**openIMIS e-Learning Course: Module 2 Script**

**Slide 1:**

* Welcome to the second module of this course, which will focus on the national eHealth landscape and how openIMIS fits within such a framework.

**Slide 2:**

* The main learning objectives for this second part is to be able to relate the position of openIMIS within a national eHealth landscape.
* Participants should also be able to summarize the interoperability of openIMIS with other systems and compare it with other software such as DHIS2 (- an open source software platform for reporting, analysis and dissemination of data for health programs) & OpenMRS (an open source-based Electronic Medical Record System).

**Slide 3:**

* This is the detailed agenda for the entire module.
* You will start by getting a general introduction to eHealth and Digital Health
* Then, thanks to our colleagues from the Asia eHealth Information Network, a presentation will be given on their work and its relevance to digital health, and openIMIS.
* Following this, we will explain how openIMIS fits into a national eHealth Landscape.
* A brief introduction to the importance of data and ICT governance and management will follow, with material provided by the ILO.
* Finally, the interoperability of openIMIS will be discussed, with a focus on DHIS2.

**Slide 4:**

* eHealth can be defined as a healthcare practice supported by electronic processes and communication.
* In 2005, the World Health Assembly highlighted the importance of drawing up a long-term strategic plan for developing and implementing eHealth services to develop necessary infrastructure for information and communication technology, with the overall goal being to promote equitable, affordable and universal access to all.
* More recently, in 2020, the WHO released a Global strategy on Digital Health that promotes the use and scale-up of technologies to revolutionize how people worldwide achieve higher standards of health and access service, to promote and protect their health and well-being.

**Slide 5 (AeHIN):**

* An important stakeholder within the openIMIS Community that is helping build knowledge on various digital health topics is the Asia e.health information network.
* The Asia e-health information network or AeHIN is an informal network created by the world health organization in 2011 to help countries with their digital health development.
* It started with 7 individuals from 6 countries and has expanded to more than 100 professionals in 25 nations all around the world.
* AeHIN recognizes that knowledge exchange and research sharing are very important and fosters its members to use these as effective methods of capacity building on digital health.

**Slide 6 (AeHIN):**

* AeHIN was formed to help countries address their digital health challenges and in 2011 the network realized that these challenges are very complex.
* It is very difficult to build national health information systems as there are many stakeholders both public and private and many have competing interests. There are also a lot of technology components such as servers, networks, databases and security which make for substantial investments. Many stakeholders do not see the whole picture and understand their role in the larger national health information systems.

**Slide 7 (AeHIN):**

* AeHIN has learned over the years that in order to address these challenges, countries need to adopt a systematic approach that follows this sequence:
* 1. establish an acceptable governance structure with the mandate to understand and address the needs of the stakeholders
* 2. this governance structure will share a clear blueprint or architecture so the stakeholders can see where their role fits in the wider national health information system
* 3. good program management should be ensured among stakeholders so they can build their part in the blueprint
* 4. the governance structure should provide standard building blocks to the stakeholders so that they build interoperable systems.
* We call this the AeHIN mind the GAPS framework.

**Slide 8 (AeHIN):**

* To fill the gaps AeHIN proposes a set of activities that countries can undertake to establish capacity for digital health and one of these is to create the AeHIN-openIMIS community of practice.

**Slide 9 (AeHIN):**

* AeHIN hosts the openIMIS community of practice in Asia and brings together its members to understand the importance of digital health, global public goods in general and openIMIS in particular.
* The members discuss and hear knowledge on how these global public goods and openIMIS can be leveraged to address their own local needs and once they learn, these members contribute their knowledge back to the community of practice.

**Slide 10 (AeHIN):**

* AeHIN is positioning itself as the openIMIS regional hub in Asia: a meeting place where health education institutions, medical student associations, country interoperability labs and national insurance agencies come together and talk about how ICT can be effectively used in social health insurance and other social protection schemes.
* With the vision of universal health coverage achieved through appropriate use of information and communication technology, the openIMIS regional hub in Asia sets for its mission the building of capacity for ICT in social health insurance in Asia through openIMIS and other global public goods. Adn eventually achieving a goal of a strong community of practice around openIMIS in Asia.

**Slide 11 (AeHIN):**

* Among AeHIN’s activities in the regional hub for openIMIS, includes identifying stakeholders and understanding their needs and then demonstrating openIMIS to them as a possible solution to their local needs. The network also fosters peer to peer support through regular webinars, which are accessible through the links provided at the end of this module.

**Slide 12:**

* Here you see a digital health landscape diagram with four different components: the business domain services, the registry services, the interoperability services and the point of service layer. so where does openIMIS fit in?
* openIMIS is a reference tool for the Finance and Insurance Service within the Business domain layer thatstores, categorizes and facilitates the administration of centralized claims and finance related data to care provision to patients within the HIE.
* openIMIS facilitates the management of claims/financial data from Point of Service applications (including financing applications acting as a point of service interface outside of other PoS systems).

**Slide 13 (ILO):**

* Due to the increased use of digital technology, data is constantly being collected, processed, analyzed, used, re-used and commercialized.
* In social protection institutions, this is not so different. Data and information are the fundamental assets. They enable decision -making and operations. They constitute a strategic public asset which is part of a national data infrastructure.
* This means that the processes and policies involving data need to be defined in social protection organizations because gathering, preserving, using, analysing and sharing data is the main role of information and communication technologies in social protection.

**Slide 14 (ILO):**

* ICT has become too important to be left only in the hands of ICT people because technology must serve the organisational goals and not the reverse.
* Thus, governance and strategic planning are the responsibility of high level decision-makers and this process is a journey, it is not a destination.
* We need to learn how to do better in order to be able to do more. It is a constant balancing act of conflicting choices and trade-offs.
* Stability vs. flexibility
* Adapting processes to systems vs. adapting the systems to the processes
* open source vs. licensed software
* contracting cloud services vs owning data centres
* Security vs interoperability
* outsourcing vs. in-house development and so on
* Social protection organisations need to decipher their ICT and data operations or they run the risk of being devoured by growing budgetary demands and diminishing results. They need to implement governance and management processes to increase capacity, effectiveness and efficiency.
* Effective service delivery capacity comes from harnessing ICT and data. This, combined with comprehensive social protection policies and adequate financing can ensure social protection rights for all.

**Slide 16:**

* As for any other digital system, openIMIS relies on interoperability to smoothly fit within the existing digital landscape in countries where it is implemented.
* Various functionalities of openIMIS can be augmented by data exchange with other systems through standards such as HL7 FHIR.
* This includes for example the submission of health services claims through existing electronic medical records systems.
* It could also be the sharing of financial data such as contributions received or payments approved with financial management systems
* Finally, a key aspect to interoperability relates to the analysis of data within openIMIS for monitoring and reporting.

**Slide 17:**

* Without interoperability, all additional functionalities would have to be built, potentially duplicated, within openIMIS. This would unnecessarily complicate the software and increase resource requirements for maintenance.
* Here we have the example of the use of Bahmni in Nepal for claims entry. - Bahmni is an open source Hospital Information System and Electronic Medical Record.
* In Nepal, Bahmni is being used in a few hospitals as a complete hospital management system that includes full patient medical records including lab details and imagine (e.g. Xrays).
* All the information for generating a claim in openIMIS is present in Bahmni.
* Using interoperability functionality developed using HL7 FHIR standards, these hospitals are able to send claims to openIMIS directly, without the need to type it into the openIMIS interface again.
* At the beginning of a patient’s visit to the facility, Bahmni is also able to retrieve information regarding the beneficiary and their eligibility from openIMIS, providing all the information required from the registration clerk, in one place.
* Once claims have been submitted, the automated response from openIMIS is also sent to Bahmni.

**Slide 18:**

* A typical implementation of openIMIS contains a wealth of data valuable to health systems.
* In order to maximize the ability to analyze such data, interoperability between openIMIS and DHIS2 has been developed. - DHIS2 is an open source software platform for reporting, analysis and dissemination of data for health programs. It has been developed by the Health Information Systems Programme (HISP).
* Required data from openIMIS can be sent, using HL7 FHiR standards, to DHIS2 where custom indicators can be developed as per needs.
* Various dashboards including GIS and other analytical techniques can be built into DHIS2 allowing multiple users to view and analyze the available data. Analyzing the data can help to monitor the overall evolution and impact of the scheme, detect fraud, including fraud detection.

**Slide 19:**

* openIMIS is able to send data on beneficiaries, their policies, claims, including the details of services and items to a DHIS2 instance which has been preconfigured with standard dashboards based on openIMIS user feedback. These dashboards contain over 80 indicators useful for analyzing trends in beneficiary management, claims management as well as overall scheme performance.
* DHIS2 also allows you to create an unlimited amount of additional analytics dashboards, based on what your needs are! You can even have different dashboards for different user types, or organization levels!

**Slide 21:**

* You have now completed module 2 of this e-learning course.
* In module 3, you will get an overview of the openIMIS implementation process, followed by a presentation of a number of use cases, namely implementations in health financing and social protection schemes in Tanzania, Nepal, The Gambia and Cameroon.