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Prehospital emergency care assessment tool
PEAT

2025

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GLOSSARY

Access Number (also referred to "universal access number"): Local telephone number that initiates Prehospital Provider activation.

Advanced life support (ALS): In addition to provision of all basic life support functions, provision of advanced care for the critically ill patient that may include advanced airway management; advanced procedures, including chest drain placement; administration of intravenous or intraosseous therapies; advanced patient monitoring, etc. The specific scope of practice by provider level may vary by system.

Advanced Ambulance Provider (AAP) or Advanced Prehospital Provider (APP): A formal Emergency Care System healthcare practitioner who has been trained in advanced prehospital care, holds a valid license, and is certified by the Emergency Care System Regulatory Authority to function within a defined advanced scope of practice.

Ambulance: Motor vehicle equipped to transport and provide patient care during transport for ill or injured patients. An ambulance must have two separate compartments including a driver compartment and a patient care compartment. Ambulances may be land, air, or water vehicles. All ambulances should be registered and accredited by the prehospital component of the Emergency Care System Regulatory Authority.

Ambulance Base Station: Location equipped to provide support for ambulance personnel and ambulance functioning, including restocking provisions. In some systems, ambulance staging posts and ambulance stations may have overlapping functions.

Basic life support (BLS): Provision of initial non-invasive life-saving care, including basic airway repositioning, CPR, control of external bleeding, and immobilization of spine and fractures. Specific BLS scope of practice should be determined at country-level.

Basic Ambulance Provider (BAP) or Basic Prehospital Provider (BPP): A formal Emergency Care System healthcare practitioner who has been trained in basic prehospital care, holds a valid license, and is certified by the Emergency Care System Regulatory Authority to function within a defined basic scope of practice.

Community First Aid Responder (CFAR): Trained layperson certified as part of an organized system to provide simple initial care for the acutely ill and injured, including but not limited to: airway repositioning, control of external bleeding, and splinting. Unlike a bystander who may have received first aid training, a CFAR is part of an organized system and can be called to respond to an emergency scene by a specific, pre-arranged mechanism.

Destination Triage: The process of deciding, usually guided by protocol, the most appropriate facility for a patient given the patient's need.

Dispatcher: An individual trained and certified in the reception of emergency calls from the public and determination of the nature of the emergency if applicable (for example, medical in nature or other), registering the call, prioritizing the call and the Prehospital Provider response, providing the ambulance with the correct location of the call, when necessary, providing pre-arrival caller instructions and coordinating communications as determined by the Emergency Care System Regulatory Authority.

Emergency Care System (ECS): The subset of the healthcare system that responds to emergency health conditions. The ECS spans system activation, first aid, prehospital care, facility-based emergency care, and the legislation and policies that govern emergency care.

Emergency Care System Regulatory Authority (ECS Regulatory Authority): The agency that is mandated by the government and health authorities to oversee emergency care. Depending on local context, prehospital and facility-based emergency care may be governed by the same or different agencies.

Emergency Communication and Dispatch Centre (also known as "ambulance dispatch centre", "emergency medical services communication and dispatch centre", "emergency call and dispatch centre", "ambulance dispatch centre", "emergency dispatch centre", and "dispatch centre"): Facility approved by ECS Regulatory Authority to continuously receive, register, and process calls from the access number, and assign and dispatch an ambulance in response

Medical Control: Remote, real-time advising from a higher-level provider (Medical Control Officer - MCO) to support clinical decision-making by PPs.

Medical Control Officer (MCO): An advanced provider with emergency care experience (often a doctor) who is authorized to provide remote advising support to Prehospital Providers. Besides meeting clinical training requirements, MCOs should undergo specific training in prehospital emergency care standards and protocols. In smaller Emergency Medical Services, the function of MCO will be covered by the Medical Director, whereas larger organizations may have two posts with separate functions (with the MCO reporting to the Medical Director).

Medical Director: The senior medical provider (often a doctor) who oversees and is responsible for all care in the Emergency Medical Service in order to deliver patient-centric, evidence-based medical care, with the ultimate goal of improved patient outcomes and public health. This provider must be trained in prehospital emergency care standards and protocols and is responsible for ensuring that the Prehospital Providers in the organization are up to date on current protocols and that these protocols are followed. The Medical Director is also responsible for reviewing cases in the organization for quality and addressing any quality improvement issues that arise.

Multiple Casualty Incident or Mass Casualty Incident (MCI): An event that generates more patients at one time than locally available resources can manage using routine procedures (generally 4 or more victims). Examples include a road traffic crash, a building fire, or a large-scale event such as an earthquake or mass toxic exposure.

Personal Protective Equipment (PPE): Equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with infectious, chemical, radiological, physical, electrical, mechanical, or other hazards. Medical non-sterile and surgical sterile gloves, surgical masks, goggles or face shields and gowns are considered essential PPE that must always be available to the Prehospital Provider, but other types of PPE may be required depending on the circumstances.

