Technical Brief
May 2022

Towards Insulin for All: Operationalising the WHA74 Resolution on Diabetes

In May 2021, during the centenary year of the discovery of insulin, WHO member states passed a resolution on "Reducing the burden of noncommunicable diseases through strengthening prevention and control of diabetes" at the 74th World Health Assembly. Within the resolution were specific appeals on access to insulin, directed at both member states and the WHO.

This technical brief gives a snapshot of the situation in Kenya, South Africa and Mali [countries where Doctors Without Borders/Médecins Sans Frontières (MSF) or Santé Diabète provide support for people living with diabetes (PLWD)] regarding these appeals within the resolution. These relate to targets for diabetes care, and inclusion of diabetes and PLWD in national policies and guidelines.

In addition, using MSF procurement prices along with available public sector price information from South Africa and Mali, the "bundle" price per patient per year is presented. The bundle calculated includes insulin, its injection device and glucose strips for monitoring as part of a typical treatment regimen for both type 1 (T1) and type 2 (T2) diabetes.

The bundle of tools required to manage diabetes includes insulin, syringes and glucose strips. © Paul Odongo/MSF

Setting targets for diabetes care

WHA Diabetes Resolution

Urges member states: "to strengthen monitoring and evaluation of diabetes responses, through country-level surveillance and monitoring systems, including surveys, that are integrated into existing national health information systems, and by identifying priority areas for diabetes research."

(OP1.10)

Requests WHO Director-General (DG): "to develop in collaboration with Member States and in consultation with non-state actors and people living with or affected by diabetes, recommendations to strengthen and monitor diabetes responses within national NCD programmes… including considering the potential development of targets to this regard."

(OP2.1)

In January 2022, WHO proposed the following global targets to the WHO Executive Board:

- 80% of people with diabetes are diagnosed (this includes all types of diabetes)
- 80% of people with diagnosed diabetes have good control of glycaemia
- 80% of people with diagnosed diabetes have good control of blood pressure
- 60% of people with diabetes of 40 years or older receive statins
- 100% of people with type 1 diabetes have access to affordable insulin treatment (including devices for insulin delivery, such as syringes and needles) and blood glucose self-monitoring (*the bundle*)

These targets will now be put forward for consideration at WHA75 in May 2022.

The status of national targets in the countries surveyed is outlined in Table 1 and compared to the proposed global targets.

Table 1: Status of national targets

	Current specific diabetes targets	**Planned diabetes targets at time of survey**	**Hypertension target**	**Statin target**	**Specific target related to insulin and glucose self-monitoring for T1 diabetes**
Kenya*	None	70% of PLWD are aware of diagnosis 70% of PLWD who know their diagnosis are on treatment 70% of PLWD on treatment are controlled	None	None	None
Mali	No detail available	None	None	None	None
South Africa*	90% of PLWD are aware of diagnosis 60% of PLWD are on treatment 50% of PLWD are controlled		Same cascade targets for hypertension but not specifically stated for PLWD	None	None

**Kenya and South Africa have developed cascade targets, aligned with those used in national HIV programmes. It is important to establish which denominator (all people living with diabetes versus the proportion identified at previous cascade step) is used at each step of the cascade to ensure comparison is valid.*

While Kenya and South Africa have included a target for the percentage of PLWD on treatment, it is not reflected in the high-level global targets. Poor diabetes control may be due to lack of access to medicines, poor linkage to treatment, poor compliance with treatment protocols, poor adherence to prescribed medicines, or a combination of these factors. Without this intermediate target, it is difficult to understand what the barrier to reaching control is.

No country has any specific target related to the complete bundle for T1 diabetes. Achieving this target would require disaggregation of other targets to know how many people with T1 diabetes are aware of their diagnosis and in need of treatment, and active monitoring of the availability of the diabetes bundle across the health system.

The countries surveyed recognised the considerable investment in monitoring and evaluation and surveillance that will be required to report on these proposed targets. In settings where monitoring systems have been scaled up for management of other chronic diseases (e.g. HIV) they should be leveraged to integrate monitoring of diabetes and hypertension.

