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Report No: PAD2456

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF US$100 MILLION

TO THE

REPUBLIC OF UZBEKISTAN

FOR AN

EMERGENCY MEDICAL SERVICES PROJECT

April 4, 2018

Health, Nutrition and Population Global Practice
Europe And Central Asia Region

CURRENCTY EQUIVALENTS

(Exchange Rate Effective March 2018)

Currency Unit = Uzbek Sum
UZS 8140= US$1

FISCAL YEAR
January 1–December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BCC	Behavior Change Communication
CPF	Country Partnership Framework
DALY	Disability-Adjusted Life Year
EMP	Environmental Management Plan
EMS	Emergency Medical Services
EU	European Union
FM	Financial Management
GDP	Gross Domestic Product
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
KPI	Key Performance Indicator
ILO	International Labour Organization
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NCD	Noncommunicable Disease
OOP	Out-of-Pocket
PDO	Project Development Objective
PHC	Primary Health Care
PIU	Project Implementation Unit
POM	Project Operations Manual
PPSD	Project Procurement Strategy Document
RSCEMC	Republican Scientific Center for Emergency Medical Care
SDG	Sustainable Development Goal
TETRA	Terrestrial Trunked Radio
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Program
WHO	World Health Organization

Regional Vice President:	Cyril E Muller
Country Director:	Lilia Burunciuc
Senior Global Practice Director:	Timothy Grant Evans
Practice Manager:	Enis Barış
Task Team Leader:	Elvira Anadolu

BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
No		Investment Project Financing

[ ] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
25-Apr-2018	31-Aug-2024	B - Partial Assessment

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to increase the effectiveness and efficiency of the emergency medical services (EMS) system.

Components

Component Name	Cost (US$, millions)
Component 1: EMS Enabling Environment, System Management and Quality Improvement	3,160,000.00
Component 2: Dispatch, Communications and Information Systems	13,964,400.00
Component 3: Emergency Care System Improvement	81,188,600.00
Component 4: Project Management	1,687,000.00

Organizations

Borrower :	Republic of Uzbekistan
Implementing Agency :	Ministry of Health

PROJECT FINANCING DATA (US$, Millions)

[ ] Counterpart Funding	[ ] IBRD	[✓] IDA Credit	[ ] IDA Grant	[ ] Trust Funds	[ ] Parallel Financing

Total Project Cost:	Total Financing:	Financing Gap:
100.00	100.00	0.00
	Of Which Bank Financing (IBRD/IDA): 100.00	

Financing (in US$, millions)

Financing Source	Amount
IDA-62100	100.00
Total	**100.00**

Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023	2024	2025
Annual	0.00	5.00	14.00	16.00	27.00	27.00	10.00	1.00
Cumulative	0.00	5.00	19.00	35.00	62.00	89.00	99.00	100.00

INSTITUTIONAL DATA

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate

9. Other	
10. Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

The Recipient shall, not later than thirty (30) days from the Effective Date, install an accounting system/software satisfactory to the Association.

Conditions

Type	Description
Effectiveness	The Recipient, through the Implementing Agency, has established a PIU with composition, staff, resources and terms of reference acceptable to the Association.

Type	Description
Effectiveness	The Recipient, through the Implementing Agency, has adopted the Project Operational Manual satisfactory to the Association.

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Elvira Anadolu	Team Leader(ADM Responsible)	Senior Health Specialist	GHN03
Nurbek Kurmanaliev	Procurement Specialist(ADM Responsible)	Procurement Specialist	GGOPC
Djamshid Iriskulov	Financial Management Specialist	Financial Specialist	GGOEE
Dominic S. Haazen	Team Member	Lead Health Policy Specialist	GHN13
Gabriel C. Francis	Team Member	Program Assistant	GHN03
Iqboljon Ahadjonov	Team Member	Consultant	GHN03
Jasna Mestnik	Team Member	Finance Officer	WFACS
Lingzhi Xu	Team Member	Senior Operations Officer	GHN03
Nina Kolybashkina	Social Safeguards Specialist	Senior Social Development Specialist	GSU03
Rustam Arstanov	Environmental Safeguards Specialist	Environment Specialist	GEN03
Ruxandra Costache	Counsel	Senior Counsel	LEGLE
Volkan Cetinkaya	Team Member	Health Economist	GHN03