Prehospital Provider (PP): Individuals who are certified and registered by the Emergency Care System Regulatory Authority to provide clinical services.

Prehospital Service Provider Organization (PSP Organization) [see Emergency Medical Services]: Any organization that is dedicated, staffed and equipped to provide prehospital emergency care, including public safety agencies, private ambulance companies, and non-governmental organizations. For the purpose of this document, we refer to PSP Organization as Emergency Medical Services.

Referral: The targeted direction of an individual to an appropriate facility or health practitioner for a specific health need.

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INTRODUCTION

Prehospital emergency care is a crucial component of the health care system. Strengthening prehospital care can help address a wide range of medical, surgical, and obstetric conditions across the life course, including injury, complications of pregnancy, exacerbations of non-communicable diseases, acute infections and sepsis. The prompt provision of care and rapid transport from the scene to a facility can save lives, reduce disability and improve long-term outcomes. A well-functioning prehospital care system is critical for the establishment of high-quality integrated emergency, critical and operative care systems. It is central to effective referral and counter referral systems, linking communities with primary care and hospitals, and is essential for the establishment of primary health care centred systems and achievement of Universal Health Coverage.

Despite their critical role, many prehospital systems are underdeveloped across the globe. Systems often suffer from a range of problems such as lack of an enabling regulatory framework, poor coordination mechanisms, insufficiently trained personnel, inadequate equipment and under-developed infrastructure, leading to delayed or inadequate emergency response and poor patient outcomes. Establishing standardized operational frameworks is essential to enhance the effectiveness of prehospital care, ensuring that all individuals have access to timely, quality emergency care, regardless of their location.

The primary purpose of prehospital emergency care systems is to provide rapid assessment, immediate management and transportation of patients to appropriate medical facilities. Key activities within these systems include:

- System activation: calling an easily accessible number to organize dispatch of a response unit and to receive pre-arrival first aid advice.
- Emergency medical dispatch: Coordinating and dispatching appropriate resources in response to emergency calls.
- Patient care: Delivering immediate medical interventions to patients at the scene and during transportation.
- Transportation: Safely conveying patients to healthcare facilities equipped to provide on-going or definitive care.
- Medical oversight: Ensuring adherence to clinical protocols and continuous quality improvement through supervision by qualified medical professionals.

Regardless of the approach taken in how they are developed, all prehospital emergency care systems have several primary functions and core components in common. At the scene of an incident, primary functions are ***bystander response***, ***dispatch***, and ***provider response***. Other prehospital primary functions are ***transport*** and ***transport care***. These primary

functions must be provided within an enabling environment. Enablers include the regulatory framework within which the service is provided, financial and human resources and fleet management.

Assessing the capacity and performance of health services is critical for planning and for managing and monitoring progress in improving access to high-quality, people-centred integrated health services that people everywhere are demanding. However, many countries currently lack timely information to monitor critical aspects of health services and systems performance. This lack of up-to-date data on health services impacts day to day service delivery and can impinge on how quickly countries are able to respond to disruptions to health services.

In response, and within the context of monitoring PHC-oriented health systems, the Department of Integrated Health Services at WHO is working together with partners to develop methods and tools that aim to rapidly identify and fill critical data gaps and to improve the analysis and use of data for monitoring progress and informing policy decisions and investments for improving integrated health service delivery at subnational, national and global level. This tool, *Prehospital emergency care assessment tool (PEAT)*, has been designed to help countries identify prehospital emergency care service gaps.

The PEAT tool forms part of a broader WHO collection of tools and resources titled the *Health Systems Performance Assessment (HSPA) toolkit for UHC*. The collection aims to strengthen country capacities to measure and monitor the capacities and performance of health systems and services in the context of PHC to drive progress towards UHC and health security. The HSPA toolkit for UHC includes metrics lists, assessment tools and other guidance resources to support countries to identify and fill data gaps and analyze and use data to monitor and improve performance at all levels of the health system.

OBJECTIVES OF THIS TOOL

The PEAT tool aims to provide a rapid, regular and low-cost method for EMS organizations to measure and monitor their capacity, preparedness, readiness and resilience for health service provision.

PEAT supports a rapid but comprehensive situational analysis of a prehospital system, gap identification, and development of an improvement plan. PEAT examines all essential aspects such as emergency medical services (EMS) staffing, operational fleet, facilities, dispatch, provider response and training, equipment and consumables and elements necessary for surge response for outbreaks and disasters.

PEAT does not define minimum standards for emergency care service provision. It is intended as a general tool to identify gaps that can be addressed by implementation of standards promoted elsewhere. Ultimately, countries will need to determine which services they aim to provide at a given level of the health system.

This tool focuses on prehospital emergency care services offered by EMS organizations. The PEAT tool assumes that there is a system of prehospital care, however nascent, in the location being assessed.

