

Rapid Assessment Protocol for Insulin Access: overcoming barriers to care

✉ David Beran

Over 80 years after the discovery of insulin, access to it is still problematic for people in many parts of the developing world. In February 2001, at a meeting between the International Diabetes Federation (IDF) and the World Health Organization (WHO), a call was made for the establishment of a non-governmental organization to improve the sustainable, affordable and uninterrupted supply of quality insulin for people with Type 1 diabetes in areas of need. In response to this call, the International Insulin Foundation (IIF) was established by leading academics and physicians in the field of diabetes. In this article, David Beran reports on the actions of IIF to overcome the barriers to diabetes care in developing countries.



The first achievement of IIF was to develop the Rapid Assessment Protocol for Insulin Access (RAPIA). This was based on the principles of the Rapid Assessment Protocols (RAP) used in the assessment of infectious diseases, drug abuse and nutrition in order to apply preventative and therapeutic interventions.

RAPs are typically used when:

- ◆ information is needed quickly
- ◆ resources or logistical constraints render conventional research techniques impractical
- ◆ there is a recognized need to closely link the assessment phase with the development, enhancement or evaluation of interventions.

Multi-level assessment

The aims of RAPIA are to prolong the life and promote the health of people with diabetes in developing countries by improving the supply of insulin, and ensuring education in its use. In order to achieve these, a clear, locality-specific analysis is needed of the constraints to insulin access and diabetes care. Increasing the supply of insulin through donations or other means offers temporary relief. However, more sustainable solutions require that the root of the problems be identified and tackled.

RAPIA is structured as a multi-level assessment of the different elements that influence access to insulin and care for people with diabetes in a given country. The Protocol is divided into three components:

- ◆ Macro – ministries of health, trade and finance, the private sector, national diabetes associations, central medical store, educators
- ◆ Meso – provincial health officers, hospitals, clinics, health centres,

A team of interviewers for the IIF project in Zambia.



chemists (pharmacies), drug dispensaries

- ◆ Micro – people with diabetes, and carers (health carers and traditional healers).

These components include 15 specific questionnaires. The aim of each of these is to obtain the interviewee's perspective of the barriers that are faced by a person with Type 1 diabetes in obtaining insulin and proper care.

RAPIA provides a multi-level assessment of access to insulin and care for people with diabetes.

The RAPIA provides information in the categories of:

- ◆ health service structure and functioning with regard to diabetes management and the procurement of medicines
- ◆ diabetes policies
- ◆ practice for Type 1 diabetes management
- ◆ the availability of insulin, syringes and monitoring equipment
- ◆ distribution networks for insulin
- ◆ insulin supply-related knowledge and attitudes among people with diabetes and their carers
- ◆ problems which obstruct access to insulin and adequate care.

Field experience

Funded by a grant from the World Diabetes Foundation, and with the financial support of WHO and the Diabetes Foundation (a UK-based charity), RAPIA was piloted in Mozambique, and implemented in Zambia in collaboration with the respective diabetes associations and ministries of health.

Findings in Mozambique and Zambia

Policy

Due to differing purchasing policies, an important disparity exists between the prices for insulin which are paid by these two countries: Mozambique purchases insulin by international tender at 3.95 EUR (4.50 USD) per 10 ml vial of 100IU insulin, compared to the 4.07 EUR (4.62 USD) paid by Zambia. Zambia also purchases through national tender at 7.02 EUR (8.00 USD) and 8.82 EUR (10.05 USD) per vial.

Insulin

Policies exist in both Mozambique and Zambia which ensure the subsidization, in part or in full, of care for chronic conditions. However, in practice, people with diabetes have to pay for their insulin, either because reimbursement policy is not applied or due to a lack of insulin at public facilities.

In Mozambique, the average price per person per vial in the public sector was 1.40 EUR (1.60 USD) compared to 9.00 EUR (10.2 USD) in the private sector. Prices for insulin in Zambia were slightly higher, with a vial costing 1.80 EUR (2.00 USD) in the public sector, and 11.20 EUR (12.80 USD) in the private sector.

Diabetes supplies

Insulin alone is not enough. Syringes and needles are needed for its delivery. While syringes were >>

in short supply, prices varied considerably between the public and private sectors in both countries.

In Mozambique, people with diabetes were able to obtain syringes from public pharmacies at 0.04 EUR (0.05 USD) each. However, when these were out of stock, as was often the case, people had to pay up to five times this price at private pharmacies.

Using data collected from medical registers, IIF was able to estimate the prevalence of Type 1 diabetes.

In both countries, problems with the assessment of the need for insulin and other related supplies have arisen from the absence of exact data on the numbers of people with the condition. Using data collected from medical registers, IIF was able to estimate the prevalence of Type 1 diabetes. In Mozambique, the estimated prevalence of diabetes per 100 000 people was as follows:

- ◆ 5.0 nationally
- ◆ 9.1 in the capital city
- ◆ 1.3 in a rural area.

In contrast, Zambia had a higher national prevalence (11.2 per 100 000), and a smaller difference between the capital city (18.0) and rural areas (9.5). The differences between these estimates are likely to be related to the number of undiagnosed cases

and the relatively short survival time of people with diabetes in some areas of these countries.

Parallel with the need for insulin and syringes, testing facilities are needed for people with diabetes; personal testing equipment is too expensive for many people. Compared with Mozambique, a higher percentage of health facilities in Zambia had diagnostic tools, such as glucometers and testing strips.

Due to low diabetes awareness, people with diabetes showing symptoms of the condition are often misdiagnosed as having HIV/AIDS.

Low awareness

The lack of supplies and low awareness of diabetes also lead to misdiagnoses. Interviews suggest that upon presenting the three 'classic' symptoms of diabetes (excessive or abnormal thirst, excessive urination, and weight loss), people with diabetes are often misdiagnosed as having HIV/AIDS or other conditions; people with diabetes with ketoacidosis or in coma may be classified as suffering cerebral malaria.

In both these countries, non-communicable medical conditions and Type 1 diabetes receive very little attention from the health ministries due to the high levels of communicable diseases. This leads to a lack of funding, which in turn affects the training of staff and

the diagnosis and management of diabetes.

Wider implications

As well as enabling IIF to collect the data presented above, RAPIA has raised awareness about the challenges faced by people with diabetes in two developing countries. RAPIA has demonstrated that while the issues around the management of diabetes are complex, they can be resolved.

Next steps

In Mozambique, the RAPIA findings were presented to the Ministry of Health, the Diabetes Association and other stakeholders in diabetes care. IIF is about to start the implementation phase of its work in this country. In the near future, similar presentations will be made in Zambia.

For more information about IIF and its activities, or to discuss future possible locations for applying RAPIA, please visit www.access2insulin.org.

David Beran

David Beran is the Project Co-ordinator for the International Insulin Foundation, a registered charity in the UK.