



WorldWIDE news

A message from the Chairman

Welcome to the third issue of WorldWIDE News! Thank you for your responses to earlier issues. We are delighted that you have contacted us from places as far apart as Iceland, The Philippines, Kenya, Australia, Norway, Argentina and the UK. We look forward to hearing from more of you.

We are also very pleased to announce the launch of the WorldWIDE website! Created especially for healthcare professionals who care for people with diabetes, this site provides you with up-to-date and relevant information and resources, including:

- Interactive case studies
- Patient communication tools
- Diabetes information PowerPoint slide resource
- Newsletters
- Articles on diabetes-related complications
- Congress information
- Links to other relevant websites

Please visit the site and let us know what you would like to see in future updates.

This is part of the ongoing mission of WorldWIDE to create a forum for multinational exchange of ideas on

diabetes management and to highlight and discuss the key issues.

Visit the WorldWIDE website:
www.worldwidediabetes.com

In this issue of WorldWIDE News, we look at raising awareness of diabetic complications; what changes are required in our current approaches to developing management plans; the status of medical training; and the new NCEP guidelines. We look forward to your feedback!

Philip Home

Talking point — Involving people with diabetes in the prevention of complications

In a recent meeting, Professor Andrew Boulton (Manchester, UK) challenged the WorldWIDE group to consider how to improve patient and physician awareness of complications.

Professor Boulton highlighted the problems of trying to manage the prevention of onset or progression of diabetic complications in people with diabetes who have no symptoms or previous experience of complications. Complications are usually clinically silent until much advanced. Regular screening is thus of paramount importance and preventative measures need to be implemented. Initiating and maintaining behaviour changes to ensure future good health present a considerable psychological barrier. It is important to create mutual trust between the patient and the healthcare team in order to establish the basis and reasons for treatment decisions.

Professor Boulton used the example of diabetic foot to illustrate how complications may be poorly understood. Conditions such as neuropathic, neuroischaemic, ischaemic and Charcot foot occur frequently in the population with diabetes but are largely preventable through vigilant foot care. However, the signs of complications are often missed or not even looked for — for example, general practitioners often fail to examine the feet of a person with diabetes. Similarly, while patients are generally aware of the increased risks of blindness, amputation and

kidney disease that accompany diabetes, there is less perception of the risk of outcomes such as myocardial infarction, foot ulcers or neuropathy. The link between having an insensitive foot, ulceration and — ultimately — amputation is often not made. In general, there is a lack of appreciation of the seriousness of diabetes (particularly Type 2 diabetes) and associated complications.

How can awareness be increased?

- Annual review is essential and usually includes screening for retinopathy, hypertension, nephropathy and vascular disease. Testing for neuropathy and foot problems is often ignored but should also be incorporated into the regular review process. Such reviews have a dual benefit: not only are potential problems detected early but, in addition, the patient's attention is drawn to all the different possible complications that might occur — hopefully raising awareness of the seriousness of the problems.
- Personal assessment cards encourage patients to monitor changes.
- Public awareness campaigns organised by local or national support groups may alert patients to visit their healthcare providers.
- Assumptions should not be made regarding practical implementation of new knowledge by patients or physicians. Teaching or sharing of information needs to be followed up

with consideration of how the facts relate to everyday clinical practice or self-management.

- Educational initiatives need to be implemented to raise physician awareness of the possible signs and symptoms indicating the presence of diabetic complication(s). In addition to educational programmes for general practitioners and hospital personnel, programmes for personnel in other, related, specialities (for example cardiologists) could also be beneficial.
- Physicians and/or patients may not be using the most appropriate medication dosage or type of treatment to control risk factors. In the case of hyperglycaemia, this may be due to fear of hypoglycaemia. More information and training in the correct use of insulin and oral agents and in dealing with hypoglycaemia may be required.
- Emphasising the link between a change in behaviour and improvement in condition or decrease in risk may help motivate the patient.