PEAT is a key component of WHO's *prehospital toolkit*, a bundle of products designed to help strengthen prehospital emergency care. These tools are intended to help address commonly identified gaps in the main components of a prehospital system (governance, operations, prehospital provider training, equipment & medication, communication and quality improvement). They can be used to support the development of prehospital services in all resource settings. The toolkit is available from WHO's prehospital website www.who.int/teams/integrated-health-services/clinical-services-and-systems/emergency-and-critical-care/prehospital-toolkit.

KEY QUESTIONS ANSWERED BY THE TOOL

Key questions that PEAT can help answer include:

- What gaps exist in the local prehospital emergency care system?
- What are possible improvements to different components of the prehospital emergency care system?
- Are there adequate human resources and infrastructure?
- Is there a robust regulatory framework in place?
- How robust is the activation and communication infrastructure?
- What services are prehospital providers able to deliver?

IDENTIFYING WHICH SERVICE ORGANIZATIONS TO EVALUATE

Users of the tool should consider the number and the different types of EMS organizations in the location they hope to assess. For instance, some countries may have only one prehospital service organization at the national level. Some countries may have service organizations that operate independently at a sub-national or regional level. Countries may

have many private service organizations. Examples of different approaches to assess settings with various arrangements of service organizations include:

- If one national service exists: assess that single service
- If multiple independent services exist in different regions: assess each of those regional services independently
- If many private services exist: consider either 1) evaluating all private services, if resources allow, 2) evaluating a representative sample of private services or 3) not evaluating private services at all if public services are more heavily used by the population.

IDENTIFYING ASSESSMENT RESPONDENTS

The target audience for PEAT includes:

- EMS manager
- Subnational planner
- National planner

It is important to select the correct respondent(s) to accurately assess the prehospital emergency care system. The respondents should include managers/leaders in the system at the regional and/or local level, as well as clinical personnel. The respondent(s) should have a broad understanding of the existing prehospital emergency care system as well as an understanding of the on-the-ground capacity of prehospital service providers. One person alone may not be able to respond to all questions. Thus, the tool may require a combination of different respondents. These respondents may therefore include a combination of:

- Director of prehospital emergency care system regulatory authority (e.g., at the Ministry of Health or equivalent health system agency)
- Chief executive officer / chief operating officer or equivalent leader at EMS organization
- Prehospital emergency care providers (e.g., ambulance personnel)
- Researchers.

Different respondents may respond to different components of the assessment, depending on their area of expertise. For instance, a director of the system may be able to answer questions about the system context whereas prehospital providers may best be able to answer questions about provider response.

More than one respondent may also answer the same question to allow for triangulation of responses, which may improve the accuracy of the results. If more than one respondent completes all or a respective part of the tool, there are multiple ways to compile the results: i) the response of the respondent with the most understanding of a specific resource, service or function becomes the final response or ii) a consensus process is initiated (e.g., a meeting convened) and a single answer for each question is agreed upon by respondents.

ADMINISTERING THE ASSESSMENT

PEAT can be administered in-person or virtually. If administered in-person, the respondents may fill out the assessment questions on their own or be asked the questions by an external interviewer. When administered using an interviewer, we recommend recording all the responses verbatim.

FREQUENCY OF ASSESSMENT

The frequent monitoring of service readiness requires following-up with the same system over a period of time (e.g. one year). It is recommended to administer the complete tool at least annually.

STRUCTURE OF THE ASSESSMENT

The assessment asks both contextual and service-specific questions. The contextual questions appear in section 2 and query different characteristics and components of the overall prehospital emergency care system. This section is followed by four others that ask questions more specific to the EMS organization being assessed. These service-specific questions are the highest priority, as they identify potential gaps and support the development of an actionable improvement plan.

The respondent will encounter three main question types in this assessment:

1. Open-ended (e.g., what are the barriers to implementing a universal access number)
2. Number response (e.g., number of basic prehospital providers employed)
3. Discrete (i.e., multiple choice).

When gaps are identified, respondents are asked to reflect on what system improvements are needed to address these gaps and what challenges may pose a barrier to progress.

Some open-ended questions are included alongside discrete questions in the last column of the tool as “Follow up questions.” These open-ended questions may be answered in the available space, if desired. The responses provided may help health planners and managers in the prehospital emergency care system to develop an improvement plan.

The assessment may use terms that may not be used or familiar in every context. A glossary of terms is included to help respondents. These terms are not intended as recommendations for change but should be adapted to the local context where needed. Terms are used consistently within this tool to facilitate replacement with local terms.

