

## **Terms of Reference**

### **1. Purpose of the APW**

The APW holder will take responsibility for developing a pilot model of early intensified diagnosis and clinical management of severe acute respiratory infection (SARI) in provincial and district hospital in Viet Nam. This model is aimed to improve an early diagnosis and effective management of SARI, ameliorate a safety transfer of critically ill patients, and enhance referral communication between hospitals.

### **2. Background**

Viet Nam is a hotspot for emerging infectious diseases, including those causing severe acute respiratory infections (SARIs). Many outbreaks of emerging infectious respiratory diseases such as SARS-CoV, avian influenzae A (H5N1) and SARS-CoV-2 pandemic occurred during the last 30 years in Viet Nam. Even the capacity on SARI case management for hospitals and healthcare system has been significantly improved, SARI remains a burden on the Vietnam healthcare system. In 2018-2019, with the support from WHO, Hanoi Medical University conducted an observational study<sup>1</sup> at critical care units (CCUs) in over 40 public hospitals in 5 provinces in Viet Nam. This study indicated that SARI cases accounted for around 25% of patients admitted to CCUs and 7-day mortality rate of SARI was high (6.6%). In addition, the diagnostic testing system and treatment capacity was insufficient in district levels but underused in the provincial ones. This required a standardized model for early diagnosis and effective management of SARI, which is suitable for the resource-constrained settings in Viet Nam.

In Viet Nam, the Ministry of Health (MOH) manages 3 levels of health service delivery: primary level in districts, secondary level in provinces, and tertiary level in national hospitals. Typically, a provincial hospital oversees between 10 and 20 district ones. As referral centers for district hospitals, the provincial department frequently receive patients from these facilities for further diagnosis and treatment. However, the referral communication between provincial hospital and district hospitals remains ineffective, resulting in inefficiencies, delays, and potential errors in patient care. In addition, lessons learned on treatment stratification and strengthening capacity on early detection and initial treatment for SARI for COVID-19 for district and provincial level hospitals is one of key components for reduction of mortality and overload for tertiary care level during the COVID-19 pandemic. Therefore, a model with good practice will maximize the utilization of all levels of health care and prevent the waste of health resources at the provincial level, leading to improve the quality of care.

The primary aim of this initiative is to enhance the quality of SARI management by developing a pilot model for intensified laboratory diagnosis and protocolized treatment at both provincial and district hospitals in Viet Nam. This involves conducting an evaluation of current capacity for laboratory diagnosis and management of SARI, an assessment for the process of interhospital patient transfer as well as the referral communication between provincial hospital and district hospitals. Developing an appropriate model, customizing, and optimizing it will provide a better support diagnosis, management and response to SARI outbreak based on the WHO clinical care for SARI toolkit 2022<sup>2</sup>. Additionally, it aims to facilitate the cooperation in intrahospital transfer, the completion of processes for diagnosing, monitoring, and managing patients with SARI within the hospital level. The insights and lessons learned from this pilot will serve as guidance for wider-scale adoption of reference model within public hospital settings in Viet Nam. This will strengthen the hospital's capacity to early diagnose and effectively manage SARI within the resource-limited settings in Viet Nam.

### 3. Planned timelines (subject to confirmation)

Start date: 1 July 2024

End date: 30 June 2025

### 4. Work to be performed

#### Method(s) to carry out the activity

The APW holder, with technical support from WHO Viet Nam, will develop early intensified laboratory diagnosis and clinical management of SARI in provincial and district hospitals in Viet Nam. The APW holder will be under guidance from the WHO representative office in Viet Nam with the following activities:

Stage 1: From July to September 2024

- Activity 1: Perform the gap analysis for current clinical management of patients with SARI and patient referral in provincial and district hospitals
- Activity 2: Update and revise the training materials for clinical management of SARI<sup>2</sup>
- Activity 3: Conduct a training for clinical management of SARI

Stage 2: From October 2024 to June 2025

- Activity 4: Piloting a model of early intensified diagnosis and comprehensive management of SARI at a referral hospital and district hospitals.
- Activity 5: Evaluate the implementation of the model of early intensified diagnosis and comprehensive management of SARI.

#### Output & Deliverables:

Output 1: Assessment of current clinical management of patients with SARI and patient referral in several target provincial and district hospitals.

Deliverable 1.1: Protocol and tools to assess the clinical management and Inter-facility transport of patients with SARI between healthcare facilities.

Deliverable 1.2: The gap analysis and report of challenges in management of SARI patient and patient referral in provincial hospital and district hospitals.

Deliverable 1.3: Post-implementation report after 1 year of introduction of training

Output 2: Update and revise the training materials for clinical management of SARI.

Deliverable 2.1: Updated toolkit of clinical care of SARI.

Deliverable 2.2: Updated training slides of clinical management of SARI.

Output 3: Strengthening the capacity of clinical management of SARI.

Deliverable 3.1: 01 training course of clinical management of SARI for doctors in several target provincial and district hospitals.

Output 4: Development and pilot of a model of early intensified diagnosis and comprehensive management of SARI patients.

Deliverable 4.1: Analysis of aetiology of SARI and outcome of patients with SARI in provincial hospitals and district hospitals.

Deliverable 4.2: Case presentation of a pilot model of early intensified diagnosis and comprehensive management of SARI patients.

Output 5: Evaluation of the pilot model implementation.

Deliverable 5.1: Report on the pilot implementation, lessons, and recommendations.

Deliverable 5.2: Result of impact assessment: Lesson learned workshop to introduce and share experience and advocate the MoH to adapt the training material after the implementation of the pilot

Deliverable 5.3: Final activities report.

#### Deliverable(s) to be submitted during and after the period of the assignment including manner of delivery and payment.

The payment will be made according to the schedule deliverables as below:

No	Item/Description	Time frame	Percentage
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1	Upon countersigned APW contract by the contractor	As soon as the contract has been issued	50%
2	Upon submission of interim mission report and financial statement/invoice	As and when completed on or before 30 September 2024	30%
3	Upon submission of final activities report and financial statement/final invoice	As and when completed on or before 31 December 2024	10%
4	Report on impact assessment on the model pilot	June 2025	10%

## 5. Technical Supervision

The selected APW holder will work under the supervision of:

Responsible Officer:	Dr Vu Quang Hieu, Technical Officer, HS Team	Email:	vuh@who.int
Manager:	Dr. Sangjun Moon, HS team lead	Email:	smoon@who.int

## 6. Specific requirements:

The selected APW holder must:

- Team Leader's requirements:
  - A PhD degree and/or postgraduate qualifications related to infectious disease or emergency medicine.
  - Minimum 10-year experience of working in infectious diseases, particularly in SARI management.
  - Previous experience of working with WHO.
  - Holding a communication network of provincial/district hospitals is advantage.
- Team members' requirements:
  - At least a graduate degree and/or work experience in infectious diseases.
  - At least 3 years of experiences in infectious diseases or emergency medicine, in SARI case management.
  - Demonstrated experience in surveillance or study design, implementation, and evaluation for communicable diseases.
  - Experiences working with WHO, Ministry of Health and public hospitals in Viet Nam is an advantage.
  - Skills/Technical skills and knowledge: advanced knowledge in emerging infectious disease, SARI and emergency medicine.
  - Language: written and spoken fluency in English is essential.

## 7. Place of assignment:

Hanoi, Viet Nam

The APW holder will work at their own base

## 8. Detailed Cost & Budget Breakdown

All bids will be evaluated based on the submitted proposals with detailed budget breakdown in term of the technical requirements, timeliness, and value for money.

## 9. Travel

Not applicable for this APW contract.