

Management of the diabetic patient in a resource-constrained environment

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Panel members

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Prof Mollentze: Sub-Saharan Africa faces a quadruple burden of disease: it is still struggling with age-old infectious diseases such as tuberculosis, and parasitic diseases such as malaria, while non-communicable diseases like diabetes and hypertension are emerging at a rapid rate alongside injuries from violence. In addition, sub-Saharan Africa is bearing the brunt of the global HIV/AIDS epidemic.

A century ago diabetes was virtually unknown in Africa.¹ Currently 10 million people are living with this disease in Africa and the number is predicted to double by 2025. Type 2 diabetes accounts for 85 to 95% of all cases in the region. The main factors responsible for the rapid increase in the prevalence of diabetes in sub-Saharan Africa are an aging population, unhealthy diet, overweight and obesity, and a sedentary lifestyle, closely related to rapid urbanisation of the population in the region.

According to the International Diabetes Federation, the global diabetes epidemic has devastating human, social and economic effects.² In sub-Saharan Africa, people with diabetes face the stark reality of premature death. In the poorest countries of the region, people with diabetes and their families bear almost the entire cost of whatever medical care they can access and afford. A person requiring insulin for survival in Zambia will live an aver-

age of 11 years, in Mali 30 months and in Mozambique 12 months.

Although the plight of people living with diabetes in South Africa is undoubtedly less severe than in neighbouring countries, the challenges facing our healthcare system are huge. The two most important and immediate challenges, for example in the Free State Province, are a lack of capacity, especially at primary healthcare level, and financial constraints.

In the Free State with its population of 2.7 million, 7% or 93 000 individuals in the age group 25 years and older are suffering from diabetes, of whom only half or 46 500 are aware of the fact that they have the condition.³ Another 13% in the same age group have pre-diabetes and are at risk of developing diabetes. Hypertension is present in 27% (i.e. 355 000) of the adult population. Added to this, another 281 258 individuals in the 15- to 49-year age group are HIV positive. Of the 14 000 patients enrolled into the HAART programme in 2003–2004, almost 3% had active tuberculosis. It is common knowledge that patients accessing our primary healthcare system tend to present with more advanced disease, often requiring medical care beyond the level and expertise available at entry points.

I have estimated that in a typical health district in the Free State, at least 85 000 patients with diabetes, hypertension or HIV/AIDS are dependent for their care on 43 primary healthcare clinics. From this it follows that each clinic is responsible for approximately 2 000 patients with one or more of these disorders per clinic catchment area. These patients have to collect their medication at least monthly and must be evaluated at three- to six-month intervals. This is over and above other services such as mother and child healthcare that these clinics are responsible for.

The staff at these clinics is further stretched by the National Department of Health's Comprehensive Care, Management and Treatment of HIV and AIDS Programme aiming for a horizontal antiretroviral-rollout programme. Serious concerns exist that HIV/AIDS may result in the crowding out of patients in need of care

for non-communicable diseases, as well as burnout of medical and support staff.

Dr Mahomed: The same applies across the board. I think all of us are facing similar constraints.

Ms Croasdale: We visit clinics in the rural nodes and we find that even within a health area in the district, one clinic is vastly different from the others. These are not even provincial differences. Much has to do with the clinic manager and his/her commitment and focus. If the focus is HIV then you will find that non-communicable diseases (NCDs) are totally overlooked.

Prof van Zyl: In addition, I think a big problem is that service delivery is dependent on one individual working in a small area. If nobody is driving the programme in a clinic, nothing happens. There are no feedback or control mechanisms to report on what the clinic is doing and what it should be doing. So, there is no accountability of the people working in that clinic.

Take the example of down-referrals from hospitals to clinics. If drugs are not ordered by the clinic and therefore are not available for patients down-referred, the clinic staff just shrug their shoulders and say: 'Sorry, go back to the hospital'. One of our major problems is down-referral of patients who have diseases that should actually be a primary healthcare problem but now have to be managed at a higher level.

Prof Delpoort: I would like to report on diabetes care at primary healthcare level, with specific reference to whether we are meeting the challenges in South Africa. To address these challenges, healthcare providers probably need to be as resilient as their patients, who have to face the daunting effects this disease has on their lives. Bradshaw *et al.*⁴ reported an incidence of 5.5% for diabetes in South Africans aged 30 and older, and calculated that about 14% of the ischaemic heart disease burden, 10% of stroke, 12% of hypertensive disease and 12% of the renal disease burden in adult males and females (30+ years) were attributable to diabetes.

