



Human Resources for Health 2030 | JANUARY 2021

Participant Guide:

Utilizing Health Workforce Training Data to Make Decisions

Introduction by Executive Director of INS

Let me start by thanking Our God for the Grace and Spirit provided upon the technical team members, who through their efforts were able to develop training module Utilizing Data for Making Decisions and deliver a pilot training for INS Managers and Trainers in October 2020.

This Manual is intended for participants with the aim to assist their understanding of the topics presented. This manual shall be used as complementary to the actual presentations made by the facilitators. Having this manual is not a reason for not attending the training. I encourage participants to use this manual only to guide their understanding and plan for what to expect from the training and monitor training progress.

The INS acknowledge and appreciates USAID's HRH2030 Program, implemented by Chemonics International for the technical and financial assistance provided thus far.

Dili, January 20, 2021

(Domingas da Costa Pereira, Lic. Ec)

Executive Director and President of Directive Council, INS

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DISCLAIMER

This material is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of cooperative agreement no. AID-OAA-A-15-00046 (2015-2020). The contents are the responsibility of Chemonics International and do not necessarily reflect the views of USAID or the United States Government.”

Introduction

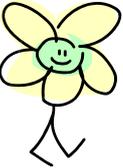
This Manual is intended for participants attending Data Use Training to assist their understanding of the topics presented. This manual is not a replacement for the training itself. Having this manual does not necessarily mean one does not need to attend the training. It serves as complementary only to assist understanding and monitor progress.

The Guide follows each session of the training program. There are six sessions.

Each stage is accompanied by a PowerPoint slide, an introduction, key information and usually an activity.

Icons and symbols

Icons and symbols are used throughout this Trainer's Guide to provide you with a quick visual reference to explain the nature of a learning activity.

ICON	MEANING
	Advice for participants
	Discussion point
	Important to know
	Case study
	Definition
	Activity

Overview of the Training

The training will run for three consecutive days starting from 8.30am to 5.30pm with 1.5 hours lunch break. On the first day, participants will be introduced with basic understanding on health workforce issues and the role of data in decision making, identification of health workforce training data needs and common data quality issues, and engagement of stakeholder in the collection and sharing of data. Participants will gain hands-on practice with improvement with data quality, be introduced to a stakeholders' engagement tools that help identify stakeholders, define their roles and resources, as well as map information flows. The participants will also be introduced to a case study which will be used throughout the training.

Day two will cover the development of basic skills in analysis and conducting calculations in training data, develop and understanding of how determinants and barriers to use of data and establish an understanding and importance of feedback loops. To help with data analysis, a practical activity for basic data analysis using excel will also be offered. Participants will also develop action plans to addressing barriers to data use and discuss feedback loops in Timor Leste. Participants will continue applying learnings from the day to their case study.

On the third day, stakeholders will deep dive into linking data to action. Participants will apply learnings from this session to the case study and later conduct a full presentation on the case study for feedback from the group.

On the final day, a session on introducing the training management information system (TMIS) will also be presented. This will cover a review of the system, discussion on report and analysis needs from TMIS to promote further development of the system and a discussion on the long-term sustainability of the system.

Session summary

Session One: Health Workforce Challenges and Use of Training Data to Make Decisions

- Session Objectives:
 - Understand common health workforce challenges globally and in Timor Leste
 - Raise awareness of the importance of using health workforce training data to inform decisions
 - Understand the importance of improving data-informed decision making to optimize the health workforce
- Session Overview: This session will focus on improving participant knowledge on health workforce challenges and how training data can be used to make decisions and take action on these challenges. An overview to data use for decision making will be provided, and the decision-making cycle will be introduced.

Session Two: Determining Training Data Needs

- Session Objectives:
 - Understand what health workforce training data is and the importance of these data to respond to health workforce challenges
 - Understand the difference between good vs bad quality training data and strengthen the ability to manage these data
- Session Overview: This session will focus on explaining what constitutes health worker training data and what are attributes of high-quality data. Specifically, the session will dive into the difference between good and bad quality data, understand attributes to data quality, data quality challenges, and measures for data quality control and assurance. At the end of the session, there will be a hands-on activity where participants will be asked to review health worker training data for quality.

Session Three: Engaging stakeholders in collecting and sharing of training data

- Session Objectives:
 - Identify key stakeholders and understand how to engage these stakeholders to make strategic decisions on health worker training
 - Identify opportunities for improving production and use of training data
 - Identify points where analysis & data could support INS planning and decision making
- Session Overview: This session will start of by defining the concept of stakeholders, data users and data producers. Then, it will explain the importance of involving stakeholders throughout the data use in decision-

making cycle. This session will also discuss information use flows. At the end of the session, participants will have to complete a stakeholder analysis matrix for them to understand, who the stakeholders are, the decisions they make, information they need, and the best way to present those information. Participants will also be asked to map information flows to better understanding the link between data and the end-users.

Session Four: Analyze Training Data to Respond to Challenges

- **Session Objectives:**
 - Turn raw data into useful information
 - Provide answers to questions being asked, by using basic data analysis using excel
- **Session Overview:** This session will focus on key concepts in data analysis by reviewing the most common data analysis terms and techniques used for descriptive data analysis and provide examples for doing some analysis with health worker training data. This includes calculating average, median, ratio, proportions, percentage, rate, and to name a few. Participants will also be required to demonstrate practical knowledge in basic data analysis by completing a given activity.

Session Five: Data for Use of Training Data to Make Decisions

- **Session Objectives:**
 - Identify opportunities for improving use of training
 - Identify opportunities for feedback mechanisms
 - Identify points where analysis & training data could support INS planning and decision making
 - Highlight the determinants of use training data
 - Understand potential barriers and solutions to use of training data
- **Session Overview:** This session will explain the context of decision making, data demand and use, the role of TMIS in decision making, and how to strengthen the decision-making process. It will also explore ways how to increase the use of data, working toward building a culture of data use. It will further share strategies for overcoming barriers to data use ensuring that health-related data are being used to make decisions at all levels. Participants will also learn strategies for using data in program management, implementation, and decision-making.

Session Six: Provide feedback and take action

- **Session Objectives:**
 - Identify opportunities for feedback mechanisms
 - Understand how to link analysis of training data with taking action
- **Session Overview:** This session will review key factors in effectively developing and using feedback loops and how to turn data into action. To assist understanding of this session, a small group activity will be included to discuss framework for linking data with action.

Other Sessions

- **Case Study:** Participants will be assigned to different groups and provided with a Case Study scenario that they will use each day of the training to apply learnings from the sessions of the day. At the end of the training, participants will present their Case Study under the themes of each session.
- **TMIS Demo:** This discussion will allow participants to apply their learnings throughout the training to understand better effective use of the TMIS. The will discussion focus on reviewing the TMIS functionality, defining the reports and analysis needs from TMIS to guide further development of TMIS and touch on TMIS sustainability.
- **Evaluation of the TMIS Data Use Training:** The evaluation will allow facilitators to understand how the TMIS data use training has affected the way the participants treat HRH training data in the future. In the session, participants will be distributed with some questionnaire to evaluate the process and the training for Data use.

Day 1

Opening Session

Time: 1 hour

Materials Needed:

- Notebooks and pens

Flow Process:

- Welcome and opening remarks from INS Director, USAID Mission Director
- Review objectives of the training
- Coffee Break
- Move locations
 - o Identify who can bring a laptop for Session 2 and the Case Study
- In new location:
 - o Overview of the agenda

Session 1: Health Workforce Challenges and Use of Training Data to Make Decisions

Session 1: Health Workforce Challenges and Use of Training Data to Make Decisions	Time
---	------

Preparation

Ensure that you:

5 minutes

1. Be on the venue at least 15 minutes prior
2. Register your attendance at least 10 minutes prior
3. Have your notebooks and pens ready
4. Phone is switched off to avoid distractions

Before commencing



Consider the following:

- You are the central of the training, make sure you learn as much as you can
- Be proactive and participative in training activities and exercises
- Learning is your responsibility. Make sure you have the opportunity to participate in group discussions.

House keeping and introduction



Expectations

Slide 1 – Introduction

Sit while facilitators:

- Welcome participants
- Introduce themselves and their roles

Facilitators may also state their expectations of you to:

- o Actively participate in training
- o Feel free to express your options and views
- o Understand that everyone has the right to be listened to
- o Ensure that mobile phones do not disrupt the class.

25 minutes



Training Resources

Course Objectives



Video “Imagine”



High-quality health system framework

Facilitators will check if all participants have signed the Participant Register.

Before commencing, you will be advised that the training will use adult centred training methods. This is different from lecture-based training. Adult training methods are interactive. They respect that you already have a lot of experience and this program is an opportunity for you to share your views. As trainers, they will be doing 20% of the work and you will be doing 80% of the work.

You will explain that the training will use:

- Powerpoint presentations,
- Activities: Discussions groups, brainstorming,
- Case Studies

Slide 2 – Objective

The course is structured so that there are six Sessions. The objectives of the first session are to:

1. Understand common health workforce challenges globally and in Timor Leste
2. Raise awareness of the importance of using health workforce training data to inform decisions
3. Understand the importance of improving data-informed decision-making to optimize the health workforce

Key issues and questions to be covered, including:

1. Common health challenges in Timor-Leste
2. The difference between Demand for data and Use of data.
3. How collected data can improve the quality of health services

Slide 3 – Video “Imagine”

A short clip will be shown to introduce the use of data to support health workers.

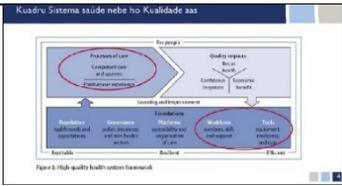
The video will take about 3 minutes.

After the video you will be asked to reflect, how the video make you feel.

- Feel free to share your impression and thought on the video

Listen to the key message from the facilitator.

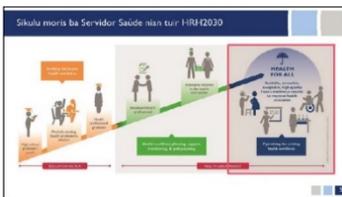
Slide 4 – High-quality health system framework



- Here is a framework for a high-quality health system from the WHO. We understand that ultimately, health systems must be equitable, resilient and efficient for people.
- But where does this put the INS?
- The INS, through in-service training, can support the workforce to better utilization the tools available to them to improve the processes of care to ensure competency care.
- And this ultimately results in quality impacts of better health and overall, confidence in the health system

HRH2030 Health Worker Life Cycle

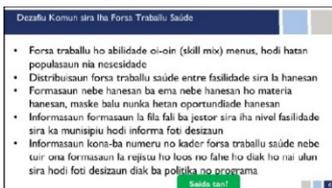
Slide 5 – HRH2030 Health Worker Life Cycle



- Now, let's focus on the overall lifecycle of health worker: Building, Managing and Optimizing.
- When we are talking about a health worker, we are not just referring to them as providers of a service, but them as professionals and how we can better support them to provide high quality health services, ensuring health for all.
- When we are talking about in service training, we are truly focusing on optimizing of health workforce. The right in-service training for the right people in the right place will lead to an available, accessible, high quality health workforce needed to improve health outcomes.
- AS we have seen in the previous slides, optimization of the health workforce through training will improve both: health worker capacity to provide quality services, and the overall performance of the health system.

Common Health Workforce Challenges

Slide 6: Common Health Workforce Challenges



Note: You may be asked to spell out the common health workforce challenges.

The objective is to raise your awareness of problems and how these can be assessed and fixed.

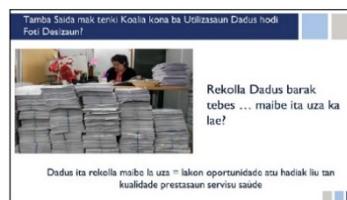
How can we use training data to solve health workforce challenges?



What is Decision Making?



Why Address Use of Training for Decision Making?



A misconception

Slide 7: How can we use training data to solve health workforce challenges?

Understand that by using training data to make decisions, we can overcome all the health workforce challenges and therefore we can improve the availability of quality health services

Slide 8 – What is Decision Making?

You will be asked to define decision-making. Feel free to express your opinion.

Think of a specific objective that needs to be achieved. What alternatives are there? How to best make a decision using these alternatives?

Decision making is the process of choosing from among various alternatives using information in light of a given objective.

Slide 9 – Why Address Use of Training for Decision Making?

So much training data is collected... but is it used?

The picture above may look familiar to many of you. In today's environment, many health professionals have become overwhelmed with collecting and using data related to services they deliver. In some contexts, data requirements from government and donors have grown exponentially, to the point where some providers and implementing partners have pages and pages of forms to fill in daily. Rarely are data used to monitor programs and make decisions beyond individual patient care. This is a huge lost opportunity because data is critical to the program improvement and decision-making process.

Slide 10 – A misconception

You may read the slide. "A major misconception about effective use of health workforce training data in decision making is that if you gather data then people will use it."



Use of Training Data



Demand for Training Data

We can use training data to...

Reflect on the statement above. Do you agree or disagree with this statement?

One of the reasons behind this is that health sector leaders lack a **process** for analyzing reports and information, getting it to the right decision-makers at the right time and planning for resources to act on the information the data contains...

This process is data utilization!

Slide 11 – Use of Training Data

There are two main components behind data utilization – data use and data demand.

This time, you will be led to focus on **USE**

Use refers to the decision-making process

We say the decision-maker **uses training** data if he/she:

- Is explicitly aware of the decision to be made
- Considers at least two possible courses of action

Considers relevant data in making the decision, even if the data is outweighed by other factors

Slide 12 – Demand for Training Data

Now let's talk about data demand.

