to the guidelines, diabetes is diagnosed according to the level of hyperglycaemia. For Type 1 diabetes, symptoms are also weight loss and vision disorders.
Risk factors for diabetes are obesity, pregnancy and cardiovascular diseases. Patients with risk factors are submitted to a glucose tolerance test, which permits the separation of patients into different categories for treatment.

6. REIMBURSEMENT

According to the national guidelines for reimbursement of the Ministry of Health[121], all drugs and treatment for diabetes are fully reimbursed in Lithuania. The guidelines also provide that 1,800 insulin strips per year per child are reimbursed by the government, 600 strips per year per adult for Type 1 diabetes and 300 strips per year per adult with Type 2 diabetes. The Lithuanian government also reimburses two to four haemoglobin tests per patient per year.

OUTLOOK

The Lithuanian Diabetes Association considers that the Government is not active enough in the promotion of early diagnosis, so recommends the launch of government programmes to raise awareness about the importance of prevention and early screening for diabetes.
The Ministry of Health believes the following actions are needed to improve diabetes treatment:

- Identification of risk groups
- Early detection and early intervention
- Training programmes for patients and professionals
- Prevention activities
- Identification of people with high risk to develop Type 2 diabetes
- The administration of haemoglobin tests earlier and more regularly (every three months for people at risk)
- Improvement of diagnosis

The Institute of Endocrinology considers that the biggest problem for the improvement of diabetes treatment and prevention is the lack of sufficient funding and the fact that not all doctors apply existing diabetes guidelines. It also would like to see more contact between the patient and the general practitioner to foster early diagnosis.
Key stakeholders would welcome action at EU level to prompt the national and local government into action on diabetes.

LUXEMBOURG

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[122]	3.8%
Total diabetes prevalent cases	12,500
Cost of diabetes (% of total healthcare budget)	Not available
POLICY FRAMEWORK	
National Plan	–
Guidelines	–
Planned Actions	National Diabetes Plan expected in 2006

1. INCIDENCE / PREVALENCE OF DIABETES

The «Maison du Diabète»[123] provides some data on incidence and estimates. Six percent of the cross-border population in Lorraine (France), Luxembourg and the Province of Luxembourg (Belgium) suffer from diabetes. The number of diabetes patients in these three regions is expected to double in the next 15 years.[124]

2. COST OF DIABETES CARE

Neither the Luxembourg Association of Diabetes nor the unit of preventive medicine in the Health Ministry has information regarding the costs of diabetes prevention or treatment.

3. GOVERNMENT PRIORITIES

The prevention and treatment of diabetes has recently become one of the priorities of the government of Luxembourg. According to the Ministry of Health and the Association of Diabetes, diabetes is a priority because of the direct link to cardiovascular diseases and obesity. However, the Ministry has allocated only a part-time official dedicated to these issues.

4. POLICY FRAMEWORK

There is no national diabetes programme, although one is being planned, but not before 2006, by the Health Ministry, to respond to the awaited prevalence data. Some good initiatives are being developed, including free screening for all, but only on World Diabetes Day.
The Diabetes Association believes that there is no diabetes plan so far because of other political priorities, notably smoking prevention, leading to a lack of human resources allocated to diabetes by the Ministry. Another contributing factor is that in November 2005 the Health Ministry will publish a framework programme on preventive medicine; this is expected to address the prevention of diabetes, among other issues. The Health Ministry has not, however, involved diabetes stakeholders in the preparation of this programme.

5. GUIDELINES

There are no national guidelines for screening or treatment of diabetes. Because of the decentralised way that the health system in Luxembourg is organised, there is no central control or data regarding the implementation of coherent treatment measures across the country.

6. REIMBURSEMENT

The Ministry of Finance and the Ministry of Social Security jointly manage the country's medicine prescription and reimbursement system. People with diabetes must have a medical prescription for their drugs, which are fully reimbursed by the Union des Caisses Maladies.

OUTLOOK

Diabetes Association stakeholders doubt the potential value of an EU regulatory framework for diabetes. They argue that measures at the EU level on other issues, such as nutrition, have neither been particularly useful nor properly implemented.
However, stakeholders recognise that an EU Recommendation could correct some weaknesses such as the need to raise awareness among medical professionals and the introduction of a coherent approach to the prevention and primary treatment of diabetes.
According to Health Ministry officials[125], an EU legal framework or Recommendation would help promote work on some neglected areas of diabetes, notably the prevention of Type 2 infantile diabetes.

M A L T A

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[126]	9.2%
Total diabetes prevalent cases	25,800
Cost of diabetes (% of total healthcare budget)	Not available
POLICY FRAMEWORK	
National Plan	–
Guidelines	European Diabetes Policy group of 1998 – 1999 are the basis for diabetes treatment. Journal of the Malta College of Family Doctors published guidelines for treatment in 2000.
Planned Actions	–

1. INCIDENCE/PREVALENCE OF DIABETES

Diabetes is particularly prevalent in Malta compared to the rest of the EU. The diabetes prevalence rate is 9.2% with a total of 25,800 cases estimated in 2003.
Recent epidemiological studies indicate that 10% of the Maltese population suffers from diabetes.[127] This figure is based on hospital records and only takes into account those people who have been diagnosed and are undergoing treatment in hospital. There are no national statistics other than those compiled by hospitals.
Current epidemiological studies indicate that 1% of the Maltese population suffer from Type 1 Diabetes and 9% from Type 2 Diabetes. Furthermore, 84% of people living with diabetes in Malta are either overweight or obese.
Diabetes accounts for one out of four premature deaths occurring before the age of 65. In addition, the leading cause of death in Malta, cardiovascular disease, kills nearly two-thirds of all diabetes patients.[128] Gestational diabetes is also a particular problem in Malta: 1.81% of the pregnant population is affected by gestational diabetes[129], which remains an important cause of miscarriages on the island.

2. COST OF DIABETES CARE

Not available

3. GOVERNMENT PRIORITIES

Diabetes is not a top priority for the government; there is no indication that a major policy development relating to diabetes care is under consideration.
For over a decade a National Steering Committee on Diabetes within the Ministry of Health has had the task of overseeing and improving diabetes services in Malta. In reality, the Committee functions as an informal network between health professionals, the Diabetes Association and the authorities.

4. POLICY FRAMEWORK

There is no official policy framework for diabetes. Stakeholders identified a series of necessary improvements which are needed:

- A national diabetic care policy: one view is that diabetes has been treated too lightly so far and a national programme is needed to improve diagnosis and early effective treatment of the disease.

- More public health campaigns: this is crucial to both improving early diagnosis and to preventing new cases of diabetes due to lack of awareness about its causes.
- Free access to the latest medication and technology: hypo-glycaemia agents are not free of charge. In addition, the government does not fund the more recent technology for insulin delivery (the pump).
- Extend the provision of glucose test strips to the over 35s: currently, patients are given 15 free test strips up to the age of 35. Beyond that age, the entitlement ends.
- A national statistical database on diabetes: this is viewed as a necessary pre-condition for developing a national programme on diabetes.
- More training of doctors: there is currently a shortage of diabetologists and this is viewed as an obstacle to further improvements in care.
- Address the social barriers encountered by Maltese diabetic citizens, including social stigma and inequitable treatment:[130] currently persons diagnosed with diabetes are required to disclose this information when applying for personal loans, mortgages and employment. This is considered to cause discriminatory practices.

5. GUIDELINES

There are no national guidelines for the treatment of diabetes. Malta relies on the guidelines of the European Diabetes Policy group of 1998-1999 as the basis for diabetes treatment. With regard to gestational diabetes, the Journal of the Malta College of Family Doctors published guidelines for treatment in 2000.

6. REIMBURSEMENT

Treatment for diabetes is mostly free. The aspects of diabetes treatment which are still at the patient's own expense include access to hypo-glycaemia agents and to glucose strips.

OUTLOOK

No significant policy change is expected in the coming years, despite health professionals constantly seeking to improve care for diabetes patients. Action at the EU level is seen as an opportunity to share experience and best practices on the treatment of diabetes.

POLAND

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[131]	9.2 %
Total diabetes prevalent cases	2,506,000 (2004: 2,000,000 | 2002: 1,500,000) (2000: 1,352,000 | 1994: 912,000)[132]
Cost of diabetes (% of total healthcare budget)	8.1 %
POLICY FRAMEWORK	
National Plan	2005 Ministerial Decree to establish a national diabetes plan
Guidelines	Clinical recommendations on handling diabetes 2005
Planned Actions	National Diabetes Plan expected in 2006

1. INCIDENCE/PREVALENCE OF DIABETES

There are more than two million people living with diabetes in Poland. The estimated diabetes prevalence rate is 9 % for those over 20 years old, based on 2003 WHO figures. Diabetes remains «unidentified» in about 30 – 40 % of all cases and an estimated four million suffer from pre-diabetes.
In Poland 90 % of all people with diabetes suffer from Type 2 diabetes.[133] The morbidity rate amounts to 4 – 6% of the diabetic population and the growth in number concerns mainly Type 2 diabetes mellitus.[134] Diabetes prevalence is expected to grow by 170 %[135] by 2025.

