

DEM 2110
SOURCES AND MEASURES OF DEMOGRAPHIC
DATA

HEALTH MANAGEMENT
INFORMATION SYSTEM



Session Objectives

- Demonstrate an understanding of HMIS as a source of demographic data,
- Develop an understanding of basic concepts and mathematical measures of demographic data from HMIS





Part 1: HMIS Overview



Health Management Information System: HMIS

- HMIS - Routine M&E system - health reforms
- HMIS - aggregates data on disease epidemiology and service delivery
- The M & E unit at MoH– responsible for coordinating and reporting all HMIS activities



Background

- The HMIS was developed as part of the health service delivery support system under the health sector reform programme of 1992
- Overtime, the system was faced with a number of developmental challenges such as its inability to provide disaggregated data by age and sex
- HMIS review in 2005 (European Union) – more responsive to current reporting needs within the sector.



Background

- 2007-2008 saw restructuring of some government ministries.
- In 2013, the access based system of the DHIS became saturated and could not contain the huge data. This saw the coming of DHIS2 (Web-based).
- Administratively, the health sector transformed the M & E Unit into becoming a fully fledged independent Department in 2018. Previously it was under Planning and Budgeting Department Under Ministry of Health.

Health Management Information System: HMIS

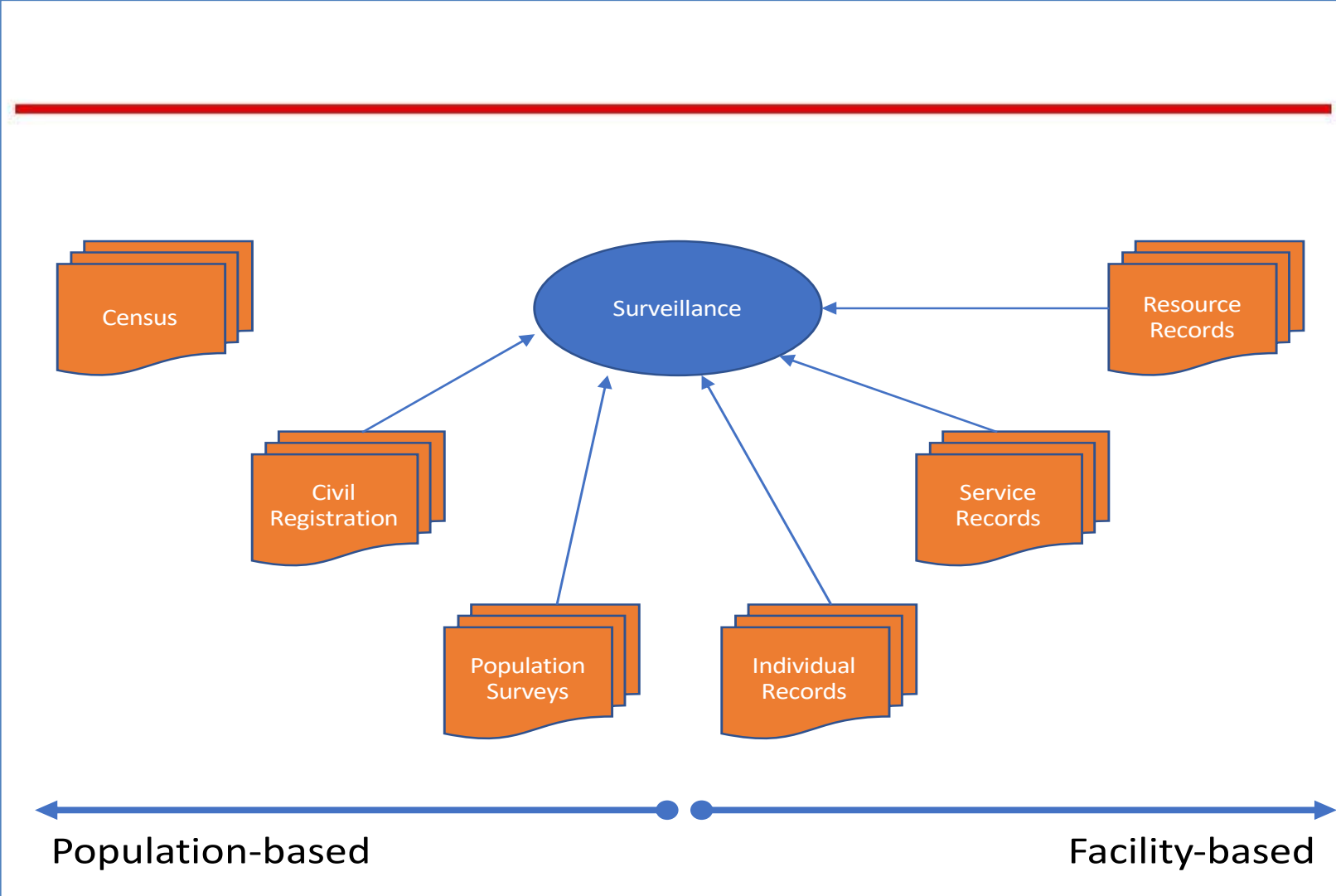
- a re-designed HMIS focuses on strengthening performance monitoring of the national health targets.
- Two types of data used in the M & E process of the health sector which are;
 - i. Non routine system (surveys e.g. DHS, SBS surveys)
 - ii. Routine System (DHIS and SmartCare)