Demand refers to the value the decision-maker places on the data, whether or not he/she actually uses the data.

We say the decision-maker demands data if he/she...

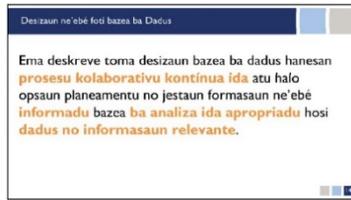
- Knows what data is needed to make the decision
- Proactively seeks out the data he/she needs

Slide 13 – We can use training data to:

You will be asked to suggest your responses. Feel free to do so. You will then be shown answers by facilitators. In summary, we can use information to...?

Slide 14 – Data Driven Decision Making

Data Driven Decision Making



Data-driven decision making has been described as **an on-going collaborative process** for making **informed** training planning and management **choices** based on **appropriate analysis** of relevant training data and **information**.

In other words, use of the data is

- the analysis,
- synthesis,
- interpretation,
- and review of data as part of a decision-making process, regardless of the source of data.

Decision Making Cycle

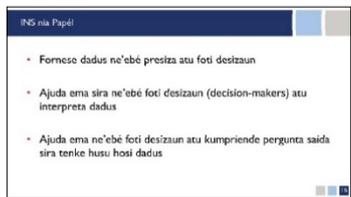


Slide 15 - Decision Making Cycle

The sessions for this training is divided according to the stages in each cycle. Make sure you understand the link between these stages leading up to the ultimate objective: **Improved availability of quality health services**

Do not worry about understanding each fully, as each of these steps will be covered separately throughout the training.

The Role of the INS



Slide 16 - The Role of the INS

NOTE to Participants:

You may be required to brainstorm the role of INS. But overall, the role of INS in terms of data use for decision making are as follows:

- Provide the data needed to make decisions
- Help decision-makers interpret data
- Help decision-makers understand what kinds of questions they should ask from the data

Note: feel free to add more if you have more ideas. The slides are only to help you understand.



Slide 17 – Discussion

Discussion



This activity is for the participants to reflect on their experience in using data to make decision.

NOTE to participants: You will be asked to share your experiences with the group.

Now that we have talked about the importance of using data and information in health decision making, let us bring the discussion down to a more personal level.



Discuss and brainstorm with your group members. Feel free to share with the group how you use data and information in your job. Give specific examples from your experiences using the following guiding questions:

5 minutes

Session Objectives

Objetivu hosi sessaun ne'e

- Kumprinde saida mak dadus formasaun forsa traballu no importansia hosi dadus hirak ne'e hodi responde ba dezafiu sira iha forsa traballu saude
- Kumprinde diferensia entre dadus formasaun ho kualidade diak vs kualidade aat no hametin liu tan abilidade atu jere dadus hirak ne'e

Slide 2 - Session Objectives

- Understand what health workforce training data is and the importance of these data to respond to health workforce challenges
- Understand the difference between good and bad quality training data and strengthen the ability to manage these data

Decision Making Cycle



Slide 3- Decision Making Cycle

We are familiar now with the decision-making cycle. During the first session we discussed the first stage. This session you will be asked to focus on the second stage, which is determining training data needs.

Note that this session is divided into two parts: health workforce training data, and training data quality assessment and management

Part I: Health Workforce

USAID, HHS, CDC

Dadus Formasaun Forsa Traballu Saude

Parte I

Slide 4 – Part I: Health Workforce Training Data

You will explain that you are going to discuss the first part: health workforce training data where you will learn about the sources and types of health workforce training data.

Who is a Health Worker?

Se maik Trabalhador Saude?

OMS define forsa traballu saude hanesan "ema hotu ne'ebé envolve iha aksaun sira ne'ebé ninia interesan primaria maik hadiak saude."

Hidat: Pessoal enfermagem no gabinete, ama, Pessoal Farmacia, Trabalhador saude de Laboratorio, Pessoal Odontologia / dentista, Trabalhador saude comunitario no saude publica, Trabalhador saude Comunitario no tradicional, Justicaru saude no trabalhador saude.

Slide 5 - Who is a Health Worker?

The WHO defines the health workforce as “all people engaged in actions whose primary intent is to enhance health.”

Members of the health workforce may include:

- Physicians
- Nursing and midwifery personnel
- Pharmacy personnel
- Laboratory health workers
- Dentistry personnel
- Environmental and public health workers
- Community and traditional health workers



What is the Health Workforce?

Slide 6 - What is the Health Workforce?

The health workforce in any given geographical area comprises health workers from a variety of sectors:

- The public sector (inclusive of all public-sector institutions such as health workers in the education system, military, police, prisons, etc.)

Sáidó mak forsa traballu saúde?

Fora traballu saúde iha área geográfika ida komposta hosi traballadór saúde sira hotu hosi setór oi-oi:

- Setór públiku (inkluziva ba institusaun setór públiku sira hotu hanesan traballadór saúde iha Sistema Edukasaun, militar, polisia, prizon, etc.)
- Organizasaun relijion nian (bazila ba fur)
- Privadu atu hetan lukru
- Semiprivadu
- Institusaun formasaun saúde
- Non-governmental, eh, organizasaun li'ós atu hetan lukru



What is Health Worker Training?

Sáidó mak Formasaun Traballadór Saúde?

Formasaun traballadór saúde mak atividade kapasitasaun hotu ne'ebé ho objetivu atu aumenta abilidade no kuñesimentu tékniku no jestaun, nune'e mos atitude hosi traballadór saúde sira hodi hadia disponibilidade prestasaun servisu ne'ebé ho kualidade.

Definitions: Health Workforce Training Data

Definisaun: Datus formasaun forsa traballu saúde

Datus formasaun forsa traballu saúde mak faktus no estatistika ne'ebé deskreve kona-ba istoria formasaun, status skill mix hosi forsa traballu saúde, rekolla hamutuk ba referénsia ka analiza.

Datus formasaun forsa traballu refere ba Variavel Kualitativu eh, *kuantitativu* kona-ba traballadór saúde ne'ebé bele uza hodi sai hanesan baze ba informasaun formasaun no kuñesimentu traballadór pesotil saúde.



Health Workforce Training Data is Needed for..

Ita prezisa datus formasaun forsa traballu saúde:

- Atu fosi desizun ne'ebé loos kona-ba formasaun, inklui tipu formasaun ne'ebé prezisa
- Atu asegura ita iha supply traballadór saúde ne'ebé kompetente
- Atu bele koloka misturasaun abilidade (skill mix) ne'ebé suficiente hodi hatán ba nesidade populasaun nian
- Atu jere no rejistu tutur formasaun traballadór saúde
- Atu planu formasaun ruma ho ema ne'ebé loos, iha tempu ne'ebé loos, hodi bele hetan abilidade ne'ebé loos, iha tempu ne'ebé loos

- Faith-based
- Private-for-profit
- Semiprivate
- Health training institutions
- Nongovernmental, or not-for-profit organizations

Slide 7 - What is Health Worker Training?

Health worker training is capacity building activities to improve technical and managerial skill and knowledge, as well as the behavior of health workers to improve the availability of quality health services.

Slide 8 - Definitions: Health Workforce Training Data

Health workforce training data are facts and statistics describing the training history and skill mix status of the health workforce, collected together for reference or analysis.

Workforce training data refers to the qualitative or quantitative variables on health workers from which health worker training information and knowledge is derived.

Make sure to understand that, “variable” in this definition means “information.”

NOTE to Participants: you will be required to discuss using the following guiding questions:

- Can anyone give us an example of qualitative data?
- What about quantitative?

Share your thought and listen to other ideas from other participants. Note the summary from facilitators.

Slide 9 - Health Workforce Training Data is Needed...

NOTE to Participants: this slide provides an overview of how health worker data is used – and why it is needed.

Overall, health worker data is needed for the following reasons:

- To make sound decisions about training, including the types of training needed
- To ensure a qualified supply of health workers
- To deploy the appropriate skills mix to meet population health needs
- To manage and track health worker trainings

TMIS Data Points



- To plan trainings with the right people, in the right places, to gain the right skills, at the right time

Slide 10 – TMIS Data Points

You will explain that TMIS data point is divided to 2 categories: training and Participants or health workers

You may provide suggestions and feedback for any other data points that you want to see in TMIS

Sources of Workforce Training Data



Slide 11 - Sources of Workforce Training Data

The are two major sources of Workforce training data: from health workers themselves and from other stakeholders.

In this slide we are discussing examples where we can obtain health workers training data.

- Application Documents: CV, application letters/forms, copies of professional certificates, professional references
- Existing Personnel Records: promotion letters, transfer letters, training records

Sources of Workforce Training Data

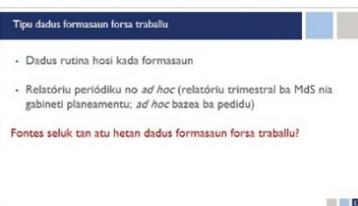


Slide 12 - Sources of Workforce Training Data (continue)

We can also find health worker training data from other stakeholders, for example:

- In-service training of health professionals, **INS and other training providers**
- Professional schools and teaching institutes (continuing professional development)
- Performance evaluations
- Planning and budget documents

Types of Workforce Training Data



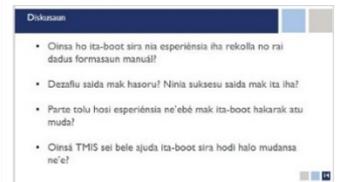
Slide 13 - Types of Workforce Training Data

Training data can be:

- Routine data from each training
- Periodic and ad hoc reporting (quarterly reports to MOH and planning office; ad hoc based on request)

You may be asked about other sources of workforce training data that you know of.

Discussion



Slide 14 - Discussion

You will be asked to share your experience using the following questions:

- What has been your experience in collecting and storing training data manually?

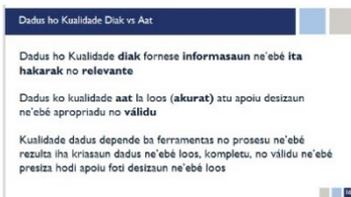
8 mins



Training data quality assessment and management



Good vs Bad Quality Data



5 Attributes of Quality Data



- What are the challenges? What are the successes? What are the top three things you would change?
- How will the TMIS help you through this change?

Slide 15 – Part II: Training data quality assessment and management

We have learned about health workforce training data, specifically the sources and types of health workforce training data.

Now we are moving on to the second part of the training, on data quality assessment and management

Slide 16 - Good vs Bad Quality Data

We evaluate data every day, for each decision we make, even though we may not realize it. When deciding whether to go to the beach this weekend, what are some sources of data you would consider? Your friends, the sky, the weather channel, etc.

Data quality includes the tools and processes that result in the creation of correct, complete, and valid data that are required to support sound decision-making.

Good quality data provide the **relevant** or **intended information**

Poor quality data are **not accurate** enough to support appropriate and **valid decision-making**

Data quality relies on tools and processes that result in the creation of correct, complete, and valid data required to support sound decision-making.

Slide 17 - 5 Attributes of Quality Data

You will be shown 5 attributes of Quality Data. Do not worry about understanding them all at this stage, because the next slides will cover them in more detail.

These attributes are:

- **Relevance:** appropriate data being collected
- **Accuracy:** data was recorded correctly
- **Completeness:** all relevant data was recorded
- **Timeliness:** data is kept up to date
- **Consistency:** data agrees with itself

25 mins

Relevance

Relevancia

Relevancia refere ba **valór** ne'ebé contribui hosi dadus hirak ne'e, karakterizadu hosi importante-oinsu dadus hirak ne'e ajuda hodi foti desizaun.

- **Exemplu Importante:** rekalla naran hosi traballador saude no oan sira la relevante ba desizaun plane formasaun ba funsionarú saude.
- **Tips ba Dadus:** konsidera desizaun sira ne'ebé sei foti ho dadus hirak ne'e antes ba rekalla.



Accuracy

Presizian / Akurat

Dadus rejistu ho koressu eh loos no tenke livre hosi erru (tantu intensional no mos la intensional)

- **Exemplu Importante:** Se karik informasaun hosi funsionarú saude ida minú ID sai hanesan fontes dadus, erru iha transkribe dadus ne'e hanesan hakerek sira, bele afeta relatoriu sira hosi iha futuru ne'ebé prodós hosi Sistema kona-ba funsionarú saude.
- **Tips ba Dadus:** Uza naran loloon hanesan hakerek iha dokumentu ofisial sira indú pottsuan no seluk tan sei evita aamentu dadus "úniku" ne'ebé la nesesáriu hosi erru no variasaun naran.



Completeness

Kompletu

Sistema Informasaun Jestaun Formasaun tenke prenxe ho dadus hotu ne'ebé prezisa atu apoiu produसान relatoriu ne'ebé prezisa.

- **Exemplu Importante:** se karik Diretor Muniçipiu ida prezisa avalla nivel kompetensia hosi minú funsionarú, no nia haree deit ba lista prezisa hosi formasaun ne'ebé nia funsionarú atende, entaun onsa Diretor ne'e bele komenta ho inteligente kona-ba the minú funsionarú nia nivel kompetensia?
- **Tips ba Dadus:** Wandaera hanesa dadus ba TMIS, angura katák tempu foti prezisid, hanesan exemplu la'ós deit foto prezisa maibé inklui mos valór teste pre/post-test, atu bele kumprende la'ós deit nia atende formasaun ba lae, maibé sira nia kullisimentu no abilidade amentu ba lae.



