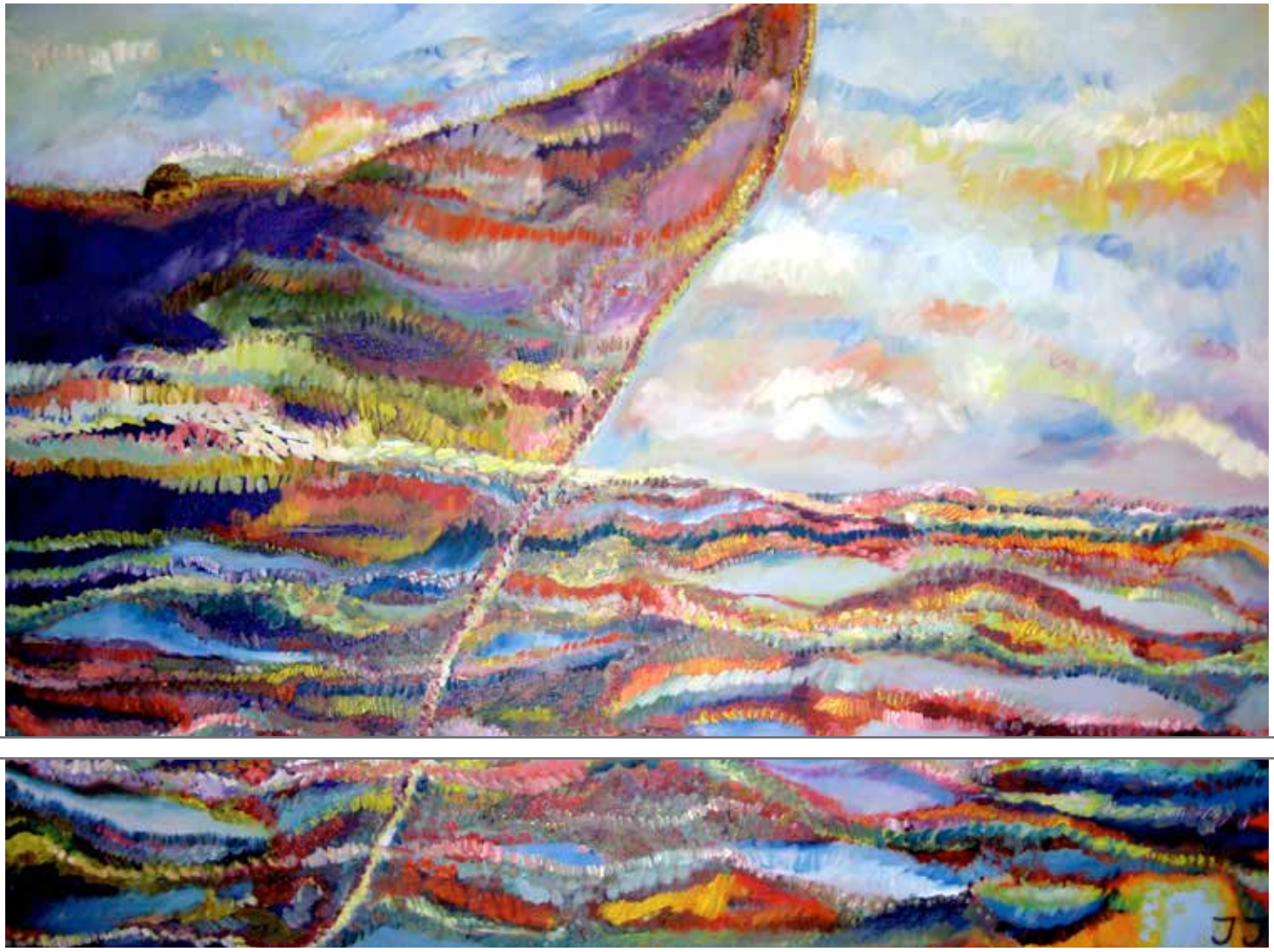

Diabetes in the Downturn:

Impact of the economic downturn on the management of diabetes in Europe

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Introduction

On behalf of Janssen Europe, the Middle East and Africa (EMEA) I am delighted to present to you our '*Diabetes in the Downturn*' report and call to action. This report, commissioned by Janssen EMEA, provides an in-depth look at the impact of the recent economic downturn on diabetes management in six European countries, from the perspectives of both patients and general practitioners (GPs).

Prior to the report being developed, a full literature review investigating the barriers diabetes patients face in managing their condition and the impact of income and socioeconomic status on diabetes management was undertaken by UK health psychologist Vicky Lawson. Key findings of this review underpin the rationale and development of this report.

Extensive market research investigating the impact of the economic recession on diabetes has been undertaken by The Research Partnership. In total, 697 interviews with healthcare professionals (HCPs) and patients with type 2 diabetes have been conducted throughout France, Germany, Greece, Italy, Spain and the UK.

Further to the development of the report, we have consulted with a range of expert European groups and individuals and their insights and opinions on the key findings have been captured. We would like to acknowledge and thank the following experts for their support and insight during the development of this report: Sophie Peresson, Regional Director of the International Diabetes Federation (IDF) and Simon O'Neill, Director of Health Intelligence at Diabetes UK.

We hope that the publication of this report will contribute to improving the conditions for diabetes treatment and we welcome all insights from HCPs and partners on policy and practices.

Jane Griffiths
Company group chairman, Janssen EMEA

International Diabetes Federation

Diabetes UK
The charity for people with diabetes

janssen
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Executive summary

Europe remains mired in the worst economic downturn since the Second World War. Governments continue to slash expenditure as ministers struggle to reduce deficits and balance national accounts. Rising unemployment and an increased tax burden is leaving people with less disposable income and, in many regions, there is evidence of a widening gulf between the rich and the poor.

Against this austere economic background, healthcare systems are facing the challenges of an ageing population, health inequalities and a growing incidence of chronic diseases[1,2].

This report focuses on diabetes – a chronic disease affecting some 32 million people in the EU[3]. The report presents results from a major new survey into the impact that the current global economic downturn is having on people with diabetes across six EU countries.

New data indicate that as the economic recession continues, the impact on diabetes is increasing, with a number of serious issues being identified that need to be addressed before they become more widespread.

The recession is undoubtedly having an impact on patients with type 2 diabetes, making it more difficult for many to adopt important healthy lifestyle choices. The downturn has impacted patients' lifestyles in terms of both time and money, with a significant proportion of patients struggling to afford healthy food (particularly in Greece, Italy and the UK) and make sufficient time to exercise.

In addition to lifestyle choices, this report also identifies that the economic recession is affecting people with diabetes through the affordability of self-monitoring of glucose. The cornerstone of diabetes self-management is glucose monitoring, however, one in three patients say they cannot afford to pay for testing their blood glucose levels, which can have serious health implications. Patients who are less well-off are the worst affected by the recession – which is particularly challenging since people from a lower socioeconomic background are more likely to develop diabetes.[4,5]

"Most people are aware that optimum diabetes management requires attention to diet and exercise routines; however, this does not necessarily require substantial lifestyle changes. Rather than purchasing expensive gym memberships, tracksuits and trainers, people with diabetes need to be encouraged to increase their movement with simple steps, such as walking to the bus stop and gardening" Simon O'Neill, Diabetes UK

Diabetes: The situation in Europe

The global economic downturn has profound importance for the health and well-being of populations and is likely to increase health inequality. Unfortunately, people in low income groups, who are already the most vulnerable and disadvantaged, are precisely those most likely to feel the effects of the global economic downturn[2].