AIM AND VISION

- AIM: “To further improve health service delivery in order to significantly contribute to the attainment of the health MDGs and national health priorities”
- VISION: “To develop an efficient and well-coordinated national HIS that ensures availability, quality, value and use of timely and accurate health information for evidence - based decision making for the provision of quality, equitable cost-effective and affordable health services as close to the family as possible”.





Adapted from WHO-HMN



HMIS Principles

- The HMIS was modeled around the **DARTs** principles as follows:
- **Decentralized:** Analysis & self-assessment done at all levels
- **Action Oriented:** Data is collected for decision making
- **Responsive:** Appropriate timing of reporting and feedback; flexible
- **Transparent:** Information is easy to obtain



Challenges

- Shortage of trained staff in data management at different levels
- Inadequate funds for the production of data collection tools e.g. Registers, Tally Sheets
- Existence of vertical reporting systems
- Poor record capturing, keeping and late reporting
- Lack of funding for pre and in-service HMIS curriculum



Challenges cont'

- Hospital MIS not yet in all hospitals
- Community MIS not yet fully developed as part of the HMIS
- Most private health facilities not reporting data to HMIS except for facilities on the Copperbelt
- Parallel reporting systems

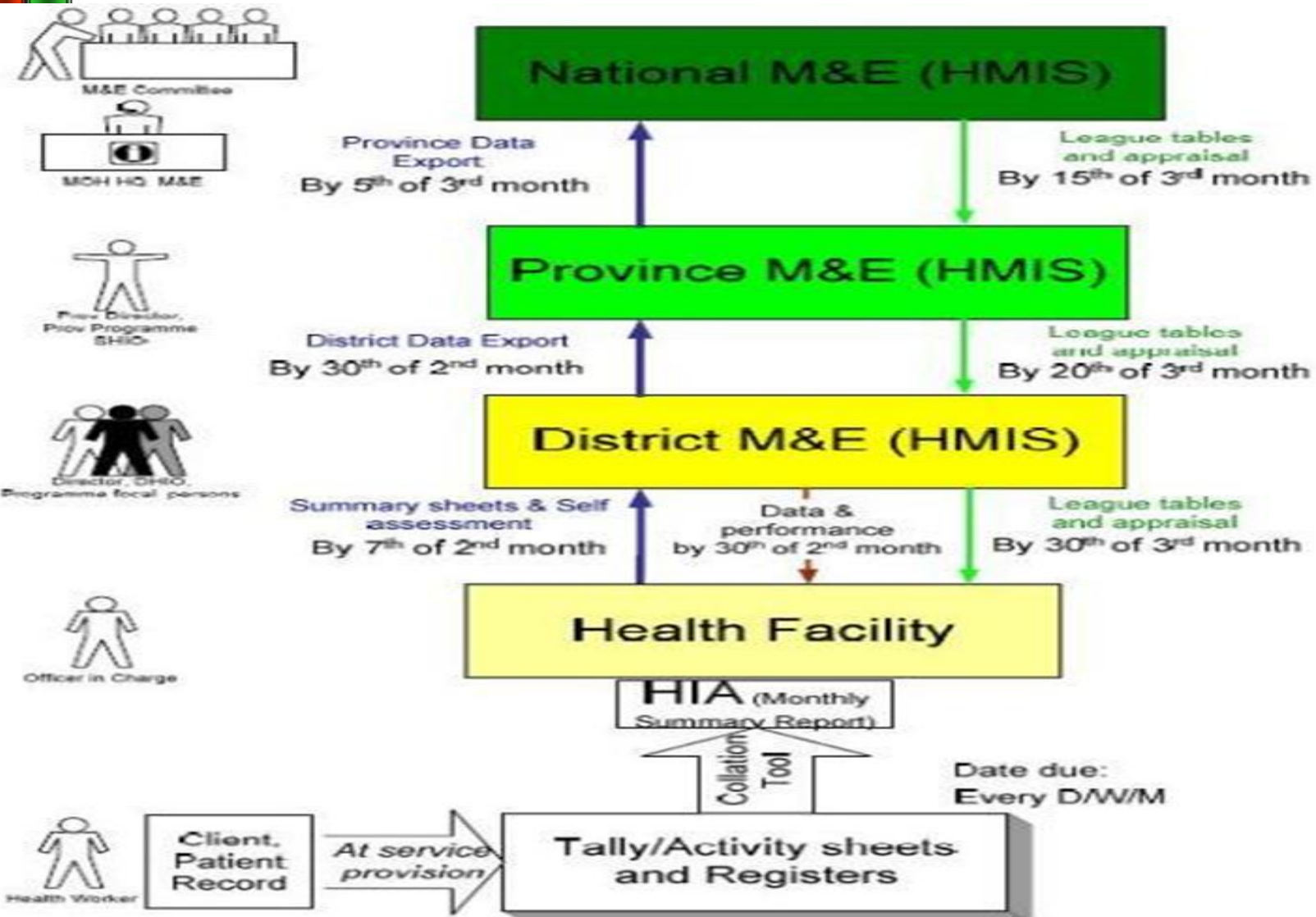




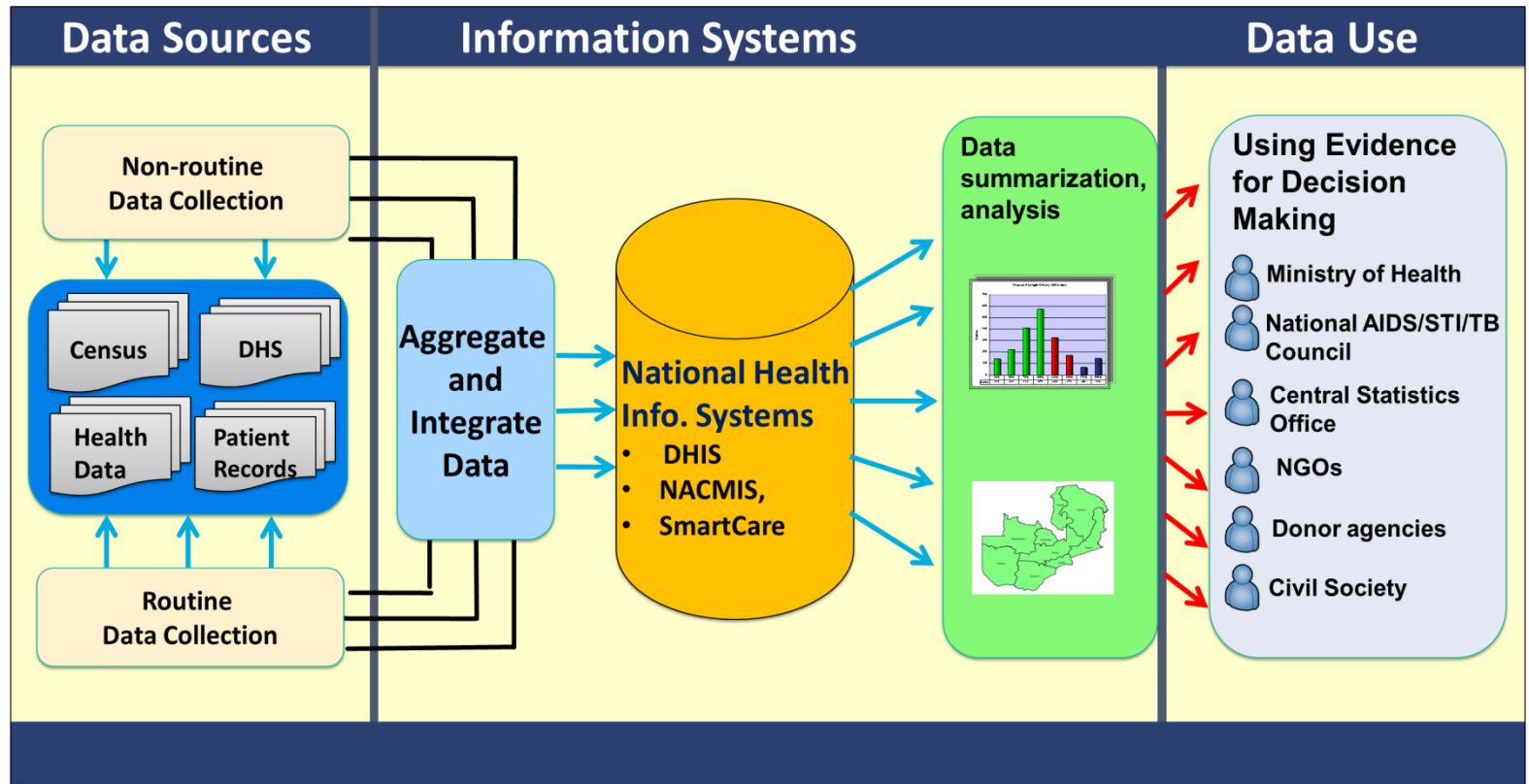