Slide 18 - Relevance

Relevance refers to **the value** contributed by these data, characterized by the degree to which **the data** help to make decisions.

- **Important Example:** Collecting the **names** of health workers' **children** is not relevant to any health worker training planning **decisions**.
- **Data Tip:** Consider the decisions that will be made with the data before it is collected.

Slide 19 – Accuracy

Data are **recorded correctly** and are **free of errors** (whether intentional or unintended)

- **Important Example:** If the information from a health worker's identification card provides the source data, **errors in transcribing this data, such as a misspelling,** can affect **all future reports** generated from the system regarding that health worker.
- **Data Tip:** Using standard preset names of occupations and positions will avoid adding unnecessary "unique" data from errors and variation of names.

Data accuracy is critical and requires that all persons involved with checking and decoding source documents ensure that data are correctly recorded.

Slide 20 - Completeness

Training management information system needs to be fed with **all data** needed to support generation of required reports.

- **Important Example** if a MHO manager needs to **assess the competency** levels of her/his workforce, and **only the** attendance list of training where the individual's name is included is available, then how can the MHO manager **intelligently comment** on the health worker's competency level?
- **Data Tip:** When entering data into TMIS, ensure that all fields are captured, for example not only attendance but pre/post-training test scores, to better understand not only if a health worker attended a training, but if they improved their knowledge and/or skills.

Timeliness

Atempada

Dados tenki atualizadu (up to date)

Se karik munisipiu ida la manda informasaun **tuir tempo**, no relatoriu produs dalaun ona, relatoriu ne'e bele projeta informasaun la kooa ba utilizador sira ba relatoriu refere.

- Exemplu importante:** Se forsa traballu saude nia dados kona-ba formasaun foun la atualiza regularmente, relatoriu kona-ba nimeru atual traballador saude ne'ebe tuir ona formasaun, ne'ebe produs hosi TPIS bele kria **seleksaun la kooa** ba participante sira ba formasaun ida, potensialmente kontribui ba distribusaun traballador saude treinadu ne'ebe la hanesan.
- Tipis ba Dadas:** kada atividade formasaun tenke atualiza regularmente, hanesan exemplu, dados tenke atualiza iha TMIS mas tardis loron 2 hafon formasaun.



Consistency

Konsisténsia

Asegura klareza no padraun sira iha eskola definisaun sira tamba ida ne'e ajuda iha komparabilidade

- Exemplu importante** se formasaun hosi-hosi iha ambito COVID-19 ka hanaran ida diat COVID-19, sai difisil mis ita atu hatain perguntas simples, hanesan gonoli kaude san lixa ona mak atende formasaun COVID-19 EmOC?
- Tipis ba Dadas:** klasifikasaun no deskripsaun ba formasaun tenke klaru. Hanesan exemplu formasaun atu ajuda fo partur ba bebe iha ambito COVID-19 tenki haktak nia suran hosi formasaun ba preparasaun hahsan iha ambito COVID-19. Formasaun nua ne'e kidade ngup hanesan deit ho suran "COVID-19" iha sistemu.



Data Quality Control and Assurance

Kontrolu no Garante Kualidade Dadas

Kontrolu Kualidade (QC) - QC mak Sistema atidade rutina ida ne'ebe halo hosi ema ida iha INS atu avalia no mantein kualidade dados.

Garante Kualidade (QA) - QA Sistema ida dezolve atu asegura katak Sistema QC dezeria atu hataun duni ba objetivu kualidade dados no katak Sistema ne'e implementa ho efikas.

Se mak responsavel ba QC no QA?



Slide 21 – Timeliness

Data are **kept up to date**

If a municipality does **not** send information **on time**, and a report is generated, it **may project a false image** to the users of these reports.

- Important Example:** If health workforce data on new training are **not updated** regularly, the report on actual number of trained health workers generated from the TMIS may lead to **inappropriate selection** of participants for a training, potentially contributing to inequitable distribution of health workers trained.
- Data Tip:** Every training activity needs to be updated regularly, for example, data should be updated in the TMIS 2 days after the training at the latest.

Slide 22 - Consistency

Ensure **clarity and standards** in the choice of **definitions** as this **aids in comparability**

- Important Example** if one training is called COVID-19 and another is COVID-19 EmOC, while both may be COVID-19 training, it becomes **difficult to answer** simple questions, such as **how many health workers** attended a clinical COVID-19 training?
- Data Tip:** the classification and the description of the training should be clear. For example training on handling delivery of baby in the context of COVID-19 should be distinguished from training on food preparation in the context of COVID-19. Both training should not be input as "COVID-19" training.

Slide 23 - Data Quality Control and Assurance

Note to Participants: In order to make sure the we are collecting and maintaining good data, we must put into place quality control measures and a system for quality assurance.

Quality Control (QC) - QC is a system of routine technical activities to be conducted by a someone in the INS to assess and maintain the quality of the datasets.

Quality Assurance (QA) - QA is a system developed to ensure that the QC system is designed to meet the data quality objectives and that it is implemented effectively.

You may be asked by facilitator to share your experience on quality control and quality assurance in your office. Share your thoughts and experience to the group.

Data Quality Challenges



Slide 24 - Data Quality Challenges

You may be asked to share what are in your opinion the common data quality challenges you face in your day to day?

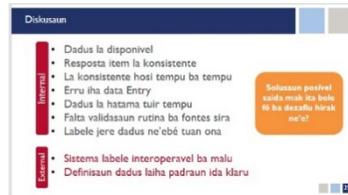
Data quality challenges is classified in two:

- **Internal:**
- **Unavailability of data:** Data required did not exist or were not readily accessible with several offices taking the approach of “just fill something in” to satisfy distant data collectors, thus creating errors.
- **Inconsistent item response:** Not all data providers report the same data elements. Collected staff reports for the different district reveal discrepancies and differences in the way districts collected and submitted data to MoPS. This reporting of different types of information from different sources created gaps in data reports, became the source of duplicate information and errors in macro-level data aggregation.
- **Inconsistency over time:** The same data element is calculated, defined, and/or reported differently from year to year. Longitudinal inconsistency creates the potential for inaccurate analysis of trends over time
- **Data Entry Errors:** Inaccurate data are entered into a data collection instrument. Errors in reporting information can occur at any point in the process - from the individual HR data collection form to the District’s report to MoH
- **Lack of timeliness:** Data are reported too late. Late reporting can jeopardize the completeness of macro-level reporting and the thoroughness of vetting which leads to late reporting, poor data quality, and delayed implementation of program improvement efforts
- **Lack of validation routines at sources:**
- **Inability to cope with ageing data** contribute to data quality problems
- **Lack of validation routines at sources** causes data quality problems
- **External**
- **System non-interoperability** Data collected in one system cannot be electronically transmittable to other systems. Re-inputting the same data in multiple systems consumes resources and increases the potential for data entry errors and data redundancy.
- **Non-standardized data definitions.** The lack of standard naming convention means that various data providers use different definitions for the same elements. Passed on to the district or MoH level, non-comparable data are aggregated inappropriately to produce inaccurate results.
- **Inability to cope with ageing data**

Session 2: Determining Training Data Needs

Time

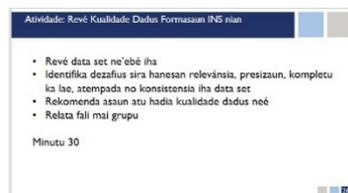
Discussion



Slide 25 content: A slide titled 'Diskusuan' with two columns of bullet points. The left column lists data quality issues: 'Dadus la disponivel', 'Resposta item la konsistente', 'La konsistente hosi tempu ba tempu', 'Erru iha data Entry', 'Dadus la hasama taur tempu', 'Falta validasaun rutina ba fontes sira', 'Labele jere dadus ne'ebe tuan ona'. The right column lists solutions: 'Sistema labele interoperavel ba malu', 'Definisau dadus laha padraun ida klaru'. An orange box contains the text: 'Solusaoan posivel suda mak ita bele hi ba dezafu hirak ne'ei'.



Activity: Data Quality Review of INS Training Data



Slide 26 content: A slide titled 'Atividade: Revê Qualidade Dados Formasaun INS nian'. It lists activity instructions: 'Revê data set ne'ebe iha', 'Identifika dezafus sira hanesan relevansia, prezisaun, kompletu ka lae, atempada no konsistensia iha data set', 'Rekomenda asaun atu hadia kualidade dadus nee', 'Relata fali mai grupu'. It also states 'Minutu 30'.



Report Back



Slide 27 content: A slide titled 'Atividade Relata fali fali: Revizaun Kualidade dadus Revê dadus formasaun INS'. It features a large green button with the text 'Relata fali fali'.

Slide 25 – Discussion

Recognizing data quality challenges in the previous slide, you may be asked “**What are some possible solutions to these data quality challenges?**”

NOTE: You may be directed to each challenge required to provide possible solution for this specific challenge.

Slide 26 - Activity: Data Quality Review of INS Training Data

You will be divided into group of fives depending on the number of participants.

Then, for each group, you will be provided with hands out:

- “Session 2 Activity 1: Data Quality Review of INS Training Data”; and
- A copy of historical data set in USB will be distributed to your group to use in laptop.

Please ask for a laptop if your group members do not have one.

Instructions for participants

- Select a reporter.
- Review the data set in excel as a group documenting data quality issues that you see in the data considering the following attributes:
 - Relevance: appropriate data being collected
 - Accuracy: data was recorded correctly
 - Completeness: all relevant data was recorded
 - Timeliness: data is kept up to date
 - Consistency: data agrees with itself
- Recommend actions to take to improve the quality of the data.

Make sure to notice any minor issues that are sometimes not obvious but matters for the quality of the data

Slide 27- Report Back

The reporter from each group is requested to present the result of their group discussion.

Pay attention to the presentations from other group and notice any minor issues that are sometimes not obvious but matters for the quality of the data

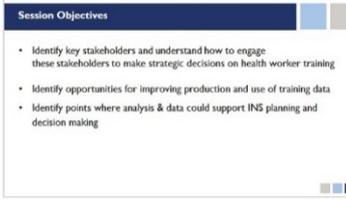
5 mins

20 mins

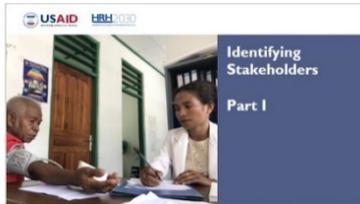
15 mins

Session 2: Determining Training Data Needs		Time
<p>Closing</p> 	<p>Slide 29 – Closing: End of Session 2 You have reached the end of session 2</p> <p>Reflect on whether you have achieved the objectives of this session. Feel free to provide feedback to facilitators if you have any.</p> <p>You will be informed the upcoming session, how it is linked to this session.</p> <p>END OF SESSION 2</p>	5 mins
LUNCH BREAK		1 hr 30 min

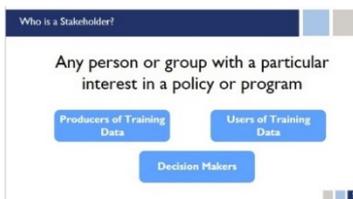
Session 3: Engaging Stakeholders in collecting and sharing of training data

Session 3: Engaging Stakeholders in collecting and sharing of training data		Time
<p>Preparation</p>  <p>Engaging Stakeholders in Collecting and Sharing of training data</p> 	<p>Ensure that you:</p> <ol style="list-style-type: none"> 1. Be on the venue at least 15 minutes prior 2. Have your notebooks and pens ready 3. Phone is switched off to avoid distractions <p>Slide 1 – Engaging Stakeholders in Collecting and Sharing of training data</p> <p>We have just identified Common Health Workforce Challenges in Timor-Leste and determining health training data needs. The next step is to engage with stakeholders in collecting and sharing of training data.</p>	2 minutes
<p>Session Objectives</p> 	<p>Slide 2 – Session Objectives</p> <ul style="list-style-type: none"> • Identify key stakeholders and understand how to engage these stakeholders to make strategic decisions on health worker training • Identify opportunities for improving production and use of training data • Identify points where analysis & data could support INS planning and decision making 	28 mins
<p>Decision Making Cycle</p> 	<p>Slide 3 – Decision Making Cycle</p> <p>We are familiar now with the decision-making cycle. We have already discussed the first and second stage. Now we move to the third stage that is engaging stakeholders in collecting and sharing of training data.</p>	

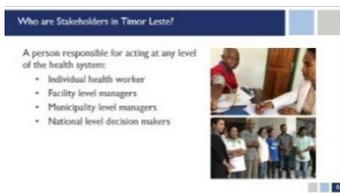
Part I: Identifying Stakeholders



Who is a Stakeholder?



Who are Stakeholders in Timor Leste?



Stakeholders are...



Stakeholders also include...



Note that this session is divided to two parts: Identifying Stakeholders, and Understanding Information Use Flows

Slide 4 – Part I: Identifying Stakeholders

Before engaging with stakeholders, first we need to know which stakeholders we need to involve. How are they relevant to our work? Let's discuss identifying stakeholders

Slide 5 – Who is a Stakeholder?

Facilitator will start off by asking volunteers to provide the definition of a stakeholder. Feel free to share your opinion.

Slide 6 – Who are Stakeholders in Timor-Leste?

As we define earlier that stakeholder is any person of group with a particular interest in a policy or program, in Timor-Leste, we have this group at different level. For example:

- Individual health worker: at a lower level an individual health worker decides whether he needs a training or not
- Facility level managers: may decide staff in his facility requires certain training course or refresher training
- Municipality level managers
- National level decision makers

Slide 7 – Stakeholders are...