Extended Team

Name	Title	Organization	Location

UZBEKISTAN

EMERGENCY MEDICAL SERVICES PROJECT

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I. STRATEGIC CONTEXT

A. Country Context

1. Uzbekistan is Central Asia's most populous country with 31 million people (over one-third under the age of 14), and comprises nearly half the region's total population. With a land area of 447,000 km^2, about the size of California or Spain, Uzbekistan is the only Central Asian country to border four other Central Asian states. It also shares a short border with Afghanistan to the south.

2. Uzbekistan's Government has started implementation of the policies towards decentralization and improvement of public accountability and transparency. Over the last decade, Uzbekistan's economy grew rapidly, was resilient to shocks, and lifted significant parts of the population out of poverty. According to official statistics, Uzbekistan's gross domestic product (GDP) growth rate of 8.2 percent over the last decade was the highest in the Europe and Central Asia Region and one of the eight highest in the world. Per capita gross national income rose from US$2,020 in 2001 to US$5,840 in 2014. Poverty also declined from 27 percent to 15 percent between 2003 and 2012, although the methodology for measuring poverty needs to be brought up to international standards. The greater part of the population lives in rural areas. The poverty level tends to be higher for rural residents and female-headed households. Analysis of national household surveys suggests that recent growth has been relatively equitably distributed.

B. Sectoral and Institutional Context

3. The quality and efficiency of the health sector in Uzbekistan has substantial scope for improvement. Currently, public financing is equivalent to just 2.8 percent of GDP, which is below the average middle-income country, but public expenditure on health is gradually increasing, placing the health sector as one of the priority areas of Government development strategy. Pervasive market failures (manifested in the absence of insurance markets) mean that ramping up private spending for health (currently equivalent to 2.6 percent of GDP) is unlikely. Thus, the current public spending on health care combined with high out-of-pocket (OOP) expenditures (44 percent of total health expenditures), suggest that the Government may need to further increase its health spending and bring down the burden of the OOP expenses, especially for the poor.

Health Outcomes

4. Life expectancy at birth in Uzbekistan in 2015 was 69.4 years which is 7.4 years below the European countries' average of 76.8 years (Global Health Observatory of the World Health Organization [WHO]). One of the key reasons for low life expectancy is the growing incidence of noncommunicable diseases (NCDs) accounting for 79 percent of total deaths (WHO 2014[1]) and in particular, from diseases related to the circulatory system, which are the main cause of mortality. Age-standardized death rate due to diseases related to the circulatory system in Uzbekistan in 2014 (154 deaths per 100,000) was four times higher than the average in the European Union (EU) member countries, which was 38 deaths (WHO European Health Information Gateway). The main forms of heart and circulatory system (cardiovascular diseases) are ischemic heart diseases with 41,892 deaths and 14,261 deaths for stroke (WHO 2014). The

[1] World Health Statistics 2014.

number of deaths in Uzbekistan Disability adjusted life years (DALYs) rate per 1,000 population in 2015 (WHO) for ischemic heart diseases is 1,463 and for cerebrovascular diseases is 432. Mortality from injuries account for 7 percent in Uzbekistan (WHO 2014). Moreover, standardized death rate in 2005 (WHO) for accidents was 11.31 percent, whereas in the WHO EU region it was 8.17 percent for the same year.

5. In addition to avoiding deaths, an effective emergency medical services (EMS) system could also help prevent disability. According to 2015 WHO data, the four areas most amenable to EMS interventions (maternal and neonatal conditions, heart attacks, strokes, and trauma) account for 39.1 percent of all DALYs, including 42.5 percent of male DALYs (due to the higher burden of trauma) and 34.8 percent of female DALYs.