Part 2: HEALTH MANAGEMENT INFORMATION SYSTEM AS A SOURCE OF DEMOGRAPHIC DATA



Data Flow



General Overview of Data Flow and Use



What's in the HMIS?

- Human Resource : Information Officers, M & Es
- Health Information Systems : DHIS2, SMARTCARE and Other Programme Data systems e.g Elmis, DATIM.
- Data collection and reporting tools.
- Data collection/Entry Instruments : Registers, Daily activity sheets, Patient cards, Program-specific forms , EHS (SmartCare)



What's in the DHIS2?

The three(3) Ws principles

1. **WHAT** : this refers to data elements and indicators
2. **WHERE** : Unit being referred to i.e place
example Facility X, District X, Province X etc
3. **WHEN** : Time period at which data of interest is being sought



Data in the HMIS

- Mainly **Vital statistics**, e.g. births, deaths, age, sex
- Individual and aggregate data
- Other demographic data e.g. **socio-economic** characteristics of the patients
- Enables generation of data elements – subsequent use in indicator calculation
- Calculate several indicators and service delivery improvement guides e.g. calculate '***Top ten causes of morbidity***', '***Top ten causes of mortality***' ...
- Enables calculation of disease burden



Any other info?

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- Tally sheet [OPD Attendance Service Tally Sheets 20 Feb 2009 A3 final.xls](#)
 - Activity sheet [Child health activity sheet Aug 2012 A3 Landscape - final.xlsx](#), [TB activity sheet Feb 2009 A3 final.xls](#)
 - Aggregation Forms [Health Centre Service Delivery Form \(HIA2\) September 2012 B.xlsx](#)
 - ANC card
 - Under 5 card
 - Registers [Under-five Register A3 Landscape August 2012.xlsx](#)
 - Instructions manual [Delivery Register Instructions Aug 2012.docx](#)
 - Any other tools?



Limitations/challenges of using HMIS data

- Difficult to infer to rest of the population-self selected sample
- Quality may not always be monitored, thus, need more statistical tactics to clean it
- Certain diseases are 'not monitored' or are hidden in others....e.g.?
- Poor storage of data/information (both parties) – difficult to follow-up on certain issues that may arise later
- Difficult to do time series data analysis



Challenges cont'

- Costly as always have to generate new data
- Incompleteness due to late or even non-reporting from some facilities.
- Untrained staff, over-burdened staff – data considered secondary duty
- General lack or limited understanding of data, its use and importance, population over
- Poor or in-existent internet connectivity



Way forward

- Need to make adjustments, (standardizations) or take caution when intending to generalize to entire population
- Invest in trainings, both in and pre-service
- Ad-hoc trainings, refreshers... other, specially designed trainings
- Consider employing full time data staff
- Incorporate data generated from community through community HMIS



Way forward

- Sensitization; general public, statisticians, policy makers.....
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- Ministry of Health, M&E Unit, Ndeke House
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