Objects found in the shoes of patients with diabetes.
Figure kindly provided by Professor Andrew Boulton

Complications of diabetes

- Heart disease
- Stroke
- Foot ulcers
- Amputation
- Hypertension
- Acute neuropathy
- Neuropathic joint
- Infections



- Periodontal (gum) disease
- Erectile dysfunction
- Renal disease
- Cataracts
- Retinopathy
- Digestive conditions
- Peripheral vascular disease

It has been estimated that by the year 2025 the prevalence of diabetes will have risen by 45% in Europe and 107% in the Americas, compared with levels in 1995 (refs 1, 2). This increase will inevitably be accompanied by increases in the prevalence of complications, leading to greater mortality, morbidity and economic burden if unchecked. The statistics are already frightening. For example:

- In people with Type 2 diabetes the risk of nephropathy has been estimated to be 25% in people of European origin and approximately 50% in some other ethnic populations, such as Afro-Caribbean, Asian Indian and Japanese (ref 3).

- A total of 20–40% of young people with diabetes are likely to advance to end-stage renal failure (ref 3).

- In the USA, approximately 40% of people with diagnosed Type 2 diabetes and 30% of people with diagnosed Type 1 diabetes are thought to have neuropathy (ref 4).

- After having diabetes for 20 years, almost all patients with Type 1 diabetes and >60% of patients with Type 2 diabetes have some degree of retinopathy (ref 5).

- Hypertension is present in 40% of people with diabetes aged 45 and 60% of those aged 75 (refs 6, 7).

- Over 50,000 lower-extremity amputations are performed per year in people with diabetes in the USA (ref 8).

- Atherosclerotic cardiovascular disease accounts for 65–75% of deaths in the population with diabetes (ref 9).

It is imperative that physicians and patients take steps to delay or prevent the long-term complications of diabetes. Improved blood glucose and blood pressure control have been shown to significantly reduce the development and progression of at least some of the complications (refs 10–12) and should be key factors in the agreed diabetes management plan.

References

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Development of comprehensive management plans for people with diabetes

A commentary by Dr Linda Siminerio



As a diabetes care provider, one does not need to be reminded that diabetes is a lifestyle disease. Physiological processes, like blood glucose and lipid levels, are affected by a variety of influences, eg food, exercise, daily schedules and adherence to care recommendations. Therefore, it is critical that a comprehensive, individualised assessment be performed in the process of developing a management plan for the person with diabetes. Attention to aspects beyond biochemical and pharmacological parameters is essential in order to improve both metabolic and — possibly more importantly — psychosocial outcomes, such as quality of life.

Along with obtaining clinical data and carrying out a physical examination, a thorough assessment should include a review of the following:

- Nutrition history — current nutrition history, including food preferences, choices, and cultural themes
- Activity history — activity types, preferences, intensity and frequencies
- Monitoring — methods, accuracy, and responses to values
- Psychosocial/economic aspects — living situation, supports, finances, stress, educational background, culture and health beliefs
- Cognitive/behavioural features — knowledge, motivation, self-efficacy and readiness to learn
- Diabetes history — complications and impact of complications on the physical and psychological demands of diabetes

It has been demonstrated repeatedly that treatment plans are almost always unsuccessful unless attempts are made to address the individual's lifestyle. A pharmacological approach that has been proven to be highly effective is useless if the patient forgets to take the medication, does not have the resources to pay for it or lacks sufficient motivation to improve their health.

Although most providers appreciate the need for a thorough assessment, time constraints often do not afford the provider and the patient this benefit. Therefore, it is wise to use a team approach where members representing specific disciplines can focus on the area that is relevant to their practice. A busy physician does not usually have the time to review a patient's meal plan in great detail or assess a patient's skill in blood glucose monitoring. This is where resources like a dietician or an educator can make the difference.

Traditional medical education programmes have used acute care models that focus on the physiological and pharmacological approaches to treatment. With diabetes, a chronic care model needs to be applied that stimulates providers to think about themes including assessment of psychosocial and behavioural aspects, together with a team approach. Training methods such as problem-based learning models or case presentations need to include areas that highlight these messages.

As the incidence of diabetes grows and the time that we can spend with patients becomes more limited, providers need to familiarise themselves with team and patient self-management approaches. This can ultimately lead to the effective implementation of a successful management plan that eventually leads to satisfaction for the provider and the person with diabetes.