6. An effective primary health care (PHC) system is one of the key interventions to address NCD-related health issues. Uzbekistan has been putting much efforts in developing and improving PHC services. The World Bank has been supporting reforms and enhancement of PHC through three health projects in the last decade. The PHC reforms encouraged the population to use local outpatient services as well as rayon medical units and city medical units within the referral chain from PHCs through rayon, oblast, and republican facilities. Yet out-of-hours nonemergency PHC services and large number of home visits are being provided by the EMS. The EMS provides free-of-charge services to urban and rural populations and handles large volumes of non-urgent and nonemergency cases, which should be treated at the PHC level.

7. The current EMS system is highly fragmented with little coordination between districts and regions. There is no screening of calls to determine whether highly specialized ambulance teams are required at the scene. In addition, there is no automation of the dispatch function, although an integrated information system is currently being developed. The proposed system appears to have all the major elements needed to be effective according to international best practices. To date, a concept note on a proposed dispatch system has been developed by UZMedInfo, the IT consulting arm of the Ministry of Health (MOH), and is awaiting formal approval by the Government; the related systems architecture has been specified; and a feasibility study is under way and is expected to be completed by December 2017. It is expected that the full system will cost US$20–25 million, although roughly 70 percent of this cost (US$14–17 million) will be required for the implementation of the digital data and voice communications system (Terrestrial Trunked Radio [TETRA]), and the linkage of this system with other emergency services. Though discussions are under way with various financiers regarding the potential funding of the system, no decisions have yet been made.

8. Pre-hospital and in-hospital aspects of the Republican Scientific Center for Emergency Medical Care, however, are providing suboptimal services far beyond the scope of what would normally be considered emergency medical care. For example, both the republican and regional centers have consultant physicians who are providing outpatient consultations and diagnostic services to nonemergency patients. Inefficiencies, therefore, exist in the delivery of pre-hospital services, with ‘emergency’ calls constituting just 56 percent of the total call volume, which is much lower than in other high-performing EMS systems. Further, only 9.2 percent of calls from cases when patients require emergency care are brought to a hospital, with over 90 percent being treated at the scene. On a per capita basis, there are almost 25 calls per 100 population in Uzbekistan, compared to 10–12 per 100 population in most well-functioning EMS systems. This suggests that many of the calls that are being responded to are neither emergency nor urgent calls. These cases should rather be treated by the PHC system or in polyclinics rather than the EMS system.

9. Ambulances are oversupplied and often inappropriately used. Most of the current fleet is unsuitable for providing modern pre-hospital care. They have limited space for providing life-saving care en route to the hospital and for storing emergency equipment and are essentially used to transport patients to and from hospitals regardless of whether there is an emergency. The ambulances are not even suitable for basic transport because the passenger compartment is too small to comfortably hold people of above-average height. To some extent, this challenge has already been recognized with better equipped ambulances being purchased through various means, including the ongoing World Bank-funded Health System Improvement Project. In addition to the quality, another challenge relates to the number of ambulances. Most countries with a functioning EMS system have one vehicle per 25,000–35,000 population. In the United States, this even goes up to one vehicle per 50,000 people in mid-size cities. Uzbekistan currently has one vehicle per 18,300 people, with the actual standards being even lower at 1: 13,000. Despite this, there are known instances in which many serious cases are not being transported to a hospital by ambulance. This suggests that there is scope for initiatives to encourage the proper use of ambulance services by reorienting the EMS system to focus more on true emergencies and urgent cases. An EMS system that responds primarily to emergency and urgent calls would require around 900–1,200 well-equipped ambulances and respond to roughly 3.2–3.8 million calls. A high percentage of patients would be transported to the hospital and about 25 percent of these patients would eventually be admitted (compared to 9.2 percent presently).[2]