2. COST OF DIABETES CARE[136]

A comprehensive and accurate study of the costs in Type 2 diabetes in Poland was carried out in 2002.[137] This analysis, CODIE – 2, was based on the study CODE – 2 (Cost of Type 2 Diabetes in Europe). In 2002, the total direct cost of Type 2 diabetes in Poland was calculated at 654,937,474 Euros or 8.1 % of all healthcare spending.

- Cost of pharmaceuticals represented the major share of direct costs (insulin represented two-thirds of the total followed by hospitalisation).
- Diabetics spend an average 6.2 days in hospital because of complications.

According to a report of the Ministry of Health[138] «Diabetes as an epidemiological and social problem», the total cost of hospitalisation was 38,333,442 Euros from January to August 2004.

3. GOVERNMENT PRIORITIES

Although diabetes is a serious problem, it is not an official healthcare priority for the government. Most activities to combat diabetes and to support people living with diabetes are initiated by doctors' and patients' associations or business entities, rather than by government. The Polish National Health Programme 1996 – 2005 mentions diabetes only in passing – healthy eating habits are listed as one way to combat illnesses such as Type 2 diabetes. Doctors and patients indicate that there is no systemic approach to dealing with diabetes in Poland.

4. POLICY FRAMEWORK

There is currently no National Diabetes Programme (NDP). A ministerial decree of June 2005 set up a task force to formulate a National Diabetes Programme. The programme is to cover the gathering of epidemiological data, organisational aspects, medical standards, treatment objectives, quality standards and accreditation, prevention and cost estimates and preparation of legislation on diabetes.

5. GUIDELINES

Recommendations for diabetes prevention, diagnosis and treatment prepared by Polskie Towarzystwo Diabetologiczne (Polish Diabetological Association) and published in its Journal Diabetologia Praktyczna, serve as basis for treating diabetes. The recommendations are targeted at specialists – diabetologists – who use them in daily practice. They are respected and implemented nationwide and are subject to annual revision and update.
These recommendations cover, inter alia, criteria for diagnosis of diabetes (targets for glycaemia control, glucosylated haemoglobin); measures for prevention of Type 1 and Type 2 diabetes; pregnancy diabetes; medical care of people living with diabetes; nutrition recommendations; use of oral medicines and insulin and diabetes complications.

6. REIMBURSEMENT

The highest reimbursement levels are granted to insulin, tests and oral medicines produced domestically. Reimbursement of ultra-short action insulin and the reimbursement of insulin pumps are very low. Few patients can afford insulin pumps. In 2004 expenditure on reimbursement of medical products for treating diabetes (insulin) represented 4.85 % of total reimbursement expenses.[139]
A legislative proposal has been drafted to enable reimbursement of more specialised medicines. Diabetologists and patients are demanding the reimbursement of more advanced medicines (analogue insulin and insulin pumps).

OUTLOOK

Diabetes education is given great attention by stakeholders in Poland. The most active bodies are the Polish Society of Diabetes, representing patients, and the Polish Diabetologists Association, which together with the National Consultant for Diabetes, launched their own «National Programme of Support for People with Diabetes».
The Society of Therapeutic Education and the Polish Society of Diabetes Nurses are actively dealing with diabetes education. This education programme targets patients, clinical psychologists, doctors and nurses, to increase understanding of doctors and nurses about the psychological aspect of treating patients and helping them to function in the society.[140]
Other private educational programmes also provide training to doctors and patients.
All stakeholders consider a national diabetes programme to be an urgent necessity, justified by epidemiological, medical, social and economic considerations. They advocate the following additional measures:

- Establishing a national system of identification (diagnosis) and registration.
- Developing screening of high risk groups.

POLAND

- Introducing epidemiological tests and monitoring of quality of treatment.
- Improving the system for financing diabetes.
- Revising the medicine reimbursement policy.
- Establishing an education platform targeted at doctors, nurses, patients, their friends and families.
- Ensuring unlimited access of patients to diabetes specialists.
- Introducing combined healthcare (regular cooperation of the family doctors with diabetes specialists.)
- Establishing a profession of «educators» for diabetes.

Patients and doctors would welcome more active support from other European organisations to lobby the Polish government to include diabetes into its healthcare policy priorities and to allocate more resources. They would also like IDF-Europe to establish closer working relations with diabetes organisations in Poland.

PORTUGAL

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[141]	7.8%
Total diabetes prevalent cases	584,500
Cost of diabetes (% of total healthcare budget)	5%
POLICY FRAMEWORK	
National Plan	National Programme of Diabetes Control (PNCD) National Health Plan 2004-2010
Guidelines	General Recommendations
Planned Actions	• Revision of PNCD – expected in 2006 • Revision of Individual Health Plans (Guide) based on UK model • Revision of the «Diabetes Dossier»

1. INCIDENCE/PREVALENCE OF DIABETES

There is neither precise nor recent data on the incidence and prevalence of diabetes in Portugal.
In 1991, the official incidence rate was 4.1% and, in 2003, the estimated prevalence was 7.8%, pointing to a rising trend that has been confirmed over the recent years. If the current trend continues[142], it is estimated that some 675,000 Portuguese will suffer from diabetes by 2025.
Recent unofficial studies already put the number of people in Portugal suffering from diabetes at 620,000, of which 20,000 are insulin dependent and about 600,000 are treated with other medication.[143] The same studies indicate that Type 1 Diabetes affects 0.2% of the population representing around 20,000 cases in Portugal. Type 2 Diabetes is responsible for the remaining cases.
Portugal ranks third among EU countries with obesity concerns and is considered the most sedentary population in the EU.
The National Health Plan (Programa Nacional de Saúde – PNS) 2004 – 2010[144] identified diabetes as the cause of death with the highest increase over the past 20 years. Between 1980 and 2000, diabetic deaths increased by 116%. Latest numbers indicate that in 2000 more than 3,000 people in Portugal died from diabetes, of which 59% were women. This number probably underestimates the impact of diabetes because it takes no account of the links that diabetes has with other causes of death, such as cardio-vascular disease.
Several specialists have raised concerns about the recent increase in the number of young children suffering from diabetes.[145]

2. COST OF DIABETES CARE

The costs of diabetes are not clearly identified for either prevention or treatment.
Extrapolations from existing EU estimates lead to an estimate that 5% of national health spending is dedicated to diabetes.[146]

3. GOVERNMENT PRIORITIES

Diabetes is not amongst the government health priorities, as it considers that diabetes is already well addressed through the current policy framework.

4. POLICY FRAMEWORK[147]

Portugal initiated its first specific diabetes programme in 1992 based on the St. Vincent Declaration.
The 1998 National Programme for Diabetes Control (PNCD) aims for an integrated management of diabetes, involving implementation through partnerships with all national stakeholders in diabetes monitoring and screening.
The National Health Plan (PNS) adopted in 2004 sets out strategic orientations through to 2010. It includes 40 specific programmes including ones for the prevention and treatment of cardiovascular diseases, obesity and the PNCD. The main objective of the PNS is to reinforce the PNCD by consolidating existing diabetes-specific initiatives by:[148]

- Systematic identification of people with diabetes and distribution of the Diabetic Guide.
- Therapeutic education of identified people with diabetes with the participation of diabetic associations and the Portuguese Society for Diabetology.
- Extension at national level of diagnosis and treatment for diabetic retinopathy
- Screening for diabetic foot disease and for micro-albuminuria.

A committee, including all relevant entities (MOH, Portuguese Society for Diabetes Patients, National Associations of doctors, pharmacists and nurses, Portuguese Diabetes Association and Federation of Diabetes Associations) coordinates the implementation of the PNCD. Two tools were developed: the Diabetes Guide (patients) and the Diabetes Dossier (professionals).
The Diabetes Guide, introduced in 1997, is an individual health plan.

- It is compulsory for all people living with diabetes. The Guide's main objectives are to facilitate exchange of information between health professionals to ensure better patient care; to improve prevention and to facilitate full and direct reimbursement.
- The actual number of Guide holders indicates a national incidence rate of 4.3%, well below the estimated total prevalence. Also, patients do not have a clear understanding of the Guide's purposes as they perceive it as a tool simply to buy medication.
- The revised «Guide» is based on the UK model and is to be implemented in 2006.

The Diabetes Dossier, introduced in 1998, is a manual of good professional practice including guidelines and technical orientations, and names of doctors and public bodies involved in the implementation of the PNCD across the country. A revised Dossier is expected in 2006.

5. GUIDELINES

The DGS adopted specific guidelines (seven «Circulares normativas» and one «Circular informativa») to support the PNCD implementation, as well as the above tools.

6. REIMBURSEMENT

Within the framework of the PNCD, two protocols involving the relevant stakeholders were adopted in 2003 to ensure a better reimbursement of diabetes costs. Even before these protocols, insulin and oral drugs were totally reimbursed.

- The first protocol sets a maximum price for self-monitoring strips and stipulates that the government will subsidise these strips up to 85% of their selling price directly in the pharmacies.
- The second protocol ensures direct reimbursement via pharmacies for reagent strips, syringes, needles and injection products. It also launched a test programme aimed at providing care in pharmacies to 5,000 people with diabetes by the end of 2005.

PORTUGAL

Diabetes associations advocate the extension of reimbursement focusing on hypertension, cholesterol and blood coagulation treatment drugs.

OUTLOOK[149]

The PNCD revision is expected by the end of 2005. Expected policy improvements include:

- Creation of a national survey on diabetes incidence and costs.
- Better allocation of human resources.
- Improved training, prevention and screening policies for all.
- Better coordination between primary care and more specialised care.
- Provision of financial support to patient associations to enable them to expand their information and prevention activities.

SLOVAKIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[150]	8.7 %
Total diabetes prevalent cases	338,700[151]
Cost of diabetes (% of total healthcare budget)	Not available
POLICY FRAMEWORK	
National Plan	2000 National Diabetes Programme – implemented 2002
Guidelines	2004 Slovakian Diabetes Association Prevention Guidelines (Type 1 & 2)
Planned Actions	Large scale screening programme, «Prevention Protect»

1. INCIDENCE/PREVALENCE OF DIABETES

There are more than 300,000 people in Slovakia who suffer from diabetes. This figure amounts to a prevalence rate for diabetes of 8.7 % of the adult Slovakian population.
Some 85 % of people with diabetes suffer from Type 2 diabetes. The growth rate of the disease is high; the number of people with diabetes has more than doubled since 1980. The International Obesity Task Force has identified Slovakia as one of six EU countries in which the rate of male obesity has overtaken the US, with some 69 % of adult males overweight.

2. COST OF DIABETES CARE

No figures are currently available for the cost of diabetes care. However, government officials referred to the cost burden of diabetes to justify the healthcare reform package adopted in October 2004.[152]

3. GOVERNMENT PRIORITIES

Diabetes specialists and patient associations do not believe that government has made diabetes a priority. This failure is best illustrated by the dramatic decline in funding for the National Diabetes Programme. The Health Ministry gave the Programme 40 million Euros in 2002, 9 million Euros in 2003 and no funding in 2004! The main reason for the lack of funding is the government's ongoing reform of the entire healthcare system. A series of reform bills were adopted in October 2004 and call for a number of changes in the healthcare system designed to lower debts and increase co-payments.

5. POLICY FRAMEWORK[153]

The National Diabetes Programme covering the period 2002-2006 promotes:

- Large-scale prevention and screening programmes across the country.
- Annual monitoring of implementation.

However, government funding practically ended in 2004 with a predictable impact on the plan's future effectiveness.[154]

5. GUIDELINES

- The 2004 Slovakian Diabetes Association Treatment Guidelines (Type 1 & 2 diabetes), published in the Journal Diabetes a Obezita, are addressed to diabetes specialists and nurses, healthcare professionals and insurance companies.

- Prescription guidelines are being prepared by the Ministry of Health. The Slovakian Diabetes Association has made its own prescription recommendations, which are entirely shared by the MoH.

6. REIMBURSEMENT / PRESCRIPTIONS

Slovakia has recently moved from an entirely state-funded and free healthcare system to a partly private insurance-based system, entailing co-payments. Slovakians must subscribe to a compulsory public healthcare insurance and must pay for healthcare services. The treatment of serious chronic diseases such as diabetes, however, remains free of charge.

OUTLOOK

Diabetes treatment in Slovakia would benefit from major policy change in favour of diabetes prevention, in particular through:

- Better funding of the National Diabetes Programme
- Early screening, as recommended by patient associations and diabetes specialists
- Better training and education for professionals about diabetes, notably through the creation of a diabetes education centre for healthcare professionals and the promotion of national diabetes institutes in each member state
- Research funding as an essential component of a coherent European strategy.

SLOVENIA

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[155]	9.6%
Total diabetes prevalent cases	145,200
Cost of diabetes (% of total healthcare budget)	Not available
POLICY FRAMEWORK	
National Plan	–
Guidelines	Type 1 St Vincent Declaration
Planned Actions	• National Diabetes Plan expected • National Guidelines Type 2 expected

1. INCIDENCE/PREVALENCE OF DIABETES

An estimated 9.6% of the population of Slovenia is affected by diabetes. The number of people living with diabetes is expected to rise by an annual rate of 4%. Estimates of the current number of people living with diabetes range from 100,000 – 160,000, out of a total population of almost two million.[156] In 1983, a register of people with diabetes was established but ceased to operate in 1997. A new version of the register is currently being established.

2. COST OF DIABETES CARE

While no official figures exist, it is recognised that better data could contribute to better planning of future spending on health.

3. GOVERNMENT PRIORITIES

Diabetes is not being given significant attention and the development of a new framework is stalled.

4. POLICY FRAMEWORK

Slovenia is looking at Finland as a model. In April 2005, the Slovene Ministry of Health met with the President of the Diabetes Association in Finland. Objectives of the national programme were outlined. Since then, no progress has been made, raising concerns about political commitment.
In parallel, a project for recording statistical data on the quality of diabetes treatment is currently underway with the support of the private sector. Such information is considered critical to shape a successful policy on diabetes care.

5. GUIDELINES

Official national guidelines for the prevention and treatment of diabetes Type 2 are currently being prepared by the Committee for Diabetes Slovenia. However, the absence of consensus among the medical profession could be a stumbling block to the establishment of national guidelines.

6. REIMBURSEMENT

Treatment for diabetes is free and includes medical check ups, medical treatment, medicines (pills and insulin) and syringes.

OUTLOOK

Agreement among EU countries would help stimulate Slovenia to move ahead with its project to establish a national diabetes programme.

SPAIN

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[157]	9.9%
Total diabetes prevalent cases	3,004,300
Cost of diabetes (% of total healthcare budget)	2.4 – 2.6 million Euros (6%)
POLICY FRAMEWORK	
National Plan	Regional Plans in place (Valencia, Andalucia)
Guidelines	Regional
Planned Actions	National Plan «Integral Approach to Diabetes»[158] expected by 2006

1. INCIDENCE/PREVALENCE OF DIABETES

Diabetes mellitus is recognised as a major health problem in all regions in Spain, with an overall prevalence rate as high as 9.9%, among the highest in Europe. Of the total diabetic population, 90% are Type 2, and 10% Type 1.[159]
In a bi-annual study carried out by the National Health Audit (Encuesta Nacional de Salud) in April 2005, some 23,000 people were interviewed about their lifestyle. The results highlighted that 5.9% of the people in the sample over 16 years were diagnosed with diabetes.[160]
For the last 12 years the cities of Vizcaya in the País Vasco, Barcelona in Cataluña and Madrid have systematically registered new cases of Type 1 diabetes. Their data revealed an incidence rate for diabetes in Spain of 11 cases/100,000 inhabitants/year.

2. COST OF DIABETES CARE

Estimates in 2002 of the direct costs of diabetes care ranged from 2.4 – 2.6 billion Euros, representing 5 – 6% of the healthcare spending.

- Hospitalisation took the largest share or 933 million Euros
- Medicines other than insulin and oral anti-diabetics totalled 777 – 932 million Euros.
- Insulin and oral anti-diabetics amounted to 311 million Euros
- Primary care consultations amounted to 181 – 272 million Euros
- Specialist treatment amounted to 127 – 145 million Euros[161]

A 2004 study on «Direct healthcare costs of diabetes patients in Spain», by Juan Oliva, et al. puts the share of diabetes at 7.4% of total healthcare spending.
There is no data on the breakdown of total spending on pharmaceuticals by disease category.[162] In 2003 public health expenditure for all drugs amounted to 8.9 billion Euros, representing 22.4% of the Spanish health budget.

3. GOVERNMENT PRIORITIES

Diabetes is not a priority for either the national government or for the regions, despite the fact that certain regions have introduced their own action plans. As a result, there is a lack of financial resources to fight the disease. Decentralisation will delay any national effort.

4. POLICY FRAMEWORK

At national level, the Ministry of Health is working with the Federación Española de Diabetes (FED) to develop a national plan «Integrated Approach to Diabetes», which would lead to the updating of existing guidelines currently in operation in various regions.
At regional level, Valencia and Andalucia have their own action plans for diabetes. Valencia was the first region to take specific action to deal with diabetes with the Decree 74/1995, establishing the Integrated Action Plan for Assistance to Diabetes Patients. The plan emphasises the importance of prevention and early diagnosis; improvements in the quality of life of people with diabetes, and the need to avoid, or at least delay, diabetes complications.

5. GUIDELINES

The FED is cooperating with the Ministry of Health on the Integrated Approach to Diabetes. This will lead to the updating of existing regional guidelines.

6. REIMBURSEMENT

Most people are covered by the national social security system, paying 40% of the cost of their prescribed medication. Retired people are not charged for medicines and medicines for certain chronic conditions, such as hypertension and diabetes. Visits to public health centres and hospitals are also free.

OUTLOOK

For the FED, Spain's major challenge is to overcome the lack of specialised diabetes units in hospitals. Diabetes patients are treated by their GP or by nurses with a very basic knowledge of diabetes. Diabetes units with a specialised team of diabetes professionals (diabetologist, psychiatrist, chiropodist and dietician) should be created in hospitals across Spain.
The Federation of Diabetic Patients from the Community of Madrid, for one, would welcome an EU diabetes initiative to support national government action and to promote best practice. A European Union Recommendation would be particularly welcome and strongly supported.

