



EMPHNET's Research Digest

Qualitative Review of National Nutrition Surveillance Systems In the Eastern Mediterranean Region

Introduction

The Eastern Mediterranean Region (EMR), with its diverse population and varying socioeconomic statuses, presents a complex landscape for public health and nutrition. The region faces additional challenges due to conflicts, natural disasters, and environmental threats, profoundly impacting food security and health systems.

The Regional Strategy on Nutrition for the Eastern Mediterranean Region (2020–2030) further underscores the need for robust surveillance systems. This strategy aims to support member states in strengthening their systems to monitor nutrition regularly and identify key socio-economic factors affecting health and nutrition. Whereas some countries in the region, like Kuwait and Sudan, have developed notable nutrition surveillance systems, providing valuable data for national and international planning and response, the lack of comprehensive

information on the designs and challenges of nutrition surveillance systems in the region spotlights a pressing gap.

Surveillance systems encompass various methods: including large-scale food and nutrition surveys, small-scale repeated surveys, senti-nel site surveillance, school census data, and continuous growth monitoring. Each method offers unique insights into the nutritional status and needs of populations, aiding in identifying malnutrition, dietary issues, and trends in public health.

This study, titled "[Qualitative Review of National Nutrition Surveillance Systems in the Eastern Mediterranean Region](#)," aims to evaluate and compare existing systems in the Region, focusing on their strengths and weaknesses and filling the existing knowledge gap. The goal is to contribute to enhancing the understanding of these systems, facilitate collaboration

among stakeholders, and contribute to policy formulation, ultimately improving nutrition surveillance and public health in the region.

To reach this goal and achieve the Global Nutrition Targets and Sustainable Development Goals by 2030, establishing effective nutrition surveillance systems is crucial. The implementation of these surveillance systems will enhance our understanding of and ability to respond to the region's distinct nutritional requirements and obstacles. They serve as a crucial tool in transforming nutrition data into actionable policies and strategies, directly influencing a country's food and nutrition policies.

Methods

This study adopts a qualitative approach using key informant interviews, checklists, and literature reviews. The regional Nutrition Advisor of EMRO revised the concept note and approved the study, and guided approaches to address the

challenges in the region. Literature review of documents published between 2003 to 2023, culminated in the selection of 19 pertinent documents. The study invited all 22 EMR countries to participate in interviews to understand country-specific nutrition surveillance systems and was able to eventually engage eight countries— Kuwait, Saudi Arabia, Oman, Morocco, Sudan, Yemen, Syria, and Palestine.

Key informants, identified via a snowball method, provided valuable insights. The data collection process used a structured checklist approved by WHO-EMRO and based on a predefined matrix, focusing on various aspects of nutrition surveillance, such as types of data collected, methods of data collection, and evaluation techniques. This checklist, sent to all countries in the region, was instrumental in gathering comprehensive information. The study further included detailed follow-up interviews with nutrition departments in four countries aiming to deepen the understanding of specific surveillance structures and the challenges encountered. Findings were shared via emails with all included countries for validation.

Results

Main Objectives of the Nutrition Surveillance Systems

The main objectives of these systems varied, yet all aimed to assess the nutritional status of their populations and identify malnutrition, particularly in vulnerable groups such as children under five years and pregnant women.

The systems in countries with stable settings (Morocco, Saudi Arabia, Oman, Kuwait) cater to a broad demographic, including those with chronic diseases and pregnant and lactating women. In contrast, countries in fragile settings (Yemen, Syria, Palestine, Sudan) focus on the most vulnerable groups. Regular information and trends related to key

nutrition indicators are a common feature across all systems.

Data Collection Approaches

Different data collection approaches are employed. All countries use health facilities as a primary data source, but some, like Sudan and Yemen, incorporate additional sources. For instance, Sudan utilizes reports from nutrition centers and bi-annual community surveys, while Yemen uses health facilities as sentinel sites for early warning systems. Other countries, such as Palestine, Morocco, Kuwait, and Oman, integrate data from community or school surveys into their annual nutrition surveillance reports.

Indicators Measured

All surveillance systems measure various indicators, including anthropometric measures (height, weight, BMI, Z-score) to identify nutritional status and biochemical data (hemoglobin and hematocrit levels to detect anemia) to track micronutrient deficiencies. Some countries, such as Yemen and Sudan use middle upper arm circumference (MUAC) to identify the nutritional status such as wasting. Additional indicators, like clinical signs of malnutrition (e.g., edema, neural tube defects), are collected in some countries. All countries consider breastfeeding as an important indicator for the health of children and report it together with indicators.

Characteristics of the Survey Tool in Different Countries

Survey tools differ in sampling design and geographic coverage. While health facility-based data include all care seekers, other countries using surveys employ specific sampling techniques. For example, Morocco uses population projections, Saudi Arabia uses stratified cluster sampling, and Palestine coordinates sampling with its Central Bureau of Statistics

and according to the prevalence of anemia. Geographic coverage varies, with stable settings aiming for national representation and fragile settings focusing on high-vulnerability areas. The frequency of data collection also varies, from monthly to annually, depending on the country.

SWOT

The analysis of the region's nutrition surveillance systems uncovers several strengths, such as comprehensive data collection encompassing anthropometric and biochemical measures, and a focus on vulnerable populations. These systems effectively monitor micronutrient deficiencies, and in countries like Sudan, Syria, and Yemen, the collection of clinical signs enhances assessment accuracy.

The weaknesses identified include variability in sampling design and the challenge of incomplete geographic coverage, especially in fragile settings. Such weaknesses lead to potential gaps in data representativeness. Additionally, inconsistencies between data collection frequency and reporting periods can also impact the timeliness of information.

Threats to these systems include limited financial and human resources, which can constrain data collection, analysis, and reporting. Political and social instability in some regions further complicates consistent surveillance activities.

However, there are significant opportunities for improvement. Collaboration among countries can foster standardization and consistency in surveillance methods. Integrating diverse data sources, such as health facility records, surveys, and population censuses, can enhance the comprehensiveness and accuracy of the surveillance systems, offering a more holistic perspective on the nutritional landscape of the region.

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