10. Human resources may be adequate in quantity, but actual skills and abilities will need to be assessed. Physicians appear to have a wide scope of practice, despite limited access to equipment, drugs, and supplies. On the other hand, the scope of practice of feldshers[3] (at PHC level) appears to be more constrained. Given the level of training that these staff already have, some expansion of this scope of practice may be worth exploring. Trauma care such as those required because of motor vehicle accidents was one area that did not appear to be well covered based on site visits. The 'Damas' ambulances are too small to carry the required equipment (including spine boards, 'scoop' stretchers, immobilization devices, splints, and so on), and even the larger ambulances did not have all the necessary equipment. Even if such equipment was included in the ambulances—which would be recommended—this suggests that there may also be a need for further training in trauma care for all clinical staff. There may also be other areas that arise if an increasing focus on emergency and urgent cases is to be pursued. There are observed gender disparities based on occupation and tasks performed in the health sector in Uzbekistan. The trainings provided under the project will equally engage both male and female health professionals. This will be monitored through a gender-disaggregated project indicator.

11. For in-hospital care, the master plan notes that the emergency care system is not adequately oriented to deal with the high burden of cardiovascular disease and does not have either sufficient diagnostic equipment nor clinical competence to appropriately diagnose and treat emergency cases. Improved training and availability of diagnostic equipment (including appropriate distribution throughout the country) are key requirements. Finally, there is a need to improve the administrative systems and procedures, including the development of a dispatching function that can appropriately differentiate emergency from nonemergency calls—directing nonemergency calls to the PHC system—and

[2] These figures are at the upper end of the recommendations from a report on a master plan for EMS services (see Jung, K.Y., Final Report, August 2017).
[3] WHO definition of feldshers is: health care professionals who provide various medical services limited to emergency treatment and ambulance practice.

improvements in the training and monitoring systems, including the development of relevant quality indicators.

C. Higher Level Objectives to which the Project Contributes

12. The proposed operation is fully aligned with the Country Partnership Framework (CPF) FY16–FY20. The CPF identifies improving public service delivery as one of the three focus areas of the new CPF, which suggests that "significantly improved public service delivery will be essential in modernizing infrastructure and reducing spatial inequity in service delivery and, in so doing, build the human capital and provide the infrastructure services needed for growth and job creation." In addition, improving the efficiency of health services delivery—an outcome of a strengthened EMS—is also highlighted as a key area for World Bank Group support in the CPF.

13. The project's objectives also support Sustainable Development Goal (SDG) 3.4 to reduce premature mortality, and SDG 3.6 to halve the number of global deaths and injuries from road traffic accidents. In addition, the project will also contribute to the World Bank's twin goals of poverty reduction and shared prosperity, through reductions in mortality and morbidity resulting from accidents and medical emergencies, which should result in more productive employment prospects and less impoverishment.

14. The Government's medium-term growth and development strategy is reflected in the Uzbekistan Development Strategy for 2017-2021. For the health sector, the strategy aims at further reforming of the healthcare sector, mostly the primary health care and emergency medical care aimed at increasing the affordability and quality of medical and socio-medical service, developing healthy lifestyle of the population, and enhancing the material and technical resource base of medical institutions.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

15. The Project Development Objective (PDO) is to increase the effectiveness and efficiency of the emergency medical services (EMS) system.

B. Project Beneficiaries

16. The project will be national in scope and will cover the entire population of Uzbekistan (31 million people). The project will focus on strengthening the Republican Scientific Center of Emergency Medical Center (for both pre-hospital and in-hospital services) and its branches in the regions, as well as general and specialty hospitals providing in-hospital emergency services.

17. The principal beneficiaries of the project will be those with emergency trauma and medical conditions, including obstetrical emergencies. The improved EMS system will particulalry benefit an estimated 3.1 million people who will be treated annually in the pre-hospital care environment, and an estimated 6 million emergency and urgent cases will be treated annually in an in-hospital environment

(across all types of hospital facilities), although there will be considerable overlap between these two groups.

III. PROJECT DESCRIPTION

A. Project Components

18. The proposed project builds on the World Bank's existing engagement in the health sector in Uzbekistan as well as the evolving government priorities in the area of EMS. The Government has already initiated the reform of the EMS system, including among others, the development of various regulations and decrees, the preparation of a concept note for the integrated dispatch system, and the purchase of several functional ambulances through the ongoing World Bank project (Health System Improvement Project). This proposed project will support the Government of Uzbekistan in the implementation of its overall vision for an effective and efficient EMS system.