SWEDEN

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[163]	7.3%
Total diabetes prevalent cases	456,900
Cost of diabetes (% of total healthcare budget)	267.2 million Euros (6%)
POLICY FRAMEWORK	
National Plan	–
Guidelines	National Board of Health and Welfare 1999 Guidelines for diabetes care[164]
Planned Actions	–

1. INCIDENCE/PREVALENCE OF DIABETES

As elsewhere in Europe, demographic change in Sweden has led to an increasingly aged population which puts considerable pressure on the national healthcare system. Changing lifestyles are also adding to the burden due to the rise in obesity and related lifestyle diseases, including cardiovascular disease and diabetes.
IDF estimates the prevalence rate to be 7.3% (approximately 460,000 persons), while other reports estimate that 3%–4% of the total Swedish population have diabetes (predominantly Type 2 diabetes), which translates into about 300,000 persons. It is estimated that about 80,000 persons have undiagnosed Type 2 diabetes.[165]
Approximately 1,500 children aged 0–14 years have Type 1 diabetes, while about 6,400 children under the age of 18 have the disease.

2. COST OF DIABETES CARE

There are not many Swedish health-economic studies in this field, but in recent years both IHE and the Centre for Health Economics at the Stockholm School of Economics have published several analyses.
The total cost for direct care of diabetes patients in 1994 was estimated at more than 267.2 million Euros. Indirect costs amounted to 83.3 million Euros for sick leave, 192.4 million Euros for early pensions and 74.8 million Euros for early deaths (1994).[166]
Patient groups estimate the cost of diabetes treatment in Sweden at 2,630 Euros per patient per year for the medical costs and 4100 Euros in indirect costs per patient per year.[167] The Ministry of Health estimates that hospital costs for diabetes patients amount to 2,980 Euros per patient per year (1993) and that it will be 2,995 Euros by 2010.
Early findings from the European CODE 2 study showed that the cost of caring for all patients with Type 2 diabetes in Sweden amounted to approx. SEK 7 billion in 1998 or 5% of the total costs of healthcare in Sweden. The average annual cost per patient is hence about SEK 25,000; with respect to patients suffering from both micro- and macro-vascular complications, this cost is doubled.

3. GOVERNMENT PRIORITIES

The Swedish government is focusing on diabetes as part of its fight against obesity and the growth of lifestyle diseases. In April 2003, the government approved 11 public health objectives including increasing physical activity and healthy diets.[168]

4. POLICY FRAMEWORK

In 1999 the National Board of Health and Welfare issued guidelines for diabetes care and treatment, drafted in cooperation with health professionals and the Swedish Diabetes Association. The main objective of the guidelines is to ensure patients' access to equal knowledge-based care in all parts of the country.[169]
The National Board of Health and Welfare still points to the need for further education for patients on self-care. The Board also emphasises the need for improvement in the areas of individual agreements between doctors and patients, individual objectives/goals for care and treatment and stricter criteria for control of the disease.[170]

5. GUIDELINES

The 1999 National Board of Health and Welfare Guidelines advised against screening the total population for diabetes. Screening should focus instead on those seeking treatment or care for conditions that are known to be linked to Type 2 disease.[171]
They focus on avoiding long-term complications and on maintaining the diabetic's quality of life. As short-term treatment goals the guidelines emphasise the importance of controlling the patient's blood sugar level, haemoglobin A1c level, lipids and blood pressure, whereas the long-term treatment goals focus on avoiding complications and associated diseases. Approximately 10% of all people with Type 2 diabetes require insulin treatment. Patient education is central to the guidelines and to achieving their goals.[172]

6. REIMBURSEMENT

Sweden's reimbursement system protects individuals who require large amounts of medicines from incurring large costs. Healthy individuals who have a temporary need for treatment pay a larger proportion of their prescription costs than individuals with chronic diseases. This approach is called «purchase cost maximisation» and is run by the National Social Insurance Board, according to which, the sale price for each product is set.
A nationwide database, used by all pharmacies, ensures that patients are correctly subsidised each time he/she uses a prescription for a reimbursable product. The database keeps information on the amount that the patient has paid within 12 months from the initial purchase of a reimbursed drug.

OUTLOOK

In light of the fact that the standards of diabetes care and treatment vary considerably across the EU, the National Board of Health and Welfare would support further discussion of standards and best practice for diabetes care in Europe by the EU institutions.[173]

THE NETHERLANDS

COUNTRY OVERVIEW	
FACTS	
Estimated prevalence (% of total population above 20 yrs old)[174]	3.7%
Total diabetes prevalent cases	432,200
Cost of diabetes (% of total healthcare budget)	2.5% (CODE 2)
POLICY FRAMEWORK	
National Plan	2005-2009 Better Diabetes Care Plan
Guidelines	• CBO – Dutch Institute for Healthcare Improvement Guidelines (Type 1 & 2 diabetes) • NGH – Dutch College of General Practitioners practice guidelines for the diagnosis & management of Type 2 diabetes (1989; 1998)
Planned Actions	• CBO Guidelines – revision expected • NGH Guidelines- revision expected

1. INCIDENCE/PREVALENCE OF DIABETES

The estimated prevalence of 3.7% is relatively low compared to other EU countries. Between 1999 and 2003, the percentage of The Netherlands' population with Type 2 diabetes almost doubled from 1.7% to 3.1%.

3. COST OF DIABETES CARE

The cost of diabetes is a modest 2.5% of the total healthcare budget, the lowest spending recorded among the EU 25 member states.

4. GOVERNMENT PRIORITIES

Despite a relatively low prevalence rate and the lowest healthcare spending on diabetes in the EU, the Dutch Health Ministry has highlighted diabetes as a priority in their report on prevention Preventienota Langer Gezond Leven, in October 2003 and subsequently has been focusing in improving diabetes care.

5. POLICY FRAMEWORK

In 2005, The Netherlands adopted a national plan for diabetes care.

In July 2004 the Dutch Health Ministry had presented a national strategy and action plan to improve diabetes care («Diabeteszorg Beter 2005-2009»). The Ministry convened a taskforce which presented its final report in June 2005. In July 2005, the Minister of Public Health, Wellbeing and Sport presented the plan of action and recommendations of the task force to the government.
The proposed diabetes care plan addresses the need to have multi-disciplinary specialised diabetes care teams. It also provides a series of basic principles for care providers to respect:

- The approach to diabetes care; care has to be patient-focused, with the patient being the key figure in the management of his disease.
- The organisation of diabetes care; good diabetes care has to be multidisciplinary, with the different aspects of care geared to one another. Care has to be based on a protocol for good diabetes care, which is approved by all parties participating in diabetes care. The taskforce suggests the use of the Standard for Good Diabetes care as developed by the Dutch Diabetes Federation.

The instrument for the organisation of care to be further developed is called the «Keten-dbc diabetes». A Program Chain of Diabetes Care (Programma Diabetes Ketenzorg) started in September 2005. Keten-dbc diabetes lays the foundation of new insurance policy.

- The re-organisation of tasks in diabetes care among the different participating disciplines (based partly on the introduction of Keten-dbc diabetes).
- Attention to Intensive Conventional Therapy (ICT) developments which can support patient care and improve transparency of results of care (e.g. development of an electronic patient record).
- Transparency concerning care providers and diabetes care; to gain an insight into the results of diabetes care provided by diabetes care groups, parameters and indicators for good diabetes care have to be formulated. In the future, information about diabetes care will be provided on a national level.
- The Minister will report to the government on progress made in the approach of diabetes in 2006.

5. GUIDELINES

Dutch Diabetes Association – CBO Guidelines

The Dutch Diabetes Association, in partnership with the largest health organisation, the CBO, has issued highly successful guidelines, encompassing prevention, diagnosis, control and treatment of Type 1 and Type 2 diabetes. These Guidelines, issued five years ago, are due to be updated.

Dutch College of General Practitioners – NHG guidelines 1989; 1998

As the majority of people with Type 2 diabetes are treated by general practitioners, the Dutch College of General Practitioners (NHG) issued national practice guidelines for the diagnosis and management of people with Type 2 diabetes.
The medical community widely regards the working guidelines as excellent. In a recent study of 13 national diabetes guidelines, the Dutch model was consistently referred to as exemplary.[175] The updating of the NHG guidelines by the Dutch College of General Practitioners is expected in January 2006.
The 1998 version introduced important changes such as:

- Stronger emphasis on the need for structured diabetes care
- Different cut-off points for establishing the diagnoses
- Guidelines for the detection of people living with diabetes in high-risk groups
- Guidelines for treatment with insulin
- Guidelines for the treatment of hypertension and lipid disorders in patients.[176]

6. REIMBURSEMENT

In general, diabetes treatment is fully reimbursed by the national healthcare system. However, a new health insurance system will come into force on 1 January 2006 in which healthcare provision will become income related.

OUTLOOK

The Dutch Health ministry, and leading doctors, believe that the physician guidelines in The Netherlands are widely respected and very effective in managing diabetes. There is general satisfaction with the way the guidelines alone are dealing with diabetes in The Netherlands.