For my discussion I would like to start off by setting a standard for practice against which one could measure current primary healthcare initiatives in South Africa. Guaranteed minimum services for improved diabetes management in South Africa,⁵ as defined by Larry Distiller, could be used for such a purpose. These services include:

- consultation with a health professional trained in diabetes management no less than twice per year – more if required
- full initial and ongoing individual and group diabetes education, as specified in the guidelines
- an initial interview with a dietician followed by an annual visit – more if required
- a minimum of one visit per year to a podiatrist
- appropriate laboratory investigations, including but not limited to HbA_{1c} determinations every six months; annual monitoring of blood lipid levels and kidney function
- one annual consultation for retinopathy and glaucoma screening with a specialist ophthalmologist
- all diabetes medication, including blood sugar testing meters and strips
- all hospitalisation for diabetes emergencies, including diabetic ketoacidosis and hypoglycaemia
- a 24-hour telephone hotline to facilitate the management of home-treatable diabetes emergencies.

Although targets at the primary healthcare level of prevention, detection and treatment of complications are clearly stated, and guidelines are available, these do not appear to be implemented in general,^{6,7} as is evident from the following quote. 'Care and control of diabetes in this rural community is sub-optimal. There is a need for primary-care staff to focus on modifying prescriptions in the face of poor blood glucose control and/or uncontrolled hypertension.'⁷

In Mpumalanga, primary healthcare physicians reportedly experience great difficulty in providing diabetes care. At primary healthcare clinics, only urine glucose testing is performed for monitoring purposes, and target organ evaluation or body mass index measurements are not done. The primary healthcare nurses are perceived as poorly trained, records are poorly kept, and audits are not done for quality assurance purposes. Dietary advice is lacking and if provided, patients often experience the advice as culturally unacceptable. Lifestyle adjustment is poor due to lack of patient education.

Medication is unavailable in most primary healthcare clinics in this area. The cost of blood glucose-monitoring strips is prohibitively high and attrition of monitors is a regular phenomenon. Blood glucose monitoring occurs monthly and that of HbA_{1c} three- to six-monthly with < 7% as treatment goal and > 8% as an indication for additional treatment being prescribed. The reliability of laboratory methods and devices available for metabolic monitoring in resource-poor settings may be an additional matter of concern, as reported.⁸

It is obvious that the challenges in diabetes care are currently overwhelming. As a solution, Levitt⁸ proposes that 'A concerted multisectoral effort will be critical to ensuring improvement in healthcare delivery for people with diabetes in the region'. A review by Beran and Yudkin on diabetes care in sub-Saharan Africa⁹ provides a list of key areas to be addressed if diabetes is to be tackled in sub-Saharan Africa, as identified by the International Insulin Foundation. These are:

- organisation of the health system
- prevention
- data collection
- diagnostic tools and infrastructure
- drug procurement and supply
- accessibility and affordability of medicines and care
- training and availability of healthcare workers
- adherence issues
- patient education and empowerment
- community involvement and diabetes associations
- positive policy environment.

Addressing these key issues may be regarded as idealistic but successful concerted multisectoral efforts will eventually provide positive outcomes in the long run. There is evidence of successful endeavours in primary healthcare following Alma-ATA,¹⁰ and of the 'Composite lessons learned from countries that are progressing', the one that should encourage us is: 'Building coverage of care and comprehensive health systems with time. Although a single right way does not exist, key factors in these countries include prioritisation of high-effect interventions to start with, integrated service delivery and building on each programme, moving from selective primary healthcare to an effective continuum of care in a comprehensive health system. Increase in human resources and skills levels with time and a willingness to innovate, including delegation to com-

munity and extension workers, and short training courses (e.g. accelerated midwifery training) followed by in-service upgrading of skills. Attention to essential drugs and appropriate technology for health, development of local generics when feasible.'

Prof van Zyl: The most important reason for managing diabetes is to prevent disability and complications. Patients who are still socio-economically active should be kept active.

I find often the system fails the patient, so it becomes impossible for them to continue working. Clinic times are only in the morning. Patients are allowed to receive only one month of treatment at a time. Therefore they have to take 12 days a year off from work just to have access to treatment.

Furthermore, the infrastructure is there but the staff are overburdened or have no interest in diabetes management. Often the sisters and even the doctors are suffering from compassion fatigue. They just do not care any more because they are overwhelmed with patients.

Diabetes care is based on four pillars: hypertension management, glucose management, lipid management, and screening for complications. The first three are aimed at preventing complications. Screening is to identify patients at risk for complications and to intervene more intensively at an early stage to prevent further problems.

Amputations should not happen, although we often see patients having amputations because no screening is done early on to identify feet at risk. Foot care in South Africa is horrific because podiatrists are not available. We train podiatrists but they leave the country.

Dieticians only work in hospitals and very few are available in the community.

Perhaps a bigger problem is that because diabetes is often not symptomatic until very late in the disease, we fail to identify patients. Patients are diagnosed late, especially type 2 patients, and often already have complications at diagnosis. Our biggest task is making the population aware of diabetes.

Much manpower is wasted by healthcare workers not working according to a plan or structure in the management of diabetes. That is why I want to emphasise a structured approach to diabetes management, where the healthcare worker can actually see results and measure success.