19. The proposed project will target specific investments that are critical to achieve this overall vision, through a combination of 'hard' and 'soft' investments. While the investments in equipment and vehicles are substantial, the related 'soft' investments are essential to ensure that these larger investments are effectively used to produce the desired outcomes. The proposed project will comprise four components.

Component 1: EMS Enabling Environment, System Management, and Quality Improvement (Estimated Financing: US$3.160 million)

20. This component will support a series of related interventions that are essential in reorienting the EMS system toward the provision of high-quality emergency and urgent care. This component will finance technical assistance, training, study tours, surveys and equipment. This would include the following:

Subcomponent 1.1: Regulatory, Governance, and Operational Management

21. A robust legal and regulatory framework is essential for realizing the vision for EMS and guiding the implementation and operation of the system. This subcomponent will assist the Government in developing such a framework and ensuring that it is revised as needed throughout the life of the project. The subcomponent will also assist in building capacity in operational management at all levels of the EMS system, including in the areas of human resource management, budget management, and data-based decision making. Support will also be provided to develop and/or update protocols for both dispatchers and operational crews to guide their performance in line with the established vision for the EMS system, and in the development of both pre-hospital and in-hospital triage and acuity scoring systems, which will be essential in ensuring that the focus of the EMS system remains predominantly on emergency and urgent cases.

Subcomponent 1.2: Behavior Change Communication (BCC) on Effective Use of the EMS System

22. This subcomponent will finance specific interventions on information, communication, and education, which will inform and encourage the public to use the EMS system primarily for emergency and urgent cases and to use alternative out-patient settings (PHC centers and polyclinics) for non-urgent cases. These interventions would include both explaining the need to reserve the EMS system for more serious cases and highlighting the likelihood that less urgent cases will be dealt with more quickly in alternative settings. Beneficiary feedback on improvements and performances of the EMS services will be collected on a regular basis and the results will provide information about areas that perform well or require further improvements. Feedback provided by men and women will be tracked separately.

Subcomponent 1.3: Quality Monitoring and Analytics

23. The new dispatch, operational, and management information systems will generate substantial amounts of real-time data. This subcomponent will finance specific capacity-building and analytical tools to fully exploit EMS-related data and make it readily available for both operational and senior management. Specific areas of analysis will include (but not be limited to) (a) response times by type of call; (b) distribution of calls by acuity score; (c) morbidity and mortality patterns by major diagnosis (including geographic variations); (d) utilization rates by age, gender, and diagnosis; (e) ambulance team efficiency; and (f) vehicle and equipment availability and use. The last type of analysis will be important for developing vehicle and equipment replacement strategies, which will ensure the ongoing sustainability of the system.

Subcomponent 1.4: EMS System Financing

24. This subcomponent will monitor the ongoing financing of the EMS system, with a view to ensuring a sustainable and efficient financing regime. In addition to ongoing monitoring of the EMS system revenues and expenditures, it will examine alternative financing sources and/or approaches, including the identification of additional sources of revenue and the development of pilot financing schemes (for example, copayment for non-urgent cases) tied to encouraging appropriate use of the EMS system. In this respect, it will rely on cost and operational data from the information system(s) and develop the capacity to conduct cost analysis of both pre-hospital and in-hospital activity.

Component 2: Dispatch, Communications, and Information Systems (Estimated Financing: US$13.964 million)

25. This component will finance the development of integrated dispatch centers in each of the 12 regions as well as in Tashkent. These centers will be responsible for receiving calls and dispatching of all ambulances within their borders, including those assigned to one of the 172 district centers or related substations. The Tashkent Center will also serve as a central coordinating function in case of natural disasters or widespread emergency situations. The central element of these centers would be a common, integrated computer-aided dispatch and communications system. The dispatch and communications system would be the core of an integrated information system to support both operational and management decision making and facilitate ongoing monitoring and evaluation (M&E). All functions of such a system are envisioned in the proposed new system that is already in the detailed design phase (but awaiting formal government approval). The funding included assumes that most of integrated digital radio

communications system (which is to be expanded to include all emergency services, including police and fire services) will be financed from other sources. This component will finance technical assistance, training, and equipment.