The literature suggests a strong association between low income, economic stress and diabetes self-management. Systematic reviews[4, 6, 7] found strong evidence of a link between lower income, reduced diabetes self-management and health outcomes. In addition, low socioeconomic status had a strong association with increased risk of diabetes in several countries including France, Germany and the UK[6]. Low income can also be seen as a barrier to effective self-management once the patient has been diagnosed.

Diabetes self-management is a core concept of modern diabetes care. Diabetes is a chronic illness demanding high levels of self-care by patients – patients must be involved in their care plans from the beginning. This means that for patients to live well with diabetes, they need effective self-management skills[8]. These include health knowledge to understand their condition, the ability to adopt recommended lifestyle changes – such as improvements in diet and physical activity – the motivation to make these changes, and the ability to maintain these self-management skills over the course of their lifetime.

A key aim in most European healthcare systems has been to ensure that people needing care should have access to a high quality and comprehensive service, irrespective of household income. This report identifies financial barriers to optimum healthcare as well as some of the perceived challenges to living healthily.

At a time when 86% of deaths in Europe are due to chronic non-communicable diseases[1], these are important findings because the main determinants of such diseases include lifestyle factors such as alcohol, diet, physical activity and smoking[1]. In 2011, 4.6 million people aged between 20 and 79 years died from diabetes[9]. So great is the problem that a new European Chronic Disease Alliance (ECDA) was recently formed to bring chronic non-communicable diseases – such as diabetes – to the attention of politicians. A major challenge faced by the ECDA is to convince politicians and policy makers of the importance of preventing lifestyle related illnesses. The preservation of health requires political support, persistence, collaboration and, most importantly, a long-term view that looks beyond short-term costs to future benefits[10]. The '*Diabetes in the Downturn*' report echoes these sentiments and the implicit call to action for politicians and policy makers.

"Because of the recent economic recession, families have less cash available and they now watch their budget much more carefully, consequently reducing or putting less importance on health problems" Italian HCP

A dreadful toll

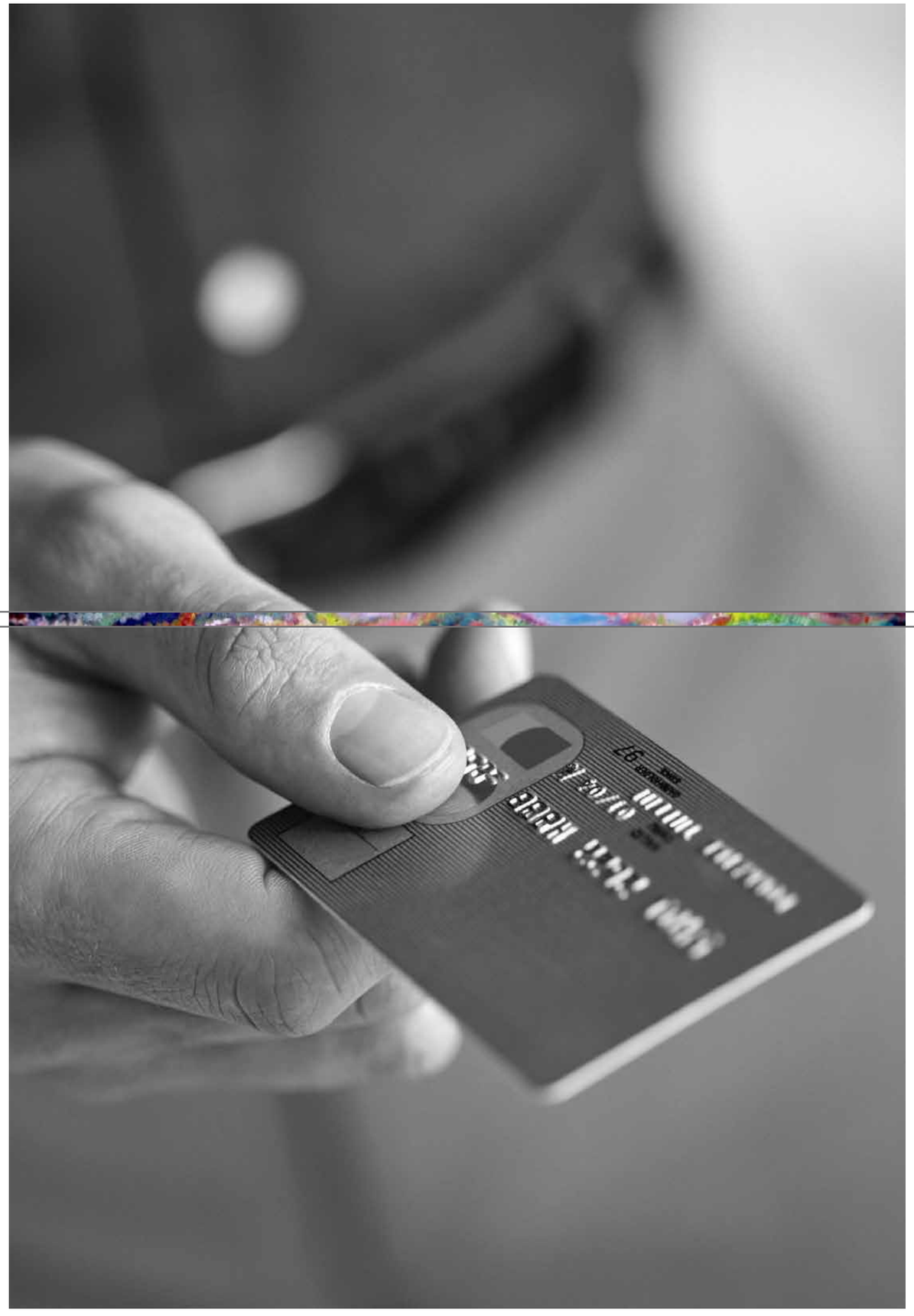
Type 2 diabetes has been called one of the fastest growing epidemics in human history[11]. According to a recent report, 12 people per minute globally are diagnosed with diabetes and six per minute die of its complications[5].

- Up to **50%** of all people with diabetes are currently unaware of their condition[3]
- **325,000 deaths per year** are attributed to diabetes in the EU[3]
- In most EU member states, diabetes accounts for **over 10%** of healthcare expenditure[3]

In the next 20 years, the number of cases of diabetes is expected to increase by 71% worldwide[12]. In addition to the EU's estimated 32 million people living with diabetes, there are another 32 million people with impaired glucose tolerance, which has a high probability of progressing to clinically manifest diabetes[3].

People with type 2 diabetes are twice as likely to have a heart attack or stroke as people without diabetes. Cardiovascular disease is the major cause of death in diabetes, is responsible for 50% of all diabetes fatalities and shortens life expectancy by an average of 5-10 years[5]. Globally more than 2.5 million people are affected by diabetic retinopathy, the leading cause of vision loss in adults in developed countries[5]. Diabetes (all types) is the most frequent cause of kidney failure and amputations.

"I am in denial as far as my health is concerned and, although my family has been putting pressure on me, I don't want to look into it" Greek patient



The cost of diabetes

Diabetes is extremely costly for society. A recent study[5] of spending on diabetes in France, Germany, Italy, Spain and the UK estimated that in 2010 the direct cost of diabetes was highest in Germany, in part due to the greater diabetes population, at €43.2 billion, followed by the UK at €20.2 billion, France at €12.9 billion, Italy at €7.98 billion, and Spain at €5.45 billion. Approximately 25-45% of these costs were inpatient, followed by pharmaceuticals (20-45%) and finally outpatient costs without medications (20-25%)[5]. The total per patient costs were estimated to be highest in Germany (€5,899), followed by France (€5,432), the UK (€4,744-5,470), Italy (€2,756) and Spain (€1,708-3,015)[5]. Strong and consistent evidence supports the role of lifestyle modification in the prevention and management of type 2 diabetes[13].