For health sector in Timor-Leste, our stakeholders would be:

- Policymakers
- Funding agencies such as WHO, UNICEF, USAID
- Providers and Implementers: St. John of God, etc.
- Civil society
- Researchers
- Government agencies (Ministries)
- Development partners
- Training Institutions (i.e. Universities)

Slide 8 – Stakeholders also include...

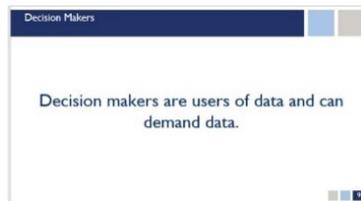
You will be prompted with questions of who are our stakeholders? Feel free to express your opinion and note others' answer.

Our beneficiaries include:

- Minister of Health
- Vice Ministers
- INS Executive Director
- HR Directorate in MoH



Decision Makers



- Quality Cabinet
- Municipality Health Officers
- Referral Hospitals
- Health Centers
- Beneficiaries

Slide 9 – Decision Makers

Decision makers are users of data and can demand data.

We often do *not* think of the beneficiaries of health programs as stakeholders. The people that our programs and services strive to serve also make decisions...

They make decisions about seeking services and continuing to seek care based on many things, including the quality of the care they receive. It is vital to consider these stakeholders when designing and implementing any program or service.

Engaging with Stakeholders



Slide 10 – Engaging with Stakeholders

Make sure you understand that different people need information for different kinds of decisions. Therefore, we need to engage in **dialogue** with stakeholders to fully understand:

- What decisions they make
- What information they need
- the best way to present that information

Different Stakeholders...



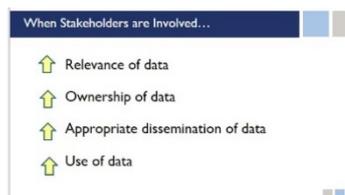
Slide 11 – Different Stakeholders...

It is important to recognize that different stakeholders will affect the data-informed decision-making process in different ways.

This is because different stakeholders ...

- View activities from different perspectives
- Have different degrees of understanding
- Need and want different information
- Need information at different levels of complexity
- Have different intensities of interest
- Have different roles in the decision-making process

When Stakeholders are Involved...



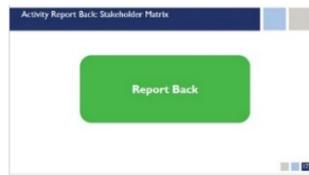
Slide 12 – When Stakeholders are Involved...

By ensuring stakeholder involvement in the data use process, you can tailor data collection to the specific needs of your stakeholders, thus **increasing the relevance of the data** to their work.

This **builds ownership of data**, so that when data-informed decisions are made, the necessary buy-in already exists to move the decision forward.

Stakeholder involvement strengthens the information cycle – they are ‘in the know’ – which contributes to a **heightened dissemination of data**.

Activity Report Back: Stakeholder Matrix



Slide 17 - Activity Report Back: Stakeholder Matrix

Each group present their results.
Note to Participants: listen attentively to the presentation of others and note down any relevant questions for discussions.

Note key messages and summary from facilitators.

Understanding Information Use Flows

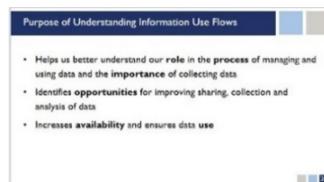


Slide 19 - Understanding Information Use Flows

After identifying which stakeholders, we need to engage and what their information needs are.

To do that, you need to understand information use flows with these

Purpose of Understanding Information Use Flows



Slide 20 - Purpose of Understanding Information Use Flows

The simple process of graphically charting information flow, using such formats as an Information Use Map, helps participants better understand their role in the greater health information system—and the importance of collecting data in the first place.

Charting the flow of data and information will allow us to identify opportunities for improving data collection and analysis, increase availability, and ensure data use. We can graphically represent the flow of data and information at any level.

Information Use in Timor Leste: Levels and Stakeholders

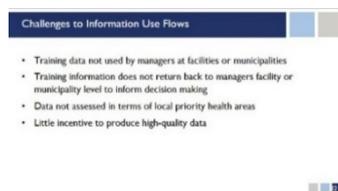


Slide 21 - Information Use in Timor Leste: Levels and Stakeholders

You will be introduced with matrix of information use in Timor-Leste. Feel free to provide comments and/or suggestions if you think the matrix does not represent information flow in Timor-Leste.

Reflect on the question, whether the matrix shown shows the different roles of using HW training information in Timor Leste.

Challenges to Information Use Flows

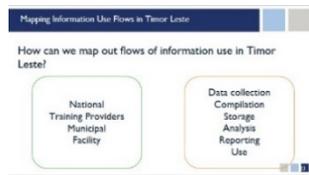


Slide 22 - Challenges to Information Use Flows

You will be shown challenges that we face to information use flows. You may suggest or add others that you think are not listed in the presentation slide.

15 mins

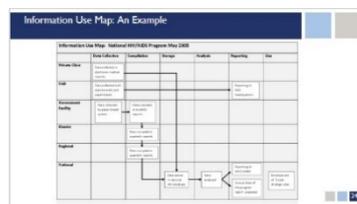
Mapping Information Use Flows in Timor Leste



Slide 23 - *Mapping Information Use Flows in Timor Leste*
Now it is the time for the participants to discuss how information flows through the INS.

Discuss with your peers and present it to the groups.
Feel free to contribute to the question in plenary.

Information Use Map: An Example



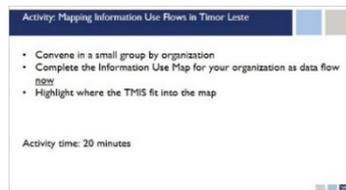
Slide 24 - *Information Use Map: An Example*

Facilitators will show a snapshot of the Information Use Map, an example from other country.
The rows represent the different actors in the health system that collect and use data. It starts with private clinics, NGOs, government facilities, regions, and finally the national level. Data are collected at the first three levels and then passed to the last two levels for use. The columns represent the process that data go through from collection to compilation, storage, analysis, reporting, and use. The map shows where data from the different data collection points pass through the stages of collection to use. When information flow is mapped visually, deficiencies quickly become apparent. The large, empty expanses of the chart tell the story. In this map, it is clear that insights from high-level reports are not shared back with lower levels, and information is being used only to file reports, not to support evidence-based decisions for program improvements.

10 mins



Activity: Mapping Information Use Flows in Timor Leste



Slide 25 - *Activity: Mapping Information Use Flows in Timor Leste*

Participants will be divided into a small group by organization. You will be given hand out activity instruction “Session 3 Activity 2: Mapping Information Use Flows”.

Follow the instructions provided by the facilitators to discuss the Information Use Map for your organization as data flow now

5 mins

Activity: Mapping Information Use Flows in Timor Leste



Slide 26 - *Activity: Mapping Information Use Flows in Timor Leste*

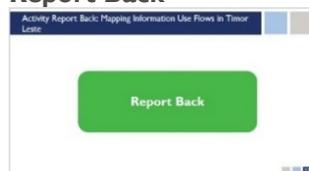
You will be asked to use the format provided to discuss your results

NOTE to participants: During the discussion, facilitator will go around the groups and check if there is anything needs to be clarified. Feel free to ask questions or clarification if needed.

Proactively discuss among group members and complete the matrix.

30 mins

Report Back



Slide 27 – *Report Back*

You will be given an opportunity to present the result of your group’s discussion.

Session 3: Engaging Stakeholders in collecting and sharing of training data		Time
<p>Information Use Map: An Example Continued</p>  <p>Closing: End of Session</p> 	<p>Let's take a moment to discuss how information use flows through in Timor-Leste. You may ask questions after other groups present their results</p> <p><i>Slide 28 - Information Use Map: An Example Continued</i></p> <p>Now that you have had some experience in discussing how information flows in your work settings, let's review the Information Use Map tool—this can be used to map information flow formally and ultimately link available data with decisions that need to be made.</p> <p>Facilitator will provide an example to help you. Then, Facilitator go through the map, notice the link and explain how that works.</p> <p><i>Slide 30 - Closing: End of Session 3</i></p> <p>You have reached the end of session 3</p> <p>Reflect on whether you have achieved the objectives of this session. Feel free to provide feedback to facilitators if you have any.</p> <p>You will be informed the upcoming session, how it is linked to this session.</p> <p>END OF SESSION 3</p>	
COFFEE BREAK		20 Mins

Study Case Phase I

Study Case: Phase I		Time
<p>Preparation</p> <p>Study Cases – Briefing</p>  	<p>Be sure to do the following:</p> <ol style="list-style-type: none"> Be on the venue at least 5 minutes prior Have your notebooks and pens ready Phone is switched off to avoid distractions <p><i>Slide 1 – Study Cases</i></p> <p>Listen attentively to the presentation.</p> <p>Facilitators start off the session by providing brief explanation of the study cases and how it benefits the participants.</p> <p>You may be asked to form 3 groups and be given a study case with guiding questions in three phases, one phase for each day. First phase requires you to identify data needs, challenges and planning to mitigate challenges. Phase 2 you will be asked to review data quality, identify stakeholders, and map information flows based on the data set and stakeholder target groups provided. On the last phase, you are required to present the</p>	5 minutes

Day 2

Opening Session

Time:

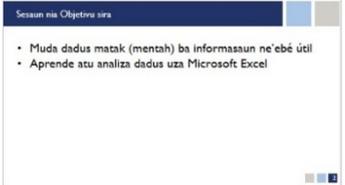
Materials Needed:

- PowerPoint “Day 2_Introduction Slides”

Flow Process:

- Welcome participants
- Review learnings of Day 1
- Review Decision-Making Cycle,
- Overview of the agenda for today

Session 4: Analyze Training Data to Respond to Issues

Session 4: Analyze Training Data to Respond to Issues		Time
<p>Preparation</p>	<p>Ensure that you:</p> <ol style="list-style-type: none"> 1. Be on the venue at least 15 minutes prior 2. Register your attendance at least 10 minutes prior 3. Have your notebooks and pens ready 4. Phone is switched off to avoid distractions 	2 minutes
<p>Review of Day 1</p>	<p>Facilitator welcome participants and start off by checking participants understanding on Day 1 topics. This may be done by randomly asking volunteers to answer questions or express what they remember about yesterday’s topics. Feel free to express your opinion</p>	30 mins
<p>Analyze Training Data to Respond to Issues</p>  <p>Session Objectives</p> 	<p><i>Slide 1 - Analyze Training Data to Respond to Issues</i></p> <p>Continuing on the Decision-making cycle, today we move on to the session 4, Analyze Training Data to Respond to Issues</p> <p><i>Slide 2 - Session Objectives</i></p> <p>Facilitator will briefly explain to the participant the objective of this session. It is to:</p> <ul style="list-style-type: none"> • Turn raw data into useful information • Learn to analyze data using Excel 	40 mins

Decision Making Cycle



Slide 3 - Decision Making Cycle

We are very familiar now with the decision-making cycle. We have already discussed the first three stages. Now we are moving on to the fourth stage that is Analyze Training Data to Respond to Issues

Data Analysis

Analiza Dadus

- Muda **Dadus matak** ba informasaun ne'ebé útil
- Fornese **resposta** ba **kestaun sira** ne'ebé ema husu
- Maske iha dadus cin-oin no ho kualidade diak tebes maibe sei **la fojin buat ida** se ita **la analiza** ho loloos — ou se la analiza kedas

Slide 4 - Data Analysis

Facilitator will explain the reason why we need to do data analysis

- Turns **raw data** into **useful information**
- Provides **answers to questions** being asked
- Even the greatest amount and best quality data **mean nothing** if not properly **analyzed**—or if not analyzed at all



Be sure to understand that often data and information often are used interchangeably, there is a distinction.

Data refers to raw, unprocessed numbers, measurements, or text.

Information refers to data that are processed, organized, structured, or presented in a specific context. The process of transforming data into information is data analysis.

The purpose of data analysis is to answer research questions or questions about a program or service. Data needs to be analyzed in order to be useful.

Data Analysis

Analiza Dadus

- Analiza **la nesasáriamente** katak tenke uza software komputador ruma
- Analiza katak verifika no haree ba dadus relasiona ho **kestaun** ne'ebé prezisa atu hataan ba

Slide 5 - Data Analysis

Data analysis does not necessarily mean using a complicated computer analysis package. It means taking the data that you collect and looking at them in the context of the questions that you need to answer.

For example, if you need to know whether your program is meeting its objectives, or if it's on track – you would look at your program targets and compare them to the actual program performance. This is analysis.

Later, we will take this one step further and talk about interpretation (e.g., through analysis, you find that your program achieved only 10% of its target; now you have to figure out *why*).

Quantitative Data

Dadus Kuantitatif

- Hateten kona-ba "Saida" eh "Hira"
- Dadus Kuantitatifu iha **tipu rua** :
 - **Dadus kategorikal**
Kualker resposta ne'ebé bele hataan ho eskolla multipulu eh loos/tae
 - **Dadus Numerikal**
Ninia resposta iha kuantidade espesifiku hanesan número, idade, data, etc



Slide 6 - Quantitative Data

Quantitative data, often referred to as numerical data, answers the “what” or “how much” about a program or service. There are two types of quantitative data: categorical data and numerical data. Both types of data can be easily counted and measured.