I feel that all patients should be managed in a structured way according to a scientific

cally based guideline and an implementation strategy that can be measured. Clinic performance can be measured by the use of process measures (e.g. how many patients in your clinic had eye and foot examinations? How many had blood pressure checked at each visit? How many patients have a glucometer?), and outcome measures (e.g. the proportion of patients achieving glycaemic and blood pressure control).

Blood tests are often not available at the clinics, for example determination of HbA_{1c} levels. Clinic staff therefore rely on one blood glucose measurement once a month or even once every three months to assess glycaemic control.

I think our healthcare workers are often not empowered with the necessary skills to manage diabetes; they may know what to do, but they just do not have the time to fit in the diabetes patient between all the other patients. The diabetic patient's consultation is not a quick one where the glucose and blood pressure are measured, a prescription is given and the patient is on his/her way. It requires training and education of the patient, which takes time.

Ms Croasdale: There are so many tools available to address these issues and it is just a problem of getting the people to use the tools.

Prof van Zyl: I think the bottom line at this stage is a financial constraint and a manpower problem.

Prof Levitt: We need to embrace the fact that there is a manpower problem. It is not going to go away, and we can either hide behind that for the next 20 years or we can see it as a challenge. How can we use the manpower that we have in a different way? It requires active engagement with them and for them to be part of the process. Then you diminish the burnout and the sense of disaffection and you create a totally different dynamic within the clinical situation.

Dr Mahomed: I agree with Prof Levitt that there are positive things we can do. I have six points that I would like to discuss. One of the problem areas is in the hospital environment. The standard of care practised by medical staff nationally is highly variable. Patients get different health messages from different levels of care and they become totally confused.

One of my suggestions is to have a standard diabetes clinic proforma that is used in

every clinic and hospital in the country, but there are pros and cons to this. I have a copy of the proforma we have been using in KwaZulu/Natal for the past two years. It is a single page with patient identification, pharmacy and examination records, and it is a simple checklist. If we use this across our healthcare facilities, then we can standardise diabetes assessment.

The second thing is to have a standard syllabus of core knowledge in diabetes care that can be taught to undergraduates and postgraduates and does not have to be limited to internal medicine. Consideration should be given to adding the syllabus to a CME programme. The Department of Health could make it a mandatory requirement for CME for doctors and other healthcare workers.

The third point is to have proper auditing of diabetes care. Prof van Zyl alluded to that earlier. We need to know the standard of our care. The private sector should not escape this kind of auditing. One also has to limit the bureaucracy. What I would recommend is to choose a small number of core statistics, for example how many diabetics there are, how many have complications, how many are on insulin or are non-insulin dependent; because those kind of statistics have implications for healthcare planning and delivery.

My next comment is about proper use of the multi-disciplinary approach. We have all mentioned the importance of involving the following staff in diabetes care: podiatrists, dieticians, diabetes nurse educators, ophthalmology services, pharmacists and nephrologists. Because we have such low staff numbers, my suggestion to overcome that problem is to have a system where we train healthcare workers to do basic assessments. So, instead of having a podiatrist at every level of care, the podiatrist could focus on just the higher level of care. He/she could train five or six healthcare workers to do basic assessments and just refer a limited amount of highly specialised work through to him/her. That is the best use of a limited resource such as the podiatrist.

Access to a multi-disciplinary team does not necessarily mean having a dietician or ophthalmologist in each facility but the medical staff in every facility should have access to a service through a referral system. We need to revisit the referral systems to see if people actually do have access, and that can be audited as well.

My next point is about availability of medication: we need to re-look at medica-

tion and the supply chain, especially insulin. Prof Mollentze mentioned the issue of insulin supplies sometimes running out.

Blood tests: when to do them, how many to do, and what to do. This has tremendous cost implications. I think that medics can advise the Department of Health about a safe minimum number of blood tests that can be done, so that it is affordable, yet still effective.

Another big problem is self-testing and this includes the cost of meters and sticks. I think it is false economy to not spend money on this because it helps improve glycaemic control and thus reduces complications. It also assists in guiding safe and appropriate therapy.

We also need greater co-operation between the Department of Health and academic institutions. Academics can supply information and they can also guide cost-effective use of facilities and resources. The Department of Health should accept the protocols and guidelines that are published by South African expert associations.

Better co-operation includes better communication, encouragement of staff, as well as regular visits to health facilities by senior Department of Health staff. This will help with the implementation of the national health policy.

Patient advocacy can be achieved with the setting up of a patient charter. I have an example of this. The patient, the healthcare worker and the Department of Health each have rights and responsibilities. There should be an independent assessment of the healthcare service that is linked to a corrective process.

My last comment is that we have non-governmental organisations that have expertise in certain areas and can take over some of the educational programmes that are required. The Department of Health should consider outsourcing some of the duties to them.

Prof Mollentze: Many of these points are common to the various areas in which we function and an important one is the mixed messages going out. Standards of care are also important.

Ms Croasdale: I think from your perspective, it seems as though the Department of Health sits on the sidelines and is not involved, but we are currently intimately involved with the people. I was involved with the SEMDSA guideline and we are aligning ours with the SEMDSA guideline.