As the economic downturn continues, the impact is seen on the access to and reimbursement of services, with health reforms resulting in increased patient contributions. All countries have some form of national health service, with treatment reimbursed in Germany, Greece, Italy, Spain and the UK, and private healthcare also available, whilst in France, costs are covered by patients and reimbursed by insurance companies. However, while treatment is provided, budgetary constraints are impacting on which drugs are reimbursed and the supporting services available, restricting prescribing behaviour and influencing the way in which type 2 diabetes can be managed. Contributions are frequently required for diabetic supplies (i.e., blood testing strips and monitors) and as the downturn continues this is increasingly seen across Europe.

The results of this survey indicate that patient contributions towards blood test strips are increasing, with patients in Germany and Spain reporting that patient contribution is required in some instances in which they were previously fully reimbursed, or that the number of strips available has decreased, influencing patients' self-management.

"I end up paying for all of my medications... going to the doctor is a luxury" Spanish patient

"I am more worried and more attentive to my health because the future of my family depends on me" Italian patient

"Rejection of some care due to excessive overspend on fees" French HCP

"Reduce using glucose testing strips" UK HCP

"Doctor stopped prescribing testing strips, medication cut back" UK patient

"I consider carefully whether to stop using a drug which is not covered by health insurance" German patient

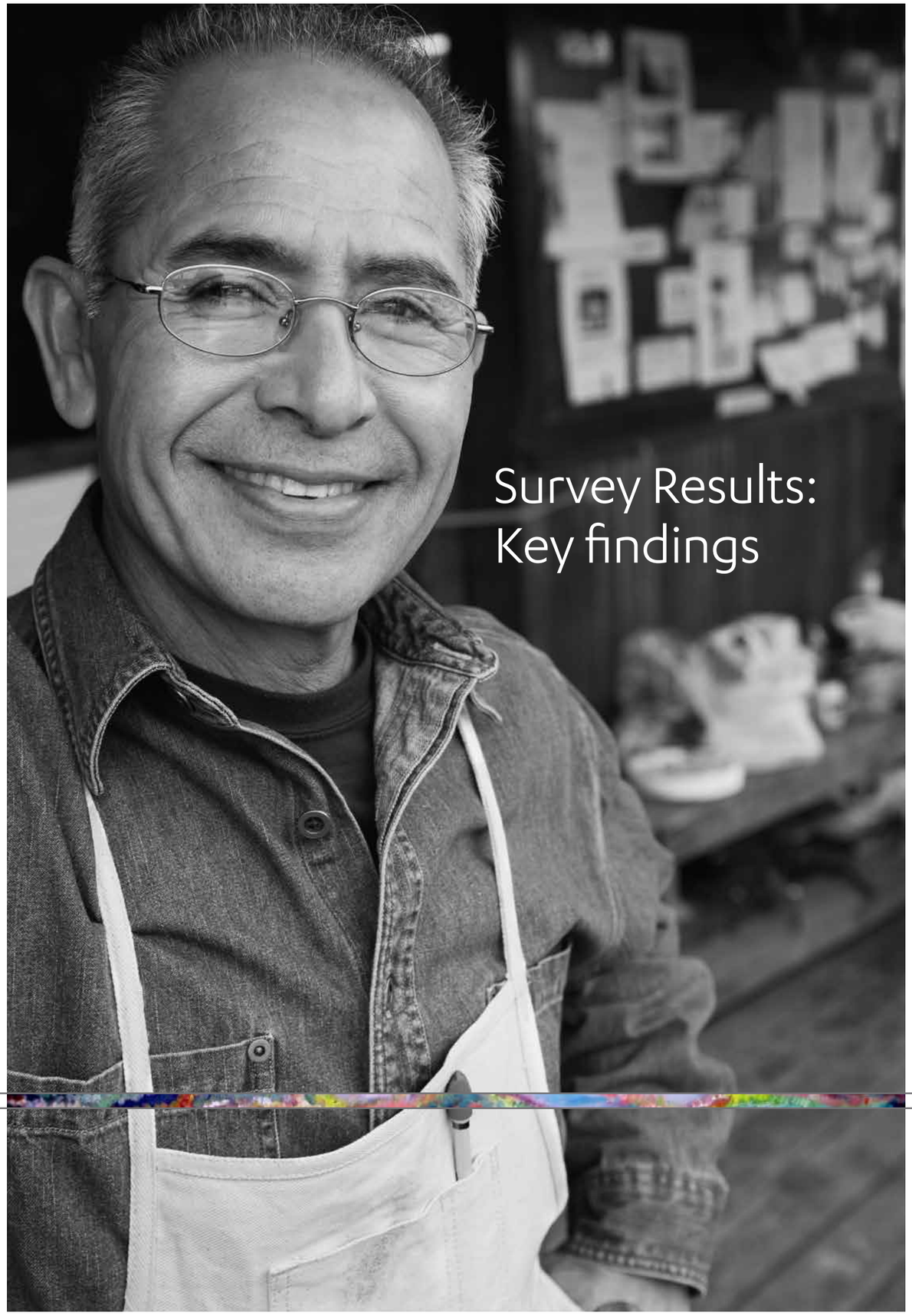
The barriers to successful diabetes management

There is already evidence of a strong association between low income, economic stress and successful diabetes management[7, 14, 15]. Many patients struggle to self-manage their diabetes[14]. A wealth of published evidence has identified some of the key barriers to successful diabetes management, including demographic, psychosocial and clinical influences[15,16]. These factors are often interrelated – for example, external triggers, such as economic or employment stress, can play a critical part in exacerbating the effect of other barriers[7]. In addition, economic stress has itself been shown to be a significant barrier to successful diabetes self-management and a predictor of poorer health outcomes[17].

Economic stress is also likely to influence psychological well-being. Depression occurs commonly in people with diabetes – in fact, it is reported to be twice as common in people with diabetes as in the general population[18]. Depression in people with diabetes is known to be associated with treatment nonadherence and worse clinical outcomes[19]. Many studies have shown that not only are depressive symptoms a risk factor for the development of type 2 diabetes, but they have also been shown to contribute to hyperglycaemia, diabetic complications, functional disability and all-cause mortality among diabetic patients[20]. Of interest are studies showing that combining anti-depressant treatments, such as cognitive behavioural therapy (CBT) with supportive diabetes education, not only treats the patient's depression but may also be associated with improved glycaemic control[21]. These important links between mental health, depression and diabetes deserve greater emphasis in an environment where economic stress could exacerbate existing psychological problems.

Limited research exists regarding diabetes and the economic environment, and this research was conducted in the United States. A survey conducted in 2010 by the Harvard Opinion Research Program (HORP)[22] at the Harvard School of Public Health, USA found that 39% of people with diabetes said that the economic downturn had negatively impacted their health. Almost half (42%) said that the economic downturn had made it more stressful for them to manage their illness and almost one in five (18%) also said that it had become more difficult for them to maintain a healthy diet. Of course, healthcare reimbursement and payment systems differ radically in the USA. A key driver for the EU survey reported here was to establish the impact of the downturn in countries with very different healthcare and economic landscapes.

For the survey, a total of 697 online interviews were conducted with GPs and patients with type 2 diabetes. The survey, conducted across France, Germany, Greece, Italy, Spain and the UK, took place in April and May 2012 and asked respondents to consider the past four years of the economic downturn. The survey methodology is described in greater detail in Appendix 1.



