BHUTAN

OVERVIEW

Country Delegation

- **Ms. Anju Thapa**: Sr. Health Assistant, Community Health Department, Jigme Dorji National Referral Hospital
- **Mr. Sangay Tenzin**: Sr. ICT Technical Associate, Ministry of Health
- **Ms. Kezang Wangmo**: Asst. Program Officer, National Medical Services

Country Experiences in EIR

- **Drivers of EIRs**:
  - Improving vaccination coverage and accuracy
  - Enhanced data management and reporting
  - Strengthening the health system
- **Current Strategies**:
  - Capacity building training
  - Community engagement via media awareness
  - Ongoing digital platform development
- **Challenges**:
  - Unstable network connectivity and poor IT infrastructure
  - Inadequate training programs
  - Low IT literacy among health workers
  - Poor IT infrastructure
  - Shortage of technical experts
  - Unsustainable funding for system upgrades
- **Desired Learnings**:
  - Integration and information exchange across different systems
  - Sustainability and linkage to the vaccine supply chain
  - Capacity-building for EIR IT focal points

System Descriptions and Usage

- **DHIS-2 (District Health Information System 2)**:
  - **Year of Development**: 2014
  - **Background**: Recording and reporting health data, monthly immunisation status, vaccine mobilisation and planning.
  - **Usage**: Used by all hospitals.
- **BVS (Bhutan Vaccine System)**:
  - **Year of Development**: 2021
  - **Background**: Registration for COVID-19, printing vaccine certificates, follow-up on doses, flu and HPV vaccines, stock management.
  - **Usage**: Used by all hospitals.
- **ePIS (Electronic Patient Information System)**:
  - **Year of Development**: 2023
  - **Background**: Comprehensive patient data management including demographics, diagnoses, treatments, medications, laboratory results, immunisation, etc.
  - **Usage**: Rolled out in 24 hospitals (ongoing, not fully implemented).

Data Management and Governance

- **Data Entry**:
    - **Providers**: Healthcare workers input data into DHIS2 monthly; immediate data entry for ePIS and BVS.
    - **Private sector**: Not applicable.
    - **Schools**: HPV and Td vaccination data entered via BVS.
    - **Data collation**: Managed by the Health Management and Information System (HMIS) unit and GovTech Agency.
- **ID Generation**: Use of national Citizenship Identity Card (CID) and system-generated identifiers.
- **Interfaces**:
    - **Healthcare Workers**: Dashboards for data management.
    - **Public**: Access vaccination status and certificates online via BVS.
- **Software Systems**:
    - **DHIS2**: Open-source, customized in 2014.
    - **BVS**: Developed by local vendor, funded by UNICEF and Ministry of Health.
    - **ePIS**: Developed by TechPark, the IT company of Bhutan, integrating all health-related systems.
- **Data Governance Policies**:
    - Field data validation
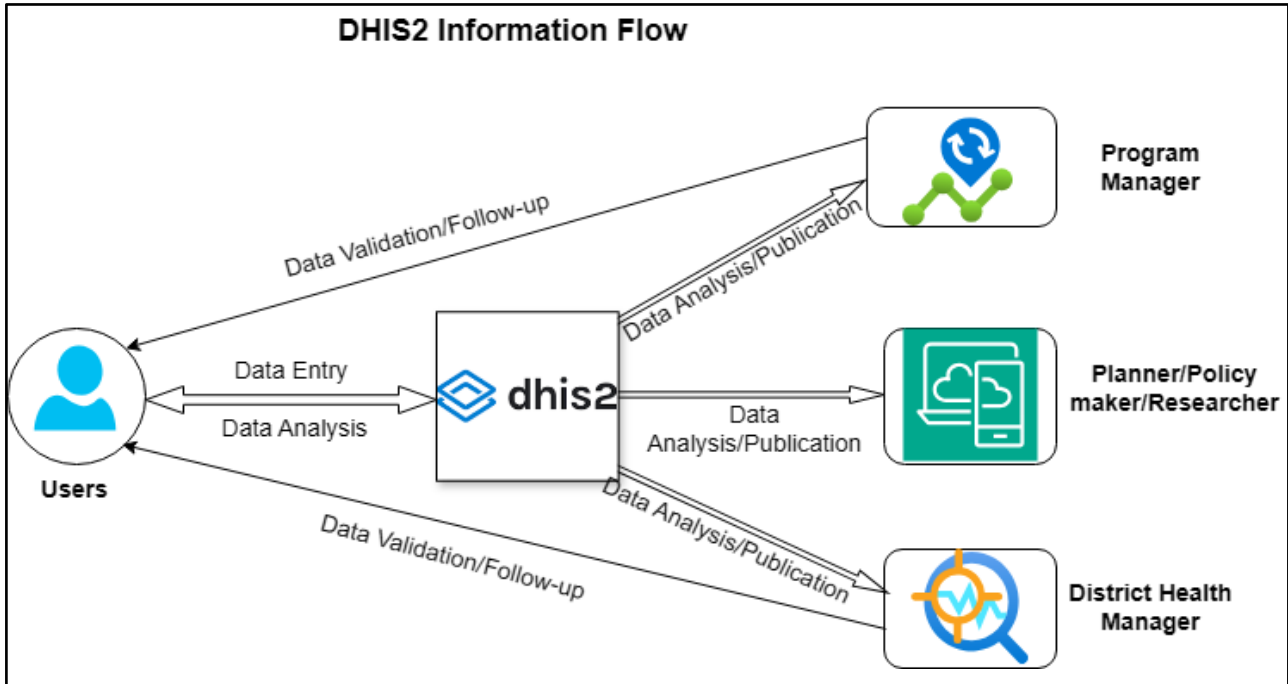   - Restricted access to designated health workers

Relevant Achievements and Learning Goals

- **Achievement**: Bhutan Vaccine System's real-time monitoring, data integration with census office, and future integration into ePIS.
- **Learning Goals**: Success stories of EIRs, integration of systems, sustainability strategies, and capacity-building for EIR IT focal points.

BHUTAN

EIR DESIGN | ENTERPRISE ARCHITECTURE

OVERVIEW OF DHIS2

DHIS2 Information Flow

OVERVIEW OF ePIS ARCHITECTURE