National diabetes policies and guidelines

WHA Diabetes Resolution

Urges member states: "to ensure national strategies for the prevention and control of non-communicable diseases contain the necessary provisions to cover persons living with diabetes with quality essential health services and promote access to diagnostics and quality, safe, effective, affordable and essential medicines, including insulin, oral hypoglycaemic agents and other diabetes-related medicines and health technologies…"

(OP1.6)

Urges member states: "to strengthen health systems and high quality, integrated and people centred primary health services for all, health management information systems and an adequate and well trained and equipped health workforce…"

(OP1.7)

A summary of national diabetes policies and guidelines in the surveyed countries is shown in Table 2.

Table 2: National diabetes policies and guidelines

	Kenya	Mali	South Africa
Diabetes T1 and T2 (including insulin use) included in national NCD strategic plan	Yes Separate national diabetes strategic plan planned for 2022	Yes	Yes
National guideline for T1 diabetes	Yes	Being drafted	Yes
National guideline for T2 diabetes	Yes	Being drafted	Yes
Insulin provided free through public sector (e.g. through national insurance scheme)	No	70% through social security; 30% by the patient	Yes
Insulin injecting devices provided free through public sector	No	No	Yes
Monitoring devices (strips) provided free through public sector	No	No	Yes
Insulin use decentralised to primary care	No	Yes, in sites where doctor present	Yes, in sites where doctor present
Cadre that can prescribe insulin	Doctors, clinical officer	Doctors	Doctors must initiate. Maintenance by clinical officers and nurses

In order to achieve the global diabetes targets it will be essential that:

- All components of the diabetes bundle are included within public sector health insurance schemes
- Insulin use is decentralised to primary care
- Insulin use is task-shared i.e. it can be prescribed and managed by non-physician clinicians

Insulin alone is not enough: costing the diabetes bundle

WHA Diabetes Resolution

Requests WHO DG: "to continue to analyse the availability of data on inputs throughout the value chain, including data on clinical trials and price information, with a view to assessing the feasibility and potential value of establishing a web-based tool to share information relevant to the transparency of markets for diabetes medicines, including insulin, oral hypoglycaemic agents and related products, including information on investments, incentives and subsidies."

(OP2.6)

There was a request to the WHO DG within the resolution to assess the feasibility and value of a web-based tool to share information relevant to transparency of markets for diabetes medicines, including insulin and related products. Such a tool would enable countries to benchmark their procurement prices with similar settings. This tool is still under development. Table 3 outlines the prices of the components of the diabetes bundle using MSF procurement prices and publicly available national procurement prices for South Africa and Mali.

Table 3: MSF and public procurement prices for the diabetes bundle

		MSF (US$)	South Africa (US$)	Mali (US$)
30/70 insulin	Vial (10ml)	2	2.3	7.56
	Disposable pen (3ml)	6.03	1.69	N/A
NPH insulin	Vial (10ml)	2	2.3	7.56
	Disposable pen (3ml)	4.32	1.69	N/A
Injection device	Insulin syringe	0.07	0.16*	0.29
	Pen needle	0.12	0.04	N/A
Monitoring	Glucose strips	0.22	0.06	0.34

**The price for insulin syringes in South Africa was not available from national public procurement information. This price was taken from public procurement at the provincial level (Kwazulu Natal).*

To calculate the average monthly use of insulin, syringes and glucose monitoring strips for people with T1 and T2 diabetes, MSF carried out a survey of five of its projects and consulted with advocacy groups of PLWD. The average use was then used to calculate bundle prices (Fig. 1 and 2).

