

Presentation of Results of the Rapid Assessment Protocol for Insulin Access in Zambia



International Insulin Foundation

Background information

- Diabetes
- Insulin
- Type 1 diabetes and insulin in developing countries
- Incidence and prevalence of diabetes
- International Insulin Foundation (IIF)



Rapid Assessment Protocol for Insulin Access (RAPIA) :

Multi-level assessment of Health system

Macro

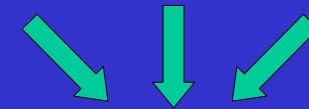
- Ministry of Health
- Ministry of Trade
- Ministry of Finance
- Central Medical Store
- National Diabetes Association
- Private/Public drug importer
- Educators

Meso (3 areas)

- Regional Health Organisation
- Hospitals, Health Centres, etc.
- Pharmacies, Drug Dispensaries

Micro (3 areas)

- Healthcare Workers
- Traditional Doctors
- Patients



Perspectives on the problem of access to Insulin and Diabetes care

What information does the RAPIA provide:

- Study the path of Insulin from its arrival in the country
- Study the path of care
- Other problems



Implementation of the RAPIA in Zambia

- Why Zambia?
- Three areas - Lusaka, Copperbelt, Eastern Province



Implementation of the RAPIA in Zambia

- Interviews carried out

Province	Patient	Pharmacy	Laboratory	Healthcare worker	Traditional Healer	Health Facilities
Lusaka	19	10	5	23	6	7
Chipata	9	7	5	17	5	6
Copperbelt	10	8	4	20	8	9

Meetings and discussions: (number)

- Private sector (4)
- Medical School (2)
- School of nursing (2)
- Ministry of Finance (3)
- Ministry of Trade (1)
- Zambia Revenue Authority (3)
- Ministry of Health (2)
- Central Board of Health (13)
- Central Medical Stores (2)
- International Organisations (2)
- Diabetes Association of Zambia (2)

Type 1 Diabetes in Zambia

- Official statistics do not exist, but International Diabetes Federation estimate - **520**
- IIF estimates based on data collected

Location	Population	Number of people with Type 1 diabetes	Number of people with Type 1 diabetes per 100,000 population
Lusaka Province	1,498,381	269	18
Copperbelt Province	1,699,384	214	13
Eastern Province	1,400,466	133	9

- Zambia total based on IIF estimate: **1,201**

Diabetes in Zambia

- Life expectancy estimates vary slightly between provinces

Age Range	0-14	15+
National (IDF estimate)	1.5	12.3
Lusaka	18	27
Copperbelt	13	19
Eastern Province	9	14

Zambia's insulin supply

- Soluble and Lente Insulin are present on Zambia's National Formulary
- Insulin purchased through World Bank and Emergency Funds

Type and Strength	Price per vial	Source of Funds
Lente 100 IU	\$4.62	World Bank
Soluble 100 IU	\$4.62	World Bank
Soluble 100IU	\$10.05	Emergency Funds
Generic Soluble 100 IU	\$8.00	Emergency Funds



Zambia's insulin supply

- Total Expenditure of Central Board of Health on Insulin

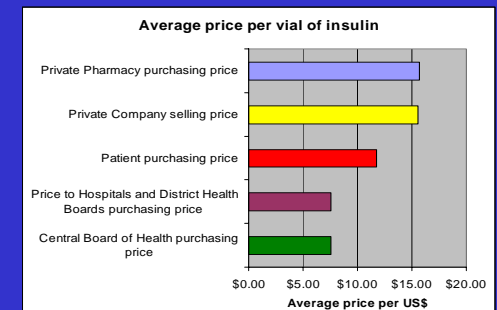
Source	Total Vials	Percentage of Total Quantity	Cost	Percentage of Total Cost
World Bank	39,353	79%	\$181,810.86	68%
Emergency Funds	10,260	21%	\$85,489.15	32%
Total	49,613		\$267,300	

Zambia's insulin supply

Province	Estimated number of people with Type 1 diabetes	Insulin ordered	Insulin ordered (percentage of total)	Insulin surplus or shortage	Estimated number of people with Type 1 diabetes based on insulin ordered ¹
Lusaka Province	269	7,275	29%	3,778	672
Copperbelt Province	214	7,629	31%	4,847	704
Eastern Province	133	1,698	7%	(31)	130

¹ - Estimate based on an annual consumption of 13 vials per patient per year

Price of Insulin in Zambia



Important points to note

- Distribution system for medicines works well
- No problems with cold chain
- No problems with quality of insulin
- No black market for insulin
- Diabetes Association of Zambia
- Policy Framework for NCDs



Access to insulin and diabetes care in Zambia

- Problems accessing syringes
- UTH specialised clinics for children and adults
- Only at 2nd and 3rd level referral hospitals
- No National Guidelines
- No referral systems



Diagnostic issues

- MedLab Policy
- Adequate training
- Adequate supplies

	Blood glucose machine	Blood glucose testing strips	Urine glucose testing strips	Urine ketone strips
Copperbelt	42%	32%	58%	42%
Eastern	61%	17%	50%	33%
Lusaka	50%	27%	64%	59%

Summary of Problems - Supplies

- Variations in Central Board of Health purchasing price of insulin
- VAT and duty are present on syringes and testing material
- Patients do not know where to get insulin
- Lack of syringes

Summary of Problems - Diabetes Care

- No national guidelines for diabetes care
- Lack of structure around diabetes care
- Lack of education in frontline healthcare workers
- Curriculum for medical and nursing students is not adapted to treating and managing diabetes and other Non-Communicable Diseases

Summary of Problems - National

- The DAZ needs to raise its profile and find sustainable means of funding
- A Policy framework for Zambia on Non-Communicable Diseases
- Health Management Information System to include diabetes
- MedLab policy not properly implemented
- Care for chronic conditions for free?

Summary of Problems and Recommendations

- Variations in Central Board of Health purchasing price of insulin
 - Quantification, Proper purchasing mechanisms
- VAT and duty are present on syringes and testing material
 - Remove VAT and duty from any items linked to diabetes care
- Patients do not know where to get insulin
 - Information and guidelines for patients where they can receive their insulin
- Lack of syringes
 - Add syringes to essential drug list and supply insulin and syringes together

Summary of Problems and Recommendations

- No national guidelines for diabetes care
 - Development of National Guidelines
- Lack of structure around diabetes care
 - Develop diabetes clinics based on the model of University Teaching Hospital (UTH) paediatric clinic
 - Define role of each type of facility in diabetes care
- Lack of education in frontline healthcare workers
 - Development of an Integrated Competence Training manual on diabetes and Non-Communicable Disease
- Curriculum for medical and nursing students
 - Development of material for curriculum for NCDS and diabetes (ICT Manual)

Summary of Problems and Recommendations

- The DAZ needs to raise its profile and find sustainable means of funding
 - Promotion of the DAZ and increase its visibility, in parallel with raising the information about diabetes
- A Policy framework for in Zambia Non-Communicable Diseases
 - Policy framework should be far reaching
- Health Management Information System to include diabetes
 - Add diabetes to HMIS system
- MedLab policy not properly implemented
 - Implement MedLab Policy
- Care for chronic conditions for free?
 - Clear Statement from GRZ

Conclusion

- IIF will coordinate ways to put recommendations into practice
- First step in creating adequate environment for people with diabetes
- This research has implications for many chronic diseases