The patient lifestyle impact

Approximately half of the patients surveyed expressed concerns about managing their diabetes during the past four years; lifestyle and self-management, as well as costs and reimbursement of drugs and tests, were their greatest concerns.

Overall, the main impact of the downturn on health-related patient behaviour has been worse self-management due to financial pressures. The two most affected areas were diet and exercise.

Diet – 'can't afford healthy food'

The current recession is having an impact on the lifestyles of millions of people in the EU, including patients with type 2 diabetes. The key causes of economic stress are increased living costs, lower income, job insecurity and unemployment. All of these factors can increase the barriers that patients are likely to face when managing their diabetes. For example, increased food costs can lead to people making less healthy food choices. A recent survey by the leading UK consumer organisation 'Which?' reported that people are finding rising food costs a struggle, with many changing their shopping and cooking habits to try and save money[23]. This Which? survey identified that 84% of people said that they were worried about food prices increasing[23]. People were more likely to buy tinned and frozen food and were eating less of the better quality foods, such as fresh fruit and vegetables. Overall, more than half of consumers (55%) said that high prices make it harder to eat healthily[23].

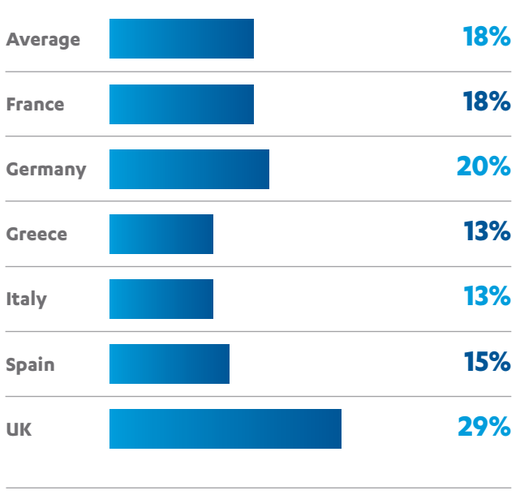
These findings were reinforced by findings from the current survey of European diabetes patients. The results show that the downturn has impacted patients' lifestyles in terms of both time and money; according to 48% of physicians, patients struggle to afford healthy food (notably in Greece, Italy and the UK).

"You are not able to follow a proper diabetes diet due to the excessive cost of certain foods" Italian patient

Overall, the downturn was found to have impacted approximately 40% of patients financially:

- Approximately a third of patients claim that their spending on healthy food has decreased and that they cannot afford healthy food
- Over a quarter of patients have gained weight over the past four years and a fifth of these believe that it is due to the economic downturn

% of patients that disagreed with the statement 'I can afford healthy food'



"Drugs are less well reimbursed and it is not easy to have a balanced meal as fruit and vegetable prices have increased" French patient

- Almost half of physicians (48%) also identified that patients find it difficult to afford healthy food. In Greece over 70% of physicians agreed with the statement that '*patients seem to find it difficult to afford healthy food*'
- Significantly more patients in the UK find it more difficult to afford healthy food than in Italy, Greece and Spain; the trend is getting worse, especially in the UK

"Patients have less money for diet products, testing strips, time for doctor visits" German HCP

"I was also seeing a dietician who helped me to reduce blood sugar levels and they removed this service without knowing that I should continue three sessions with her" Spanish patient

Diet: Potential remedies

Given that patients provide the majority of their own diabetes care, training in self-management has increasingly become recognised as an important strategy with which to improve quality of care. Unfortunately, participation in self-management programmes is low and the efficacy of current behavioural interventions tends to decrease with time[24]. Recent innovations to help boost participation and efficacy include the development of web-based self-management programmes to improve clinical outcomes in people with type 2 diabetes[24].

There would seem to be a need for specific education about how to adopt a healthy diet despite more limited means. It is commonly assumed that it is more expensive to make healthy food choices. However, new research by the US Department of Agriculture's (USDA) Economic Research Service[25] dispels the myth that eating junk or convenience food is cheaper than eating healthy food. The authors of the USDA report compared three ways of pricing foods: per number of calories, per gram or per average portion. For example, they found that protein foods and foods high in saturated fat, added sugars and sodium, were all more expensive than fruit, vegetables, dairy products and grains, based on pricing per average portion[25]. However, convincing EU consumers that healthy choices can be less expensive will require a substantial nutrition education effort.

"Slightly poor control of the diabetes mainly due to dietary changes rather than medication problems. The reason for this, I think, is that patients cannot afford better quality foods that are good for them, but as medications are free for diabetics in England the therapeutics of diabetic care remains unchanged" UK HCP

"Patients have cut down on their exercise programmes, especially if they have to pay a fee for gym membership" UK HCP

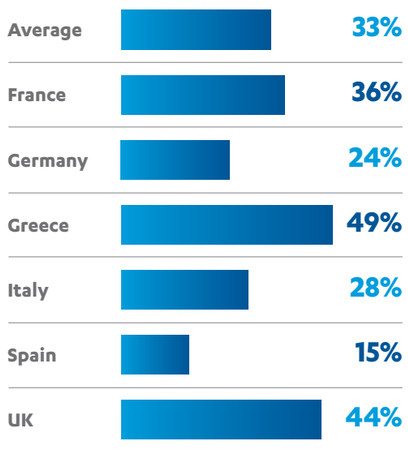
Exercise – a worsening trend to the sedentary

Almost half of the diabetes patients surveyed do not exercise and say they cannot afford to pay for exercise facilities, while a third of all respondents noted that they may not make time to exercise. These trends have worsened over the past four years, especially for patients from lower socioeconomic categories.

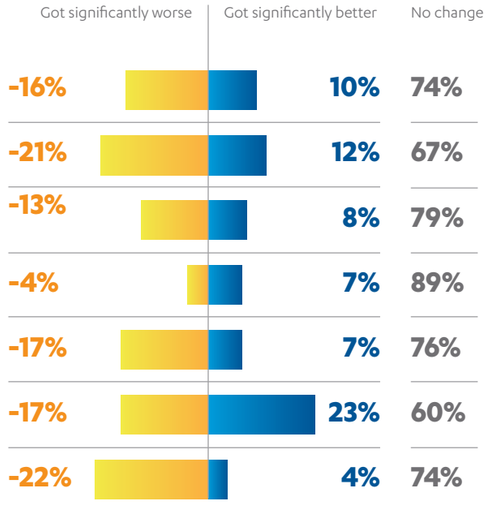
- Significantly more patients in Greece (49%) and the UK (44%) do not make time to exercise versus those in Spain (15%), Germany (24%) and Italy (28%)

"Less money/more unemployment so more difficulty adhering to healthy lifestyle" UK HCP

% of patients that disagreed with the statement 'I make time to exercise'



% of patients that feel attitudes towards making time to exercise has changed in the last four years



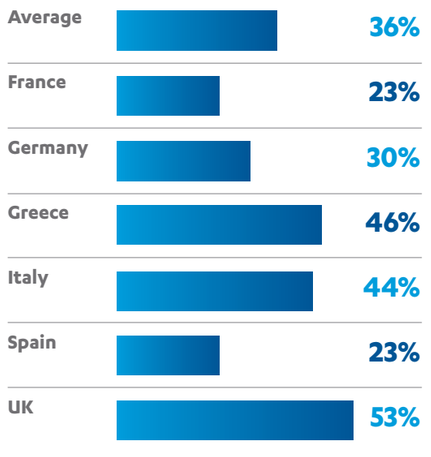
"I compensate for the reduction in income by cutting some costs such as gym memberships" Spanish patient

These patient perceptions were shared by HCPs. Over half of physicians surveyed believe that patients are more stressed and under greater work pressures due to the economic downturn and more than a third of physicians (36%) believe that patients find it difficult to make time to exercise.

