NTD Databases – Compilation Working Groups Discussion

1. What are the relative strengths and weaknesses of the 4 example NTD databases that were discussed? Which model would you want to implement and why?

1. Country Integrated NTD Database (CIND, now outdated)

Strengths:

- Comprehensive scope: A potential one-stop shop for NTD projects, maintaining a wide range of data (e.g., treatment, assessment, survey baseline) in one location.
- Centralized data: Facilitates the centralization of NTD data, including endemicity, survey, and MDA data.
- JAP Integration: Was able to generate two of the JAP forms (JRF & EPIRF), a significant advantage.
- Data handling: Supports centralized storage, archiving of data, and allows data requests in Excel format.

Challenges:

- Obsolescence: The database is outdated, with WHO no longer providing updates or support, leading to data loss and bug issues.
- Difficult to use: The tool is cumbersome, slow, buggy, and difficult to install and configure. It also lacks flexibility and dashboard features.
- Siloed and offline: As a desktop application, it is siloed, difficult to link to other databases, and faces significant challenges in terms of internet connectivity.
- Security and support: Installation presents security challenges, and limited support is available for its use.

2. CHIP & ESPEN Portal

Strengths:

- Fully functional: Links to the latest available ESPEN data via API, with standardized use across all countries and NTDs.
- Open access: Free to use and provides strong, reliable data visualizations.
- Centralized data: Centralizes data for all PC-NTDs and WASH, with interactive dashboards and country-specific data already submitted on ESPEN.
- Comprehensive features: Offers projections by disease by year, district-level information, and visualizations in multiple formats (tables, graphs, maps).

Challenges:

- Data export limitations: It is not possible to export data or visuals directly from the portal.
- Data updates: There is a lag in data availability, with updates occurring annually rather than in real-time.
- Language and connectivity issues: The portal is available only in the local language of the country, and users may face internet connectivity issues.
- Geographic limitations: SCH data isn't available at the sub-district level, and there are issues with shape files.

3. NTD Data Repositories (using DHIS2)

Strengths:

- Interconnectivity: Ensures interoperability with national HMIS and NTD databases, reducing fragmentation.

- Familiarity and customization: Broad familiarity with DHIS2 reduces training needs, and it is customizable with apps to extend functionality.
- Real-time access: Provides real-time access to data and supports multi-user access, ensuring data security and visualization capabilities.
- Standardization and integration: It is a standardized system used across multiple disease programs, enabling sustainability and centralized data management.
- Flexibility: Can incorporate data from multiple sources (e.g., WASH, Trachoma TT) and allows for JAP development.

Challenges:

- Internet dependency: Requires internet availability, and limited access due to login requirements.
- Customization needs: Not explicitly designed for NTDs, so it requires customization, which may lack standardization compared to other HMIS data.
- Capacity issues: There are challenges at lower use levels, and API access requires administrative support.
- Limited access and scope: Not all states or regions may be covered, and only aggregated data is collected. Some stakeholders may have limited access.
- Competing health needs: Only a certain number of indicators can be included in the HMIS, and the setup process involves multiple departments.

4. Annual JAP Reporting Forms

Strengths:

- User-friendly: Familiarity with Excel makes it easy to use and customize.
- Data visibility: Allows users to see all their data in one place, facilitating continuity in reporting across countries.
- Simplicity: Easy to add content and make updates.

Challenges:

- Error-prone: Content can be easily deleted accidentally, and file corruption is a risk.
- Limited scope: The forms are cross-sectional, single-year focused, and not integrated into broader data systems. They do not support trend analysis.
- Siloed: The data often resides on individual laptops, limiting access and visibility, especially for policymakers.
- Data divergence: There is a risk of data divergence, and limited traceability on data modifications.

Preferred Model for Implementation:

Considering Strengths and Challenges:

- **NTD Data Repositories (using DHIS2)** might be preferred due to its real-time access, flexibility, and integration with national HMIS, although it requires customization and reliable internet access.
- **CHIP & ESPEN Portal** is a strong alternative for its fully functional, centralized, and standardized approach with robust data visualization, despite its data export limitations and annual updates.
- **Country Integrated NTD Database (CIND)** could be considered if its outdated issues are resolved, given its comprehensive scope and ability to generate JAP forms.

- **Annual JAP Reporting Forms** may still be valuable for continuity in Excel-based reporting, though their siloed nature and limited scope make them less ideal as a primary tool.

Each model has its own strengths and challenges, and the choice of implementation may depend on specific country needs, infrastructure capabilities, and the level of integration required with other health data systems.