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1. Setting and respondent information This section covers background questions about the respondent's setting and organization		
1.1	Country:	
1.2	Name of the respondent's prehospital service:	
1.3	Type of service:	☐ Public ☐ Private ☐ Volunteer ☐ Informal (e.g., CFAR system)
1.4	Location(s) served by the prehospital service:	☐ Entire country ☐ Specific region/state/province (specify): ☐ Specific municipality/county/city (specify): ☐ Other (specify):
1.5	Approximate population in area serviced:	
1.6	Name, designation, and contact of focal point for the prehospital emergency care system:	
1.7	Name, designation, and contact of respondent: This refers to the person answering the assessment questions.	
1.8	Name, designation, and contact of additional respondents: If applicable	
1.9	Name, designation, and contact of interviewer: If respondent is being interviewed by an interviewer, include the interviewer's information here.	
1.10	Date of survey:	

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2. System context

This section covers background questions about the context in which the prehospital system exists, including legislative, financial and cross-cutting elements.
The questions refer to the local context in which the service operates: answers may be provided at a local, regional or national level, but should be consistent in approach.

		Yes	No	If yes, please address the following questions	
2.1	There are formal **public** emergency medical services (EMS) in the prehospital system	☐	☐	*What is the name of the public system?* *How many separate public services exist in the system?* *What is the coverage area of public services (that is, what geographic area is covered by the named EMS organization)?*	
2.2	There are **private** EMS in the prehospital system	☐	☐	*How many separate private services exist in the system?* *Are the services hospital based or EMS-based?* *What is the coverage area of private services?*	
2.3	There are informal EMS (e.g., CFAR) in the prehospital system	☐	☐	*What is the name of the informal EMS?* *How many separate informal services exist?* *What is the coverage area of the informal services?*	

2A. GOVERNANCE AND POLICY		**N = No S = Somewhat A = Adequate**	**For "No" or "Somewhat": does this need to change? If so, what are the barriers?**	**Follow up questions**
I.	***General***			
2.4	There is legislation that establishes the prehospital component of the emergency care system and defines its responsibilities.	**N ☐ S ☐ A ☐**		*What is this legislation? What are the system's responsibilities?*
2.5	There is legislation mandating that anyone can access prehospital emergency care (i.e., there is a legal framework for universal access)	**N ☐ S ☐ A ☐**		

2.6	There is legislation that protects against financial barriers to accessing prehospital emergency care.	**N** ☐ **S** ☐ **A** ☐		*Do patients pay for services out of pocket? When are they asked to pay (i.e., before or after service provision)?*
2.7	The prehospital emergency care system is governed by a central authority.	**N** ☐ **S** ☐ **A** ☐		*What is the central authority? What is its mandate?*
II.	***System Activation***			
2.8	There is a legislative mandate for a single universal access number (UAN) for system activation.	**N** ☐ **S** ☐ **A** ☐		*What is the mandated universal activation method?*
2.9	There is legislation requiring telephone companies to provide free calls to the UAN.	**N** ☐ **S** ☐ **A** ☐		
III.	***Protections***			
2.10	There is legislation protecting patients from theft and assault.	**N** ☐ **S** ☐ **A** ☐		*What does the legislation protect?*
2.11	There is legislation to protect bystanders who provide assistance to the acutely ill or injured.	**N** ☐ **S** ☐ **A** ☐		*What does the legislation protect?*
2.12	There is legislation to protect prehospital providers who deliver care to the acutely ill or injured.	**N** ☐ **S** ☐ **A** ☐		*What does the legislation protect?*
IV.	***Private services*** *If no private services exist, skip to next sub-section, "V. Human resources"*			
2.13	Private ambulance services in the system's area are regulated.	**N** ☐ **S** ☐ **A** ☐		*Who regulates these services? How is this done? What penalties are there for non-compliance?*
2.14	Private ambulance services are coordinated with public services.	**N** ☐ **S** ☐ **A** ☐		*How is coordination done (e.g., do public dispatch centres coordinate dispatch to private ambulances)?*

V.	***Human Resources***			
2.15	There is legislation describing the role, responsibilities, and scope-of-practice of prehospital providers.	**N ☐ S ☐ A ☐**		*How are prehospital providers defined? What are their roles and responsibilities?*
2.16	Prehospital provider training leads to licensing with a central authority.	**N ☐ S ☐ A ☐**		*What is the licensing authority?*
VI.	***Operations***			
2.17	There are standardized system-wide operational protocols for providers to follow.	**N ☐ S ☐ A ☐**		*What do the protocols include? Who is responsible for them?*
2.18	There are laws regulating the use of emergency response vehicles.	**N ☐ S ☐ A ☐**		*What do these laws include?*
2.19	There is a protocol and process for interfacility transfers.	**N ☐ S ☐ A ☐**		*What do the protocols include? Who is responsible for them?*
2.20	There is a protocol to determine which facility to take each patient to.	**N ☐ S ☐ A ☐**		*How is destination triage done? Are there specific centres with specialized capabilities that have been designated or certified (e.g. stroke or trauma centres)?*
2B. FINANCING		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
2.21	There are public funding sources for the system.	**N ☐ S ☐ A ☐**		*Is the public funding mandated by legislation? Is there a funding scheme for prehospital care (e.g., linked to vehicle registration fees, licensing fees, or similar)?*

