

## SESSION 6: INDICATOR SETS AND DATA SETS

### Aim of the session:

This session aims to introduce the concept of a minimum indicator / dataset and to create awareness of the importance of careful selection of indicators. Participants' attention is drawn to the indicator sets in the M&E framework as well as the Division of Revenue Act (DORA) indicators. The session further aims to identify those data elements that must be collected in order to meet national reporting requirements.

### LEARNING OUTCOMES:

By the end of this session participants should be able to:

- ✧ Explain the terms minimum indicator set and minimum data set
- ✧ List criteria for selecting indicators
- ✧ Identify data elements presently collected at facility level
- ✧ Identify additional data elements to be collected to meet reporting requirements of the National Monitoring and Evaluation Framework and the DORA indicators

### SESSION CONTENTS:

- ✧ The minimum indicator set concept
- ✧ Selecting indicators
- ✧ Indicator and datasets
- ✧ Assessing datasets

### READING:

- ✧ Department of Health. Division of Revenue Act Indicators
- ✧ National monthly data collection tool for the comprehensive HIV and AIDS care, management and treatment plan
- ✧ Table 6.1: Indicator/data element tables for national M&E primary set of 12 indicators and national monthly data collection tool
- ✧ Table 6.2: DORA indicators/data elements

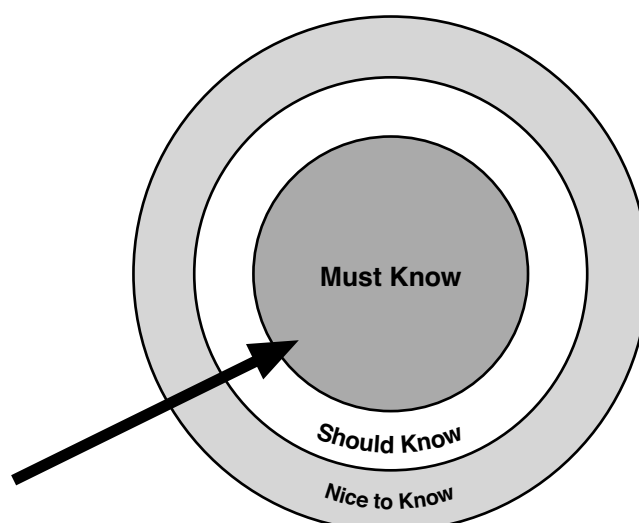
### 6.1 The minimum indicator set concept

Many different indicators could potentially be used to measure a programme's progress. However, data collection has costs in terms of staff, time and money, so the number of indicators should be kept to a minimum. Furthermore, the quality of the information may be compromised when the time and effort involved in collecting large volumes of data becomes very demanding. Therefore, data must only be collected for defined purposes and should reflect defined indicators, i.e. only data for which a use has been identified should be collected.

We can think about information in terms of three categories: MUST know, SHOULD know and NICE to know.

**MUST KNOW** information is considered the **minimum amount of information needed to make key decisions**. A health information system should be built on a **minimum set of indicators**. The set of data elements used to calculate this minimum set of indicators is called the **minimum dataset**. A minimum dataset therefore represents the minimum amount of data that needs to be collected to enable the calculation of the minimum indicator set.