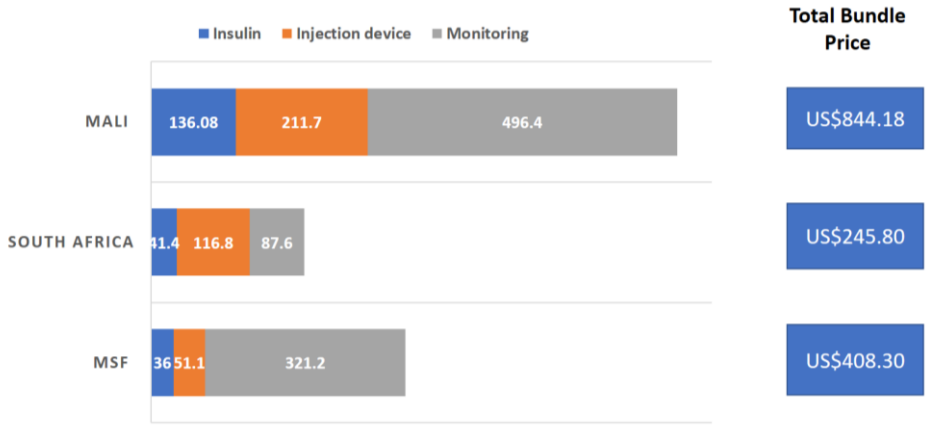

Fig. 1: Bundle price for T1 diabetes insulin use per patient per year
(Bundle includes twice daily 30/70 human insulin 15ml/month (vials); 60 syringes/month; 120 glucose test strips/month)

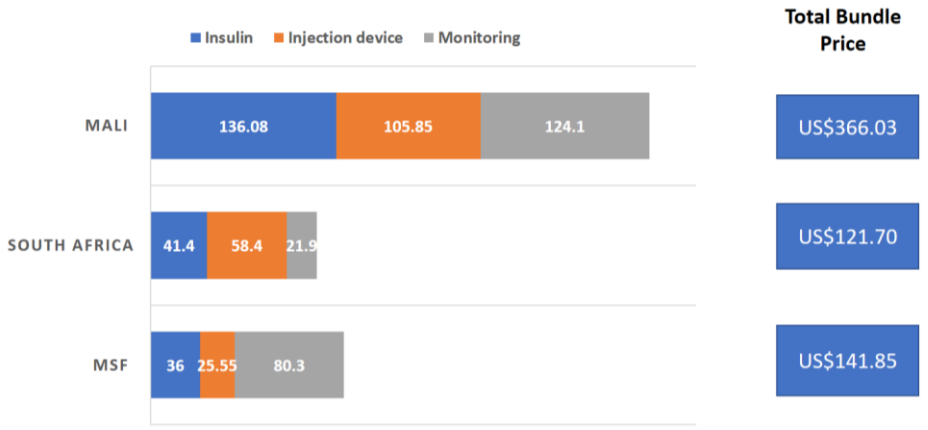

Fig. 2: Bundle price for T2 diabetes insulin use per patient per year
(Bundle includes once daily NPH insulin 15ml/month (vials); 30 syringes/month; 30 test strips/month)

The price of the bundle for T1 and T2 diabetes varied widely between settings. In T1 diabetes the cost of the glucose strips was a major driver of increased cost. FIND, the global alliance for diagnostics has included blood glucose meters and glucose test strips within their accessible pricing marketplace, where they have negotiated preferential pricing with diagnostic suppliers for buyers in low- and middle-income countries. The estimated landing price within this initiative can be 50% lower than current market prices. Access to the preferential prices is available to buyers from the public and private sector by contacting FIND, who will connect buyers to suppliers to procure directly. For further information contact NCDs@finddx.org.

Insulin pens, which offer simplification of insulin delivery and improved quality of life, are only used in selected MSF programmes due to increased cost, and are not available in the public programme in Mali. The bundle price per patient per year was compared moving from the insulin vial presentation to disposable insulin pens using available procurement prices (Fig. 3).

The prices for insulin pens negotiated by South Africa provide support to the potential role of pooled procurement across humanitarian agencies and regions to improve access to these more patient-centred devices.