We are working with the people we know and we expect the chairperson of an organisation like SEMDSA to pass the information on to their members, so that we can get comprehensive input from them. But this is very difficult. We can only work through a few people, but we do expect the base numbers to be broadened.

Dr Mahomed: I accept that, but what I would like is greater participation between our healthcare facilities and the local Department of Health personnel who are tasked with chronic diseases. We would welcome a two-way process on that.

Prof Mollentze: We must distinguish between the national Department of Health and their initiatives and what is happening in the provinces. The Free State Department of Health welcomes participation and input from clinicians. I was recently invited to address top management about this very issue and to put forward a basic strategy that could be followed to improve diabetes care in the Free State, and this was welcomed. Our unit is now developing a protocol for structured diabetes care in a particular health district in the Free State. We are optimistic that if this proves to be successful, the Free State Department of Health would buy in and consider expanding the programme to other health districts. It is a two-way process and maybe we need more visibility and support from the provincial Department of Health. We also need to make use of what is available.

Dr Levitt: I would like to support Prof Mollentze. The National Department of Health does wonderful things. It produces all these documents but none of them get implemented because of the total breakdown in the way healthcare is organised. However, I can speak from our experience in the Western Cape where we have fantastic relationships with the Cape Town metropolitan area and the Western Cape Department of Health with regard to chronic diseases. We meet with them, we are engaged in workshops with them, and we develop audit tools in multiple aspects. It is a matter of finding somebody that you can talk to because that makes a huge difference, and once you have that, you will see substantial progress.

Prof Mollentze: It boils down to one important issue, and that is communication, both vertically and horizontally. This is in need of serious attention in the South

African healthcare environment.

Ms Croasdale: It is all very well talking about communication but if you do not know exactly who is responsible for a particular programme, it is very difficult to find out. I am happy to pass on my immediate contacts in the provincial offices.

Prof Mollentze: Ms Croasdale, we are looking forward to an update on what the Department of Health has on the agenda for diabetes care in South Africa.

Ms Croasdale: I will discuss the diabetes implementation strategy for the public sector in South Africa. This strategy was developed by Ms Kotzenberg, the cluster manager for non-communicable diseases (NCDs) in the National Department of Health, after due consultation. She was requested to develop an implementation plan for the Diabetes Declaration and Strategy for Africa, which was ratified at the IDF Conference in December 2006. Mrs Kotzenberg was originally opposed to this because she did not want to focus on specific diseases, but rather address risk factors that are common to the primary NCDs. This document to hand is the final document and I will give you copies.

To achieve improved management of diabetes, specific areas of action have been highlighted in the strategy. The activities have been placed under 10 major headings, these being risk-factor prevention/reduction; early detection of diabetes; empowering people with diabetes; clinical management and follow-up of diabetes patients; early detection and management of complications and disabilities; health workforce capacity development; support services or partnerships; resource allocation; monitoring and evaluation; and research. The kind of research we want is research that will inform the policies that we are developing, be they treatment policies or total management care policies. The improved management of diabetes does not just hinge on this implementation strategy alone, but will also make use of other NCD management tools that have been developed.

The guideline, Non-Communicable Diseases – A Strategic Vision (I will give you a copy) explains the long-term care model in detail and highlights the fact that collaboration between the community and the health system is essential. The six interdependent areas, community resources and policies, and the five health system areas – organi-

sation of healthcare, self-management support, delivery system design, decision support, and clinical information systems – must be addressed. We need to know how to get the statistics; we need the information systems that will provide them.

The guideline also details all aspects of dedicated services – a requirement of the long-term care model, and includes national record keeping and patient file management. I like the patient records example that you have given me (from KwaZulu/Natal). We also have a very good example from Western Cape. I think what we need to do is take all of these and make one document. Western Cape has found that theirs works very well.

For effective long-term care we need a coordinated and comprehensive continuum of care, and people with NCDs should have access to dedicated services because they will be attending the clinic over a long period of time. We talk about a reasonable patient–healthcare provider ratio and we know that is not the situation currently, but we need to think differently on how to make best use of our human and other resources.

The Department held a collaborative workshop with the World Health Organisation in November 2008, during which a framework for the implementation of long-term care was finalised. This user-friendly implementation framework will be utilised by provinces, districts, and health facilities to establish where they are in terms of implementation. We have provisionally filled in some of the columns to give them an idea of where we think they are at this point. They will use it within their own context. I have done training in Gauteng only, and we will have to expand on the training.

At the workshop we also finalised the standardised Chronic Diseases Management Register, to comply with national record keeping, as mentioned in the Strategic Vision document. Provinces wanted a standardised register. The register will be printed and implemented in the 18 priority districts over the next two years.

Input to the section Chronic Diseases and Geriatrics in the *Primary Healthcare Supervision Manual* was also finalised. This cross references the chronic diseases care being rendered by the clinics in terms of the long-term care model and monitors the appropriateness of the care and the availability of medicine and equipment. The Manual actually falls under the directorate of Quality Assurance at national level, with Dr Louis Claassens. Everything is up to date

and all documents are in agreement.