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Training in medical communication



Dr Tim Dornan discusses the status of medical training

The prevailing model of medical education consists of a 2–3 year grounding in medical sciences, followed by a 2–3 year practical training. Biomedical sciences dominate the early years. Behavioural sciences are now also being given some prominence, but often in an abstract, academic and unpalatable presentation that is far removed from the consulting room. Practical training begins traditionally, with intensive instruction in clinical skills, predominant amongst which is 'taking a history'. Thereafter, training in medical communication may be provided in an ad hoc fashion through clinical experience and role modelling. Role models range from the sublime to the ridiculous, giving plenty of scope for obsolete and ineffective patterns of practice to be perpetuated. Some will see this as a pastiche of their forward-looking educational approach but, worldwide, it is probably a fairly representative picture.

There are understandable reasons for dissatisfaction with that tradition, foremost amongst which is clamour from the lay people — who it is our duty to serve — for better medical consultation skills. That clamour is not yet to be heard worldwide. In some cultures, wherein patient empowerment has not even been considered, part of the perceived power of the doctor is due to his/her apartness. Paternalistic professionalism may simply be accepted in other cultures. Perhaps a lack of open communication will be tolerated indefinitely in those cultures, but Western European and North American experience indicates that affluence and consumerism are intolerant of paternalism. Certainly, it is out of tune with the traditions of diabetes care, in which the establishers of modern practice — such as Robin Lawrence in the UK and Elliott Joslin in the USA — were exhorting patients to 'be their own doctor' the best part of a century ago. How can one do that if one's white-coated medical attendant jealously guards information, and stands aloof?

Even if one were not persuaded by moral and practical arguments such as these, there is evidence that is hard to avoid. In an exercise in Manchester to define the exit competencies required of our graduates, no fewer than 50% of items submitted by traditionally trained clinicians were communication skills. A systematic review, including studies in diabetes, has shown that improving the quality of doctor–patient communication can improve biomedical outcomes independently of any deliberate change of therapeutic policy. There is an empirical research literature demonstrating that placebos are, themselves, effective and that 'context effects' in clinical care have a significant impact on biomedical outcome.

The doctor must remind her/himself that the central ethic established by Hippocrates is one of service. S/he should see that a training limited to 'taking a history' is set within a narrow, biomedical mould that is at odds with the Hippocratic ethic and painfully inadequate. A physician who has not bought into that ethic will never be an effective communicator (or doctor), but a physician who has accepted it can be helped to behave more effectively by training.

Accepting the centrality of patients in their own illnesses is conducive to building a style of consultation that helps patients come to terms with their own situation and reflect on how they can improve it through effective self-care behaviours. Finally, evaluation of their satisfaction with the communication measures much more than a 'feel-good factor', and can help support and build better practice.

Dr Tim Dornan

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New NCEP (USA) guidelines recognise risk of heart disease in diabetes

In the USA, the third report of the National Cholesterol Education Program (NCEP) Expert panel on detection, evaluation and treatment of high blood cholesterol in adults (Adult Treatment Panel III) has elevated the status of people with diabetes to the same risk level as people with established coronary heart disease (ref 1). This is in recognition of two key facts:

- (1) diabetes confers a high risk of developing coronary heart disease (CHD), which is at least partly due to the presence of multiple risk factors;
- (2) experiencing a myocardial infarction carries an increased risk of death either immediately or in the long term in people with diabetes compared with the non-diabetic population.

The guidelines are issued to give an estimate of how intensive cholesterol-lowering therapy needs to be. In practical terms, the new guidelines are saying that if someone has diabetes it is recommended that their low-density lipoprotein (LDL)-cholesterol level is maintained below 100 mg/dl (2.6 mmol/l). This is in sharp contrast to the previous guidelines (Adult Treatment Panel II,

issued in 1993; ref 2) which placed diabetes as a risk factor along with others such as age, cigarette smoking and hypertension. Thus, depending on what other risk factors were present, the previous recommendation for people with diabetes may have been to aim for an LDL-cholesterol level below 130 mg/dl (3.4 mmol/l), or even just to keep levels below 160 mg/dl (4.1 mmol/l).

The new guidelines comprise three categories of risk which define the LDL-cholesterol goal level:

Category 1: People with CHD and people with 'CHD risk equivalents'.

