### Enhancing the Epidemiologic Bulletin for Actionable Decision-Making

To improve the Epidemiologic Bulletin, I would focus on user engagement, content redesign, data flow automation, and integration into timely decision-making processes.

#### Step 1: Stakeholder Engagement

Identify current bulletin users by engaging with the team responsible for generating and disseminating the report. Convene a representative focus-group of users to understand their roles and decision-making responsibilities related to public health interventions, what information they use to make decisions, and how they perceive the bulletin’s value and limitations. Discussions could include:

* Reviewing a recent public health intervention and what information and data were used to initiate and target it.
* Taking stock of the type and scale of public health events this group responds to, and the type and scale of interventions they can initiate.

Later, mock-up options of the redesigned bulletin would be shared with the group to gather feedback on content and design revisions.

#### Step 2: Bulletin Redesign and Content Refinement

Insights from bulletin users would guide the selection of refined metrics tailored to their needs. Key metrics might include:

* Trends in suspect case incidence rates and test positivity ratios with indicators for thresholds passed at national, provincial or district level.
* Timeliness gaps, such as the interval between sample collection and receipt at the lab.

The bulletin’s layout, figures, and tables would be redesigned to emphasize actionable metrics while retaining essential elements. Automation would generate the bulletin in an editable format (e.g., Word) with space for an executive summary and analytic notes. Analysts generating the bulletin would complete these sections before disseminating it to reinforce action-oriented and critical data interpretation.

#### Step 3: Data Flow and Automation

Improving the data flow involves enabling direct access to key data sources and working with each data source to standardize and harmonize key data structures. For the weekly suspect case data from DHIS2, automated data pulls through API connections could be developed. The maternal deaths data could be improved by direct access to the full linelist, rather than the weekly snapshot. Measles lab data would require collaboration with the lab to identify options for direct database access and database standardization – such as improving how key dates are stored.

Automated data quality and validation checks could be implemented to ensure timely feedback and corrections at the source, covering completeness, timeliness, and adherence to standards used for data harmonization across sources.

#### Step 4: Dissemination and Integration into Decision-Making

Customized reports could be developed for different user levels – e.g. national and provincial. If there is an existing decision-making structure, such as a weekly all-hands meeting, mechanisms could ensure the bulletin is available and reviewed beforehand.

Data analysts and health officers responsible for the bulletin would be trained in using automated R scripts and making minor adjustments as needed.