Categorical data are usually generated though multiple-choice questions or other questions with defined answer choices. The responses to these questions can be easily categorized and counted. Numerical data are created by questions that ask for a number response such as a count, age, or date.

Both types of quantitative data can be analyzed using the descriptive analyses we present in the following slides.

Basic Quantitative Analyses

Analiza Kuantitatifu Baziku

Analiza Deskriptiv:

- Ratio
- Proporsaan
- Persentajan
- Rate ka taxa
- Mean
- Median



Slide 7 – Basic Quantitative Analyses

This slide lists the basic statistical terms used in data analysis that we will cover in this session. The basic statistical analyses presented in this presentation are descriptive analyses because they do not infer causality, which we will come back to at the end of the presentation.

Our focus in today’s training is on:

- Ratio
- Proportion
- Percentage
- Rate
- Mean
- Median

Ratio

Ratio

- Komparasaan número rua ne'ebé espresa hanesan:
 - a ba b, a per b, ab
- Uta hodi espresa komparasaan sira hanesan médiku ba paciente eh laua ba kliente sira
- **kalkulasaaun:** a/b
- Exemple: Iha Aileu iha enfermeiru nain 30 mak tur ona formasaan EmOC no iha klinika 10 mak sertifikadu eh aprovaadu atu fornese servisu ida ne'e. Oinsá ho ratio entre enfermeiru formandu ba klinika?

$\frac{30}{10}$ = Ninia ratio 3:1 signifika enfermeiru 3 ba kada klinika.



Slide 8 - Ratio

A ratio is a comparison of two numbers and is expressed as “a to b” or “a per b.” In the health sector, we commonly use ratios to look at the number of clinicians to patients, or beds to clients.

A ratio is a comparison of two numbers. To calculate a ratio, divide the first item you are looking at by the second. So, if you were to say that there are 3 staff per clinic, the ratio is expressed numerically as 3:1. It is not the same as saying 1 to 3 or 1:3. The order of the numbers matters.

Facilitator will provide you with more examples to assist your understanding.

Practice: Calculating Ratios

Pratiza: Kalkula Ratio

Iha Municipiu Dili, iha enfermeiru 100 no klinika 20.

Ratio nurse kompara ho klinika hira?

$\frac{100}{20} = 5$

5:1 katak enfermeiru 5 ba klinika 1



Slide 9 - Practice: Calculating Ratios

Facilitator will show you an exercise and you will have to do it together
 Make sure you follow the steps properly and understand to interpret the results once you found the results.

Proportion

Proporsaan

- Ratio ne'ebé individuu hotu iha numeradór iha mos denominadór.
- Uza hodi kompara partes hosi tomak, hanesan proporsaan hosi parteira sira hotu ne'ebé atende ona formasaun "Partu mos no Seguru".
- Esemplu: se parteira 20 hosi 100 mak simu ona formasaun refresher kona-ba "Partu mos no Seguru" iha tinan rua ikus ne'e, entaun proporsaan parteiras ne'ebé simu ona formasaun hira?

$20/100 = 1/5$ ka 0.2

Slide 10 - Proportion

A proportion is a ratio in which all individuals included in the numerator must also be included in the denominator. We frequently use a proportion to compare part of the whole, such as proportion of all clients who stop taking their drugs.

Facilitator will provide you with examples to assist your understanding.

Practice: Calculating

Pratiza: Kalkula proporsaan

- Esemplu: se karik formasaun ida iha partisipante feto nain 12 no mane nain 8, entaun proporsaan hosi partisipante mane, hira?
- Partisipante mane 8 (numeradór)
- $12+8 = 20$ (denominadór)
- $8/20$

Redús frasaun ne'e ho 4: 2/5 hosi partisipante ne'e mane

Slide 11 - Practice: Calculating proportions

Facilitator will provide more exercise to calculate proportions and you will have to do it together
 Make sure you follow the steps properly and understand to interpret the results once you found the results.
 You will be given the opportunity to ask questions if there are any

Percentage

Perzentajen

- Dalan ida atu espresa proporsaan
- Multiplika ita-boot nia proporsaan ho 100
- Espresa número ida relasiona ho parte tomak / totál
- Bele kompara grupu, fasilidade, no munisipiu diferente ne'ebé iha denominadór diferente

40% hosi partisipante iha Formasaun A mane kompara ho 50% hosi partisipante iha Formasaun B

Session 12 - Percentage

A percentage is a way to express a proportion multiplied by 100. It expresses a number in relation to the whole.

We can use it to compare different groups, facilities, municipalities that may have different denominators

Practice: Calculating a Percentage

Pratiza: Kalkula Perzentajen ida

Iha ita nia ezemplu proporsaan, ita hane ona formasaun ne'ebé iha partisipante feto nain 12 no partisipante mane 8. Ita determiná katak proporsaan partisipante mane mak 2/5.

Hane 8
 $12+8 = 20$ totál partisipantes $2/5$ hosi partisipante ne'e mane
 Otsá ita muda valor ne'e ba perzentajen!

Ita konverte frasaun ne'e ba desimali ($2/5 = 0.40$)
 Depois multiplika ho 100
 $0.40 \times 100 = 40\%$ hosi partisipante ne'e mane

Slide 13 - Practice: Calculating a Percentage

Facilitator will provide more exercise to calculate percentage and you will have to do it together
 Make sure you follow the steps properly and understand to interpret the results once you found the results.
 You will be given the opportunity to ask questions if there are any.

Percentage Practice: Training Participation of Nurses in Dili

Pratiza Perzentajen: Estimativa da Participação de Enfermeiros em Dili

Numero Enfermeiros em Dili segundo o ano de formatura em Dili, Município Dili, 2018

Ano	Enfermeiros	Total
2015	20	100
2016	25	125
2017	30	150
2018	35	175

Perzentajen perzentajen hira hosi enfermeiros em Dili segundo ano formasaun parte mos no tabelu?

Numero total dos funcionários de saúde em Dili segundo o ano de formação? _____

Numero enfermeiros em Dili segundo ano formasaun parte mos no tabelu? _____

Tod' os valores em percentagem? _____

Slide 14 - Percentage Practice: Training Participation of Nurses in Dili

Facilitator will provide more exercise to calculate percentage and you will have to do it together
 Make sure you follow the steps properly and understand to interpret the results once you found the results.

Percentage Practice: Training Participation of Nurses in Dili

Topik	Attendansia	Sendak Attend
Paras Kesehatan Sigur	75	125
EnOC	130	70
SDMG-18	175	25
Intercultural Communication	20	180

Perpantes: enfermeiru ne'ebé sendak atende formasaan EnOC nia persentasején horat?

Númeru cada det. ita tábeu ne'e mai. ita bele ota hodi kálkulu persentasején ta persentején ne'e?

Númeru enfermeiru ne'ebé sendak atende formasaan EnOC =

Total númeru enfermeiru =

Slide 15 - Percentage Practice: Training Participation of Nurses in Dili

More exercises is given to calculate percentage and you will have to do it together. Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there are any.

Percentage Practice: Training Participation of Nurses in Dili

Topik	Attendansia	Sendak Attend
Paras Kesehatan Sigur	75	125
EnOC	130	70
SDMG-18	175	25
Intercultural Communication	20	180

Perpantes: enfermeiru ne'ebé atende ona formasaan intercultural communication nia persentasején horat?

Númeru enfermeiru ne'ebé atende ona formasaan intercultural communication = 20

Total númeru enfermeiru = 200

$0.10 \times 100 = 10\%$

Enfermeiru 10% mak atende ona formasaan intercultural communication

Slide 16 - Percentage Practice: Training Participation of Nurses in Dili

More exercises are given to calculate percentage and you will have to do it together. Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there are any.

Rate

Taxa

- Usa atu espresa frekwénsia hosi eventos espefíku ita períodu tempu ruma
- Taxa fertildade eh taxa mortalidade

Slide 17 - Rate

A rate is used to compare two quantities from the same time period. It is used to express the frequency of an event happening over a certain time period such as maternal mortality rate. The numerator and denominator must be from the same time period.

Rates are often expressed as a ratio with the second number being per 1,000.

Calculating Rates

Kálkulu Taxa

Taxa dalaruma envolve sasukat rua eh valor rua la hanesan, hakerek valor rua ne'e hotu ida hanesan numerador no ida seluk hanesan denominador.

Simplifika taxa ne'e ho dividi ho fatór komun nebe boot liu.

- Numeradór and denominadór tenke mai hosi períodu tempu ne'ebé hanesan
- Dalaruma espresa hanesan ratio ida (kada 1,000)

Slide 18 - Calculating Rates

Rate usually involves two different units of measurement. Write down both measurements, one as numerator and the other as denominator. Simplify the rate by dividing each number by the greatest common factor.

- Numerator and denominator must be from same time period
- Often expressed as a ratio (per 1,000)

Calculating Training Rate

kálkulu Taxa partipasaun formasaan

Hosi funsaonáriu foin rekrutadu nain 3,000 ita tinan 2019, 125 mak atende ona formasaan indonés hosi ENOC.

kálkulasaaun: Númeru atende = total númeru rekrutadu ita períodu tempu hanesan x 1,000

$125/3,000 = .041$

$0.041 \times 1,000 = 41$

41 mak atende formasaan ita kada 1,000 hosi funsaonáriu foin ne'ebé rekrutadu

Slide 19 - Calculating Training Rate

More exercises are given to calculate Rate using training rate as sample. Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there is any.

Slide 20 - Central tendency

Other numerical presentation is numerical tendency.

Central tendency

Tendensia Sentral

Kalkula fatin iha klaran ka sentru hosi distribuissan dadus:

- Mean
- Median

Mean

Mean

- Média hosi ita nia dataset
- Valór média ne'e hetan hosi divide total soma kuantidade iha set nia laran ho número kuantidade iha set
- Esemplu: $(22+18+30+19+37+33) \div 6 = 26.5$
- Mean ne'e sensitivu ho valór balu ne'ebé boot liu
- Esemplu: $(22+18+30+19+37+229) \div 6 = 57.6$



Calculating the Mean

Kalkula Mean

Valór média hosi participante ne'ebé atende ona formasan ida iha INS kada fulan?

Saida mak ita tenke kalkula uluk?

– January: 30
– February: 45
– March: 38
– April: 41
– May: 37
– June: 40

$(30+45+38+41+37+40) \div 6 = 231$

Depois saida tan?

$231 \div 6 = 38.5$

Mean ho média = 38.5

Maisunmus funtioneriu saida 38.5 vokal atende ona formasan iha INS kada fulan



Median

Median

- Valór klaran hosi distribuissan, wanhira ita akista número iha orden
- Metade hosi número ne'e iha média nia leten no metade iha média nia okos
- Ho número impar, median = número ida iha klaran

Esemplu: Resposta Pasa Testes partikipante mak 5 mak: 18, 28, 33, 35, 39. Mediu hosi Resposta mak mak

$= (28+33) \div 2 = 30.5$

Median la sensitivu ba valór extrema lancesan iha mean

It is the most commonly investigated characteristic of a collection of data (or dataset) is its center, or the point around which the observations tend to cluster. Measures of central tendency measure the middle or center of a distribution of data. We will discuss the mean and the median.

Slide 21 – Mean

The mean is the most frequently used measure to look at the central values of a dataset. It is often referred to as the average.

The mean takes into consideration the magnitude of every value, which makes it sensitive to extreme values. If there are data in the dataset with extreme values – extremely low or high compared to most other values in the dataset – the mean may not be the most accurate method to use in assessing the point around which the observations tend to cluster.

Use the mean when the data are normally distributed (symmetric).

AN example will be given to calculate mean

Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there is any.

Slide 22 - Calculating the Mean

More exercises are given to calculate means and you will have to do it together

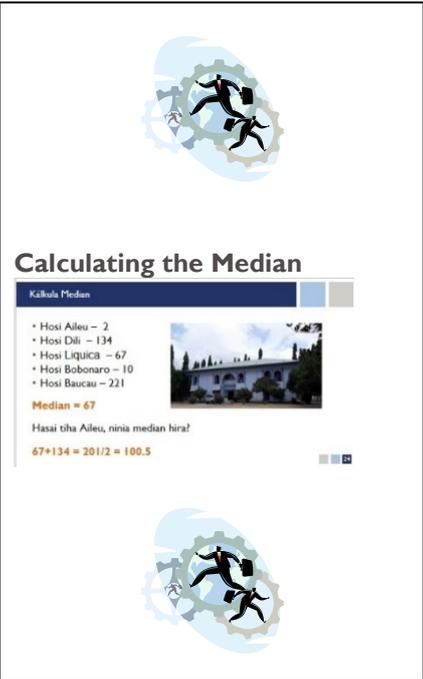
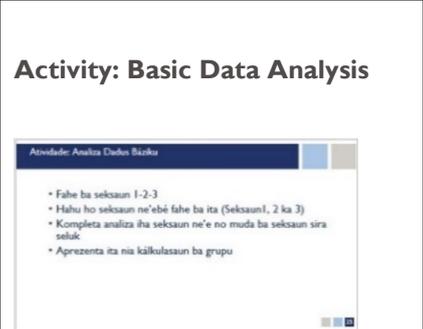
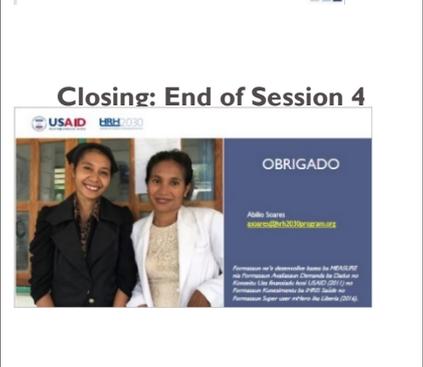
Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there is any.

