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## Improving Outcomes for Patients with Type 1 Diabetes in Africa A paradigm for chronic disease management

Before 1922, survival for youngsters developing diabetes was a matter of months. The discovery of insulin transformed this grim prospect and today, with the availability of insulin, care and monitoring, newly diagnosed diabetic children in Britain can expect to live into their 70s. This is not the case in most of sub-Saharan Africa where average life expectation is at best a few years and where many die in coma for want of treatment.

The International Insulin Foundation (IIF) is a small UK charity which is working with Health Ministries and Diabetes Associations in the world's poorest countries to help identify and overcome the barriers to care for patients with insulin-dependent diabetes. Over the past 2 years, the Foundation has developed and field tested an assessment tool (the [Rapid Assessment Protocol for Insulin Access, RAPIA](#)) and applied it to the diabetes needs and available services in Mozambique, Zambia and Mali, reporting on its findings to respective national organisations. These studies show that:

- Supplies of insulin, syringes and monitoring equipment for diabetic patients are rarely available outside urban centres and sometimes inadequate within them.
- Costs of insulin for one patient, even purchased in the public sector, may consume as much as half the family income
- Inadequate numbers of trained personnel, deficient organisation, and shortages of drugs and monitoring equipment, result in failure to diagnose and treat as many as 90% of new patients.
- In consequence, the numbers of 'missing diabetic patients' – those who have died for lack of care either before or after diagnosis - substantially exceed the few survivors receiving some form of care, particularly outside the national and regional capitals .

The International Insulin Foundation, through RAPIA, has formulated country-specific recommendations for each of the 3 countries suggesting measures to improve the situation for patients with type 1 diabetes. While numerically many more people test positive for HIV than have type 1 diabetes, nevertheless, the implications of improving care provision for diabetes have great general relevance to health departments across the developing world for the following reasons:

- In all continents of the world except Africa, demographic change and urbanisation now result in a greater contribution to mortality from non-communicable diseases than from infectious disease. Everywhere, health services face increasing demands for management of people with life-long conditions like high blood pressure and diabetes, asthma, arthritis, epilepsy and mental illness.
  - In respect of disease management, tuberculosis and AIDS, two major infectious contributors to global mortality, share similar levels of complexity with non-communicable diseases (NCDs) for sustained, affordable and reliable drug supply, patient and laboratory monitoring, assessment of complications, and staffing and training needs for health services providers..
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- Major increases in numbers with diabetes, both types 1 and 2, are occurring all over the world and mainly in developing countries.

Recommendations made for improving diabetes care have included:

- Collection of key data and information
- Improvement of purchasing and distribution mechanisms at Central Medical Store
- Exploration of tendering for generic insulin
- Establishment of a defined diabetes care role for each level of the health system for each region
- Creation of *local* guidelines for diabetes care and patient education
- Compilation of a sustainable Essential Equipment list for each level of the health system
- Development of a supply chain for laboratory materials
- Improvement of healthcare worker training to include more on diabetes care and NCD management
- Promotion of local patient-based Diabetes Associations to help build care and advocacy for people with diabetes

### The Future

The RAPIA has proven a valuable tool to assess, and improve, health care for a chronic, non-infectious disease in poor countries:

- RAPIA has extracted valuable information from different levels of the health care system in different geographical areas in contrasting countries. It has pointed to strengths and weaknesses likely to be relevant to their management of type 1 diabetes and also other chronic diseases, both infectious and non-communicable.
- The process of interviewing involved local people, particularly at national managerial level, has greatly raised the profile of diabetes and of chronic non-communicable disease, among officials in Ministries and Central Medical Stores. They welcome modernisation.
- The RAPIA procedure provides a valuable baseline against which to measure changes introduced consequent implementation of the report.

The IIF greatly welcome offers of support and assistance and will be happy to communicate results to all interested parties.

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