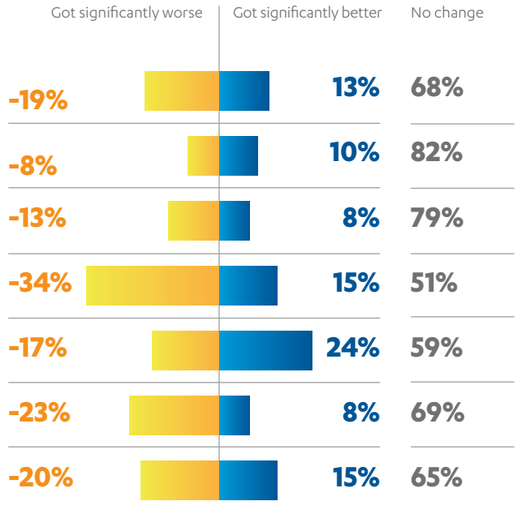
- Significantly more physicians in the UK (53%), Greece (46%) and Italy (44%) perceive that patients find it difficult to make time to exercise than those in France (23%), Spain (23%) and Germany (30%)

"Due to stress at work, I often have no energy to do sport. I sometimes consider whether it is still possible to continue to eat and live so healthily" German patient

% of physicians that agreed with the statement 'patients seem to find it difficult to make time to exercise'



% of physicians that feel attitudes towards making time to exercise has changed in the last four years



Exercise and movement: Potential remedies

Increased physical activity should be a cornerstone of the self-management plan for patients with type 2 diabetes[26]. Exercise and increased movement also play a role in obesity prevention, which itself will reduce the incidence of diabetes in at-risk groups. Exercise does not need to involve a costly gym membership. Any activity that increases movement, such as regular walking (three times a week) has been shown to improve markers of diabetes control[27].

There are numerous incentives for healthcare providers to boost participation in physical activity – primarily that overall healthcare costs have been shown to be higher for sedentary type 2 diabetic patients compared with those who are physically active[28].

Across the EU, innovative schemes are currently underway to boost patient participation in self-management. In a novel project based at Norfolk and Norwich University Hospitals NHS Foundation Trust, Norwich, UK, people with type 2 diabetes are being recruited to 'peer support' individuals at high risk of type 2 diabetes as part of a Diabetes Prevention Programme (the UEA-IFG Study)[29]. Whilst these lay supporters are training others in nutrition and physical activity, they may also boost their own adherence to optimum self-management. Preliminary analysis suggests this is a cost-effective strategy compared with employing salaried HCPs[29].

Other recent research has shown that:

- A six-session group-based intervention can significantly increase healthy eating and physical activity, reduce waist measurements and weight, improve motivation positive mood, self-efficacy and knowledge[30]
- At the Otto-von-Guericke-University Magdeburg, Germany, clinicians running the "Active Body Control (ABC) Program" are successfully employing telemonitoring to track the physical activity of patients with type 2 diabetes[31]

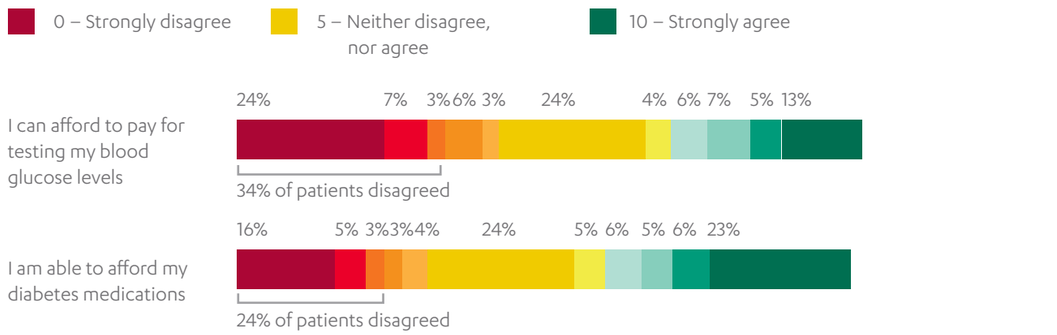
The patient cost impact

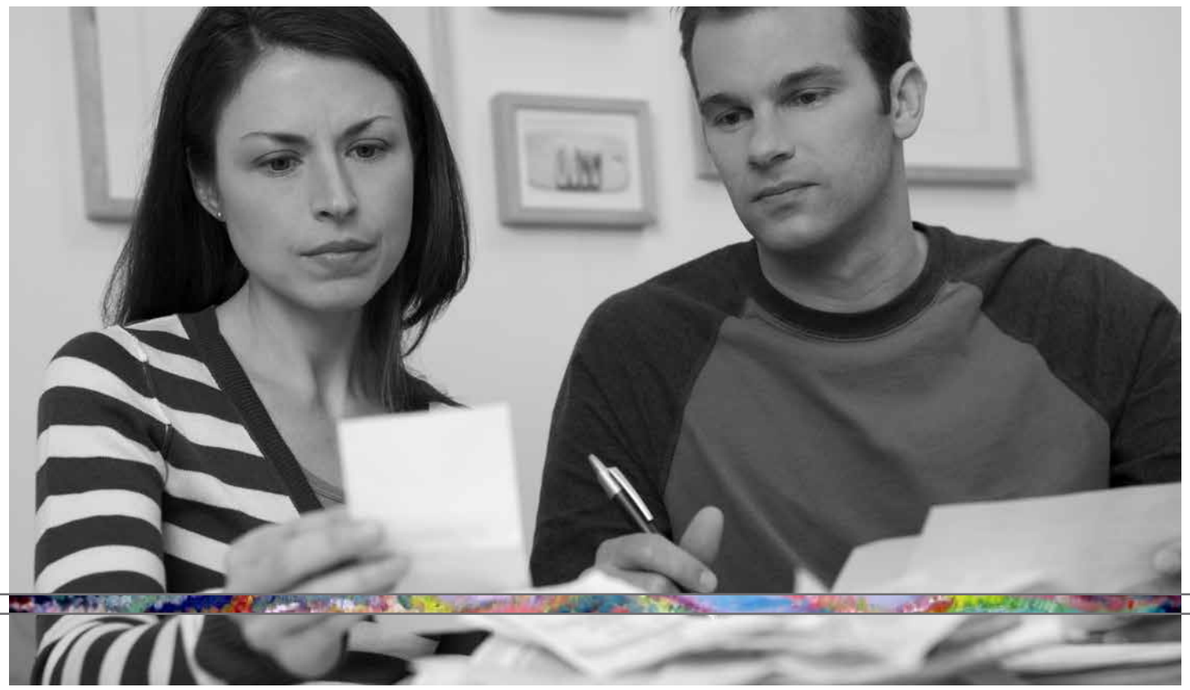
Almost half of the patients surveyed (46%) claimed that the cost of managing diabetes has increased, making it more difficult to afford test strips (especially for patients in the lower socioeconomic categories) and, to a lesser extent, their medications.