2. CHIP and the ESPEN Portal provide annual reporting form data over time and present data using visualizations. However, these tools are reliant on the annual reporting cycle and therefore are delayed. What impact does that have compared to a national NTD database on use?

Challenges:

- **Limited Programmatic Use:** The reliance on annual reporting cycles means that CHIP and the ESPEN Portal are not always aligned with the most recent data, which can limit their utility in making timely programmatic decisions. Programs that require up-to-date information may find these tools less reliable.
- **Dependence on Other Data Sources:** Due to delays in data updates, users cannot solely rely on ESPEN/CHIP for accurate, real-time information. They often need to source additional data from elsewhere to ensure decisions are based on the most current information available.
- **Data Mismatch and Divergence:** Delays in updating CHIP and ESPEN can lead to discrepancies between the data presented in these tools and the most current national data. This mismatch can create challenges in data consistency and reliability at the country level, where timely and accurate data are critical.

Strengths:

- **Useful for Presentations:** Despite the lag in data updates, CHIP and the ESPEN Portal's powerful data visualizations are beneficial for presentations and high-level overviews.
- **National NTD Database Advantage:** National NTD databases, such as those using DHIS2, typically offer up-to-date data that is more suitable for real-time programmatic use. The continuous access provided by national databases without external dependencies makes them more reliable for ongoing decision-making.

Example of a Preferred System:

- **DHIS2:** The use of DHIS2 is preferred because it meets all the needs of NTD programs for data collection, centralization, and management. It also offers permanent access without requiring an external service.

3. Data divergence occurs when the same data are stored in separate systems and modified independently. Do you have examples of data divergence in your work? What are some processes you can put in place to limit data divergence?

Examples of Data Divergence:

- **National Data vs. CHIP Data:** If national data are updated but the JAP forms are not resubmitted, there will be divergence between the national program data and CHIP.

- **Geographic and Administrative Variations:** Differences in geographic boundaries, population figures, and administrative unit names between systems can lead to data divergence.
- **Discrepancies in Reporting:** Figures presented at the national level may differ from those at the state level due to independent updates and lack of standardized validation processes.

Processes to Limit Data Divergence:

- **Interoperability and Integration:**
    - **Interoperability:** Ensuring interoperability between databases, such as linking DHIS2 with other systems, allows all users at any administrative level to access the same data, reducing the risk of divergence.
    - **Integration with Reporting Forms:** Exploring integration with annual reporting forms like JAP could help synchronize data across platforms.
- **Data Review and Validation:**
    - **Regular Reviews:** Implementing regular data reviews and sending changes back to lower levels can help align data across systems.
    - **Centralized Census Data:** Centralizing pre-MDA census data that incorporates information from various programs (e.g., malaria, immunization, NTDs) ensures consistency in population figures.
- **Using Consistent Data Sources:**
    - **Lowest Level Data:** Using population data that comes from the lowest administrative level (e.g., health facilities) and ensuring it is updated annually can reduce discrepancies.
    - **Shared Enumeration Data:** Programs sharing population data (e.g., malaria programs sharing data with NTD programs) can help harmonize figures across different health initiatives.

4. A large number of you said on the pre-meeting survey that you do access data from national system. Briefly describe which systems, how those data are accessed, and the benefit of accessing those data from those systems.

Systems Used:

- **DHIS2:** Widely used across different countries, including Zimbabwe, South Sudan, and Tanzania, often serving as the national NTD database or in combination with Excel-based systems.
- **Excel:** Used in countries like Nigeria and South Sudan for national data management alongside DHIS2.
- **Custom National Platforms:** Tanzania, for example, utilizes its own national platform for data access.

Benefits of Accessing Data from National Systems:

- **Campaign Monitoring:** Easier to monitor coverage on a daily basis, particularly during campaigns, when using systems like DHIS2.
- **Cost-Effective:** National systems like DHIS2 reduce the need for expensive external tools, making them cost-effective for ongoing data management.
- **Accessibility and Sustainability:** These systems are accessible to users within the country, promoting in-country ownership and sustainability of data management processes.

- **Standardized NTD Indicators:** There is a need for a standardized list of NTD indicators that can be included in DHIS2, ensuring consistent reporting and monitoring across different regions and programs.

Challenges in Access:

- **Limited Data Reporting:** Although most countries have access to systems like DHIS2, there is often limited data reporting through these systems, which can hinder comprehensive data management.
- **Credential Access:** Log-in credentials need to be created at sub-national levels to ensure widespread accessibility across different administrative levels.