UNITED KINGDOM

COUNTRY OVERVIEW

FACTS

Estimated prevalence (% of total population above 20 yrs old)[177]	3.9%
Total diabetes prevalent cases	1,767,000
Cost of diabetes (% of total healthcare budget)	9%[178]

POLICY FRAMEWORK

National Plan

2001 National Service Framework for Diabetes

National Health Service's Improvement Plan – June 2004

Guidelines

- National Institute of Health and Clinical Excellence Guidelines (NICE) – Type 1 & 2 diabetes
- National Health Service GP new General Medical Services Contract (newGMS) and Quality Outcomes Framework (QoF)
- The NICE Health Technology Appraisal on patient-education models for diabetes

Planned Actions

- Increased investment for the prevention and early detection of diabetes (new GMS)
- «Self-Help» Expert Patient Education Programme

1. INCIDENCE/PREVALENCE OF DIABETES

The overall prevalence for diabetes in 2003 is estimated at 3.9% with 1,767,000 cases. Most health experts agree that the UK is facing a huge increase in the number of people with diabetes. Since 1996 the number diagnosed with diabetes has increased from 1.4 million to almost 1.8 million. By 2025 it is estimated that the number will increase to 2.1 million. Most of the increase in cases will be Type 2 diabetes, attributable to an ageing population and the rapidly rising numbers of people who live an unhealthy lifestyle resulting in being overweight or obese.

Children with Type 2 diabetes: Estimates suggest that there could be approximately 1,400 children under the age of 14 with Type 2 diabetes. If the current trend of increased childhood obesity continues and follows the pattern seen in North America, the UK will develop similar rates of Type 2 diabetes in children within the next ten to 15 years.

Minority ethnic groups: Type 2 diabetes is three to five times more common among people of Asian and African origin living in the UK than among the general population. Type 2 diabetes also tends to develop 5 – 10 years earlier in people from black and minority ethnic groups, the reasons for which remain unknown. However, it is suspected that several factors could play a role including genetic differences in how the body processes and stores fat, a general sedentary lifestyle and social deprivation.

Children with Type 1 diabetes: Half of the people with Type 1 diabetes in the UK are diagnosed under the age of 15 with the peak age for diagnosis being 10 – 14 years of age. However, while this figure is falling, the country is currently experiencing a steep increase in cases of children under five. There are 20,000 children and young people under 15 with Type 1 diabetes in the UK.

2. COST OF DIABETES CARE

In the UK, cost estimates vary. The financial burden of Type 2 diabetes was estimated at just under 5% of the nation's healthcare budget in 1998.[179] More recent estimates point to 9% of the annual NHS budget. This represents a total of approximately £5.2 billion per year.[178]
People with diabetes spend 1.1 million days in hospital each year. Most of this time is spent dealing with the long-term effects of the condition. New cases of diabetic kidney failure are costing the UK's National Health System up to £30 million per year to treat.
In addition to NHS expenditure, people living with diabetes are spending over £500 million of their own money on coping with the condition. Social service costs for people with diabetes stand at around £230 million each year.

3. GOVERNMENT PRIORITIES

UK government priorities for diabetes are explicitly outlined in the National Service Framework for Diabetes, published in 2001 and subsequently supplemented with various policy papers designed to:

- Stop inequalities in diabetes care, resulting in world-class diabetes services
- Prevent diabetes and secure early diagnosis, notably to avoid diabetes-related complications
- Improve patient education in terms of general health and wellbeing/prevention and appropriate self-care advice for diagnosed patients
- Increase eye screening to 100% by 2007 for patients diagnosed with both Type 1 and Type 2 diabetes.

4. POLICY FRAMEWORK

Diabetes benefits from an array of official policy frameworks. In recognition that there were significant variations in the quality of diabetes care across the UK, the government published the National Service Framework (NSF) for Diabetes in 2001. The primary goal of the framework is to enable patients with diabetes, or at risk of developing diabetes, to manage their illness and their lifestyle, by providing support, structured education and treatment.

- The NSF for Diabetes was the first NSF to tackle chronic disease management. It identified self-management as the core component. The NSF for Diabetes sets out a ten-year programme of change to deliver systematic care and support for all people with diabetes. This NSF exemplifies the approach to patient-focused services set out in The NHS Plan and The Expert Patient.
- The Delivery Strategy, published in January 2003, outlines a framework for continued progress towards the stated vision of «equitable, integrated, patient-centred and outcome-orientated care.»
  - By 2006, a minimum of 80% of people with diabetes are to be offered screening for the early detection (and treatment if necessary) of diabetic retinopathy; with 100% coverage by the end of 2007.
  - Updated practice-based registers will ensure that by 2006, people with diabetes receive systematic treatment regimes, including appropriate advice on diet, physical activity and smoking, in line with NSF standards.
  - Local diabetes networks should be set up in order to plan local services.
- The Department of Health is funding a pilot project – The Diabetes Heart Disease and Stroke Prevention Project (DHDS), to identify the prevalence of undiagnosed Type 2 diabetes and coronary heart disease and to screen for the undiagnosed.
- The Department of Health has also developed a pilot patient education programme for Type 2 diabetes, «Diabetes Education and Self-Management for Ongoing and Newly Diagnosed». DESMOND is a new structured group education programme which supports patients in identifying their own health risks and responding to them by setting their own specific behavioural goals. The DESMOND pilot is now being evaluated as one model among others.

- Practice-based diabetes registers are being formulated along the same lines as, and integrated with the CHD and stroke registers, but requiring greater amounts of diagnostic testing. This initiative is also supported by the inclusion of diabetes as a disease area in the Quality and Outcomes Framework of the General Medical Services Contract. Indicators have been identified, giving GPs an incentive to identify those at risk of diabetes and monitor those with diabetes for complications, so increasing the need for diagnostic testing. Whereas previously GPs may have struggled to find the resources to prioritise the condition, now a comprehensive set of standards will become the norm.

5. GUIDELINES

The National Institute for Clinical Excellence (NICE) has published a set of 5 guidelines for Type 2 diabetes. NICE stresses that systems of surveillance for the early detection of complications are also important as is effective management of late complications.

Management of blood glucose (Guidelines – Sept. 2002):

- People with Type 2 diabetes should have their haemoglobin A1c (HbA1c) measured at 2-6 monthly intervals
- People with Type 2 diabetes should be set a target HbA 1c level of between 6.5% and 7.5%

Management of Retinopathy (Guidelines – Feb 2002)

- People with Type 2 diabetes should have an eye examination at least once a year and more frequently if they are experiencing problems with their eyesight
- People with Type 2 diabetes who experience a sudden loss of vision or who have a suspected detached retina should be seen by a specialist within one day

Renal disease – Prevention and early management (Guidelines – Feb 2002)

- People with Type 2 diabetes should have their kidney function checked at least once a year and more frequently if they are at high risk of renal disease

Management of blood pressure and blood lipids (Guidelines – Oct 2002)

- People with Type 2 diabetes who do not have manifest evidence of cardiovascular disease should have their heart disease risk estimated annually. This risk level should then be used, in conjunction with measurements of blood pressure and blood lipid levels, to inform subsequent treatment options.
- People with Type 2 diabetes should have their blood pressure taken at least once a year. Advice and possibly treatment should be offered if blood pressure is consistently above the 140/80mmHg target.
- People with Type 2 diabetes should have their blood lipid levels checked once a year.

Prevention and management of foot problems (Guidelines – Jan 2004)

- People with Type 2 Diabetes should have an annual review as part of ongoing care, during which trained personnel should examine patients' feet to detect risk factors for ulceration.

6. REIMBURSEMENT

All patients diagnosed with diabetes are granted an exemption certificate, giving them free prescriptions for life. People with diabetes do, however, have to purchase blood glucose monitoring equipment from their pharmacist. They receive blood glucose testing strips on free prescriptions.
Pharmacists receive 85p for each prescribed item, per prescription from the Department of Health, plus a one-off fee for the item based on a national drug tariff (reflected by wholesale price of drug minus the expected 8% discount).

OUTLOOK

Although in the early days of implementation, based on information to date, the roll-out of the NSF for Diabetes appears to be patchy, particularly with regard to the flagship national priority – retinal screening. This is generally down to insufficient resources, which are put under further strain by the increasing numbers of diagnosed patients, and also due to a lack of organisation at the local level. In some cases, annual check-ups are being deferred to 18–21 months, which could have serious consequences in the number of untreated diabetes complications.

The responsibility for implementation lies in the hands of primary care trusts and therefore relies on local priorities and decision-making. On the positive side, the framework is a good benchmark for measuring the performance of healthcare providers and puts the UK in a better position than previously.