- Over a third of patients (33%) report that they cannot afford to pay for testing their blood glucose, especially those from lower socioeconomic categories
- A quarter (24%) say that they cannot afford their diabetes medication, especially those from lower socioeconomic categories

"Due to the non-reimbursement of home blood-sugar test strips, I don't test myself as often" French patient

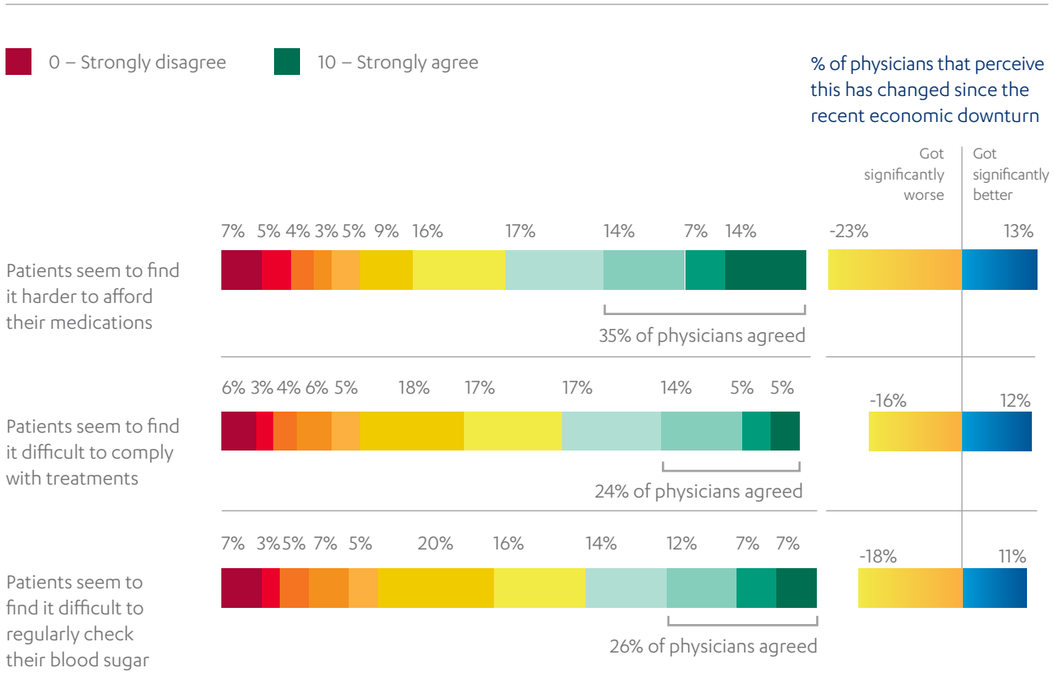
"Lack of monitoring and compliance due to working all the time" UK HCP





- Approximately a third of HCPs believe that it is more difficult for patients to afford their medications (35%)
- Approximately a quarter of HCPs believe that it is difficult for patients to comply with treatment (24%) and to monitor their blood glucose, especially in Greece (25%); these trends have become significantly worse over the past four years
- A third to a quarter of HCPs (37%) claim that patients suffering from diabetes spend less on healthcare
- Over half of HCPs (52%) observe that patients are under greater stress and are more anxious; a third to a quarter of HCPs claim that patients have a poorer lifestyle (28%) and visit HCPs less often (19%)
- Type 2 diabetes patients are less compliant according to a third of HCPs (33%), especially in Greece

"I am going to consult the specialist less because the financial pressure is very strong with the overspend on fees which are not covered. Therefore, I do fewer tests, hospital stays and follow-ups. On the other hand, I pay a lot more attention to my food and only buy what is necessary" French patient

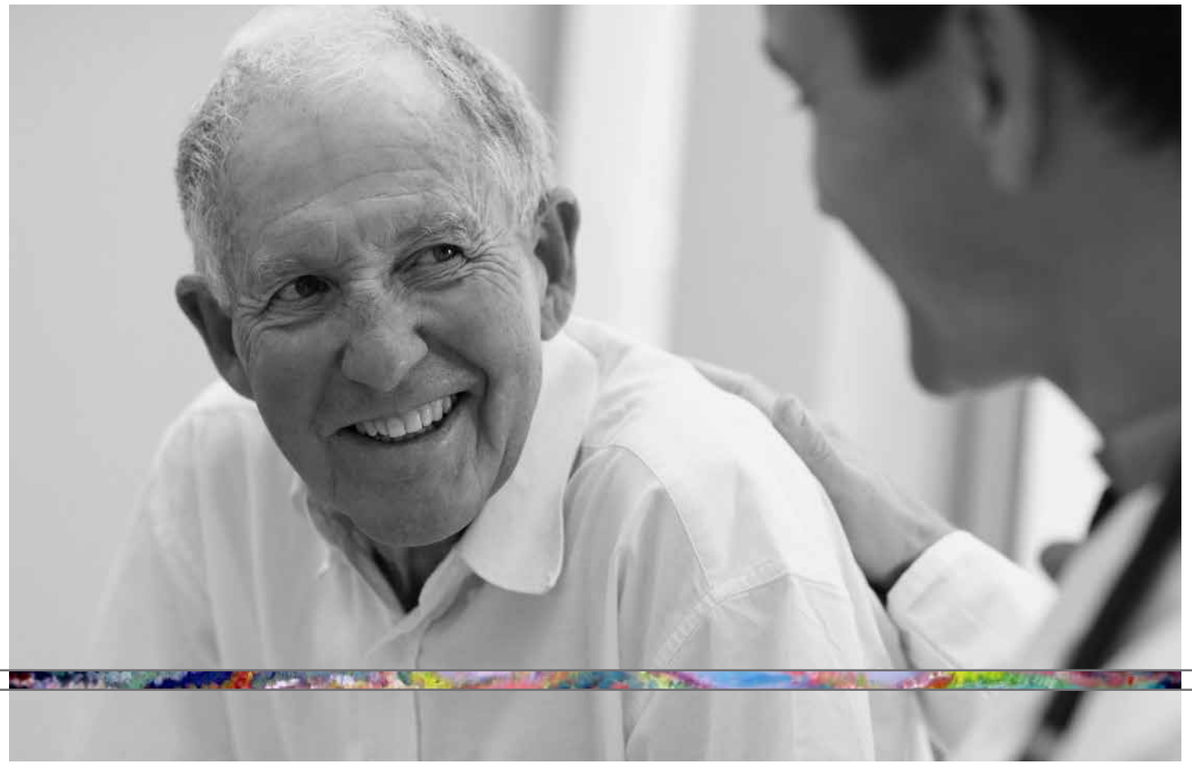


Potential remedies

Given the economic challenges faced by many people, short-term cost cutting based on the perceived cost of healthy eating and poor self-management is understandable. However, this is a false economy that will lead to greater costs in the future, as poor management results in greater complications, increasing the healthcare burden[5] and impacting on patients' quality of life. Greater patient education and support will help to alleviate this, if patients understand that healthy lifestyle choices do not have to incur additional costs and that managing their diabetes must be a priority.

People are generally aware that a poor diet and not enough exercise is related to type 2 diabetes, yet despite this, the number of people with the condition is increasing. People need to recognise and appreciate that implementing simple lifestyle changes, such as increasing their movement by walking more frequently, or by doing gardening and housework, can support them in their diabetes management, without incurring any cost.

"The poor are becoming poorer, well earning patients don't change so much; the gap is widening" German HCP



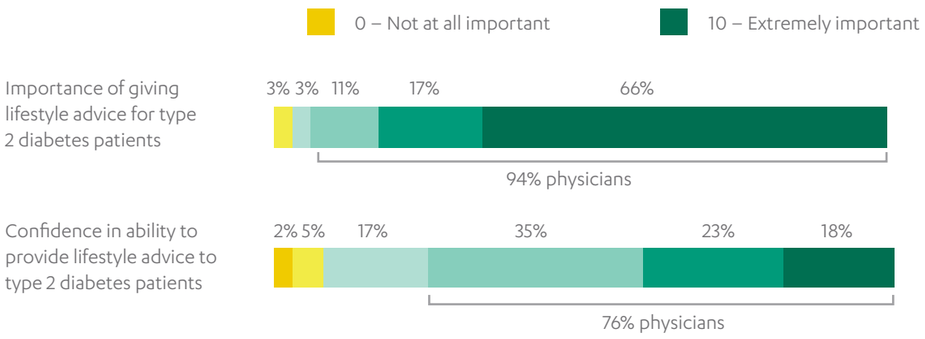
The impact on HCPs

Results from the survey indicate that the economic downturn is beginning to have an effect on diabetes management with one in five HCPs (19%) believing the economic downturn has had a negative impact on their ability to treat and manage patients (across conditions) optimally. These findings are relevant across the multidisciplinary team caring for people with diabetes.