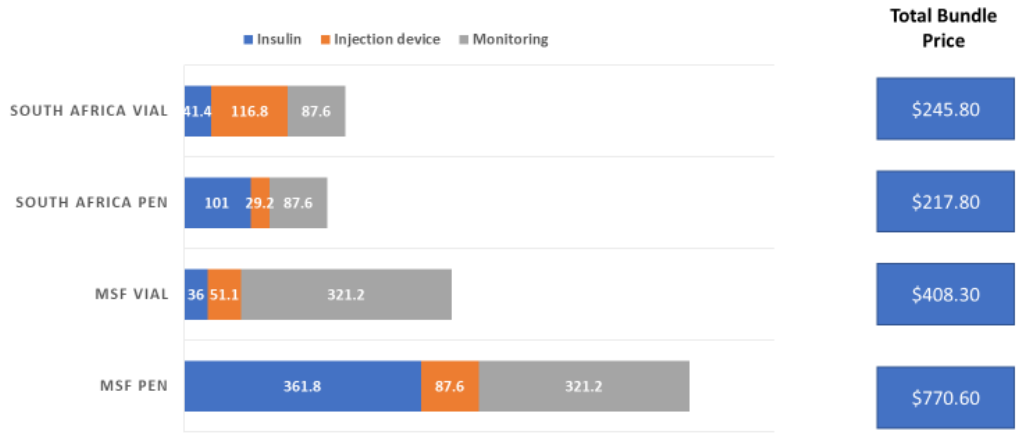

Fig. 3: Bundle prices for T1 diabetes per patient per year comparing insulin vials to pens
(Bundle includes twice daily 30/70 human insulin 15ml/month (vials or pens); 60 pen needles a month; 120 glucose test strips/month)

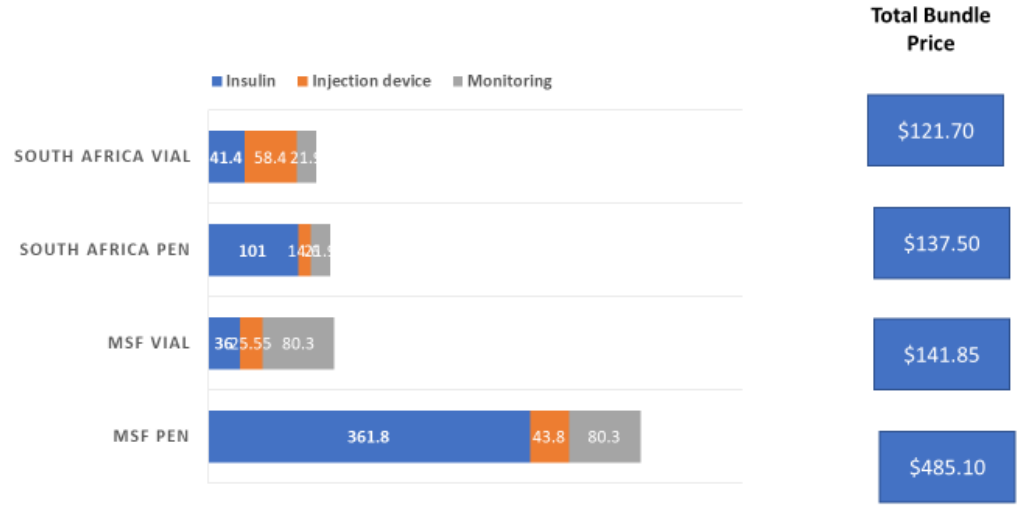

Fig. 4: Bundle prices for T2 diabetes per patient per year comparing insulin vials to pens
(Bundle includes once daily NPH human insulin 15ml/month (vials or pens); 30 pen needles a month; 30 glucose test strips/month)

Key Messages

To countries:

- Set national targets in line with WHO global targets and consider an additional target on the percentage of people on diabetes treatment
- Investment will be needed in monitoring and evaluation systems for diabetes to report on the global diabetes targets, including monitoring of access to insulin and monitoring tools specifically for T1 diabetes
- National guidelines for T1 and T2 diabetes should be updated and available, based on WHO guidance
- Insulin, its injection device, and glucose monitoring strips should be included in public sector health insurance schemes
- The use of insulin should be decentralised to primary care for the management of both T1 and T2 diabetes; with task-sharing to allow for its management by trained nurses

- Health budgeting should consider the bundle price per patient per year, and not the price of insulin alone
- Volume procurement can drive lower prices for disposable pens vs vials; national or regional pooled procurement may enable a more patient-centred device at no additional cost

To WHO:

- Urgently support national diabetes programmes to implement monitoring and evaluation systems to report on global and national targets. Where systems exist for other chronic diseases such as HIV, these should be leveraged.
- Provide technical assistance to support the decentralisation and task-sharing of insulin use
- Support national diabetes programmes to forecast, budget and procure for the diabetes bundle
- Support the development of a publicly available web-based tool towards transparency of insulin bundle prices