Slide 23 – Median

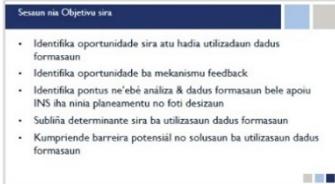
The median is another measurement of central tendency, but it is not as sensitive to extreme values as the mean because it takes into consideration the ordering and relative magnitude of the values. We therefore use the median when data are not symmetric or skewed.

If a list of values is ranked from smallest to largest, then half of the values are greater than or equal to the median and the other half are less than or equal to it. To calculate a median, place the numbers in order from smallest to largest.

When there is an odd number of values, the median is the middle value.

Session 4: Analyze Training Data to Respond to Issues		Time
 <p>Calculating the Median</p> <p>Kalkula Median</p> <ul style="list-style-type: none"> Hosi Aileu - 2 Hosi Dali - 134 Hosi LIQUICA - 67 Hosi Bobonaro - 10 Hosi Baucau - 221 <p>Median = 67</p> <p>Hasai taha Aileu, ninia median hira?</p> <p>$67 + 134 = 201 / 2 = 100.5$</p>	<p>An example will be provided to you by facilitators. Make sure ask questions or seek clarification if you feel that you have not understood well.</p> <p><i>Slide 24 - Calculating the Median</i></p> <p>More exercises is given to calculate median and you will have to do it together Make sure you follow the steps properly and understand to interpret the results once you found the results. You will be given the opportunity to ask questions if there is any.</p> <p>Be sure to work on the exercises</p>	
COFFEE BREAK		20 min
<p>Activity: Basic Data Analysis</p>  <p>Activity Report Back: Basic Data Analysis</p>  <p>Closing: End of Session 4</p> 	<p><i>Slide 25 - Activity: Basic Data Analysis</i></p> <p>Facilitators break the participants into group of fives depending on the number of participants.</p> <p>Then, for each group, facilitator hands out: “Session 4, Activity I: Basic Data Analysis.</p> <p>You will have to work on the exercises provided by the facilitators. Be sure you understand the concepts and how it is done.</p> <p><i>Slide 26 - Activity Report Back: Basic Data Analysis</i></p> <p>The reporter from each group are requested to present the result of their group discussion.</p> <p>Notice any mistake in the calculations presented by the groups. If you have any input of analysis that you would like to see from TMIS, feel free to raise this to the facilitators.</p> <p><i>Slide 28 - Closing: End of Session 4</i></p> <p>You have reached the end of session 4 Reflect on whether you have achieved the objectives of this session. Feel free to provide feedback to facilitators if you have any.</p> <p>You will be informed the upcoming session, how it is linked to this session.</p>	<p>20 mins</p> <p>15 mins</p> <p>5 mins</p>
COFFEE BREAK		1hr 30 mins

Session 5: Use of Data to Make Decisions

Session 5: Use of Data to Make Decisions	Time	
<p>Preparation</p> <p>Use of Training Data to Make Decisions</p>  <p>Session Objectives</p>  <p>Decision Making Cycle</p>  <p>Reminder on Key Concepts on</p> 	<p>Ensure that you:</p> <ol style="list-style-type: none"> 1. Be on the venue at least 15 minutes prior 2. Register your attendance at least 10 minutes prior 3. Have your notebooks and pens ready 4. Phone is switched off to avoid distractions <p><i>Slide 1 - Use of Training Data to Make Decisions</i></p> <p>We have just learnt how to do basic analysis of the data, making data more meaningful. Now it is time to use that data to make decisions. However, in using the data there are few determinants and barriers for us to consider.</p> <p><i>Slide 2 - Session Objectives</i></p> <p>The objectives of this sessions are to:</p> <ul style="list-style-type: none"> • Identify opportunities for improving use of training • Identify opportunities for feedback mechanisms • Identify points where analysis & training data could support INS planning and decision making • Highlight the determinants of use training data • Understand potential barriers and solutions to use of training data <p><i>Slide 3- Decision Making Cycle</i></p> <p>By this time, we are very familiar with the decision-making cycle. We have discussed the previous 4 phases. Now we move on to phase 5 that is Use of Data to Make Decisions.</p> <p>NOTE: this session is divided to two parts: one is reminder on the concept of data use and the other part is about determinants and barriers to data use.</p> <p><i>Slide 4 - Reminder on Key Concepts on Use of Training Data</i></p> <p>This is just a reminder from previous presentation.</p> <p>Ask any question to facilitator if you have any</p>	<p>5 minutes</p> <p>35 mins</p>

Use of Training Data

Slide 5 – Use of Training Data

There are two main components behind data utilization – data use and data demand.

Use refers to the decision-making process

We say the decision-maker **uses training** data if he/she:

- Is explicitly aware of the decision to be made
- Considers at least two possible courses of action

Considers relevant data in making the decision, even if the data is outweighed by other factors

We can use training data to...

Slide 6 - We can use training data to...

You may be asked to suggest responses on what do we use the training data for. Feel free to provide your answers.

Then compare to what is present's answers.

Role of TMIS in Data Use

Slide 7 - Role of TMIS in Data Use

Facilitator will read out the role of the TMIS on the slide.

NOTE: Not only that TMIS will automatize the process, but it ensures the data is available and up to date for making data-driven decisions.

Working Toward a Culture of Data Use

Slide 8 - Working Toward a Culture of Data Use

Successful feedback contributes to what is known as information culture. When information becomes available, it is more likely to be used. When information is shared and used, it:

- Becomes an integral part of decision-making processes, including planning, problem solving, choosing alternatives, and giving or receiving feedback.
- Empowers people to ask questions, seek improvement, learn, and improve the quality of programs.

Determinants and Barriers to Use of Training Data

Slide 9 - Determinants and Barriers to Use of Training Data

In Session 2, we are going to discuss the determinants of data use and the potential barriers that affect them.

Determinants of Use



Why training data are often underutilized

Dados formasaan sira daluruma ladun uza tamba...

Limitasaan Organizasionál

- Estruktural – estrada, telekomunikasaan, internet koneksaan internet, infra-estruturas sira seluk
- Organizasionál – falta klareza hosi papé, apotu, fluka informasaan ne'ebé ladun ulitán; falta koordinasaan entre forneseidór formasaan ho INS, madansa funisionáriu /lideransa
- Ideolojia polítika, opiniaan públiku, relasaan poder

Barreira sáidu tan iha Timor-Leste? Saida mak sei limita TMIS?



Why Training data are often underutilized – Technical Constraint

Dados formasaan sira daluruma ladun uza tamba...

Limitasaan Tekniku

- Abilidad tékniku
- Disponibilidade Sistema informasaan no teknolojia (ex. komputadór)
- Dezaju Sistema informasaan
- Definasan Indikadór sira
- Falta protokolu garante kualidade dados no dados na arbitrariness

Barreira sáidu tan iha Timor-Leste? Saida mak sei limita TMIS?



Why Training data are often underutilized – Behavioral Constraint

Dados formasaan sira daluruma ladun uza tamba...

Limitasaan Atitude ka Behavioral

- Attitude hosi Ema ne'ebé Foti desizaan no funisionáriu relevantes
- Funisionáriu nis motivasaan
- Abilidad no nivel kumpriensaan oinsá atu uza dados
- Falta "kultura uza dados"
- Prioridades ne'ebé la hanesan

Barreira sáidu tan iha Timor-Leste? Saida mak sei limita TMIS?

Slide 10 - Determinants of Use

As we are all well aware, the data demand and use cycle does not always function as outlined in the previous slide. There are many factors that affect data use.

NOTE: facilitators will walk you through each of the determinants. —Organizational, Technical, and Behavioral.

Slide 11 - Why Training data are often underutilized – Organizational Constraint

This slide discusses the first constraint (Organizational) why training data are often underutilized.

Organizational constraints include:

- Structural – roads, telecommunications, internet connectivity, other infrastructure
- Organizational – lack of clarity of roles, support, ineffective flow of information, lack of coordination between training providers and INS, staff/leadership changes
- Political ideology, public opinion, power relationships

After facilitator explain this part, you may suggest any other organizational constraints for Timor-Leste that you know of.

Slide 12 - Why Training data are often underutilized – Technical Constraint

The second constraint is technical. This includes:

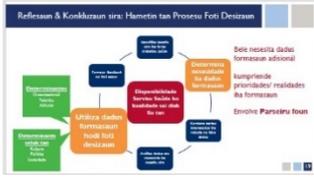
- Technical skills
- Availability of information systems and technology (i.e. computers)
- Design of information system
- Definition of indicators
- Lack of data quality assurance protocols and arbitrariness of data

After facilitator explain this part, you may suggest any other technical constraints for Timor-Leste that you know of

Slide 13 - Why Training data are often underutilized – Behavioral Constraint

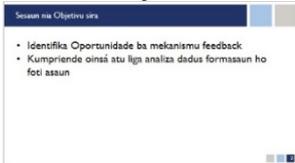
Apart from organizational and technical, another constraint is Behavioral. They include

- Decision-maker and other staff personal attitudes
- Staff motivation
- Skills and understanding on how to use data
- Lack of “data culture”
- Competing priorities

Session 5: Use of Data to Make Decisions		Time
<p>Reflections & Conclusions: Strengthening the Decision-making Process</p> 	<p>Slide 19 - Reflections & Conclusions: Strengthening the Decision-making Process</p> <p>Facilitator will use some guiding questions to reflect on the materials learned today.</p>	4 mins
<p>Closing: End of Session 5</p> 	<p>Slide 21 - Closing: End of Session 5</p> <p>You have reached the end of session 5 Reflect on whether you have achieved the objectives of this session. Feel free to provide feedback to facilitators if you have any.</p> <p>You will be informed the upcoming session, how it is linked to this session.</p> <p>END OF SESSION 5</p>	3 mins

ICE-BREAKER

Session 6: Take action and continue demand for data, Part I: Provide feedback and take action

Session 6: Take action and continue demand for data, Part I: Provide feedback and take action		Time
<p>Preparation</p>	<p>Ensure that you have your notebook ready and your phone is switched off</p>	2 mins
<p>Provide feedback and take action</p> 	<p>Slide 1 - Provide feedback and take action</p> <p>We have reached the last stage of the decision-making cycle, that is take action and continue demand for data. Our demand for data does not stop after we make decision. Demand for data should be a continuous process to strengthen, modify changes, re-align priorities and programs.</p>	23 mins
<p>Session Objectives</p> 	<p>Slide 2 - Session Objectives</p> <p>Sit and relax as facilitator spells out the objectives of the session:</p> <ul style="list-style-type: none"> Identify opportunities for feedback mechanisms Understand how to link analysis of training data with taking action 	

**Session 6: Take action and continue demand for data,
Part I: Provide feedback and take action**

Time

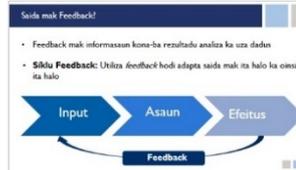
Decision Making Cycle



Creating a Feedback Loop



What is Feedback?



Importance of Feedback

Importansia hodi Feedback

- Informasian taenke partilla:**
 - Tuun sanpu no regularita laras, entre, ba letes, ba krak orizontal ba nivel hodi fit
 - Sistema saude ma laras
- Loke dalan entre reolladór dadus no utilitadór dadus iha nivel hodi iha Sistema Saude**

Importance of Feedback

Importansia hodi Feedback

- Lori ita ba apresiasun diak liu hodi dadus formasaan:**
 - Hasik ten kualidade dadus
 - Influensia koleksaun dadus aporopriada
- Elementu Importante hodi jestaun no supervizaun:**
 - Kira oportunidade nin monitoraun hodi servisu programa
 - Demonstra katali dadus nin importante tamba ia hatene eme saza duri ita hodi desizaun

Slide 3 - Decision Making Cycle

We are on the last step of the decision-making cycle that is provide feedback and take action

This session is divided to two parts: creating a Feedback Loop, and Linking Training Data to Action

Slide 4 - Creating a Feedback Loop

Say:

In this final session, we are going to discuss how to link the data we have with our programmatic questions and the decisions we need to make. But first let's discuss feedback loop with partners and stakeholders.

Slide 5 - What is Feedback?

As we know, data collection requires the efforts of many individuals within an organization, several organizations and facilities, different levels of government, and community members. The resulting information should be shared just as widely. Once data are analyzed, however, the information often is not made available or accessible to stakeholders who need it for decision making. Feedback ensures that those who collected the data benefit from the collection as much as those requesting the data. Also, information needs to be shared regularly and in a timely manner so that a 'culture of information use' is supported.

Slide 6 - Importance of Feedback

Facilitators will explain the importance of feedback

- Information needs to be shared:
 - At timely and regular intervals
 - Within, between, up, down and across all levels of the health system
- Paves a path between data collectors and users at all levels of the health system

Slide 7 – Importance of Feedback

Having a proper feedback mechanism also

- Leads to greater appreciation of training data:**
 - Improved data quality
 - Influences collection of appropriate data
- Important element of management and supervision:**
 - Creates opportunity to monitor & improve program services
 - Demonstrates that data is important because it is being used in decision making

**Session 6: Take action and continue demand for data,
Part I: Provide feedback and take action**

Time

Feedback Loop in Timor Leste

Slide 8 - Feedback Loop in Timor Leste

Facilitator will explain how the data flows from facility level to municipality. From municipality the data is compiled and sent to National level.