Referring to the provision of services:

- The vast majority of physicians (93%) believe that providing lifestyle advice to type 2 diabetes patients is very important and 76% are confident in their ability to do so, but only one third of HCPs (32%) believe they have the time and resources needed to offer this lifestyle advice to patients

"Told to try non-hospital management plans. Cheaper medical options, drag things on longer before being seen. Longer waiting lists" UK HCP



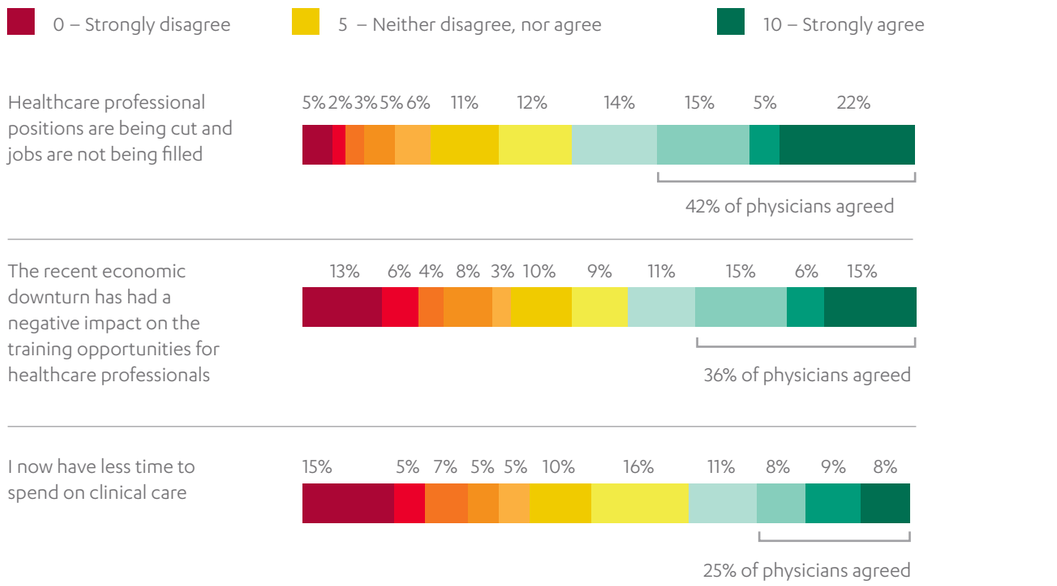
- Over one third of HCPs (42%) claim that their positions are being cut and jobs are not being filled
- Over a third of HCPs (36%) believe that the economic downturn has had a negative impact on their training opportunities
- A quarter of HCPs (25%) believe that they now have less time to spend on clinical care
- Less than one third of HCPs (28%) believe that they have enough resources to provide the best diabetes management training for their patients

Looking to the longer term, HCPs believe that the result of the downturn will mean that there will be fewer resources available (37%), more restrictions on prescribing (32%) and that they will have less time to spend on direct patient care (20%). As one UK GP stated:

"Healthcare professionals will try to continue to provide a good service. However, we are using less resources overall to treat more patients, so each patient may get less time/follow-up. We will not be able to provide as many extra services to patients."

However, a positive insight into type 2 diabetes management is that approximately a quarter of HCPs say that they are providing the right level of services to their type 2 diabetes patients and that these services have improved over the past four years.

"Less time for the clinic, even less for therapeutic education, more drugs which are not reimbursed, patients spacing out their tests" French HCP



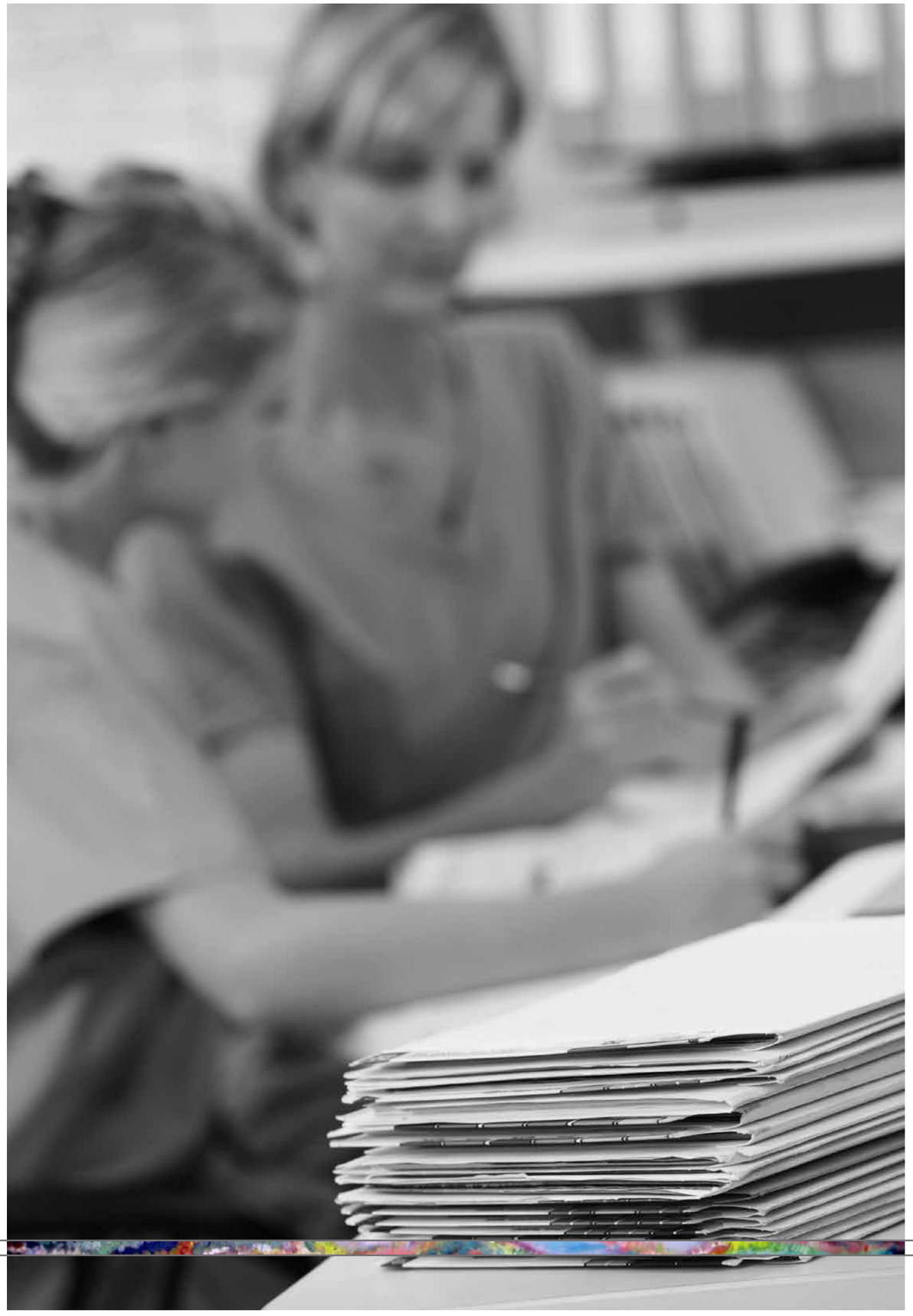
"Workload has increased greatly and the challenge will be how to manage this whilst maintaining quality. Rationing will increase and more bureaucracy will be used to attempt to control activity" UK HCP

Potential remedies to problems identified

HCPs seem to be optimising diabetes management in a difficult environment, but further challenges are anticipated when the cuts in funding, training and new appointments, as identified in the survey, impact front-line diabetes care.