2.22	There are non-public (e.g., private) funding sources for the system	**N ☐ S ☐ A ☐**		*What are the non-public or private funding sources for the system? Who is responsible for funding the system?*
2.23	Financing is organized and administered at the central level. (Central = the authority oversees the entire system)	**N ☐ S ☐ A ☐**		*Who is responsible for finances at the central level?*
2.24	There is a government funded national health insurance scheme that covers prehospital emergency care.	**N ☐ S ☐ A ☐**		*What does it cover?*
2C. LEADERSHIP The titles of leadership positions may be different in your setting. If a specific title is not used in your system, please answer based on the equivalent position.		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
2.25	There is a chief executive officer (CEO) managing the prehospital system.	**N ☐ S ☐ A ☐**		
2.26	There is a medical director or medical control officer (MCO) for the system.	**N ☐ S ☐ A ☐**		
2.27	There is a chief operations officer (COO) for the system.	**N ☐ S ☐ A ☐**		
2.28	There is someone responsible within the system for each of the following areas:			
i.	clinical training.	**N ☐ S ☐ A ☐**		
ii.	clinical governance and quality improvement.	**N ☐ S ☐ A ☐**		

iii.	financial management.	**N** ☐ **S** ☐ **A** ☐		
iv.	supply chain management.	**N** ☐ **S** ☐ **A** ☐		
v.	human resource management.	**N** ☐ **S** ☐ **A** ☐		
vi.	facility and infrastructure management.	**N** ☐ **S** ☐ **A** ☐		
vii.	fleet management.	**N** ☐ **S** ☐ **A** ☐		
viii.	communications.	**N** ☐ **S** ☐ **A** ☐		
2.29	Communication and dispatch centres have dedicated managers.	**N** ☐ **S** ☐ **A** ☐		
2.30	The system has regional managers (where applicable).	**N** ☐ **S** ☐ **A** ☐		
2.31	The system has district managers (where applicable).	**N** ☐ **S** ☐ **A** ☐		
2.32	The system has station/base managers.	**N** ☐ **S** ☐ **A** ☐		
2.33	System leadership has the ability to adapt to changing current needs, and to various local contexts across regions.	**N** ☐ **S** ☐ **A** ☐		*How is adaptation ensured? Who is responsible for making sure this is done?*

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2D. INFRASTRUCTURE AND TECHNOLOGY		N= No S= Somewhat Adequate	For any "No" or "Somewhat", does this need to change? If so, what are the barriers?	Follow up questions
2.34	There is a toll-free UAN that patients or bystanders can use to activate the prehospital component of the emergency care system.	**N ☐ S ☐ A ☐**		*What are the UAN numbers? What areas do they cover?*
2.35	The public is aware of and can use the UAN.	**N ☐ S ☐ A ☐**		*What percentage of the population knows the UAN?*
2.36	There is education for the general public on when to appropriately call the UAN to activate the system	**N ☐ S ☐ A ☐**		
2E. BYSTANDER RESPONSE		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
2.37	There is accredited first aid training for the general public.	**N ☐ S ☐ A ☐**		*What is included in the training? Who accredits it?*
2F. QUALITY IMPROVEMENT		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
2.38	There is a central registry/database for patient care information, available in writing or digitally.	**N ☐ S ☐ A ☐**		*Who is responsible for maintaining the central registry/database?*
2.39	Patient data are stored in a secure manner, accessible only to those within the system as needed.	**N ☐ S ☐ A ☐**		*How are patient data secured? Who is responsible for securing the data?*

2.40	Performance metrics of the system are collected, including statistics on patient presentations, response times, patient destinations, training, and resource utilization.	**N ☐ S ☐ A ☐**		*How are these performance metrics collected? What are the data used for?*
2.41	There is a method for the medical director to ensure the clinical compliance of the system.	**N ☐ S ☐ A ☐**		*What does the medical director do to ensure clinical compliance?*
2.42	All emergency calls are answered, and all calls requiring an emergency response are responded to.	**N ☐ S ☐ A ☐**		*What is the total call volume? What % are answered? What % are responded to? What % end up with a patient transported?*
2.43	There are time targets for highest priority calls.	**N ☐ S ☐ A ☐**		*What are the time targets? What percentage of qualified calls meet this target?*
2.44	There is a framework and plan in place to further develop the system as more resources become available.	**N ☐ S ☐ A ☐**		*Who is responsible for overseeing the development of the system?*
2G. SURGE RESPONSE (DISASTER PREPAREDNESS)		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
2.45	The system has an up-to-date mass casualty incident / disaster plan.	**N ☐ S ☐ A ☐**		*What is included in the disaster plan? When was it last updated?*
2.46	The system's staff know about the disaster plan and their roles within it.	**N ☐ S ☐ A ☐**		*What percentage of the system's staff know the plan?*

2.47	There are regularly performed disaster drills.	**N** ☐ **S** ☐ **A** ☐		*Who participates in the drills? How often do these occur?*
2.48	There is a protocol or method to triage patients in a mass casualty incident.	**N** ☐ **S** ☐ **A** ☐		*Which triage method is used?*
2.49	There is a designated liaison to the relevant public health authority.	**N** ☐ **S** ☐ **A** ☐		*Who do they liaise with?*
2.50	There is a protocol for coordination with other services (e.g., police, fire, water, etc.) in surge.	**N** ☐ **S** ☐ **A** ☐		*What is this protocol?*

Notes on system context:

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3. Service-specific overview

This section covers background questions about the respondent's own prehospital service organization. The respondent should report details only about his/her service.