Feedback on the other hand happen within, between, up, down and across all levels of the health system

Variety of Feedback Formats

Slide 9 - Variety of Feedback Formats

Facilitator will explain different means and formats in which one can present feedback. Feedback can be presented in narrative form, in-person discussion, presentations or through supervision visits,

If you have any other means that you know of, feel free to share with the rest of the group.

Examples of Utilizing a Feedback Loop

Slide 10 - Examples of Utilizing a Feedback Loop

Facilitator will show an example for feedback loop. You may be asked to provide examples of feedback you either have given or received and share your experience with the rest of the group.

Potential barriers to providing feedback

Slide 11 - Potential barriers to providing feedback

While sharing information and providing feedback is critical to a provider's job, there are barriers that may inhibit the ability to do so. Facilitator will walk you through each of these potential barriers.

Provide your comments if you have other barriers that you know of but are not mentioned by the facilitator

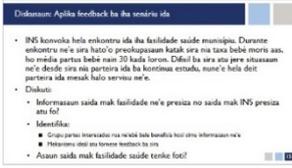
When developing a feedback mechanism, consider...

Slide 12 - When developing a feedback mechanism, consider...

This part will help you to understand factors that need to be considered when developing a feedback mechanism. These could be:

- The data being shared. What is the best way to summarize and present them?
- Consider who – or which stakeholders – will benefit from the information being shared.
- What is the best format for your information?
- Consider the forum in which the feedback will be presented.
- How often will the feedback be provided?



Session 6: Take action and continue demand for data, Part I: Provide feedback and take action		Time
<p>Use of feedback</p>  <p>Discussion: Provide an example of feedback loop following this flow</p>  <p>Discussion: Applying feedback to a scenario</p>  <p>END OF SESSION 6 PART I</p>	<ul style="list-style-type: none"> Consider how the information will move to the next level. Last, document the process for implementing and maintaining the feedback mechanism so that it will be standardized and shared with others. <p><i>Slide 13 - Use of feedback</i></p> <p>Once feedback is provided, it should be used to take action:</p> <ul style="list-style-type: none"> To improve the quality of a training To improve the selection of health workers for a training To inform the Municipal Health Office's training request To improve follow up after training by supervisors <p><i>Slide 14 - Discussion: Provide an example of feedback loop following this flow</i></p> <p>You will be asked to provide an example of feedback loop following the flow on the slide.</p> <p><i>Slide 15 - Discussion: Applying feedback to a scenario</i></p> <p>Facilitator will lead a discussion using guiding questions on the slide. Feel free to contribute to the questions.</p>	<p>15 mins</p>
<p>COFFEE BREAK</p>		<p>20 mins</p>

Study Case Phase 2

Study Case: Phase 2		Time
<p>Preparation</p>	<p>You will have to continue discussion on the study case from previous day, so make sure you have:</p> <ol style="list-style-type: none"> Case Study instruction ready Template to fill the answer in a laptop Laptop to write your answer and to copy in historical data from facilitator for you to analyze 	<p>2 minutes</p>

Study Case: Phase 2

Time

Study Cases – Briefing



Case Study Day 2 Instructions



Recap – Closing

Slide 1 – Study Cases

Facilitator will give a short introduction and explain how to continue your discussion on the case study. Be sure to understand the instructions before you continue.

NOTE: your discussion results have to be presented on the third day.

Be reminded to bring your Day 1 handouts:

- Case Study
- Case Study Instructions
- Case Study Data Set

Slide 5 - Case Study Day 2 Instructions

You will have to sit according to your respective group

Facilitator will provide you more handouts on Basic Data Analysis Guide to assist with data analysis

Building on Day 1, the participants are to conduct the following using the same case study conduct the following:

- a. Using the guide that will be provided, conduct basic analysis using your data set.
- b. Based on the stakeholders identified in Day 1, identify the potential barriers to use of data that could affect your ability to achieve the mission. Complete the table.
- c. Recommend feedback loops in relation to your mission.

Recap - Closing

Once the discussion is completed and time is up, facilitator ask participant to cease the group discussion and quickly do a recap for the day.

There is no presentation of the result, as they will be presented on the following day.

END OF STUDY CASE PHASE 2

3 mins

1hr 10mins

2 mins

END OF DAY 2

Day 3

Opening Session

Time:

Materials Needed:

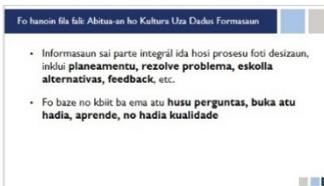
- Notebooks and pen

Flow Process:

- Welcome participants

- Review learnings of Day 2
- Review Decision-Making Cycle, reminding participants that on Day 1 and 2, we have completed step 1 – 5 and step 6 part 1. Today we will discuss step 6 part 2. The remaining time for today is for discussion and group presentations
- Overview of the agenda for today

Session 6: Take action and continue demand for data, Part 2: Linking Training Data to Action

Session 4: Take action and continue demand for data, Part 2: Linking Training Data to Action		Time
<p>Preparation</p>	<p>Ensure that you have the following:</p> <ol style="list-style-type: none"> 1. Be on the venue at least 15 minutes prior 2. Register your attendance at least 10 minutes prior 3. Have your notebooks and pens ready 4. Switch phone off to avoid distractions 	5 minutes
<p>Review Day 2</p>	<p>Facilitator welcome participants and start off by checking participants understanding on Day 2 topics. This may be done by randomly asking volunteers to answer questions or express what they remember about yesterday's topics.</p>	30 mins
<p>Part II: Linking Training Data to Action</p>   <p>Reminder: Working Toward a Culture of Use of Training</p>  <p>Building Use of Training Data into Your Work</p> 	<p><i>Slide 16 – Part II: Linking Training Data to Action (Continue from yesterday's presentation)</i></p> <p>Continuing the Decision-making cycle, today we move on to the session 4, Analyze Training Data to Respond to Issues</p> <p>In this final session, we are going to discuss how to link the data we have with our programmatic questions and the decisions we need to make.</p> <p><i>Slide 17 - Reminder: Working Toward a Culture of Use of Training</i></p> <p>Successful feedback contributes to what is known as the information culture. When information becomes available, it is more likely to be used. When information is shared and used, it:</p> <ul style="list-style-type: none"> · Becomes an integral part of decision-making processes, including planning, problem solving, choosing alternatives, and giving or receiving feedback. · Empowers people to ask questions, seek improvement, learn, and improve the quality of programs. <p><i>Slide 18 - Building Use of Training Data into Your Work</i></p> <p>NOTE to Participants:</p> <p>In the previous sessions, we discussed many of the concepts and tools that can facilitate data use in your setting. Now let's discuss the practical aspect of data use. How can you manage to build data use into your work? How do you ensure that data</p>	55 mins

Omsá hametin ábitu uza dados formasaun iha ita nia Servisu

- PLANU PLANU PLANU!
- Revê regularmente ita nia dados formasaun – marka oráriu
- Refleta iha ita nia atividade no papél lor-loron, identifika dados formasaun sei uza iha ne'ebé no ba saís
- Envolve iha dialogo ho partes interesadus atu kumprende ho dialo
 - Desizaun ne'ebé sira foti
 - Informasaun ne'ebé sira preiza
 - Dalan diak liu atu apresentá informasaun hirak ne'e

Framework for Linking Data with Action

Kadru atu Liga Dedus ho Asaan

- Kria **planu ida ho prazu tempu** ba foti desizaun ne'ebé bazeia ba dados eh informasaun
- Enkoraja **utilizasaun ne'ebé boot liu** dados formasaun ezistente
- **Monitória** utilizasaun dados formasaun iha foti desizaun



Framework for Linking Data with Action

Kriasan Programa (Publika)	Tomasidr Desizaun (DM), partel interesada (stakeOS)	Indikasi r/Dados	Fontel Dados	Prazu Tempu (Análiza) (Desizaun)	Kadri Komunika san	Desizaun Asaan

Framework for Linking Data with Action

Kriasan Programa (Publika)	Tomasidr Desizaun (DM), partel interesada (stakeOS)	Indikasi r/Dados	Fontel Dados	Prazu Tempu (Análiza) (Desizaun)	Kadri Komunika san	Desizaun Asaan
Informasaun ho partel interesada iha ita nia Servisu Informasaun ho ita nia Servisu Informasaun ho ita nia Servisu COVID-19 Omsá hametin ábitu uza dados formasaun iha ita nia Servisu						

What is the policy question?

use becomes part and parcel of your day-to-day duties? The answer is to PLAN for it. PLAN PLAN PLAN!

Slide 19 - Framework for Linking Data with Action

Facilitator will introduce participants to a Framework that help Linking Data with Action. It is a management tool—a combination of template and process—that serves three key purposes:

1. **Creates a time-bound plan for data-informed decision making** by setting dates by which data should be reviewed in relation to key programmatic questions and upcoming decisions.
2. **Encourages greater use of existing information** by identifying existing data resources and linking that information with the programmatic questions that need answers to support evidence-based decision making.

Last, it provides you with a data-informed decision-making 'record' so that you can:

- 3) **Monitor the use of information in decision making**—Provides a timeline for conducting analyses and making decisions.

Slide 20 - Framework for Linking Data with Action

Facilitators show the framework and work through it.

Make sure you understand the concept because you will have to practice using the Framework and eventually use it in your daily work.

Slide 21 - Framework for Linking Data with Action

Facilitator will start off with the first two columns on the left hand – the Decision/Action and the Program/Policy columns.

Examples will be provided by facilitators to help your understanding

Slide 22 - What is the policy question?

This slide will help participants to better understand what the policy questions is. It could be:

- Strategic policy question to respond to long term issues
- Medium term planning
- Immediate needs
- Ad hoc based on emergencies
- Program planning

Session 4: Take action and continue demand for data, Part 2: Linking Training Data to Action

Time

- Kestuan Politika eh Estratejiku atu responde ba kestaun longu prazu sira
- Planesmentu termu médiu
- Nesesidade lmediatu
- Ad hoc bases ba emerjensia
- Planesmentu Programa

Framework for Linking Data with Action

Slide 23 - Framework for Linking Data with Action

Be sure to understand the concept while the facilitator goes through each of these columns.

Ask any questions or seek clarification if you have any

Slide 24 - Framework for Linking Data with Action

This slide brings participants to the next two columns, Indicator/Data and Data Source. In these two columns, you link your decision with data. So, looking back at our example, participants will help you understand how to fill these columns. Guiding questions will be asked.

Slide 25 - Framework for Linking Data with Action

Next, you fill in the timeline column, which is where you indicate when you will complete your analysis and communicate it to the appropriate stakeholders. In this column, you also can indicate when you need to make your decision and take the action.

Be sure to understand the concept while the facilitator goes through the column with examples.

Ask any questions or seek clarification if you have any

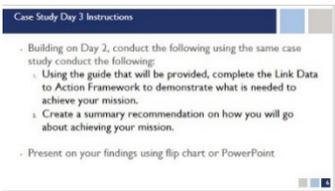
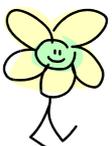
Slide 26 - Framework for Linking Data with Action

In this column, you indicate how you will inform the decision maker and other stakeholders of the data-informed decision. When completing this column, think back to our session on feedback. What mechanism or format will you use to inform others?

Be sure to understand the concept while the facilitator goes through each of these columns. Ask any questions or seek clarification if you have any

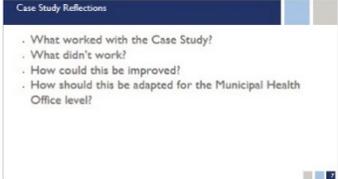
Slide 27 - Framework for Linking Data with Action

Last, you will fill in the decision column. In our example, the decision would be training implemented by the INS
It is important to note that this tool can be applied in different ways, depending on the needs of the user. If the decision is known and clear, the users will start with column I first and work their way across the matrix to the right.