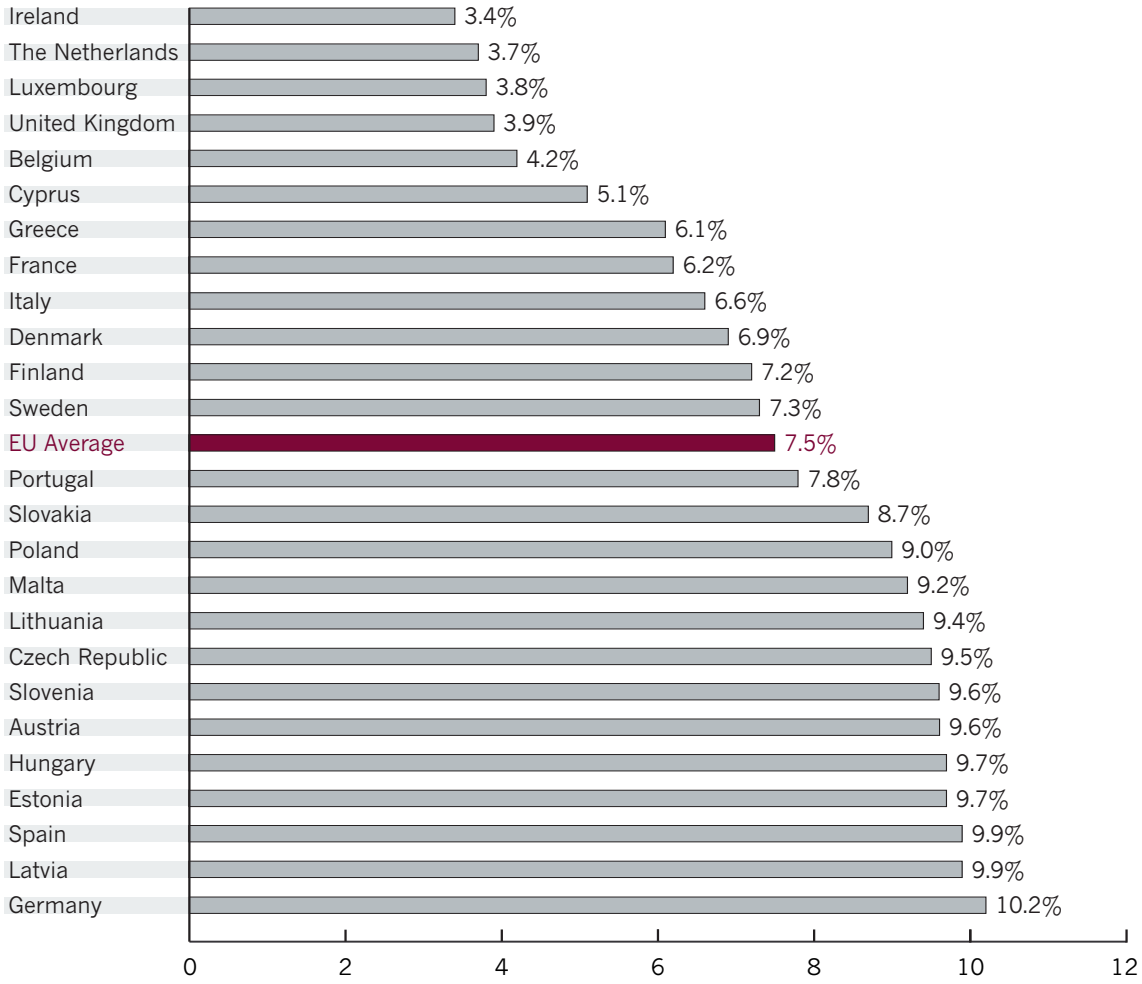
ANNEX I – DATA

PREVALENCE ESTIMATES OF DIABETES MELLITUS (DM) – EU

COUNTRY	2003 DM PREVELANCE	TOTAL*	2025 DM PREVELANCE	TOTAL*
Austria	9.6%	576.0	11.9%	702.8
Belgium	4.2%	315.1	5.2%	394.6
Cyprus	5.1%	27.7	6.3%	40.1
Czech Republic	9.5%	734.9	11.7%	887.4
Denmark	6.9%	264.9	8.3%	330.4
Estonia	9.7%	96.3	11.0%	89.4
Finland	7.2%	273.5	10.0%	383.9
France	6.2%	2,653.6	7.3%	3,285.3
Germany	10.2%	6,294.3	11.9%	7,143.7
Greece	6.1%	493.0	7.3%	566.4
Hungary	9.7%	711.4	11.2%	761.7
Ireland, Republic of	3.4%	89.8	4.1%	134.5
Italy	6.6%	2,880.1	7.9%	3,198.3
Latvia	9.9%	173.6	11.1%	178.2
Lithuania	9.4%	248.9	10.8%	284.1
Luxembourg	3.8%	12.5	4.4%	18.1
Malta	9.2%	25.8	11.6%	35.1
Netherlands	3.7%	432.2	5.1%	635.3
Poland	9.0%	2,506.5	11.0%	3,152.6
Portugal	7.8%	584.5	9.5%	706.2
Slovakia	8.7%	338.7	10.7%	443.3
Slovenia	9.6%	145.2	12.0%	173.5
Spain	9.9%	3,004.3	10.1%	2,944.9
Sweden	7.3%	456.9	8.6%	548.2
United Kingdom	3.9%	1,671.5	4.7%	2,141.4
EU Average	**7.5%**	**Total 25,011.2**	**8.9%**	**Total 29,179.6**

*Number of people with DM (000s) in the 20 – 79 age group
Source: Diabetes Atlas, International Diabetes Federation. Generated Table, Prevalence DM Comparisons 2003 – 2025

PREVALENCE ESTIMATES OF DIABETES MELLITUS (DM) – EUROPEAN REGION 2003



ANNEX II

ANNEX II – PROGRAMME FOR THE PREVENTION OF TYPE 2 DIABETES IN FINLAND (EXTRACTS)

1. THREE APPROACHES TO PREVENTION OF TYPE 2 DIABETES

Type 2 diabetes is one of the leading problems for the primary healthcare system, within which most patients with this disease are treated. Prevention of the development of Type 2 diabetes and its complications is the only way of preventing the problem from becoming too great for society to bear.

Prevention of Type 2 diabetes is backed by compelling research evidence. The Finnish Diabetes Prevention Study (DPS) was the first in the world to demonstrate the feasibility and successfulness of prevention (Tuomilehto et al 2001). The message from the study is clear: development of Type 2 diabetes can be prevented or delayed by modification of eating and physical activity habits despite the presence of a genetic predisposition to the disease and risk factors for its development.

The major modifiable risk factors for Type 2 diabetes are mostly well known: obesity, sedentary lifestyle and nutritional imbalance, ie excessive intake of energy and fat and insufficient intake of fibre. According to DPS (see Chapter 7), addressing these factors can lower the risk of diabetes by 58 per cent.

Three Strategies of the Prevention Programme

Probably at least a third, and possibly up to half, of the Finnish population have a genetic predisposition to Type 2 diabetes. It is therefore important to aim any prevention measures simultaneously at the population as a whole and at individuals with a particularly high risk of developing the disease.

In addition, a straightforward system is required for initiating early treatment of persons with Type 2 diabetes diagnosed at screening, with a view to preventing the development of complications, particularly cardiovascular diseases.

To meet these requirements, the Programme for the Prevention of Type 2 Diabetes comprises three concurrent strategies. The mainstays of all three strategies are health-promoting eating and exercise habits, intensive lifestyle counselling and an extensive range of participating players. Acting alongside the primary healthcare system are the entire occupational healthcare system, pharmacies with their diabetes liaison pharmacists and the network of weight-management and physical-education services offered by various non-governmental organisations. The prevention programme has great significance for public health, as the interventions proposed also work to prevent obesity and cardiovascular disease.

The **Population Strategy** (see Chapter 8) is aimed at promoting the health of the entire population by means of nutritional interventions and increased physical activity so that the risk factors for Type 2 diabetes, such as obesity and metabolic syndrome, are reduced in all age groups. This strategy comprises both society-oriented measures and measures targeting individuals with the aim of preventing obesity.

In the **High-Risk Strategy** (see Chapter 9), individual-oriented measures are targeted at individuals with a particularly high risk of developing Type 2 diabetes. This strategy provides a systematic model for the screening, education and monitoring of people at risk. People at risk will be screened using the Type 2 Diabetes Risk Assessment Form developed by the National Public Health Institute (see Chapter 12.4).

The **Strategy of Early Diagnosis and Management** (see Chapter 10) is directed at individuals with newly diagnosed Type 2 diabetes. Its aim is to bring these people into the sphere of systematic treatment, thus preventing the development of diabetic complications that reduce the affected person's quality of life and are expensive to manage. This strategy offers practical instructions for intensive lifestyle management, as well as quality criteria for its practical implementation.

2. ORGANISATIONAL OBJECTIVES AND OUTCOME GOALS OF THE PROGRAMME

The main objective of the Programme for the Prevention of Type 2 Diabetes is to develop the organisation of health promotion and the practices of preventive healthcare so that the prevention of obesity, Type 2 diabetes and cardiovascular disease becomes a broad-based, systematic activity. The programme's organisational objectives and outcome goals for 2010 are pursued through the Population Strategy, the High-Risk Strategy and the Strategy of Early Diagnosis and Management.

Population Strategy

Organisational Objectives

- There will be a functional health-promotion organisation at the national, regional and local levels, with well-defined responsibilities. Health-promotion activity will encompass cooperative efforts for the improvement of environments and social practices, as well as coordination of cooperation in physical education, nutritional education and weight management, using national networks.
- The current resources for health promotion and the prevention of major public-health problems will be reviewed and utilized effectively. Additional resources will be allocated as necessary at national, regional and local levels.
- Each municipality will have an action plan of its own for health promotion and for the prevention of the major public-health problems as part of the local government welfare strategy. There will also be a network of players and services relating to health promotion in each municipality. The outcome of the action plan will be assessed on a regular basis, and the outcome data, new insights and experience gained will be used to update activities.
- A model of «ease of access» will be employed in health promotion, with a view to reaching target groups outside formal institutions, such as the school health service and occupational healthcare.
- Health promotion and focused prevention of the major public-health problems, target-oriented forms of activity in the primary healthcare system (including health-guidance centres, occupational healthcare, school and student health services), as well as the healthcare of conscripts and the elderly, will be planned.
- Common approaches jointly agreed by the various players, continuing training of personnel, quality assurance and associated regular assessments will ensure that health promotion is effective.
- The level of nutritional expertise will be enhanced in primary and occupational healthcare. Support groups for weight management will be a permanent feature of the customer service at healthcare centres and units of occupational healthcare. Conversely, healthcare will be an integral part of local networks of services related to weight management, physical education and nutritional education.