3A. HUMAN RESOURCES

Insert the number of prehospital providers for each cadre (or N/A if not applicable)

3.1	First Aid (e.g., CFARs)	
3.2	Basic Life Support (BLS) / Basic Ambulance Provider (BAP)	
3.3	Intermediate Life Support This provider level operates between basic and advanced life support.	
3.4	Advanced Life Support (ALS) / Advanced Ambulance Provider (AAP)	
3.5	Prehospital Nursing Staff Nurse with training to deliver care in the prehospital setting	
3.6	Physicians	
3.7	Other (specify)	

3B. OPERATIONAL FLEET

Insert the number of vehicles for each type (or N/A if not applicable)

3.8	Basic Ambulances	
3.9	Advanced Ambulances	
3.10	Other Scene Response Vehicles May include vehicles that transport providers, or may refer to other vehicles e.g., emergency resupply for MCI	
3.11	Medical Helicopters	
3.12	Fixed Wing Air Ambulances	

3.13	Watercraft Ambulances	
3.14	Alternative Ambulances or Response Vehicles e.g., motorcycle, bicycle, animal-drawn	
3.15	Other	

3C. FACILITIES

Insert the number of facilities for each type (or N/A if not applicable)

3.16	Directional facilities (e.g. national or regional headquarters)	
3.18	Communication and dispatch centres	
3.19	Ambulance base station	
3.20	Satellite ambulance base station	
3.21	Other:	

Notes on service specific overview:

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4. Call-taking and dispatch

This section covers the respondent's own prehospital service organization. The respondent should report details only about his/her service.

		N = No S = Somewhat A = Adequate	For any "No" or "Somewhat", does this need to change? If so, what are the barriers?	Follow up questions
4.1	Patients or bystanders are able to reach this service by calling the UAN or by calling a service-specific number.	**N ☐ S ☐ A ☐**		*If there is a service-specific number, what is it?*
4.2	This service has designated emergency communication and dispatch centres to dispatch and coordinate emergency responses between all involved parties Centres may be for ambulance service alone or part of another centre (e.g., police call centre) **If "no," skip to next section: "5. Patient transport and transport care.". Otherwise, proceed.**	**N ☐ S ☐ A ☐**		*What is the total number and locations of the communication centres?*
4.3	Communication centres are able to give basic clinical advice to bystanders.	**N ☐ S ☐ A ☐**		*How is this regulated? Who is responsible for this?*
4.4	There is clinical oversight of the communication centres and their operations.	**N ☐ S ☐ A ☐**		*How is this done?*
4.5	There are pre-defined criteria to decide what resources need to be dispatched to an incident.	**N ☐ S ☐ A ☐**		*What are the criteria? What system is used?*

4.6	The communication centres have personnel for call taking.	**N** ☐ **S** ☐ **A** ☐		
4.7	The communication centres have personnel for dispatch.	**N** ☐ **S** ☐ **A** ☐		
4.8	There is accredited training for communication centre personnel.	**N** ☐ **S** ☐ **A** ☐		*What is included in the training? Who accredits it?*
4.9	There is automated tracking of the caller's location by phone.	**N** ☐ **S** ☐ **A** ☐		*How is the automated tracking done?*
4.10	There are alternative methods of identifying a caller's location.	**N** ☐ **S** ☐ **A** ☐		*What are these additional methods?*
4.11	Prehospital providers can receive up to date information on local emergencies.	**N** ☐ **S** ☐ **A** ☐		*How do they receive this information?*
4.12	Prehospital providers can report details about the emergency back to the communications centre and others involved in the response.	**N** ☐ **S** ☐ **A** ☐		*How are the prehospital providers able to report back?*
4.13	Communication centres are able to give medical direction to prehospital providers.	**N** ☐ **S** ☐ **A** ☐		*How is this regulated? Who is responsible for this?*
4.14	Each emergency call is given a priority level, indicating its urgency.	**N** ☐ **S** ☐ **A** ☐		*How is this determined?*
4.15	There is a backup communications system, or a protocol for when communications are down.	**N** ☐ **S** ☐ **A** ☐		*What is the backup system or protocol? Who is responsible for this?*

4.16	There are designated ambulance base stations to dispatch emergency responses from.	**N ☐ S ☐ A ☐**		*What is the total number and locations of each base? Is there a dedicated wash bay with purpose-built drainage at each base?*
4.17	The ambulance base stations are geographically spread to provide adequate coverage of the prehospital system area.	**N ☐ S ☐ A ☐**		*What % of the total geographic area is adequately covered?*
4.18	There are designated satellite ambulance base stations to support the main bases.	**N ☐ S ☐ A ☐**		*What is the total number, the locations, and the nature (e.g. hospital parking spot) of each satellite base?*

Notes on call taking and dispatch:

World Health Organization

5. Patient transport and transfer

This section covers the respondent's own prehospital service organization. The respondent should report details only about his/her service.