Recognising HCP time constraints, support could be provided in the form of online training tools, which could be completed at the HCPs' convenience. Patient educational resources regarding lifestyle changes, diet and exercise could also be produced for HCPs to provide during consultations, either as hard copies or links to online materials, ensuring that patients receive the advice required.

In many EU countries, pharmacists are also playing an increasing role in the hospital and community multidisciplinary teams caring for people with diabetes [32,33,34]. This trend should further be encouraged with relevant educational initiatives[32, 33].



Conclusions and need for action

There is consistent evidence that people in lower socioeconomic groups are more likely to have type 2 diabetes and are more likely to die from its complications. Addressing these frank inequalities, Spanish researchers have called for greater access to exercise, healthy food and health services[35]. This, they say, "will be key to achieving a reduction of socioeconomic position-related diabetes inequalities in Europe"[35]. What holds true in Spain applies equally to other EU countries. For this reason:

The European Commission and EU member states must lead the way and make optimum diabetes self-management a top health priority. Several important EU initiatives have roles to play.

- The European Commission and EU member states recently launched a reflection process to respond to the growing challenge of chronic diseases[36]. Although the deadline for stakeholder submissions has passed, this initiative should be monitored to ensure that diabetes is effectively addressed in the plans of EU member states to promote good health and prevent chronic diseases
- At several points the '*Diabetes in the Downturn*' report has mentioned the importance of using the internet to further patient education about lifestyle and to improve both content of and adherence with self-management. A dedicated internet site could also be used to share best practice and bring to wider audiences the important research into lifestyle and self-management currently underway in many European research centres. This would fit in with European Commission plans to promote the fuller use of technologies, including better use of information technology
- The ageing population is one of the drivers of the growing prevalence of type 2 diabetes[1]. *The European Innovation Partnership on Active and Healthy Ageing* should be engaged to ensure that type 2 diabetes features in their prevention and health promotion initiatives
- Another organisation that should have a vested interest in ensuring optimal self-management of type 2 diabetes is the newly formed *Global Alliance for Chronic Diseases* (GACD) – a collaboration among the world's largest public medical and health research funding agencies. Diabetes is on this organisation's radar, but effective lobbying should be undertaken to ensure that it takes a prominent place in the funding hierarchy
- In March 2012 a Plenary Public Health Session of the EU Parliament highlighted the need for a dedicated strategy to tackle the EU's growing diabetes problem and a resolution was adopted by members of the European Parliament. They resolved that EU strategy should target diabetes prevention, diagnosis, management, education and research and should complement EU countries' efforts (although MEPs noted that many countries do not currently have a national diabetes programme). MEPs urged continued funding for diabetes research through EU research framework programmes, standardised criteria and methods for data collection, and broader efforts to join up research ventures. These initiatives should be supported and encouraged
- Continued engagement with urban planners is important if the EU drive towards 'healthy cities' is to develop further. Healthy urban planning means planning for people. Work already published, or currently ongoing, has a role to play at this level. The WHO report 'Healthy urban planning in practice: experience of European cities' remains relevant[37]. This builds on experience from the European Sustainable Cities & Towns Campaign[38]. The latter describes how health and sustainable development are closely related and how creating healthier and more sustainable cities and towns requires new approaches to planning[38]. The first wave of the EU Commission's 'Knowledge and Innovation Communities (KICs)', developed under the European Institute of Innovation and Technology (EIT) 'Strategic Innovation Agenda'[39] has key themes of innovation for healthy living and active ageing (improving the quality of life and well-being of citizens of all ages) and 'food4future' (sustainable food supply chain, from farm to fork). '*Diabetes in the Downturn*' recognises the important work underway in these initiatives and will work with the relevant bodies to ensure the exercise and dietary needs of people with diabetes are adequately catered for in such planning
- At the community level, screening and treatment of depression is essential if the best possible care is to be delivered to people with diabetes[18]. All HCPs need greater awareness and training to address this problem, and health service providers need to ensure that clinical services are able to deal with this co-morbidity[18]
- Again, at the community level, current initiatives by some supermarket chains to provide consumer health education about healthy food choices are to be applauded. Food selection is a key factor in the nutritional management of diabetes[40]. However, there may be a health equity issue here and chains of low-cost supermarkets should be encouraged to launch similar healthy eating initiatives. This is especially important in the light of recent research showing that consumers in lower socioeconomic status groups tend to purchase calories in inexpensive forms that are higher in fat and less nutrient-rich[41]
- Finally, healthcare reimbursement bodies/insurers need to be made aware of the potential cost savings from effective diabetes-centred population-wide behavioural prevention and counselling programmes. Recent research has highlighted the substantial health benefits and insurer cost savings accruing from adequately funded interventions[42,43]

"The key to success in diabetes management is easy access to competent primary healthcare combined with quality patient information. Give priority to such reforms!" Johan Hjertqvist, President, Health Consumer Powerhouse, publisher of Euro Consumer Diabetes Index 2008 Report

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Appendix 1

Preliminary literature review methodology

Due to the extensive empirical evidence already available, the project literature review concentrated on published systematic reviews. Ovid software was used to search 24 journal databases including Medline, Embase and Pyschinfo. This identified 497 publications of potential interest. Titles and abstracts were then screened using the following criteria:

- Included: Adult, patient and psychosocial issues in relation to patient education or similar
- Excluded: Type I diabetes, clinical drug trials, or those that included a comorbidity interaction such as diabetes and cancer, children and adolescents, or focused on a specific group by ethnicity that were exclusively American or Australian

Systematic reviews were then categorised under the following areas:

1. Barriers and risks
2. Economics and socioeconomic status
3. The role of healthcare professionals in diabetes self-management
4. Adherence
5. Interventions and intervention effectiveness

EU survey methodology

The '*Diabetes in the Downturn*' survey was funded by Janssen EMEA and was conducted by The Research Partnership – a global pharmaceutical market research organisation. The objectives of the survey were to explore the impact that the current economic downturn could have on diabetes care in Europe, taking into account the situation over the past four years, and to identify areas where the economic downturn is having a detrimental effect on the self-management of type 2 diabetes.

A total of 697 online interviews were conducted with 242 GPs and IMs and 455 type 2 diabetes patients in France, Germany, Greece, Italy, Spain and the UK. Patients were split equally between two socioeconomic groups: ABC1 and C2DE. Each interview lasted 15 minutes. The interviews were conducted between 3rd April and 9th May 2012. Physicians were recruited to meet the following criteria:

- To see a minimum of 15 type 2 diabetes patients per month
- To make treatment initiation and modification decisions for oral therapy for type 2 diabetes patients

Patients were recruited to meet the following criteria:

- Be over 50 years old
- Currently receive treatment for type 2 diabetes

The final sample size was France 116, Germany 115, Greece 115, Italy 116, Spain 116, UK 119. Over half of the patients recruited were under 60 years of age, 88% were taking oral tablets for their diabetes (mean of 1.8 drugs taken, mean age 61 years) and 25% were receiving insulin.

Results cited in this report are statistically significant, based on a 0-10 point Juster scale.

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