Diabetes mellitus: effective disease risk management?

Dr Andrew Good*

How good are we at managing diabetes mellitus?

Diabetes mellitus is a significant disease affecting many lives and has a major impact on productivity and healthcare costs in South Africa. The disease affects 4.1% of our medical scheme population. The cost of a member with diabetes to a scheme, is on average 3 times as much as the average member with no chronic disease.

Diabetes mellitus is an unfortunate name for an unfortunate disease. How many of us know that the name diabetes mellitus translates as 'a large amount of honey-sweet urine'? "Suikersiekte" (Afrikaans for "sugar disease") is a better name for diabetes mellitus but even so, do patients actually understand what the disease is?

The cornerstones of managing a disease are:

- Ensuring everyone knows how they can prevent themselves from getting the disease;
- Screening to make sure the disease is diagnosed early;
- Ensuring patients have a clear understanding of their disease;
- Ensuring patients have a clear understanding about the lifestyle changes to improve their condition;
- Ensuring patients understand the treatment they are on and the importance of taking their medication regularly;
- Ensuring patients see their GP regularly so their care can be co-ordinated.

Patients' lack of understanding can be quite astounding. I recall working in a newly-established worker union clinic as a young doctor and being consulted by many patients who reported having diabetes or "suikersiekte" for years. Upon asking them questions, like "What is this disease?", "How should you change your diet?" and "Do you understand your medication and how it works?", many patients simply replied with "I have diabetes and this means I have to take medication for the rest of my life."

The reality was that very few patients would say something like:
"Sugar disease means I have too much sugar in my blood. Too much sugar in my blood damages (rusts) the pipes in which my blood flows, which can either cause blockage or breakage. A blocked pipe in the heart will give me a heart attack; a burst pipe in the head will give me a stroke. Damaged pipes can also lead to blindness, kidney damage and a foot rotting (gangrene).

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I understand that cutting down on the amount of food with sugar in it, exercising and losing weight will decrease the amount of sugar in my blood. The medication I take to manage my disease will decrease the sugar in my blood and I can test how effectively the medication is working by measuring my blood sugar level. The most import test of my blood sugar level is called the Hba1c. I know it is important to visit my GP regularly to have my sugar disease checked and my Hba1c tested. In fact, my last Hba1c was 6.5. Oh, and by the way, I have also stopped smoking as this really damages (rusts) blood pipes."

Reflecting on this experience at the union clinic, I have often wondered why patients seem so uneducated. Could it be a 'white coat' phenomenon? 'White coat hypertension' is the well-described medical phenomena where patients stress in the presence of a medical person, thereby increasing their blood pressure. This stress could also affect their ability to assimilate information doctors give them, also affecting retention.

Could it be because the fees paid to primary health care physicians impacts the time they have to educate patients and co-ordinate their care? Could it be the state of our country's education system? Is it a function of care provided in the treating doctor's rooms? Is it a function of how seriously patients take their health care? The sad reality is that it is a combination of all of the above. Poor diabetic management impacts us all. It influences the use of our taxes and the cost of our medical scheme contributions. The rates of the complications we see in this disease are unacceptable.

In assessing how effective we are in managing diabetes, doctors must ask themselves how the patients under their care would do when asked the above.

Health schemes find it imperative that disease management improves and are now spending around R500 million a year on managed-care disease management initiatives. Are these schemes getting value for money from this process? The jury is out on this. However, worth mentioning is that despite the investment in diabetes-management initiatives, the latest large, private industry quality survey

shows that key diabetes-management measures are a cause for concern. The survey shows that, on average, diabetics have an Hba1c every two years.

My personal opinion is that the way diabetes is being managed (or not) in South Africa is a serious cause for concern and could open disease programmes up to lawsuits. My motivation for saying this is that the disease management reports, done by managed-care companies, hardly ever show six-month medication compliance, or the number of Hba1c tests per diabetic on the programme per year. I would advise trustees or employers involved obtain this important information; some companies even provide a template of what a disease risk manager should be reporting on.

Any disease risk manager who has impressive medication compliance or Hba1c statistics is invited to share their results with us for an honourable mention and for recommendation in the next edition of HMR.

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The placebo revisited: what we do, don't and maybe won't know

Prof. Heather McLeod

"*For a long time I have held the opinion that the negative association with the placebo phenomenon is not justified. This is because from a more holistic point of view, the placebo effect is to be considered part of the 'self-healing response*."

This was confirmed by several of the experts who emphasised the importance of the 'meaning response' and that giving a medicine to patients cannot be dissociated from the meaning of the personal interaction and cultural context in which this takes place. The latter was also confirmed by experts on the role of empathy in medicine who observed in an extensive research programme that perceived empathy has a significant and real effect on outcomes in the treatment of chronic diseases.

For me a number of clear messages transpired. One of these is that the placebo debate is not more, or less, of an issue in Complimentary & Alternative Medicine (CAM), as compared to conventional medicine. It is linked to any kind of medical intervention. Another important message is the complexity as well as high relevance of the placebo issue. On the one hand, it can greatly complicate the evaluation of treatments in clinical trials; on the other hand, better understanding of the placebo phenomenon can contribute to improvements in clinical practice. To a certain extent, the placebo effect has become more an 'issue' since the dominance of the Randomised Controlled Trial (RCT) as a research method after World War II. This was accompanied by the emergence of a regulatory framework strongly hinging on the placebo-controlled RCT, as a proof of efficacy for single molecules with highly specific effects on single molecular targets. This framework is still largely in place today and it represents a reductionist, mono-causal, 'linear' way of approaching disease and its treatment, in which the concept of separating and simply adding up the specific and the non-specific effects of pharmacological agents, seems to make sense.

Whilst this approach has been very successful, particularly in the treatment of acute diseases, advances in medicine have increasingly demonstrated the limitations of this model, particularly in the treatment of chronic diseases. The genomic revolution in biology has demonstrated that single-cause disease pathways are the exception rather than the rule and in fact, the majority of the major chronic diseases are multi-factorial diseases, in which a 'multi-component, multi-target' approach is likely to be more applicable. So the question could be asked if the dominance of a reductionist, mono-causal disease model has led to the creation of a 'false dichotomy' between 'specific' and 'non-specific' effects and resulted in a regulatory model not optimally appropriate for most CAM treatments which have a 'whole systems' approach to the patient.

I am of the opinion that we should keep questioning the appropriateness of the placebo-controlled research design and keep looking for improved and/or alternative research designs for the rigorous evaluation of treatments. Further efforts in this direction should not only explore what is ultimately 'knowable', but also what will remain 'unknowable' due to methodological, ethical and/or legal reasons. The latter will help to map limitations and remaining knowledge gaps associated with clinical trial designs.

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