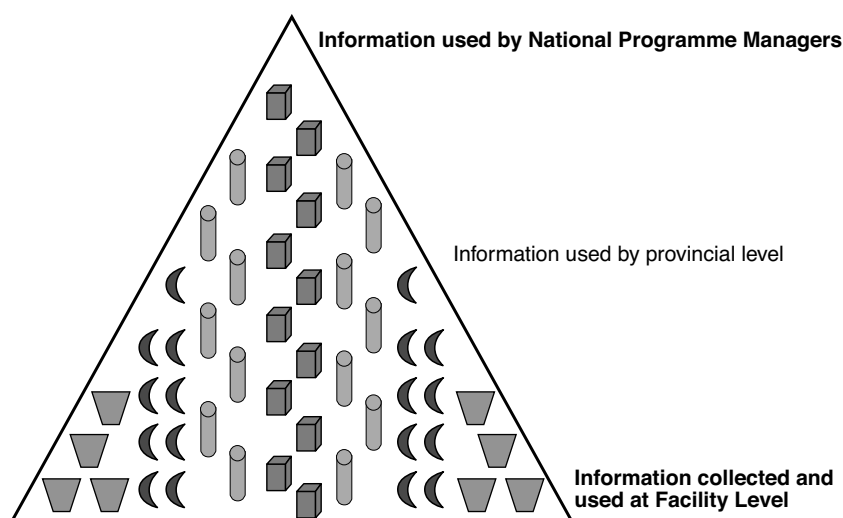
Figure 6.1: The three categories of information



Source: HISP training materials

An information system should initially focus on achieving **MUST** know information of high quality. The minimum indicator set reflects **MUST** know information. Once this is achieved, consideration can be given to including **SHOULD** know and finally **NICE** to know information.

Figure 6.2: The information pyramid



Source: HISP training materials

### The information pyramid

All decision-making levels do not require all indicators. The amount of **information needed at successive levels of the health system decreases from peripheral to central levels**. We can think of this as an information pyramid, with the national minimum indicator set being the minimum amount of information that must flow through all levels from the periphery at the base to the central level at the top of the pyramid. (Sometimes this information pyramid is viewed upside down, and is then called the “information filter”, with data filtering down from community level through the various levels of the health system, to reach the national level, and finally, the international level, e.g. World Health Organization).

Each level can expand the minimum indicator set, adding to the set further indicators that they believe to be important for decision-making at that level. The regional level can expand the national minimum indicator set and develop a regional indicator set specific to regional needs. Facilities can in turn add their own indicators to develop a facility indicator set to suit their particular needs. These additional indicators may not be relevant at a higher level and are therefore not submitted to higher levels. There should be clear guidelines on exactly what information is required at each level. The management teams at each level are responsible for defining exactly what information they need at their level.

### 6.2 Selecting indicators

The careful selection of indicators is a crucial part of planning. At the time of drawing up a plan, we should decide which questions we must ask to measure the achievements of the plan and what information will be needed to answer these questions. This will allow the systems for obtaining this information to be set up from the start of implementation of the plan.

As data collection has cost and quality implications, indicators should be very carefully selected so that they tell us what we want to know accurately, but also in the most practical and efficient way possible. A number of criteria should be considered when selecting indicators.

An indicator "RAVES":

- ❖ **Reliable** - Should produce the same results when used by different people in different places.
- ❖ **Affordable** - Should represent reasonable costs in terms of human and financial resources needed to collect and analyse.
- ❖ **Valid** - Should measure the condition or event it is intended to measure.
- ❖ **Easy** - Should be easily collected within current data collection system.
- ❖ **Specific** - Should measure only the required condition or event.
- ❖ **Sensitive** - Should show changes over time in the state of the condition(s) or event(s) under observation.

### 6.3 Indicators and datasets

In this course, we are concerned with the indicator set for monitoring the Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for SA.

Some of the indicators needed for monitoring the comprehensive plan at national and provincial levels may differ from those needed at facility level. National and provincial managers are concerned with monitoring the plan on a broad scale, while site managers are mainly concerned with information needed to manage their services. However, it is important for service points to realise that provincial level managers depend on reliable information from sites in order to make decisions about resource allocation to service points.

In the Monitoring and Evaluation Framework document, the National Monitoring and Evaluation Unit presents indicators for monitoring the comprehensive plan. The M&E Unit recognises that all the indicators will not be available initially, but will become available gradually, as programmes expand and data collection systems are established.