CHD risk equivalents are:

- diabetes
- clinical forms of atherosclerotic disease other than CHD, such as symptomatic carotid artery disease, peripheral arterial disease or abdominal aortic aneurysm
- multiple risk factors; people in this category carry a >20% chance of developing CHD or having a recurrent CHD event in the next 10 years.

The LDL-cholesterol goal level for these people is <100 mg/dl (2.6 mmol/l).

Category 2: People who have multiple (2+) risk factors.

These people have a $\leq 20\%$ 10-year risk of CHD and should aim to keep their **LDL-cholesterol levels below 130 mg/dl (3.4 mmol/l).**

Category 3: People who have no risk factors or just one risk factor.

The 10-year risk for people in this category is less than 10%. Their **LDL-cholesterol goal is <160 mg/dl (4.1 mmol/l).**

What about the diabetes guidelines?

While ADA guidelines quote <100 mg/dl as low risk and ≥ 130 mg/dl as high risk, European guidelines state a 'low-risk' LDL-cholesterol level to be <115 mg/dl (3.0 mmol/l) and high risk as >155 mg/dl (4.0 mmol/l); IDF European guidelines). Is it time for these target values to be lowered?

More information on this topic can be found in the Executive Summary of the ATP III report (ref 1) or on the National Heart, Lung and Blood Institute's web site: www.nhlbi.nih.gov

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Case History

The WorldWIDE Working Group was asked how they would manage the following case — do you have any views on their suggestions?

Patient B was described as a 55-year-old, slightly overweight woman who was found to have Type 2 diabetes on screening. She had been known to have raised blood pressure for some years and has received treatment with diuretics and β -blockers. She was referred to a specialist diabetes service by her general practitioner who was concerned about her increased blood glucose levels. The reported findings were confirmed on presentation at the clinic (blood pressure 155/95 mmHg). By this time, she had already received treatment with a sulphonylurea (gliclazide 6 mg daily), but her HbA_{1c} was still 8.9%. She had evidence of non-proliferative retinopathy and a repeated urinary albumin/creatinine ratio of around 10.0 mg/mmol. She also had dyslipidaemia with a total serum cholesterol of 6.7 mmol/l (260 mg/dl), LDL-cholesterol 4.2 mmol/l (160 mg/dl) and triglycerides 3.2 mmol/l (280 mg/dl). Her serum creatinine level was normal but liver enzymes were slightly elevated.

The group noted that this was the kind of complex medical problem that was typical of people with Type 2 diabetes. The 'straightforward' questions are: the management of the lipid disorders, management of blood pressure, and management of hyperglycaemia. The group agreed that these problems required 'stepped care', and it was suggested that management of the raised blood pressure and lowering the lipid levels would also allow more effective blood glucose control. A key issue is how successful glycaemic control will be in the long term.

MANAGEMENT OF LIPID DISORDERS

- Patient B's general practitioner had not checked for dyslipidaemia. This should be done in all people with diabetes and all with raised blood pressure
- Dietary management, in combination with a statin to reduce LDL-cholesterol levels (and possibly a fibrate for the hypertriglyceridaemia), would lower lipid values close to recommended levels

MANAGEMENT OF RAISED BLOOD PRESSURE

- Treatment options for hypertension are:
 - further attention to calories, salt and alcohol intake
 - continue with propranolol
 - continue with diuretics
 - switch to an ACE inhibitor

MANAGEMENT OF HYPERGLYCAEMIA

- It was strongly recommended that Patient B should have full dietary assessment and receive advice on the dietary management of hyperglycaemia
- Even with lifestyle modifications, it was predicted that glycaemic control would continue to deteriorate with time
- One option could be to place Patient B on insulin therapy immediately

OTHER MANAGEMENT CONCERNS

- Patient B should be offered more formal diabetes education, including skill training, for example, in self-blood glucose monitoring
- If insulin is to be considered, Patient B should undergo the recommended education procedures to allow informed acceptance of an insulin injection treatment regimen

Do you have a case history that may be of interest to your colleagues? We would like to hear from you. Although we cannot guarantee that your case history will be discussed, we hope to be able to feature more case histories in future issues of WorldWIDE News and on the worldwidediabetes.com website.

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Don't forget to include your contact details!

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