5A. INFRASTRUCTURE AND TECHNOLOGY		N = No S = Somewhat A = Adequate	For any "No" or "Somewhat", does this need to change? If so, what are the barriers?	Follow up questions
5.1	There is an organized, defined system or process to transport patients to a healthcare facility (e.g. ambulances, taxis, combination thereof, etc.)	**N ☐ S ☐ A ☐**		*What is the method or process of transportation?*
5.2	Vehicles are branded to make them identifiable as a part of the prehospital system.	**N ☐ S ☐ A ☐**		*How are they branded (lights, sirens, white with red writing, etc.)?*
5.3	There are mechanisms in place to repair broken vehicles.	**N ☐ S ☐ A ☐**		*What is this mechanism? Who is responsible for it?*
5.4	The receiving healthcare facility is notified of patients being transported to them.	**N ☐ S ☐ A ☐**		*How are healthcare facilities notified?*
5.5	Patients can be transferred from one healthcare facility to another (interfacility transfers).	**N ☐ S ☐ A ☐**		
5.6	Healthcare facilities can communicate with each other about interfacility transfers.	**N ☐ S ☐ A ☐**		*How does communication about transfers occur?*
5.7	There is a distinction made between primary emergency responses and interfacility transfers.	**N ☐ S ☐ A ☐**		

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5B. HUMAN RESOURCES		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
5.8	In each ambulance, there is both a designated driver and a designated care provider.	**N ☐ S ☐ A ☐**		*What are the titles and qualifications of each? What are their specific roles and what is their relationship to each other?*
5.9	There is accredited training for designated drivers.	**N ☐ S ☐ A ☐**		*What is included in the training? Who accredits it?*

Notes on patient transport and transfer:

World Health Organization

6. Provider response and care

This section covers the respondent's own prehospital service organization. The respondent should report details only about his/her service.

6A. HUMAN RESOURCES		N = No S = Somewhat A = Adequate	For any "No" or "Somewhat", does this need to change? If so, what are the barriers?	Follow up questions
6.1	There are uniforms or other materials for prehospital providers to identify themselves.	**N ☐ S ☐ A ☐**		*How are prehospital emergency providers identified?*
6.2	There is adequate recruitment of prehospital providers to fill staffing needs.	**N ☐ S ☐ A ☐**		*How are prehospital providers recruited?*
6.3	Prehospital providers are compensated or are incentivized to stay involved and to perform well.	**N ☐ S ☐ A ☐**		*How are they compensated or incentivized?*
6.4	There is a training curriculum to become a prehospital provider.	**N ☐ S ☐ A ☐**		*What training courses are used? What different levels are available? (e.g., CFAR, Basic Ambulance Provider, Advanced Ambulance Provider, etc.)*
6.5	The training is controlled and regulated by a central authority.	**N ☐ S ☐ A ☐**		*Who is the central authority?*
6.6	The training curriculum is adapted to local needs, resources, and cultural contexts.	**N ☐ S ☐ A ☐**		*How is the curriculum adapted? Who is responsible for making sure the curriculum is adapted?*
6.7	There are designated trainers that train prehospital providers.	**N ☐ S ☐ A ☐**		*Who are the trainers?*

6.8	Prehospital providers are required to keep up to date with their training (Continuous Professional Development)	**N ☐ S ☐ A ☐**		*How are prehospital emergency providers refreshed on their training? Who is responsible for keeping them up to date?*
6.9	Prehospital providers are re-assessed at specified time intervals to ensure skill and knowledge retention.	**N ☐ S ☐ A ☐**		*How often are prehospital providers re-assessed? Who is responsible for re-assessing them?*
6B. CARE PROVISON		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
6.10	There is a clinical protocol for:			
i.	initial approach to ABCD.	**N ☐ S ☐ A ☐**		
ii.	trauma.	**N ☐ S ☐ A ☐**		
iii.	burns.	**N ☐ S ☐ A ☐**		
iv.	difficulty in breathing.	**N ☐ S ☐ A ☐**		
v.	shock.	**N ☐ S ☐ A ☐**		
vi.	altered mental status.	**N ☐ S ☐ A ☐**		
vii.	labour and delivery in low-risk women.	**N ☐ S ☐ A ☐**		
viii.	post-partum haemorrhage.	**N ☐ S ☐ A ☐**		