Study Case: Phase 2		Time
  <p>Case Study Day 3 Instructions</p>  	<p>Be reminded to refer to their Day 1 handouts: Case Study and Case Study Instructions</p> <p><i>Slide 6 - Case Study Day 2 Instructions</i></p> <p>Participants sit according to their respective group</p> <p>Facilitator will distribute handout “Case Study Handout: Linking Data to Action Framework” to assist them in filling out the framework.</p> <p>Building on Day 1 and day 2, the participants are to conduct the following using the same case study:</p> <ul style="list-style-type: none"> • Review your Case Study and the past two days of work. • Using what you have completed the last two days complete the table: <ul style="list-style-type: none"> ○ Identify the program or policy question(s) based on your mission ○ Document the decision makers and other stakeholders needed to address these questions and achieve the mission ○ Identify the indicators and data needs, as well as the data sources needed ○ Define the timelines for analysis and decisions to take action to achieve the mission ○ Determine how the analysis and decisions will be communicated ○ Describe the final decisions or actions that are needed to take place to achieve your mission. <p>Once completed, they either transfer the completed framework to a flip chat or the PowerPoint template provided.</p> <p>Participants will have to prepare to finalize the case study ready to present after lunch.</p>	
LUNCH BREAK		1hr 30 mins

Case Study Presentations

Case Studies Presentation		Time
Preparation	<p>Ensure that you have the following:</p> <ol style="list-style-type: none"> 1. Data projector 2. Data screen 	5 minutes
Presentations	<i>Presentation from the first two groups</i>	2hr 40 mins

Case Studies Presentation		Time
 <p>Case Study Reflections</p>  	<p>Using the template “Case Study_Slide Template for Participant Use” provided by the Facilitator, participants take turn to present their answers.</p> <p>Each group should have at least 1 hour in total for presenting their work.</p> <p>Encourage discussion and reflection on how to apply this in the future.</p> <p style="text-align: center;">**Coffee Break within the presentations**</p> <p><i>Slide 7 Case Study Reflections</i></p> <p>Once complete, facilitator will lead the case study reflections by asking few guiding questions.</p> <p>Feel free to suggest any feedback that will help improving the case studies for the next training.</p> <p style="text-align: center;">END OF CASE STUDY PRESENTATION</p>	<p>20 mins</p> <p>30 mins</p>

Training Evaluation

Training Evaluation		Time
<p>Preparation</p> 	<p>Ensure that you have the following:</p> <ol style="list-style-type: none"> I. Pens <p><i>Process Flow:</i> Facilitator hands out training evaluation form. You will be provided some time to complete the form.</p> <p>Be sure not to put your name on the form</p> <p>Once completed, place your evaluation form in the box or folder provided by the facilitator.</p> <p>Once everyone submits, the facilitator collects the completed form.</p> <p style="text-align: center;">END OF DAY 3</p>	<p>30 minutes</p>

Utilizing Health Workforce Training Data for Decision Making

Day 1		
Time	Topic	Methodology
8:30-9:00	Welcome and Opening Remarks <ul style="list-style-type: none"> INS Executive Director USAID Mission Director 	Speakers
9:00-9:15	Housekeeping and Expectations	Speakers
9:15-10:00	Session 1: Health Workforce Challenges and Use of Training Data to Make Decisions <ul style="list-style-type: none"> Understanding health workforce challenges Use of training data to make decisions 	Presentation
10:00-10:15	Coffee Break	
10:15-11:15	Session 2: Determining Training Data Needs <ul style="list-style-type: none"> Health Workforce Training Data Data quality assessment and management 	Presentation
11:15-12:00	Activity: Data Quality Review	Activity, Group work
12:00-1:30	Lunch	
1:30-2:00	Session 3: Engaging stakeholders in collecting and sharing of training data <ul style="list-style-type: none"> Identifying Stakeholders 	Presentation
2:00-2:30	Activity: Stakeholder Identification and Analysis Matrix	Activity, Group work
2:30-3:00	Session 3 continued: Engaging stakeholders in the collection and sharing of training data <ul style="list-style-type: none"> Understanding information use flows 	Presentation
3:00-3:30	Activity: Mapping Information Use Flows	Activity, Group work
3:30-3:50	Coffee Break	
3:50-4:45	Case Study Phase I <ul style="list-style-type: none"> Assignment of groups and presentation of the cases Group work to identify of health workforce challenges, data needs, potential data quality issues, stakeholders and information use flows 	Case Study

4:45-5:00	Recap/Closing	Group Discussion
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Day 2		
Time	Topic	Methodology
8:30-9:00	Opening and Review of Day 1	Speakers
9:00-9:45	Session 4: Analyze Training Data to Respond to Challenges	
	<ul style="list-style-type: none"> Understanding basic data analysis and calculations 	Presentation
9:45-10:05	Coffee Break	
10:05-10:50	Activity: Basic Data Analysis Worksheet	Activity, Group work
10:50-11:30	Session 5: Use of Training Data to Make Decisions	
	<ul style="list-style-type: none"> Reminder on Key Concepts on Use of Training Data 	Presentation
	<ul style="list-style-type: none"> Determinants and Barriers to Use of Training Data 	
11:30-12:00	Activity: Action Plan for Addressing Barriers to Use of Training Data	Activity, Group work
12:00-1:30	Lunch	
1:30-2:30	Activity continued: Identifying and Overcoming Barriers to Use of Training Data	Activity, Group work
2:30-3:10	Session 6: Provide feedback and take action	
	<ul style="list-style-type: none"> Creating a Feedback Loop 	Presentation
3:10-3:30	Coffee Break	
3:30-4:45	Case Study Phase 2:	Case Study
	<ul style="list-style-type: none"> Provide data set and stakeholder target group to accompany the cases Group work to continue Day 1 assignment and conduct basic analysis, identify barriers to data use, and identify feedback loops 	
4:45-5:00	Recap/Closing	Speakers

Day 3		
Time	Topic	Methodology
8:30-9:00	Opening and Review of Day 2	Speakers
9:00-10:00	Session 6: Explaining Analysis and Taking Action	
	<ul style="list-style-type: none"> Linking data to action 	Presentation
10:00-10:15	Coffee Break	
10:15-12:00	Case Study Phase 3: <ul style="list-style-type: none"> Group work to continue Day 1 and Day 2 and apply linking data to action framework to case study Finalizing presentations 	Case Study
12:00-1:30	Lunch	
1:30-3:00	Case Study Presentations	Presentations by participants
3:00-3:20	Coffee Break	
3:20-4:00	Case Study Presentations Continued	Presentations by participants
4:00-4:30	Discussion on adapting training for MHO	Speakers
4:30-5:00	Evaluation of Training	Evaluation

Day 4		
Time	Topic	Methodology
8:30-9:00	Opening and Review of Day 3	Speakers
9:00-9:30	Training Management Information System (TMIS) Demo	Demo of TMIS
9:30-10:30	Review of TMIS Forms and Fields	Demo of TMIS
10:30-10:45	Coffee Break	
10:45-11:45	Discussion: Enhancing the functionality and sustainability of TMIS <ul style="list-style-type: none"> Report and analysis need from TMIS to promote further development of the system TMIS sustainability 	Guided Discussion
11:45-12:00	Review, Wrap Up & Next Steps	Guided Discussion
12:00	Lunch & Adjourn Training	

Annex II: Terms of Reference for Training

Utilizing Health Workforce Training Data for Decision Making

Background

The Government of Timor-Leste (GoTL) has requested USAID's technical assistance to help address the inequities in the health system and sustain a fit-for-purpose, fit-to-practice health workforce to effectively respond to current and emerging health issues and improve the Timorese population's health. Human resources for health (HRH) challenges include insufficient quantity, skill mix, and distribution of qualified health workers—which results in inequitable access to quality services— as well as limited financial support to sustain HRH, and low performance and motivation. Additional challenges include: human resources (HR) planning, management and administration capacity (including clarity on job descriptions); variations in clinical care practices and knowledge among health care workers trained in different countries under different systems; quality of pre-service and in-service training; language barriers between health care workers, and between health care workers and patients; and poor working conditions, including infrastructure and support. The underlying factors contributing to these HRH challenges are the limited completeness and quality of HRH training data, as well as the limited capacity of mid-level managers to use HRH training and other health systems data for evidence-informed decision-making. To address the issues noted above, USAID's Human Resources for Health in 2030 (HRH2030) Program will work with INS to establish and implement a more dynamic, interoperable Training Management Information System (TMIS) and improve the capacity of INS team members on use of HRH training data for decision-making.

In support of this capacity building, HRH2030 will conduct a four-day training on utilization of health workforce training data for decision making training of trainers for INS managers. The training will use a problem-based, hands-on approach to train the INS on how to identify health workforce challenges and subsequently training needs to respond to these challenges; stakeholder engagement in the collection and sharing of training data; how to analyze this training data; use of training data to make decisions and most importantly, taking action. Throughout the training, you will learn how the Training Management Information System can be used to carry out these key steps in the decision-making process.

Objectives of the Training

The overall objective of the training is to develop participants capacity to use HRH training data to make decisions and take action to improve the availability of quality health services. More specifically it is hoped that the training will result in:

- Enhanced managerial competency of participants on use of training data to take action
- Improved ability to conduct data analytics and ensure the data is presentable for making strategic decisions.
- Increased availability of high-quality training data.
- Improved ability to engage stakeholders in collection and sharing of data, and in the provision of feedback.
- Increased understanding of how to leverage the **Training Management Information System in the data use process.**
- Improved knowledge and training skills of participants on use of data for decision making and action for future trainings.

Overview of the Training

The training will run for three consecutive days starting from 8.30am to 5.30pm with 1.5 hours lunch break. On the first day, participants will be introduced with basic understanding on health workforce issues and the role of data in decision making, identification of health workforce training data needs and common data quality issues, and engagement of stakeholder in the collection and sharing of data. Participants will gain hands on practice with improvement with data quality, be introduced to a stakeholders' engagement tools that help identify stakeholders, define their roles and resources, as well as map information flows. The participants will also be introduced to a case study which will be used throughout the training.

Day two will cover the development of basic skills in analysis and conducting calculations in training data, develop and understanding of how determinants and barriers to use of data and establish an understanding and importance of feedback loops. To help with data analysis, a practical activity for basic data analysis using excel will also be offered. Participants will also develop action plans to addressing barriers to data use and discuss feedback loops in Timor Leste. Participants will continue applying learnings from the day to their case study.

On the third day, stakeholders will deep dive into linking data to action. Participants will apply learnings from this session to the case study and later conduct a full presentation on the case study for feedback from the group.

On the final day, a session on introducing the training management information system (TMIS) will also be presented. This will cover a review of the system, discussion on report and analysis needs from TMIS to promote further development of the system and a discussion on sustainability of the system for the long run.

Session Descriptions

Session One: Health Workforce Challenges and Use of Training Data to Make Decisions

- Session Objectives:
 - Understand common health workforce challenges globally and in Timor Leste
 - Raise awareness of the importance of using health workforce training data to inform decisions
 - Understand the importance of improving data-informed decision making to optimize the health workforce
- Session Overview: This session will focus on improving participant knowledge on health workforce challenges and how training data can be used to make decisions and take action on these challenges. An overview to data use for decision making will be provided, and the decision-making cycle will be introduced.

Session Two: Determining Training Data Needs

- Session Objectives:
 - Understand what health workforce training data is and the importance of these data to respond to health workforce challenges
 - Understand the difference between good vs bad quality training data and strengthen the ability to manage these data
- Session Overview: This session will focus on explaining what constitutes health worker training data and what are attributes of high-quality data. Specifically, the session will dive into the difference between good and bad quality data, understand attributes to data quality, data quality challenges, and measures for data quality control and assurance. At the end of the session, there will be a hands-on activity where participants will be asked to review health worker training data for quality.

Session Three: Engaging stakeholders in collecting and sharing of training data

- Session Objectives:
 - Identify key stakeholders and understand how to engage these stakeholders to make strategic decisions on health worker training
 - Identify opportunities for improving production and use of training data
 - Identify points where analysis & data could support INS planning and decision making
- Session Overview: This session will start off by defining the concept of stakeholders, data users and data producers. Then, it will explain the importance of involving stakeholders throughout the data use in decision-making cycle. This session will also discuss information use flows. At the end of the session, participants will have to complete a stakeholder analysis matrix for them to understand, who the stakeholders are, the decisions they make, information they need, and the best way to present those information. Participants will also be asked to map information flows to better understanding the link between data and the end-users.

Session Four: Analyze Training Data to Respond to Challenges

- Session Objectives:
 - Turn raw data into useful information
 - Provide answers to questions being asked, by using basic data analysis using excel
- Session Overview: This session will focus on key concepts in data analysis by reviewing the most common data analysis terms and techniques used for descriptive data analysis and provide examples for doing some analysis with health worker training data. This includes calculating average, median, ratio, proportions, percentage, rate, and to name a few. Participants will also be required to demonstrate practical knowledge in basic data analysis by completing a given activity.

Session Five: Data for Use of Training Data to Make Decisions

- Session Objectives:
 - Identify opportunities for improving use of training

- Identify opportunities for feedback mechanisms
 - Identify points where analysis & training data could support INS planning and decision making
 - Highlight the determinants of use training data
 - Understand potential barriers and solutions to use of training data
- **Session Overview:** This session will explain the context of decision making, data demand and use, the role of TMIS in decision making, and how to strengthen the decision-making process. It will also explore ways how to increase the use of data, working toward building a culture of data use. It will further share strategies for overcoming barriers to data use ensuring that health-related data are being used to make decisions at all levels. Participants will also learn strategies for using data in program management, implementation, and decision-making.

Session Six: Provide feedback and take action

- **Session Objectives:**
 - Identify opportunities for feedback mechanisms
 - Understand how to link analysis of training data with taking action
- **Session Overview:** This session will review key factors in effectively developing and using feedback loops and how to turn data into action. To assist understanding of this session, a small group activity will be included to discuss framework for linking data with action.

Other Sessions

- **Case Study:** Participants will be assigned to different groups and provided with a Case Study scenario that they will use each day of the training to apply learnings from the sessions of the day. At the end of the training, participants will present their Case Study under the themes of each session.
- **TMIS Demo:** This discussion will allow participants to apply their learnings throughout the training to understand better effective use of the TMIS. The will discussion focus on reviewing the TMIS functionality, defining the reports and analysis needs from TMIS to guide further development of TMIS and touch on TMIS sustainability.
- **Evaluation of the TMIS Data Use Training:** The evaluation will allow facilitators to understand how the TMIS data use training has affected the way the participants treat HRH training data in the future. In the session, participants will be distributed with some questionnaire to evaluate the process and the training for Data use.

Methodology & Materials

The training will be an instructor led in person training that includes lectures, group discussions and activities, role playing and hands on “practice” through the use of a case study.

Materials developed will include technical PowerPoint presentations, and worksheets and a calculator for activities and the case study. Participants will also need pen and paper for taking notes, as well as access to a laptop for the case study.

Participants

Participants for the training of trainers will be totaling 25 consist of:

- INS Managers and Trainers,
- MOH HR Director