At present we are concerned with three indicator/data sets, which represent the initial MUST KNOW information to be obtained by provinces:

1. **The M&E Framework presents a primary set of 12 indicators to be reported within a six month period of starting an ART programme.** (Refer to page (iv) of the Framework)

This primary set of 12 indicators is extracted from the broader set of indicators for monitoring the various components of the plan in detail. (Refer to page 9 of the Framework, where the listing of the broader set starts.) The M&E Framework document states that it is expected that 75% of the information in the broader set of indicators will be available within 24 months of implementation of the plan.

2. **A set of monthly reporting forms has been developed for facilities to provide information to the province.** These forms have been designed to collect data for the primary set of 12 indicators, as well as some additional indicators. (Refer to National monthly data collection tool for the comprehensive HIV and AIDS care, management and treatment plan.)
3. **The Division of Revenue Act requires quarterly reporting on a set of indicators called the DORA (Division of Revenue Act) indicators.** (Refer to DORA forms) The first report is to be submitted by provinces to the National Department of Health by 20 July 2005. The information in the DORA reports will determine the allocation of resources to provinces and facilities.

**Table 6.1: National M&E Framework: primary set of 12 indicators to be reported on within 6 months**

	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
1	Number of accredited service points per district	number of accredited service points per district			
		NA			
2	% of facilities experiencing stock out of basket of tracer drugs at any time in the last month	number of facilities experiencing stock out of basket of tracer drugs at any time in the last month*			
		number of accredited service points operational			
3	Full time equivalent (FTE) per category as proportion of required personnel	number of FTE per category (doctors, nurses, pharmacists, nutritionists/dieticians, social workers, counsellors and data clerks)			
		required number of personnel per category			
Example:					
3a	Full time equivalent (FTE) of doctors as proportion of required doctors	number of FTE for doctors			
		required number of doctors (doctor posts)			
4	Male and female condom distribution rate	male condoms distributed x 12			
		male population 15 years and older			
5	% of eligible patients receiving supplement meal and nutritional supplements	patients on antiretroviral therapy, receiving supplement meals and micronutrient supplements			
		total number of patients on antiretroviral therapy			

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	<b>Indicator</b>	<b>Numerator / Denominator</b>	<b>Source</b>	<b>Staff responsible</b>	<b>Tool</b>
6	Proportion of adult patients on antiretroviral therapy with adherence lower than 70%	number of adults patients on ART with adherence lower than 70%			
		total adult patients registered on ART minus ART start			
7	number of CD4 counts done per month	number of CD4 counts completed per month			
		NA			
8	number of viral loads completed per month	number of viral loads completed per month			
		NA			
9	<b>Proportion of registered patients on regimen 1a or 1b, 2 or child regimen</b>				
9a	Proportion of registered patients on regimen 1a or 1b	number of registered ART patients on regimen 1a or 1b			
		total number of registered ART patients			
9b	Proportion of registered patients on regimen 2	number of registered ART patients on regimen 2			
		total number of registered ART patients			
9c	Proportion of registered patients on any child regimen	number of registered ART patients on any child regimen			
		total number of registered ART patients			
10	<b>% of patients with viral load &lt;400 copies / ml</b>	registered ART patient: viral load < 400 (this month)			
		registered adult ART patient: total viral load monitoring (this month)			
10a	% of adult (>14yrs) patients with viral load <400 copies / ml at baseline	registered adult (>14yrs) ART patient: viral load < 400 at baseline (this month)			
		registered adult (>14yrs) ART patient: total viral load done at baseline (this month)			
10b	% of adult (>14yrs) patients with viral load <400 copies / ml at 1st 6 months	registered adult (>14yrs) ART patient: viral load < 400 at 1st 6 months (this month)			
		registered adult adult (>14yrs) ART patient: total viral load done at 1st 6 months(this month)			
10c	% of child (6-14yrs) patients with viral load <400 copies / ml at baseline	registered child (6-14yrs) ART patient: viral load < 400 at baseline (this month)			
		registered child (6-14yrs) ART patient: total viral load done at baseline (this month)			

	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
10d	% of child (6-14yrs) patients with viral load <400 copies / ml at 1st 6 months	registered child (6-14yrs) ART patient: viral load < 400 at 1st 6 months (this month)			
		registered child (6-14yrs) ART patient: total viral load done at 1st 6 months (this month)			
10e	% of child (<=5yrs) patients with viral load <400 copies / ml at baseline	registered child (<=5yrs) ART patient: viral load < 400 at baseline (this month)			
		registered child (<=5yrs) ART patient: total viral load done at baseline (this month)			
10f	% of child (<=5yrs) patients with viral load <400 copies / ml at 1st 6 months	registered child (<=5yrs) ART patient: viral load < 400 at 1st 6 months (this month)			
		registered child (<=5yrs) ART patient: total viral load done at 1st 6 months (this month)			
11	% of patients with CD4 > 200/mm3	registered adult ART patient: CD4>200 (this month)			
		registered adult ART patient: total WHO stage monitoring results (this month)			
11a	% of adult (>14yrs) ART patients with CD4 < 200/mm3 at staging	registered adult (>14yrs) ART patient: CD4<200 at staging (this month)			
		registered adult ART patient: total staged (this month)			
11b	% of adult (>14yrs) ART patients with CD4 > 200/mm3 at staging	registered adult (>14yrs) ART patient: CD4>200 at staging (this month)			
		registered adult ART patient: total staged (this month)			
11c	% of adult (>14yrs) ART patients with CD4 > 200/mm3 at 1st 6 months	registered adult (>14yrs) ART patient: CD4>200 at 1st 6 months (this month)			
		registered adult ART patient: total 1st 6 month follow up (this month)			
11d	% of adult (>14yrs) ART patients with CD4 > 200/mm3 at 2nd 6 months	registered adult (>14yrs) ART patient: CD4>200 at 2nd 6 months (this month)			
		registered adult ART patient: total 2nd 6 month follow up (this month)			

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	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
12	<b>% of patients with weight gain &gt; 10% compared to baseline</b>				
12a	% of adult (>14yrs) ART patients with weight gain > 10% compared to baseline	registered adult (>14yrs) ART patient: weight (this month) gain >10% compared to baseline			
		registered adult (>14yrs) ART patient: total weight monitoring (this month)			
12b	% of child (6-14yrs) ART patients with weight gain > 10% compared to baseline	registered child (6-14yrs) ART patient: weight (this month) gain >10% compared to baseline			
		registered child (6-14yrs) ART patient: total weight monitoring (this month)			
12c	% of child (<=5yrs) ART patients with weight gain > 10% compared to baseline	registered child (<=5yrs) ART patient: weight (this month) gain >10% compared to baseline			
		registered child (<=5yrs) ART patient: total weight monitoring (this month)			

**Not included in primary set of 12 indicators in national monthly data collection tool:**

13a	% of child (6-14yrs) ART patients with CD4 <15% at staging	registered child (6-14yrs) ART patient: CD4<15% at staging (this month)			
		registered child (6-14yrs) ART patient: total staged (this month)			
13	% of child (<=5yrs) ART patients with CD4 <15% at staging	registered child (<=5yrs) ART patient: CD4<15% at 1st 6 months (this month)			
		registered child (<=5yrs) ART patient: total 1st 6 month follow up (this month)			
13c	% of child (6-14yrs) ART patients with CD4 <15% at staging	registered child (6-14yrs) ART patient: CD4 <15% at staging (this month)			
		registered child (6-14yrs) ART patient: total staged (this month)			
13d	% of child (<=5yrs) ART patients with CD4 <15% at 6 monthly	registered child (<=5yrs) ART patient: CD4 < 15% at 6 months (this month)			
		registered child (<=5yrs) ART patient: total 1st 6 month follow up (this month)			
14	Known-death rate among patients on antiretroviral therapy	total registered ART patient - known death (this month)			
		total number of registered ART patients			

	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
14a	Known-death rate among adult (>14yrs) patients on antiretroviral therapy	registered adult (>14yrs) ART patient - known death (this month)			
		total number of registered adult (>14yrs) ART patients			
14b	Known-death rate among child (6-14yrs) patients on antiretroviral therapy	registered child (6-14yrs) ART patient - known death (this month)			
		total number of registered child (6-14yrs) ART patients			
14c	Known-death rate among patients on antiretroviral therapy	registered child (<=5yrs) ART patient - known death (this month)			
		total number of registered child (<=5yrs) ART patients			
15	Proportion of patients assessed medically eligible for treatment	number of patients assessed who are medically eligible for treatment (by age group and gender)			
		number of ART assessment first visits			
16	% of assessed patients medically eligible for treatment that completed readiness training**	number of patients who completed drug readiness (by age group and gender)			
		number of patients assessed medically eligible for treatment			

\* tracer drugs: stavudine, lamudine, efavirenz, zidovudine, lopinavir/ritonavir, didanosine

\*\* presumed indicator

**Table 6.2: Selected DORA indicators / data elements**

	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
<b>5.1 ART interventions</b>					
1	Number of ART assessment - first visit	number of ART assessment - first visit			
		NA			
2	Number of HIV patients medically eligible for ART on waiting list	(number of HIV patients medically eligible for ART) minus (number of registered ART patients: ART start)			
		NA			
3	Number of registered ART patients: ART start	number of registered ART patients: ART start			
		NA			
4	Number of registered ART patients: total	number of registered ART patients: total			
		NA			
5	Number of registered ART patients: adult male	number of registered ART patients: adult male			
		NA			

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	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
6	Number of registered ART patients: adult female	number of registered ART patients: adult female			
		NA			
7	Number of registered ART patients: child	number of registered ART patients: child			
		NA			
8	Number of de-registered ART patients excluding death or transfer out	number of de-registered ART patients excluding death or transfer out			
		NA			
9	Number of de-registered ART patients due to death	number of de-registered ART patients due to death			
		NA			
10	Number of CD4 tests done	number of CD4 tests done			
		NA			
11	Proportion of CD4 turnaround > 6 days	CD4 turnaround > 6 days			
		CD4 turnaround measured			
12	Number of HIV viral load done	number of HIV viral load done			
		NA			
13	any ARV drug stock out	any ARV drug stock out			
		NA			
14	number of STI treated new episodes among ART patients	number of STI treated new episodes among ART patients			
		NA			
15	Number of inpatient days of patients on ART	number of inpatient days of patients on ART			
		NA			
<b>5.4 PMTCT</b>					
16	Number of antenatal clients tested for HIV	number of antenatal clients tested for HIV			
		NA			
17	Proportion antenatal clients tested for HIV	antenatal clients tested for HIV			
		antenatal first visit			
18	Nevirapine dose to baby coverage rate	nevirapine dose to baby born to woman with HIV			
		Total live births x provincial (national) HIV prevalence among antenatal clients			
19	Number of lay counsellors receiving stipends	number of lay counsellors receiving stipends			
		NA			

	Indicator	Numerator / Denominator	Source	Staff responsible	Tool
20	Number of lay counsellors trained	number of lay counsellors trained			
		NA			
<b>5.9 VCT</b>					
21	Number of HIV clients pre-test counselled (excluding antenatal)	number of HIV clients pre-test counselled (excluding antenatal)			
		NA			
22	Proportion clients HIV pre-test counselled (exclduing antenatal)	number of clients HIV pre-test counselled (excluding antenatal)			
		PHC headcount 5 years and older - (antenatal 1st visit before 20 weeks + antenatal 1st visit 20 weeks and later + antenatal follow up visit)			
23	Number of clients tested for HIV (excluding antenatal)	number of clients tested for HIV (excluding antenatal)			
		NA			
24	Any HIV rapid test kits stock out	any HIV rapid test kits stock out			
		NA			

### National reporting requirements in accordance with the Division of Revenue Act (DORA)

Note: According to DORA, provinces are expected to submit quarterly data to NDoH within 20 days after the end of each financial year quarter.

Table 6.3: DORA Indicators per programme

Sub-programme	Indicators
5.1 ART	Number of hospitals accredited as ART service points
	Number of fixed PHC facilities accredited as ART service points
	Percent of accredited ART service points with nutritional services
	Number ART assessment first visit
	Number of HIV patients medically eligible for ART on waiting list
	Number of registered ART patients - ART start
	Number of registered ART patients total
	Number of registered ART patients adult male
	Number of registered ART patients adult female
	Number of registered ART patients child
	Number of de-registered ART patients excluding death or transfer out
	Number of de-registered ART patients transfer out
	Number of de-registered ART patients due to death
	Number of CD4 tests done
	Proportion CD4 turn-around > 6 days
	Number of HIV viral load done
	Percent of fixed PHC facilities drawing blood for CD4 testing
	Any ARV drug stock out
	Number of STI treated new episode among ART patients
	Number of in-patient days of patients on ART
5.1 ART: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.2 HBC	Number of active home-based carers
	Number of active home-based carers receiving stipends
	Number of patients served by home-based carers
	Number of home visits conducted by home-based carers
	Number of caregivers trained new
	Number of care kits purchased/replenished
5.2 HBC: Narrative comments (mandatory on indicators whose target was not met or information not available)	

Sub-programme	Indicators
5.3 HTA	Number of HTA intervention sites Number of male condoms distributed at HTA intervention sites Number of STI treated - new episode at HTA intervention sites Estimated male high risk target population at intervention sites Estimated female high risk target population at intervention sites Number of female condoms distributed Number peer educators trained new Number peer educators operating Number of health education materials distributed
5.3 HTA: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.4 PEP Sexual Assault	Number of sexual assault cases - new Number of ARV prophylaxis to sexual assault case -new Percent of hospitals offering PEP for sexual assault cases
5.4 PEP: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.5 PMTCT	Number of antenatal client tested for HIV Proportion antenatal clients tested for HIV Nevirapine dose to baby coverage rate Percent of fixed PHC facilities offering PMTCT Number of PCR HIV tests done in infants
5.5 PMTCT: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.6 Programme Management strengthening	Percent of management positions filled against plan - provincial HQ Percent of management positions filled against plan - district health management Number of tenders under grant awarded - provincial level Number of tenders under grant awarded - district level Number of monthly expenditure reports with break down by grant condition submitted to National in time Number of quarterly output reports submitted to National in time Amount transferred to Districts/Metro or Sub-districts Amount transferred to hospitals Amount transferred to PHC facilities

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Sub-programme	Indicators
5.7 RTC	Annual RTC business plan received and certified by Province
	Number of monthly RTC expenditure reports with break down by Standard Item submitted to Province in time
	Number of quarterly RTC output reports submitted to Province in time
5.7 RTC: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.8 SDC	Number of Step Down Facilities/Units
	Number of usable beds at Step Down Facilities/Units
	Number of admissions at Step Down Facilities/Units
	Usable bed utilisation rate at Step Down Facilities/Units
	Number of annual SDC business plans received and certified by Province
	Number of monthly SDC expenditure reports with break down by Standard Item submitted to Province in time
	Number of quarterly SDC output reports submitted to Province in time
5.8 SDC: Narrative comments (mandatory on indicators whose target was not met or information not available)	
5.9 VCT	Number of client HIV pre-test counselled (excluding antenatal)
	Proportion clients HIV pre-test counselled (excl. antenatal)
	Number of client tested for HIV (excluding antenatal)
	Any HIV rapid test kits stock out
	Percent fixed PHC facilities offering VCT
	Number of lay counselors receiving stipends
	Number of lay counselors trained new
5.9 VCT: Narrative comments (mandatory on indicators whose target was not met or information not available)	