ix.	neonatal resuscitation.	**N** ☐ **S** ☐ **A** ☐		
x.	paediatric resuscitation.	**N** ☐ **S** ☐ **A** ☐		
xi.	adult resuscitation.	**N** ☐ **S** ☐ **A** ☐		
6.10	There is a protocol and process for backup medical guidance for providers (medical control).	**N** ☐ **S** ☐ **A** ☐		*What do the protocols include? What is the process? Who is responsible for medical guidance?*
6.11	There is a protocol for handover of a patient between prehospital providers and the healthcare facility.	**N** ☐ **S** ☐ **A** ☐		*What does the protocol include?*
6.12	Prehospital providers can:			
i.	measure vital signs including oxygen saturation.	**N** ☐ **S** ☐ **A** ☐		
ii.	perform spinal immobilization.	**N** ☐ **S** ☐ **A** ☐		
iii.	use manual manoeuvres to open the airway (e.g., jaw thrust, chin lift).	**N** ☐ **S** ☐ **A** ☐		
iv.	perform abdominal or back thrusts for choking.	**N** ☐ **S** ☐ **A** ☐		
v.	suction the airway.	**N** ☐ **S** ☐ **A** ☐		
vi.	place oro- or naso-pharyngeal airway devices.	**N** ☐ **S** ☐ **A** ☐		

vii.	place supraglottic devices (e.g. LMA).	**N** ☐ **S** ☐ **A** ☐		
viii.	perform endotracheal intubation.	**N** ☐ **S** ☐ **A** ☐		
ix.	place a surgical airway (e.g. cricothyrotomy).	**N** ☐ **S** ☐ **A** ☐		
x.	administer bronchodilators.	**N** ☐ **S** ☐ **A** ☐		
xi.	administer oxygen.	**N** ☐ **S** ☐ **A** ☐		
xii.	administer bag-valve-mask ventilation.	**N** ☐ **S** ☐ **A** ☐		
xiii.	initiate mechanical ventilation (e.g. BiPAP, CPAP).	**N** ☐ **S** ☐ **A** ☐		
xiv.	perform needle decompression of tension pneumothorax.	**N** ☐ **S** ☐ **A** ☐		
xv.	dress sucking chest wounds.	**N** ☐ **S** ☐ **A** ☐		
xvi.	administer oral rehydration solution.	**N** ☐ **S** ☐ **A** ☐		
xvii.	place peripheral IVs.	**N** ☐ **S** ☐ **A** ☐		
xviii.	place intraosseous access.	**N** ☐ **S** ☐ **A** ☐		
xix.	administer IV fluids.	**N** ☐ **S** ☐ **A** ☐		

xx.	insert a urinary catheter.	**N ☐ S ☐ A ☐**		
xxi.	perform external control of haemorrhage.	**N ☐ S ☐ A ☐**		
xxii.	perform wound packing or suture placement to control bleeding.	**N ☐ S ☐ A ☐**		
xxiii.	place a tourniquet to control bleeding.	**N ☐ S ☐ A ☐**		
xxiv.	splint fractured extremities.	**N ☐ S ☐ A ☐**		
xxv.	perform pelvic binding on suspected pelvic fractures.	**N ☐ S ☐ A ☐**		
xxvi.	perform defibrillation and/or cardioversion.	**N ☐ S ☐ A ☐**		
xxvii.	administer adrenaline.	**N ☐ S ☐ A ☐**		
xxviii.	perform ECGs with interpretation.	**N ☐ S ☐ A ☐**		
xxix.	administer aspirin.	**N ☐ S ☐ A ☐**		
xxx.	administer glucose.	**N ☐ S ☐ A ☐**		
6C. DOCUMENTATION		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
6.13	Prehospital providers consistently and reliably record patient care information.	**N ☐ S ☐ A ☐**		*How do providers record patient care information? Is it on paper or digital?*

6.14	Patient care information is available to other care providers.	**N ☐ S ☐ A ☐**		*How is the information available to others?*
6.15	Patient care information is given to providers upon arrival to the healthcare facility.	**N ☐ S ☐ A ☐**		*How is patient care information handed over?*
6.16	Patient care information is integrated with patients' charts as they are handed off to a healthcare facility.	**N ☐ S ☐ A ☐**		*How is patient care information integrated with the patient's chart?*
6D. INFRASTRUCTURE AND TECHNOLOGY		**N = No S = Somewhat A = Adequate**	**For any "No" or "Somewhat", does this need to change? If so, what are the barriers?**	**Follow up questions**
6.17	There are mechanisms in place to repair broken equipment in a timely manner.	**N ☐ S ☐ A ☐**		*What is this mechanism and who is responsible for it?*
6.18	There are mechanisms in place to check, replenish and dispose of medications and equipment for prehospital providers.	**N ☐ S ☐ A ☐**		*How is this done? Who is responsible for this?*
6.19	Medications and equipment are organized in jump bags, easily accessible boxes, or another organized method.	**N ☐ S ☐ A ☐**		*How are they organized? How do providers know where to access supplies?*

Notes on provider response and care: