Forecasting Medicine Needs – Compilation Working Groups Discussion

Question 1: What factors cause uncertainty in forecast numbers year to year?

1. **Demographic Challenges:**
    - Uncertainty arises from reliance on outdated census data, inaccuracies in population estimates, and internal/external migration patterns.
    - Government population predictions often differ from reality, leading to discrepancies in forecasts.
    - Population movements, such as intra-country migration, complicate accurate forecasting at the Implementation Unit (IU) level.

2. **Quality and Accuracy of Historical Data:**
    - Historic data quality is compromised due to literacy limitations among data collectors and insufficient funding for data collection in previous years.
    - The accuracy of previous forecasts and the reliability of inventory (stock balance) data are also significant concerns.

3. **Financial Constraints:**
    - Inadequate funding leads to incomplete consumption of previous stock, affecting future forecasts.
    - Long budget cycles exacerbate the issue, making it difficult to predict future needs accurately.

4. **Cross-border and International Factors:**
    - Differing levels of support and activities from donors and implementing partners across borders create inconsistencies in forecasting.
    - Variations in treatment strategies between country practices and WHO guidelines further contribute to uncertainty.

5. **Supply Chain and Stock Management:**
    - Issues in maintaining proper storage conditions (including cold chain) and managing inventory effectively can lead to stock shortages or surpluses.
    - Supply chain disruptions and stock management challenges are common issues affecting forecast accuracy.

6. **Environmental and Security Factors:**
    - Seasonality and weather changes impact the timing and scale of medicine needs.
    - Insecurity, conflicts, and natural or man-made disasters disrupt regular health interventions and complicate accurate forecasting.

7. **Methodological Challenges:**
    - Different methodologies for calculating forecasts (demographic, consumption, service-based) yield varying results, contributing to uncertainty.
    - Challenges arise as countries move between different forecasting methodologies, complicating the accuracy of projections.

8. **Capacity Limitations:**
    - Limited capacity in central stores managing drugs, as opposed to program-specific management, reduces forecasting accuracy.
    - The overall capacity of countries to perform accurate forecasting remains a significant issue.

9. **Other Specific Challenges:**
    - **Survey Results:** Changes in endemicity status, especially for diseases like schistosomiasis at the sub-district level, add complexity.
    - **Government and Donor Policies:** Divergences between government and donor population forecasts or policy changes can lead to forecast discrepancies.
    - **Unreliable Funding:** Unpredictable funding levels challenge the ability to project required medicine amounts accurately.
    - **Health Emergencies:** Epidemics, endemics, and other health emergencies introduce further unpredictability into forecasts.

Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?

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1. Data-Related Challenges:

- **Population Data:** Inaccurate or outdated population data is a major challenge in achieving accurate forecasts, as it directly influences the estimation of required medicines and commodities.
- **Endemicity:** The shifting nature of disease endemicity, particularly when not accounted for due to outdated epidemiological survey data, creates significant forecasting challenges. Ensuring control over endemicity at all levels is essential but challenging.
- **Lack of Funding for Prevalence Surveys:** Insufficient funding limits the ability to conduct necessary prevalence surveys, leading to reliance on outdated or inaccurate data, which impacts forecast accuracy.

2. Factors Affecting the Timing of MDA:

- **JAP Approval Timelines:** Delays in the approval of the Joint Application Package (JAP) affect the scheduling and implementation of MDA, complicating the forecasting process.
- **Insecurity:** Security issues in certain regions delay or prevent the implementation of MDA, resulting in challenges in aligning forecasts with actual needs.
- **MDA Results and Timing Decisions:** Delays in obtaining MDA results and making critical timing decisions, such as avoiding school closures or religious periods like Ramadan, introduce additional complexities in forecasting.
- **Financial Arrangements with Partners:** Delays or uncertainties in financial arrangements with partners can disrupt the timing of MDA, affecting the alignment of forecasts with actual medicine needs.
- **Shelf-Life of Available Drugs:** The shelf-life of drugs necessitates timely MDA; delays can lead to the use of short-dated stock, which can skew forecasts.

3. Structural and Systemic Challenges:

- **Weak Supply Chain Management Systems:** Inaccuracies in inventory counts and poor supply chain management systems hinder effective forecasting and study planning, leading to either stockouts or excess inventory.

- **Redistricting:** Changes in administrative boundaries can alter endemicity status, particularly in diseases like schistosomiasis, where only parts of a district may be endemic. This misalignment can result in inaccurate forecasts if not correctly accounted for.
- **Limited Skills and Capacity:** A lack of skills within National NTD Programs (NTDP) in planning and forecasting, coupled with insufficient human resources and tools, significantly hampers accurate forecasting efforts.
- **Infrastructure and Logistics Challenges:** Inadequate infrastructure for storage and delays in delivery timelines affect the availability and condition of medicines, leading to inaccuracies in forecasts.
- **Parallel Supply Chains:** The existence of parallel supply chains in some countries complicates the accurate tracking and forecasting of medicine needs.

Question 3: How can we address challenges in forecast accuracy?

1. Funding and Financial Management:

- **Localized and Timely Funding:**
  - Break down funding allocations to indicate timing and ensure funds are available at a more localized level. This helps in aligning financial resources with the specific needs of different regions.
  - Ensure that funding is sufficient, timely, and reliable to prevent disruptions in the forecasting and distribution processes.
- **Advocacy for Sub-National Funding Data:**
  - Advocate for the provision of short, medium, and long-range sub-national funding data to assist with more accurate forecasting and planning for MDA distribution.

2. Improving Data Quality and Utilization:

- **Accurate Population Figures:**
  - Use alternative sources for population data, such as school enrolments, and integrate data from other programs (e.g., Malaria campaigns) to improve the accuracy of population estimates.
  - Implement a country-specific feedback loop to review and refine population data used in previous forecasts.
- **Review and Analyse Past Forecasts:**
  - Regularly review previous-year forecasts to identify the drivers of inaccuracy through trend analysis. This will help in refining forecasting models and adjusting strategies accordingly.
  - Document sources of variation in population data to better understand and address discrepancies.

3. Enhancing Forecasting Methodologies:

- **Improved Formulas and Testing:**
  - Develop and test improved forecasting formulas that incorporate a broader range of factors. This should include comprehensive testing for accuracy and reliability.
- **Consumption Data Completeness:**
  - Ensure that consumption data is complete and accurate, which is crucial for making reliable forecasts. Routine monitoring of consumption versus forecasting data can serve as a mechanism for continual improvement.

4. Strengthening Cross-Border and Internal Collaboration:

- **Cross-Border Collaboration:**
  - Facilitate cross-border meetings and collaboration with neighbouring countries, particularly in areas with significant population movement, to reconcile numerators and denominators and improve the accuracy of shared forecasts.
- **Targeted Approaches for Population Fluctuation:**
  - Specifically target areas known for population fluctuation, such as regions with high levels of migration or refugee camps, to tailor forecasts more accurately.

5. Capacity Building and Training:

- **Training for In-Country Forecasters:**
  - Provide training for national program personnel in forecasting and supply chain management (SCM). This will enhance the capacity of NTDP personnel to develop and implement accurate forecasts.
- **Partner Involvement:**
  - Involve partners more actively in the forecasting process, leveraging their expertise and resources to improve overall accuracy and coordination.

6. Strengthening Supply Chain and Stock Management:

- **Enhanced Stock Management Systems:**
  - Develop and utilize robust tools for tracking inputs throughout the supply chain, from ordering to delivery and usage, to ensure better inventory management.
  - Improve storage capacities and stock management practices to prevent shortages or surpluses, which can impact forecast accuracy.
- **Integration into National Supply Chains:**
  - Integrate NTD products into the national supply chain to streamline processes and improve consistency in forecasting and distribution.

7. Routine Monitoring and Documentation:

- **Routine Monitoring and Feedback:**
  - Establish routine monitoring of the relationship between consumption and forecasting data as part of a continuous improvement process.
  - Ensure timely submission of reports with complete data and strengthen the tracking of medicine production and delivery.
- **Documentation and Accountability:**
  - Document variations in data and outcomes to create a more accountable and transparent forecasting process, enabling better adjustments in future cycles.