Other tools include the disease-specific clinical management guidelines (containing non-drug and drug management). This is the diabetes hospital-level guideline (I will give you a copy). The primary healthcare guideline is being updated. I was waiting for the SEMDSA guideline to be finalised.

There are departmental strategic plans, operational plans, the 18 priority districts (identified by senior managers), and the district health information system. I have recently had access to the raw data but you cannot use it because in a particular month one may have 2 000 patients on register, and in the next month it is only 1 000. When I questioned them about what happened to the other 1 000, they did not know. Data are being collected but are not being used and are not informing decisions.

The 18 priority districts are defined as the most disadvantaged districts in the country. Within these 18, of the total of 52 I think it is, the most deprived sub-districts have been identified. Eastern Cape for example has six identified districts, with a number of sub-districts.

One of the key strategic objectives of the Department of Health is to improve the management of NCDs. The above diabetes strategy, together with the many generic tools and non-communicable disease-specific clinical management guidelines will certainly put this objective within reach, provided that the available products are utilised by the various health facilities at district and provincial levels.

Prof Mollentze: This is very useful information. Thank you for representing the Department of Health at this discussion. It is appropriate to be reminded of the many policy documents, guidelines and strategies that are available. It remains, however, a question of disseminating this information, creating awareness and deciding how these policies could be implemented. I think SEMDSA and allied organisations should play a definite role in that.

Prof Levitt: I agree. One of the major challenges is how can we move on. There are so many isolated groups of individuals working in parallel, often in isolation, and nobody knows what the next person is doing. There are so many wonderful initiatives both within and outside the Department of Health.

What we need to do as a society is hold the Department of Health to account. We

must make sure that what they promise actually comes about, so that the people with diabetes have a better outcome. I think we have to be very assertive in this.

Dr Mahomed: I suggest that SEMDSA set up provincial committees and take the lead in co-ordinating people such as the Department of Health, DESSA (Diabetes Education Society of South Africa), dieticians, podiatrists and so on to look specifically at implementation.

Prof Mollentze: Many initiatives are ongoing but not in a coherent way. Dr Mahomed's proposal is an excellent one that should be raised at the proper forum.

Prof Delpont: I am thinking of all the data that could be generated to influence decision-making. I would like to suggest that it be captured in digital format if possible as it may get lost otherwise. Furthermore, I would like to applaud what you are doing.

Ms Croasdale: May I just say, from the National Department of Health's point of view, we are the advocacy support. We are not the implementing organisation. So, implementation then falls to the provincial Departments of Health and that is where we get stuck with staff shortages, which everybody hides behind. 'We do not have to do much because we do not have enough staff.' But if we start thinking out of the box and looking at alternative suggestions then we can make use of the tools that are available and get the necessary information.

Prof van Zyl: I agree with that. We under-utilise the resources we have because we do not have a strategy to achieve our objectives. We waste a lot of time repeating the same tests, and neglect to do other equally important tests because we do not work according to a plan.

Dr Spitaels: Many of these problems are exactly the same ones we encounter in paediatrics. If children are not in a children's hospital or in a child service they get lost among the adults because there are so many more adults. The issues around children specifically do not always get recognised.

I think this is across the board in private and hospital practise. Protocols that have been set up for adults get applied to children. So children land up at a day hospital and get given Atraphane and not told how

to use it. We are now using Protophane. They may also be told: 'you are too late, come and fetch your insulin tomorrow', because there is no understanding that you do not do that to a type 1 diabetic. Or they get one box of strips when they are three years old and they need four.

Ms Went: That's where we find people start falling through the cracks – when they are adolescents. They may be staying out in the townships and they go into diabetic ketoacidosis during the night. Sometimes they end up in one of those primary or secondary health clinics or a private hospital. They sit there for a while before they are referred to tertiary institutions and that is a real problem for our adolescents.

Dr Spitaels: Where a 14-year-old lands up is very different from province to province and from hospital to hospital. The hospital system says that you are an adult when you turn 13 but it is not true. Also they are long-term patients.

The other thing I did want to mention was that the reasons to use more expensive insulins in children are slightly different from adults. So, if we are trying to motivate for that, it is a specialised need.

Dr Monyamane: As we all know, Lesotho is a land-locked country of 30 000 km². It is defined by the World Bank as one of the poorest countries. The population is 1.8 million, the literacy rate is 85%, but only 11% of the population live in the highlands. There is only about 8% arable land, as most of Lesotho is mountainous. Many people work in South Africa as miners. There are about 6 million in South Africa and 1.8 million living in Lesotho.

Public healthcare in Lesotho is provided by 18 health service areas and each is headed by a hospital. Sometimes it is a district, a political district on a political map, because the public sector is a mixture of church-owned and government-owned facilities. Each hospital is supported by 10 to 15 clinics, and below the clinics we have health posts.

Starting at the bottom, the health posts are staffed by nurses, sisters and village health workers. The clinics are staffed by professional nurses, and at the hospitals we have doctors and professional nurses. Tertiary care we get from the Free State. Diabetes care is currently accessed in hospitals. Both in the minds of the patients and the Minister of Health, diabetes is a spe-

cialist disease. Unfortunately in all hospitals there is only one day a week for seeing diabetic patients, and if the patient has diabetes and hypertension, he will be attending different clinics on different days.

In our clinics, consultations and treatment are free. In the hospital it is R15.00 and you get a month's prescription and two repeats for that. Despite that we still have many challenges. The first challenge is access to healthcare because of the topography of the country. It is difficult for patients to get to the clinics and once there, they find that there is no insulin or oral hypoglycaemic medicines because these are seen as dangerous drugs only to be prescribed by a doctor.

Fifteen per cent of the people are not working, so it is difficult to get from their homes to the centre of care. The waiting time at the clinics is very long. As you can imagine, with 100 to 200 patients having to be seen in a clinic, people arrive at 3 am and leave at 5 pm, because doctors have tea and lunch breaks in between. There is no appointment system. If we book 20 patients, about 50 will arrive.

The second challenge is the quality of care. The contact time with the patients is a big problem. The doctors just repeat the previous prescription, even if the patient is poorly controlled. There is no time for education or physical examination. Examination of the eyes and feet is not done. Monitoring of haemoglobin A_{1c} is not done – not even in the referral hospital laboratory because it is expensive.

The accuracy of information given to patients is also a problem. Patients get confused because we have doctors from all over the world, speaking different languages. We have Chinese and Cuban doctors, as well as doctors from the DRC and Zimbabwe. Ninety per cent of our doctors are expatriates from the African continent, Cuba and other places.

Local doctors are limited to about 60 registered private practitioners, but there is no relationship between the private doctors and the public facilities. Patients go to their private doctor or family physician for diagnosis and initiation of treatment only. Patients will then migrate to the nearest hospital because the fee is affordable or the service is free. After a year or two, patients will turn up at the private doctor again but now they have complications.

As far as nutrition is concerned, patients are still told not to eat starch. This happens in spite of a 'Train the Trainer' programme

provided by partners such as the University of the Free State, Novo-Nordisk and Life Scan. However, if you listen to patients sitting outside clinics they tell one another: 'no you do not have to eat starch'. If patients do eat starch it is the white sorghum *pap*.

Follow-up is a further problem. Patients have the perception that they only need to go and see their doctor if they are not well or if they run out of medicine.

The knowledge of the professional staff is also quite a challenge because there is no continuing medical education. There is also no induction despite a very high turnover of staff. Supply-chain management is a big challenge, since the pharmacy, technicians and the supply department do not order in time, especially for patients who are using insulin. Patients are given six syringes, and if they are lucky, 15 syringes, because syringes are perceived to be expensive. In reality syringes cost about 10 cents each.

What can we do with what we have? I would suggest that we have integrated care at the point of contact, whether it is at a clinic or a village post. If ordinary people can be trained to do HIV testing and counselling as lay counsellors at clinic level, why can we not empower the same group to check blood pressure and manage patients with diabetes, because diabetes is a chronic disease and has to be integrated into the primary healthcare model. We can also enter into partnerships with patient associations. They are very enthusiastic and good at training, teaching and volunteering to check blood sugar and educate the patients. The nurses would then be relieved to perform other duties.

Staff induction or in-house training would also improve the attitude and knowledge of the staff because diabetes patients tend to be thrown about if they are in hospital. Skills are lacking to take care of diabetic patients if they are in a surgical ward and patients tend to stay longer in hospital, escalating costs. It is also important that hospital staff including doctors, nurses, pharmacists and dieticians function as a team.

Access to self-monitoring is also a challenge. Patients will visit clinics once in three months to be tested or they do not go at all. A child may even be sent to pick up the medicine from the clinic. Even though pharmaceutical companies have donated glucose meters, test strips are not provided since it is too expensive.

Finally, the prevalence of HIV/AIDS in Lesotho is 23.2% and contrary to diabetes care, a lot of money is channelled into AIDS

care. In many ways diabetes is no different from AIDS and people still die from diabetes. As a donor-dependent country, I think we have the culture of entitlement and needing to be helped, although we can do a lot ourselves.

The roles of general practitioners or family doctors have been limited to hospitals to perform caesarean sections and fix broken bones. We should empower them to help at the clinics, and also engage them in training so that the patients they see are managed in a better way.

Dr Mahomed: In terms of the AccuChek or GlucoMeter sticks, maybe it applies to us as well – can we not negotiate a good price for it if you are buying in bulk?

Prof Levitt: The national tender now requires the companies to tender both on the machine and the strips.

Dr Monyamane: Since Lesotho is regarded as an international country, prices for drugs and consumables are higher than in South Africa.

Ms Went: DESSA is an organisation of diabetes educators. We have large branches in the Western Cape, KwaZulu/Natal and Gauteng. There is a sprinkling of members in other areas. As you can, see you have a concentration of highly trained health professionals in certain areas and not out in the more rural areas.

We are looking specifically at training for standardisation purposes and we have been doing *ad hoc* training over the years. In each centre the staff do a number of training courses each year, but now we are developing a manual to standardise it across the board. It is presently approaching completion and SEMDSA are in the process of having it edited by Dr Delpont. Hopefully once we have that, we can offer standardised courses in specific areas throughout South Africa. We would be very grateful for help from the Department of Health in implementing these courses.

Things need to be standardised and I think DESSA has a large role to play here. We are dealing with both healthcare professionals and patients. We need one qualified diabetes educator and several other educators in each support group system.

Tomorrow at the DESSA workshop they are doing a conversations map. Each diabetes educator will be presented with a box of conversations maps, which he/she will

take back to his/her respective area. These are maps of pictures, which stimulate discussion around the table, and patients are encouraged to take responsibility for themselves and to help others, so not just one person does all the work.

Obviously DESSA is very important for networking. We are often seen as a link between the doctors and patients. It is wonderful to have a diabetes education centre in Cape Town where everything is available. Patients come in and it is a one-stop shop. They are seen, examined, receive their medication, have their microalbuminuria done, their blood work is done routinely, their HbA_{1c} is done in six minutes and off they go. This is an unusual situation.

Ms Went: They get their three boxes or the 30 syringes, but despite that, we still have people with diabetes who do not actually take responsibility for their disease. They are not motivated within themselves. Our aim is to motivate these patients to take responsibility, and to empower themselves.

Dr Monyamane: How can we access or link with DESSA? I feel you are doing a wonderful job, because there is no education in our public clinics in Lesotho.

Ms Went: One possibility is to become a member of SEMSDA. I do not know if Lesotho has members in SEMSDA. You could send representatives to our meetings and workshops. We have a website and we are contactable through the SEMDSA website on the DESSA link. Take my details and somebody will get hold of you and let you know when things happen.

Prof Levitt: I represent IDF, Africa because I am the Southern African representative on this regional board. IDF is merely the sum of its member organisations. Our country differs because we actually have two member organisations of IDF: SEMSDA and Diabetes South Africa. IDF Africa represents sub-Saharan Africa. Northern Africa actually falls within the Northern African Mediterranean region.

The major impact that the IDF has had in the recent past is the UN Resolution, and subsequent to that, there have been regional workshops to try and ensure that the UN Resolution and the Africa Declaration are implemented.

There was a workshop in Nairobi in December where 15 countries were represented. We have been waiting for six

months for the report. The question is how can we make sure as an organisation that we improve the lot of people with diabetes in the region. The first issue is actually political buy-in at the level of the Department of Health and the Ministry of Health. No country in Africa is going to achieve anything unless we achieve political buy-in.

Jean-Claude Mbanja from Cameroon is the current president of the IDF, and Africa needs to utilise the fact that we have a president from Africa to promote the process of improved diabetes healthcare in our region. A letter is due to go out to the ministers of health emphasising this and asking them to take the lead.

There also needs to be a committee set up in each country to represent Government, the health professionals and the people with diabetes, as well as the pharmaceutical industry, in order to ensure that the UN Resolution and the Africa Declaration is implemented. Our country is way ahead of many other countries in sub-Saharan Africa. We have had interaction with the Department of Health with regard to the implementation.

The second need is to create a committee to hold Government responsible. The third is to make sure that diabetes care becomes a primary healthcare responsibility. In South Africa, diabetes care is rendered at a primary healthcare level but in many other countries in Africa it is not primary healthcare. Patients have to go to the district hospital in order to get diabetes healthcare. A further challenge is to improve the care for pregnant women with diabetes.

What is IDF doing about this? Firstly, there is the Africa Declaration and secondly, as part of the Africa Declaration there are implementation documents. For example, the region developed clinical practise guidelines for the management of diabetes, which are available. Secondly, an educational manual was developed by participants right across the region. These are the tools that have been provided for the individual countries to implement. The region acquired some funding through World Diabetes Foundation to develop these documents and to implement them in about eight countries.

Honestly, the countries where you see success are where the Department of Health is driving it. For example, in Mozambique there has been a wonderful initiative. Dr Carla Silva-Matos in the Department of Health had these documents translated into Portuguese and they have had numer-

ous workshops around many parts of the country to make sure that the guidelines are implemented and that the infrastructure is improving.

I think the IDF would like to work with all of its member associations in order to achieve these objectives. I was asked by the IDF Africa office who they can contact in Lesotho for the Diabetes Association.

Prof Delport: You identified diabetes in pregnancy as an area of initiative where you can achieve maximum effects, but in your paper that was published in *Heart* recently, you referred to Nayaran's paper,¹¹ focusing on HbA_{1c} and hypertension.

Prof Levitt: In fact Nayaran's paper identified three things that are cost effective and accessible across all developing areas and you are quite right, it is HbA_{1c}, high blood pressure and foot care.

Dr Spitaels: Being able to do an HbA_{1c} test or lower the values?

Prof Levitt: No, lower HbA_{1c} below 9% and improve high blood pressure. It is interesting that at that time the cut-off blood pressure value was 160/90 mmHg. The third was to improve foot care. In fact, attention to pregnant women fell into the next category. So, it was cost effective and cost saving, but not fully accessible across all regions or developing countries that were identified in Narayan's paper. This was an issue that was hotly debated. What the document says is make diabetes part of primary healthcare, and identify and screen pregnant women. You are not going to be able to do this in most countries but it is something to work towards and try to implement by about 2011. These were targets more than anything else.

Prof Delport: What I really like is the fact that one targets ones initiatives. The outcomes are measurable, which in turn would increase motivation and make it cost effective.

Ms Croasdale: Here in South Africa with the former Minister of Health there was absolute buy-in because her own close family members were diabetic. That is why they emphasised an implementation strategy even though Mrs Kotzenburg objected to it. I am pleased to say there is buy-in in South Africa.

Prof Mollentze: The former president, President Mbeki, was also a signatory to the Africa Declaration.

Prof Mollentze: There was definite buy-in and we must now try to keep the momentum.

Prof Levitt: In fact it is really interesting, every single member state of the UN signed. They have no excuse, but it is incumbent upon us to actually make sure that they implement the changes needed.

Prof van Zyl: Can I ask whether any timelines were set? When can we expect to see a reduction in HbA_{1c} levels and blood pressure – in 10 years' time? Clearly, an implementation strategy with realistic timelines is needed. Lastly, whose responsibility is it going to be?

Prof Levitt: At this implementation meeting I tried to push the cluster manager, Kristel Kotzenberg, to create an implementation group that could oversee this, and her response was that this needs to be done on a provincial level because the National Department of Health has no access. It is dependent upon the provinces to implement.

Prof Levitt: The National Department of Health develops the strategies but they need to be implemented by the provinces and by the local authorities. She suggested that an implementation programme or group be set up for each province and maybe that is something that could be considered, although I do believe that there needs to be a national drive to make sure that each province is doing their bit.

Ms Croasdale: Although the Department of Health's strategic plan was drawn up by the national office, all departments have to adhere to it. Implementation of this is starting in the current year, as of April 2009, and the timeframes that we have put to it are that nine of the priority districts must implement the plan this year, and the following year all 18 of the priority districts must have done so. We give them a bit of time to do it, but the fact is if they do not have the financial resources and cannot do the necessary training, it is not going to happen.

We are not in a position to instruct provinces because of the political autonomy that has been given to them. So, we can just advise and say this is where we should

be going, and they can say: 'yes we agree with you but we cannot do it for the next 10 years because we do not have the capacity to do it, and our focus is on HIV and AIDS or maternal and child health' or wherever the focus is, and that is the problem. We do put timeframes to it, but we cannot force them or coerce them, we can only ask them to do it.

Prof van Zyl: Should we not follow the example of the HIV/AIDS action group. They had an action campaign that eventually pushed so hard that a strategic plan was formulated and implemented. Is it not time for us to recruit champions for diabetes care to highlight the problems and to put pressure on the provinces to start implementing a strategy to improve diabetes care?

Ms Croasdale: We want to empower the patients to the point that the services are patient driven. They will come into the service and say 'you have not checked my feet, you must do it. I need to go for an eye check, you have to do it'. It will take time because there is unfortunately a culture of 'the doctor knows everything' and you cannot question the doctor. That still exists, especially in older or less educated people, who would not challenge the seniority of a doctor.

Prof van Zyl: Perhaps that is where SEMDSA and DESSA can play a role and be more visible. The lay press can also be involved to educate patients with diabetes to request the minimum required care. If patients do not receive this they should ask their doctor or healthcare worker why not.

Prof Levitt: Because I am involved with Diabetes South Africa (DSA), and I do not know why they are not here, I want to speak on their behalf as well.

Prof Mollentze: You can speak on their behalf. You may wear two hats.

Prof Levitt: I do feel quite strongly about DSA. I can speak for our region where DSA is doing very good work and multiple support groups meet regularly, empowering patients, doing assessments of feet, checking on blood glucose levels, and measuring blood pressure. I think that SEMSDA, DSA and DESSA need to create a movement for diabetes that will really work.

Prof Mollentze: At the end of this round-

table discussion I am the first to confess that I underestimated the difficulties facing diabetes care in southern Africa. On the positive side, however, I was impressed by the overwhelming enthusiasm and commitment of each of the participants to improve diabetes care in our region. I wish to thank each of you not only for making yourselves available for this roundtable discussion but also for your preparation and lively interaction. A number of issues were identified that necessitate further reflection. If the only outcome of this event is to emphasise the pressing need for a concerted effort to improve diabetes care in our region, we can declare this roundtable discussion a resounding success.

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