Scope of Work and Deliverables

USAID Advancing Nutrition Technical Team

**Date of Request: *April 18, 2022***

**Purpose: *The Senior Health Informatics Consultant will review and provide recommendations for updating the technical documentation of the Guidance Package for Developing DTDS Tools for GMP Services to ensure it aligns with business process and decision model notations.***

**Place of Performance:** ***Remote***

**Provider(s):** ***TBD***

**Period of Performance: *June 2022-early July 2022***

**Activity Manager:** ***Sascha Lamstein***

**Activity Code: *2.1.C.1***

**Activity Internal Project #: *37462.2107.0008***

***SERVICES/SCOPE OF WORK: The Contractor shall use all reasonable efforts to perform the following services in accordance with the terms and conditions set forth in this agreement:***

1. **Background**

USAID Advancing Nutrition is the Agency’s flagship nutrition project, led by JSI Research & Training Institute, Inc. (JSI), and a diverse group of experienced partners. The project’s multi-sectoral approach draws together global nutrition experience to design, implement and evaluate programs that address the root causes of malnutrition.

Anthropometric measurements, such as weight and height, have been used for decades to describe the overall health and nutritional status of children. Growth monitoring (GM) compares a child’s growth over time with reference curves) to identify growth faltering before it advances to the state of undernutrition[[1]](#footnote-1). However, growth monitoring alone cannot improve children's growth or nutritional status. Recognizing this, in the mid‐1980s, the concept of growth monitoring and promotion (GMP) was introduced. GMP leverages GM as an opportunity for communication with caregivers and promotion of appropriate activities to prevent or address the identified growth problem. Versions of the GMP package of services have been integrated into routine child health visits, including but not limited to those provided as part of the Integrated Management of Childhood Illness (IMCI) and Community Management of Acute Malnutrition (CMAM). They have also been delivered during special sessions held monthly (or at some regular interval) at the community level.

Despite its widespread use, GMP has achieved varying degrees of success. This has led to doubts about the ability of GMP to achieve the intended impact. One reason why impact may not be achieved is if the quality and completeness of services are poor, which can be caused by insufficient competencies of the health workers. Anthropometry measurements—primarily weight, height/length, and mid–upper arm circumference (MUAC)—can be challenging, and health workers often find it difficult to chart data on growth curves and interpret growth in comparison to the reference curves. Counseling during GMP varies. It may not take place at all, be too generic, or not provide specific, actionable advice to caregivers[[2]](#footnote-2). For these reasons, countries and programmers are paying closer attention to ensure that the “P” in GMP happens, and is tailored to the growth outcome, age of the child, and context, and is of high quality.

Over the past 10 years, health practitioners, technology providers, and other stakeholders have explored innovative approaches to digital health, developing an evidence base of success in improving the quality of care. The strategic use of digital health tools, according to USAID’s [Vision for Action in Digital Health](https://www.usaid.gov/digital-health-vision), can improve the quality of care, addressing the needs of clients and health workers. Recognizing that it can be very time-consuming to translate guidelines into the requirements and specifications needed for developing a digital tool, the World Health Organization (WHO) has set out to develop generic guidance for the development of digital tools for specific service delivery packages. These are referred to as Digital Adaptation Kits (DAKs) and are part of the SMART guidelines initiative to “ensure WHO’s evidence-based guideline content is accurately reflected in the digital systems countries are adopting.”[[3]](#footnote-3)

A landscape of digital tools used to strengthen nutrition service delivery found that many of the tools were developed independently which can be a timely and costly endeavor. In 2021, Advancing Nutrition developed a Guidance Package for Developing Digital Tracking and Decision Support Tools for Growth Monitoring and Promotion Services using the format that WHO had developed. The components of the guidance package are: user personas, business processes and workflows, data elements and indicators, and decision-support logic.

**B. Objectives**

The objective of this consultancy is to review the informatics components of this guidance package to ensure they are accurately following the business process modeling notation (BPMN) and decision model and notation (DMN). Additionally, the review should ensure that calculations for calculated data elements and indicators are correctly notated. The consultant will make recommendations on how to update the components to align with these modeling notations to ensure they can be understood by business analysts who decide to use and adapt this guidance package to their own GMP contexts.

**C. Activities**

The Senior Health Informatics Consultant will work closely with the USAID Advancing Nutrition team staff on the overall activity and will lead the review of the informatics components of this guidance package. Specifically, the consultant will be responsible for the following:

1. Conduct a detailed review of the health informatics components of the guidance package to ensure the BPMN and DMN are correctly used. The components included in this review are:
	1. Workflows and business processes and associated annotations
	2. Decision-support logic
2. Conduct a detailed review of the data elements dictionary and indicators table of the guidance package to ensure that:
	1. Notation used in core data dictionary can be translated into software specifications
	2. Calculations for calculated data elements and indicators are correctly notated
3. Meet regularly with USAID Advancing Nutrition staff.
4. Document findings of review in a report of roughly 5-10 pages.

**D. Deliverables and Schedule**

The Senior Health Informatics Consultant is responsible for the timely submission of the following deliverables, as part of the SOW:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Del. No.***  | ***Deliverable Name*** | ***Deliverable Description*** | ***Due Date*** | ***Deliverable Value\**** |
| 1 | Report of corrections and recommendations for updating the business processes, workflows, decision logic, and data element and indicator calculations and notations | The 5-10 page report should include:* Corrections needed to the workflow diagrams and decision-logic to ensure that BPMN and DMN are being used correctly
* Corrections needed to notation used for core data dictionary and indicator table
* Recommendations for how to use BPMN and DMN correctly for future changes to the guidance package based on any errors found in the review
 | June 30, 2022 | 8 days LOE |

\* Participation in USAID Advancing Nutrition team meetings is built into all activities.

The total LOE is approximately equivalent to **8** days. All required deliverables and reports shall be submitted to the JSI Activity Manager listed on Page 1.

**E. Consultant Qualifications**

* Bachelor's degree and 10+ years of experience in information systems and business requirements development and documentation
* Experience in developing requirements for health information systems
* Experience using BPMN and DMN for documenting requirements for health information systems
* Strong written and verbal communication
* Written and oral English fluency
1. For more information see:

Mangasaryan, N., N. Arabi, and W. Schultink. 2011. “Revisiting the Concept of Growth Monitoring and Its Possible Role in Community-Based Nutrition Programs.” Food and Nutrition Bulletin 32(1): 42–53. <https://doi.org/10.1177/156482651103200105>

Mason, J., D. Sanders, P. Musgrove, Soekirman, R. Galloway. 2006. “Chapter 56: Community Health and Nutrition Programs.” In Disease Control Priorities in Developing Countries. 2nd ed. Washington, DC: International Bank for Reconstruction and Development/World Bank. [↑](#footnote-ref-1)
2. For more information see: Global Financing Facility (GFF) and the Manoff Group. 2020. Strengthening Promotion Activities within GMP Programs. Washington, DC: World Bank Group. [↑](#footnote-ref-2)
3. See for example WHO’s DAK for [Family Planning](https://www.who.int/publications/i/item/9789240029743) services. [↑](#footnote-ref-3)