Outcome Goals

- The Implementation Project of the Programme for the Prevention of Type 2 Diabetes (2003–2007) and the core recommendations of the national action programmes for the enhancement of health and the prevention of the major public-health problems will be implemented.
- These include the Action Plan for Promoting Finnish Heart Health (1997–), the Government Resolution on the Development of Health-Enhancing Physical Activity (2002), the Action Programme for Implementing National Nutrition Recommendations (2003), National Recommendations for the Local Promotion of Health-Enhancing Physical Activity (2000) and the Development Programme for the Prevention and Care of Diabetes (2000 – 2010).

ANNEX II

- Most people will be familiar with the basic messages concerning healthy eating and health-enhancing physical activity, which will be reflected as an increase in daily activity and wider adherence to health-promoting nutrition.
- The number of people who have at least 30 minutes of exercise each day – including normal daily activity – will increase.
- The proportion of obese individuals (body-mass index, BMI 30) among the working-age population will decline from 20% to 15%, the increase in Type 2 diabetes will taper off, and cardiovascular disease and other adverse consequences of obesity will be reduced.
- Families, day-care centres and schools will work actively together in education for healthy lifestyles. Physical activity, healthy eating habits and mental and physical well-being will increase and obesity will decrease, among children and young people.
- The core messages of the prevention programme will have reached the various players, from local government policymakers to healthcare professionals and non-governmental organisation officials. Awareness of the programme, attitudes, the success of public information and effectiveness will be assessed by questionnaires.
- An ever greater proportion of the population will be aware of their own opportunities for enhancing their health and will know the causes of Type 2 diabetes and ways of preventing the development of the disease. The quality of health communication will be improved, and the marketing of health-promoting activities will be enhanced. Attitudes and the level of knowledge will be measured by conducting opinion polls.

High-Risk Strategy

Organisational Objectives

- Screening, education and monitoring of individuals at risk of developing Type 2 diabetes will be planned forms of activity for primary and occupational healthcare. Recording of lifestyles will be a functional and practical element of the electronic patient record system, and monitoring of outcomes will be part of healthcare units' quality monitoring system.
- Current Care Guidelines relating to hypertension, adult obesity and smoking will be applied to the education and care of individuals at risk of developing Type 2 diabetes. Health-guidance centres, school health services and the paediatrics' units of specialized medical care will adhere to the Current Care Guideline on Childhood Obesity.

Outcome Goals

- 75% of those belonging to the risk groups for Type 2 diabetes will recognize having a high probability of developing the disease and will have received instructions for managing their diabetes risk.
- 50% of high-risk individuals will receive intensive lifestyle counselling and monitoring or will make self-motivated efforts to prevent Type 2 diabetes.
- Screening will detect 70% of those with undiagnosed diabetes.
- The functionality of the Programme for the Prevention of Type 2 Diabetes and the cost-effectiveness of prevention will have been demonstrated by means of the Implementation Project of the programme over the period 2003–2007.

Strategy of Early Diagnosis and Management

Organisational Objectives

- Intensive lifestyle management will be started immediately, cardiovascular risks will be assessed and a long-term management plan including subsequent options will be drawn up for individuals with Type 2 diabetes diagnosed in conjunction with screening and monitoring. Their risk factor status will be regularly monitored at annual check-ups and, if necessary, their treatment will be stepped up without delay by instituting appropriate medication to prevent the development of diabetic complications.

Outcome Goals

- People with newly developed Type 2 diabetes will get off to a good start in treatment, learn right from the start the significance of nutrition, physical activity and weight control for the management of their disease and see their personal role in preventing complications.
- The drug therapy related to diabetes management will be implemented optimally.
- Complications of diabetes will be reduced in line with the objectives of Dehko.

3. RECOMMENDATIONS FOR ACTION

The Programme for the Prevention of Type 2 Diabetes includes 12 key measures for achieving the goals of the Population Strategy, the High-Risk Strategy and the Strategy of Early Diagnosis and Management.
The implementation of the key measures requires wide-ranging cooperation among various players for promoting healthy nutrition and physical activity, as well as improvement of the preparedness of the Finnish healthcare system and restructuring of preventive healthcare. In implementation, all current health policy strategies, programmes and projects will be utilized, as well as the services of organisations involved in public health, nutrition and physical education.

ANNEX II

KEY MEASURES

- The national, regional and local health-promotion organisation will be built into a functional, modern and service-oriented system. Health promotion will be included in the operational and financial plans of local government, and the resources allocated to this activity will be increased as necessary.
  Players: municipalities, provinces, central government, Finnish Centre for Health Promotion, non-governmental organisations

- The level of nutritional expertise in primary healthcare will be enhanced by creating a substantial number of new posts for nutritionists.
  Players: municipalities, hospital districts

- An efficient system of further training of healthcare, catering and teaching staff will be set up with the aim of developing and maintaining professional skills in nutrition, physical education, weight management and the prevention of the major public-health problems.
  Players: healthcare, hospital districts, provinces, educational institutions, Local Government Training Ltd, National Research and Development Centre for Welfare and Health, UKK Institute for Health Promotion Research, non-governmental organisations

- Uniform national recommendations will be drawn up for carrying out age-related periodic health examinations of adults in primary healthcare.
  Players: Ministry of Social Affairs and Health, National Research and Development Centre for Welfare and Health, Association of Finnish Municipalities, professional bodies and expert organisations in healthcare, other organisations

- A model of «ease of access» will be constructed for health promotion, with a view to reaching target groups outside formal institutions, such as the school health service and occupational healthcare.
  Players: National Research and Development Centre for Welfare and Health, Association of Finnish Municipalities, municipalities

- Public authorities, the healthcare system and non-governmental organisations will engage in wide-ranging cooperation to direct resources to the well-being of children, young people and families.
  Players: Ministry of Education, Ministry of Social Affairs and Health, National Board of Education, National Research and Development Centre for Welfare and Health, Association of Finnish Municipalities, Finnish Centre for Health Promotion, schools, day-care centres, Children's Health Forum, other organisations

- The Type 2 Diabetes Risk Assessment Form will be put to use by healthcare centres and occupational health units. People assessed as having a high risk of developing Type 2 diabetes will receive counselling aimed at reducing this risk. Intensive education and treatment of persons with newly diagnosed diabetes will be started without delay.
  Players: healthcare centres, occupational health units, hospital districts, Finnish Diabetes Association

- The proposals of the Committee on Development of Health-Enhancing Physical Activity will be implemented as set out in the relevant Government resolution.
  Players: Government, ministries, expert organisations in physical education, social welfare and health, primary healthcare and social service institutions, municipalities, schools, day-care centres, workplaces, non-governmental organisations

- The proposals of the National Nutrition Council's Action Programme for Implementing National Nutrition Recommendations will be implemented.
  Players: Government, ministries, municipalities, families, primary healthcare, occupational healthcare, healthcare for the elderly, mass catering, non-governmental organisations

- A national network of nutritional-education, physical-education and weight-management services will be set up to support the healthcare system.
  Players: Ministry of Social Affairs and Health, Finnish Centre for Health Promotion, sports institutes, UKK Institute for Health Promotion Research, rehabilitation institutions, non-governmental organisations

- A national system for assessment of health promotion will be set up.
  Players: Ministry of Social Affairs and Health, National Research and Development Centre for Welfare and Health, National Public Health Institute, Finnish Institute of Occupational Health, Social Insurance Institution, Association of Finnish Municipalities, Finnish Centre for Health Promotion, UKK Institute for Health Promotion Research, universities

- A project entitled Healthy Media will be implemented. The Healthy Media Project is a cooperative effort among non-governmental organisations, the media and various other players with the aim of enhancing Finnish news and health journalism so that media publicity will provide sustained support for other forms of health promotion and disease prevention.
  Players: Finnish Diabetes Association, Finnish Heart Association, other non-governmental organisations involved in public health, nutrition or physical education

4. IMPLEMENTATION AND ASSESSMENT OF THE PROGRAMME

Implementation

Preventing Type 2 diabetes is the main objective of the Dehko Programme (Development Programme for the Prevention and Care of Diabetes in Finland 2000–2010). By 2010, the prevention of Type 2 diabetes and, at the same time, cardiovascular disease and obesity, should be a planned and evidence-based form of activity for primary and occupational healthcare, backed by an extensive cooperation network of non-governmental organisations and other players.

As coordinator of the preparation and implementation of Dehko, the Finnish Diabetes Association also undertook to prepare the Programme for the Prevention of Type 2 Diabetes with the help of a broad-based group of invited experts. In addition, the Finnish Diabetes Association is itself one of the numerous players in the programme. In the implementation of the programme, the Population Strategy concerns all the inhabitants of Finland, with the players consisting of parties involved in health promotion at the local, regional and national levels. The High-Risk Strategy and the Strategy of Early Diagnosis and Management are mainly the responsibility of the healthcare system, together with other local government players and non-governmental organisations.

