

## New perspectives on insulin access in the developing world

*Access to insulin in the developing world is a cornerstone in improving diabetes care. The price of insulin is always brought up as a key factor in the debate, however, a rapid assessment protocol for insulin access (the RAPIA) in Mozambique developed by the International Insulin Foundation (IIF) points out several factors to the problem – the price being but one of them.*

The RAPIA has been prepared by the International Insulin Foundation (IIF) tested in Mozambique with the financial support of the World Diabetes Foundation (WDF). The protocol was developed in order to investigate possible barriers to insulin access and identify how and where the system works and/or falls short. The aim was furthermore to get a picture of the “flow” of insulin through a country by conceptualising the path of medicines and care.

Categorised as a “Highly Indebted Poor Country” (HIPC) Mozambique was chosen as a pilot in order to see how a sustainable solution can be found to the issues of access to insulin and proper diabetes care under extreme conditions of scarce resources in the health sector.

Mozambique’s expenditure on medicines is about US\$ 30-35 million. US\$ 6 million is directly from the government budget the rest is covered by donors. Mozambique also receives US\$ 5.5 million in direct donations of medicine. Over 18 months, insulin expenditure for Mozambique represents from 1.7-2% of total expenditure on medicines or 10% of government expenditure on medicines (US\$ 6 million).

The insulin expenditure is to be seen in the light of Mozambique falling under Novo Nordisk's best pricing policy, which offers insulin to public health systems in the 50 poorest countries at prices not to exceed 20% of the average price in North America, Europe and Japan.

### **Putting a name on the problem**

The main problem with the supply of insulin in Mozambique is *quantification* of needs. Lack of data on the number of people with diabetes combined with inadequate communication between the different levels of the system makes quantification a real challenge. Quantification of insulin is therefore generally based on a mix of estimates, past consumption trends and past orders.

The problems with quantification result in most areas in Mozambique experiencing a shortage of insulin supply as this is simply based on the expected number of patients. In the Maputo province, however, the amount of insulin ordered would be sufficient for 19 times as many patients as expected – random quantification again being the reason.

The second problem is lack of *communication* and coordination between the National Company that imports Medicines for the Government of Mozambique (Medimoc), the Central Medical Store (CMAM) and the end users of insulin. In practice this is reflected in the public pharmacies running short of supply and private pharmacies driving up prices. Rather than being able to receive insulin at a subsidised price of US\$ 0.5 per 10 ml 100IU/ml vial patients are forced to pay as much as US\$ 24.20 per vial in the open market.

Following the lack of communication unreliable government sources of insulin constitute another problem. This results in patients often avoid taking the prescribed amount of insulin so that their supply lasts longer. To give an idea of the extent of the problem; in one case a patient lived 600 km away from the closest source of insulin resulting in a forced choice of insufficient treatment far from the one prescribed.

Lack of *infrastructure* and *resources* is present in all of the investigated settings except at Provincial and Central Hospitals. Lack of adequately trained doctors and lack of diagnostic tools such as glucometers and urine test strips is seen at all levels of Mozambique's health care infrastructure. In the Maputo vicinity this results in a steady referral of patients to the Central Hospital of Maputo (HCM). However, for most people treatment is

simply out of reach, the grievous fact being that the closer people live to a central hospital the better they are. Traditional Healers, Curandeiros, are often the only source of care for many Mozambicans.

As opposed to diabetes TB and malaria is treated well as the health care workers are familiar with these diseases. In comparison there is a general lack of *knowledge* of what diabetes is, and how it should be treated. Also reflecting the prioritization of the government, only one person deals with non-communicable diseases at Mozambique's Ministry of Health (MISAU).

In addition to the above-described factors leading to an inadequate access to insulin, the RAPIA in addition identified the following problems to further worsen the problem:

- Lack of everything from desks to medicines
- Pharmacy fragmentation and lack of control
- No earmarked funds for chronic diseases/diabetes
- Social distance between doctor and patient
- Lack of coordination between medical staff
- Lack of a strong patient's association
- Lack of information

Following the RAPIA the Mozambican Ministry of Health (MISAU) in collaboration with WHO has taken the lead to address the various issues raised in the protocol and effectuate the recommendations proposed by IIF, including the creation of a national register and surveillance system. US\$ 392,000 has been set aside from MISAU, WHO, the Mozambican Faculty of Medicine, IIF and WDF – earmarked to improve the outcomes for people with diabetes in Mozambique.



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