Non-governmental organisations involved in social affairs, health and physical education contribute to the prevention programme by systematically directing their existing services to both the entire population and risk groups in cooperation with primary and occupational healthcare. All the players will have access to the Programme for the Prevention of Type 2 Diabetes and its ancillary materials. For each of the three strategies, a cooperation network will be formed to carry out the practical implementation of the programme. As regards healthcare, the programme will be launched as a joint exercise by the Finnish Diabetes Association, the Finnish Heart Association, the diabetes working groups of the various hospital districts, occupational health service, non-governmental organisations involved in physical education, etc.

ANNEX II

Training related to the programme and the prevention of Type 2 diabetes in general will be arranged in all hospital districts.
Implementation Project in Four Hospital Districts in 2003–2007:
To get the prevention programme underway and measure its effectiveness, four hospital districts have been appointed as Pilot Districts for a period of five years, 2003–2007. In these Pilot Districts the implementation of the programme will be systematically assessed, particularly in terms of the High-Risk Strategy and the Strategy of Early Diagnosis and Management. The Pilot Districts of this Implementation Project comprise the hospital districts of South Ostrobothnia, Central Finland, Pirkanmaa and North Ostrobothnia. It is envisaged that the Implementation Project will produce data that will enhance the implementation of the prevention programme in all parts of Finland.
Practical Aims of the Implementation Project
Aims for a service infrastructure:

- To introduce a new preventive approach focused on Type 2 diabetes to primary and occupational healthcare, which will also enhance the prevention of the other major public-health problems.
- To generate regional and local models and programmes for the prevention of Type 2 diabetes and the associated cardiovascular, retinal, renal and leg complications.
- To train healthcare personnel in the basics of preventive healthcare, team work and cooperation with other players in the field of health promotion.
- To develop preventive methods of working that can be applied across the healthcare system, such as the model of lifestyle management and counselling.
- To promote the dissemination of the methods of working presented in the Programme for the Prevention of Type 2 Diabetes throughout the Finnish healthcare system.

Aims for health promotion:

- To demonstrate that targeted prevention has an effect on the prevalence of Type 2 diabetes, its age of onset and the general health status of the population.
- To further develop the diagnosis-related approach (High-Risk Strategy, Strategy of Early Diagnosis and Management) that is required in addition to health enhancement at population level.
- To improve the geographical and social equality of the population in terms of health.
- To demonstrate the cost-effectiveness of prevention.

Clinical aims:

- To identify among the population those individuals who are at high risk of developing diabetes.
- To provide earlier diagnosis of people who are unaware of their Type 2 diabetes.
- To bring people with diagnosed Type 2 diabetes quickly into the sphere of appropriate treatment.
- To reduce the prevalence of and the care requirement for the complications of Type 2 diabetes.

As the task is one of creating evidence-based, national procedures for the prevention of Type 2 diabetes, the implementation phase of the prevention programme calls for joint contribution by the Ministry of Social Affairs and Health, the National Public Health Institute, the Finnish Institute of Occupational Health, the UKK Institute for Health Promotion Research, the Social Insurance Institution, the National Research and Development Centre for Welfare and Health, the Association of Finnish Municipalities, etc.

Assessment

The Implementation Project 2003–2007 of the Programme for the Prevention of Type 2 Diabetes will provide a way of assessing the programme with regard to practical feasibility and effectiveness, as well as cost-effectiveness. The results for the project districts (Pilot Districts) will be compared with those for all hospital districts in Finland.
The National Public Health Institute's periodic studies of the health and health behaviour of Finns and the Institute's periodic Nutrition Reports will be utilized in the assessment of the Programme for the Prevention of Type 2 Diabetes throughout the programme.
In 2010, the population-level effects of the programme will be studied in terms of coverage, effectiveness, rate of adoption, feasibility and permanence.

ANNEX III

All interviews were conducted anonymously between May and September 2005. Below is the list of organisations which have agreed to participate and give input for this audit.

LIST OF ORGANISATIONS CONDUCTING INTERVIEWS

COUNTRY	NAME OF ORGANISATION
Austria	AKTIVE DIABETIKER AUSTRIA
	Plattform Diabetes
Belgium	Belgian Diabetes Association – Association Belge du Diabète (ABD)
	Flemish Diabetes Association – Vlaamse Diabetes Vereniging (VDV)
	Scientific Association of Flemish GPs – Wetenschappelijke Vereniging van Vlaamse Huisartsen (WVVH)
	Brussels group of diabetes patients (belongs to Belgian Diabetes Association)
	Belgian Diabetes Registry (BDR)
	Scientific Institute for Public Health
	INAMI/RIZIV, National Institute for Sickness and Invalidity Insurance
	Flemish Diabetes Association – Vlaamse Diabetes Vereniging (VDV)
Cyprus	Ministry of Health – Medical and Public Health Services Nicosia
	Cyprus Diabetes Association – Nicosia
Czech Republic	General Insurance Company
	Czech Diabetes Society (doctors)
	Ministry of Health – Odbor zdravotni pece
	Czech Sociatuy of Diabetes (patients)
	Institute for Health Information and Statistics
Denmark	Danish Diabetes Association
	Socialstyrelsen
Estonia	Estonian Diabetes Association, Ministry of Social Affairs of Estonia – Tallinn
	Department of Polyclinic and Family Medicine, Tartu University Clinics
	Department of Endocrinology, Tartu University Clinics
	London School of Hygiene and Tropical Medicine
Finland	National Public Health Institute, Unit for diabetes and genetic epidemiology
	University of Helsinki
France	Centre Hospitalier de Nevers
	Hopital Saint-Louis (Assistance Publique-Hopitaux de Paris)
	Centre Hospitalier Universitaire de Bordeaux (CHU) Hopital Haut Leveque
	ASSOCIATION PARISIENNE DU DIABETE (APAD)
	CHU Grenoble
	Hopital Pitie-Salpetriere Paris
	ALFEDIAM
	HOTEL-DIEU DE FRANCE
	AFD – Association francaise des diabetiques
	C.H.R.U Hopitaux de Tours –
	Association Française des Diabétiques (AFD)

COUNTRY	NAME OF ORGANISATION
Germany	Deutsche Diabetes-Union
	Deutscher Diabetiker Bund
Greece	Greek Ministry of Health – Department for Chronic Diseases
	Hellenic Diabetologic Association
	Panellenic Federation for people with diabetes
	Hellenic Center for diabetes prevention
Hungary	Hungarian Diabetes Association
Ireland	Department of Health and Children
	Diabetes Federation of Ireland
	Endocrine Society
Italy	Associazione Italiana Diabetici (FAND)
	Associazione Italiana Diabetici (FAND) – Lombardi
Latvia	Latvia Ministry of Health – Public Health Department
	Latvian Association of Endocrinologists
	Latvian Diabetes Association
Lithuania	Lithuanian Ministry of Health – Department of Curative diseases
	Union of Endocrinologists
	Lithuanian Diabetes Association
	Institute of Endocrinoly of the Ministry of Health
Luxembourg	Ministere de Santé
	Association pour la recherche et les maladies metoboliques
	Association du Diabete/Maison du Diabete
	(Dr.) President of the Luxembourg Diabetes Association, member of the Association
	for research on Diabetes and Metabollic illness
	Doctor, member of the Luxembourg Diabetes Association
	Doctor, Hon. President of the Luxembourg Diabetes Association
	Union des Caisses Maladies
Malta	National Steering Committee on Diabetes
	Maltese Diabetes Association
	Institute of Health Care
The Netherlands	EMGO – Institute for Research in Extramural Medicine,
	Vrije Universiteit Medical Centre
	Centre for Quality of Care Research-229,
	University Medical Centre St. Radboud Nijmegen – The Netherlands
	Nederlandse Diabetes Federatie
Poland	Polskie Stowarzyszenie Diabetykow – patients (Polish Diabetes Association)
	WHO
	Polskie Towarzystwo Diabetologiczne – doctors (Polish Diabetology
	Association)Klinka Chorob Metabolicznych CM UJ
	AM Klinika Diabetologii, Bialystok
	Ministry of Health – Departament Polityki Zdrowotnej (Health Policy Department)
	Narodowy Fundusz Zdrowia (National Health Fund)

ANNEX III

COUNTRY	NAME OF ORGANISATION
Portugal	Direcção-Geral da Saúde
	Portuguese Society for Diabetology (Sociedade Portuguesa de Diabetología – SPD)
	Portuguese Diabetes Assocation (Associaçãzo Protectora dos Diabeticos – APDP)
	KOL
Slovakia	Slovakian Health Ministry
	Slovakian Diabetes Association
	Association of Diabetic Patients of Slovakia
	Health Institute
	National Endocrine and Diabetes Institute
	Slovenian Diabetes Association
	Departement of Prevention and Development of Public Health
	Health Institute
Spain	Press office of the Ministry
	Federation of Diabetic Patients from the Community of Madrid – Federación de Diabéticos de la Comunidad de Madrid
	Federación Española de Diabetes (Spanish Diabetes Federation)
	Consejería de Sanidad de la Comunidad de Madrid (Health Council of the Madrid Auronomous Community)
	Press office
	Instituto Madrileño de Salud (Health Institute of Madrid)
	Instituto Salud Pública
	Diabetics Association in Madrid
Sweden	Socialstyrelsen
	Svenska Diabetesförbundet
United Kingdom	Diabetes UK
	Chief Pharmacist within a hospital trust
	Diabetes Nurse Specialist within a hospital trust and primary care trust
	Senior Community Pharmacist
	Prescribing Advisor for a primary care trust

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