Component 3: Emergency Care System Improvement (Estimated Financing: US$81.189 million)

26. This component will finance technical assistance, training, equipment.

Subcomponent 3.1: Training and Skills Improvement

27. This subcomponent will develop a training needs analysis and develop training strategies to ensure that both hospital and pre-hospital care staff have the skills needed to operate in a predominantly emergency/urgent care environment. The activities will include support for the initial training of physicians and nurses in emergency medicine to encourage more staff to undertake a career in emergency medicine. Currently, health professionals need to take time off work, and pay their own tuition and living expenses. This subcomponent will also explore feasibility of expanding the network of training institutions beyond Tashkent, to Samarkand, Bukhara, and Adijan, and assist in establishing these programs if it proves to be feasible.

28. The training will address gender disparities identified in the health sector and ensure equal participation of male and female health professionals. Feedback on the quality of trainings will be collected. While a well-established network of continuous medical education already exists within the EMS system, the funds under this subcomponent would help facilitate the rapid dissemination of diagnostic and intervention skills as determined by the needs assessment. The trainings will address gender disparities identified in the health sector and ensure equal participation of male and female health professionals. Feedback on the quality of trainings will be collected. Another important element of the training will be to ensure that all staff are aware of and can apply the triage and acuity scoring systems which will be essential in ensuring that the acuity of pre-hospital and hospital cases are properly assessed.

Subcomponent 3.2: Essential Vehicles and Equipment

29. This subcomponent will support the acquisition and distribution of modern ambulance vehicles and the essential equipment needed for those vehicles to support an increasing emphasis on pre-hospital and in-hospital emergency and urgent care (both trauma and medical emergencies, including obstetrical and neonatal emergencies), with regard to diagnosis, triage, and treatment. This subcomponent will also support the development of regional vehicle and equipment maintenance centers to ensure that equipment continues to be available and working properly, if these are determined to be cost-effective approaches. If not, other options will be developed to ensure that vehicles and equipment are maintained at appropriate levels for optimum availability and utilization.

Component 4: Project Management (Estimated Financing: US$1.687 million)

30. This component will finance the costs associated with the day-to-day project management of the proposed project, including the establishment of a new Project Implementation Unit (PIU) within the RSCEMC, PIU staff, and its running costs for the duration of the project. Data collection and analytical work for M&E (an assessment of gender differences in health care utilization planned to be conducted

during the initial phase of the project; beneficiary surveys; midterm review of the project, and so on) will be sponsored under this component. This component will also finance annual project financial audits. In addition, learning events, such as training and study visits will be funded from this component. This component will finance consultants' services, equipment, training of staff involved in project implementation activities, and incremental operating costs.

B. Project Cost and Financing

31. The project will be supported through an IDA credit of US$100 million equivalent, with a 6-year implementation period. The credit will be on regular IDA terms for blend coutnries[4]. The distribution of funds by component/subcomponent is presented below:

Table 1. Total Costs by Component and Financier

Total Including Contingencies (US$, thousands)			
	IDA	**Government**	**Total**
1. EMS Enabling Environment, System Management, and Quality Improvement			
1.1. Regulatory, Governance, and Operational Management	675	—	675
1.2. Behavior Change Communication (BCC) on Effective Use of the EMS System	1.730	—	1.730
1.3. Quality Monitoring and Analytics	595	—	595
1.4. EMS System Financing	160	—	160
Component Total	**3.160**	**—**	**3.160**
2. Dispatch, Communications, and Information Systems	13.964	—	13.964
Component Total	**13.964**	**—**	**13.964**
3. Emergency Care System Improvement			
3.1. Training and Skills Improvement	5.861	—	5.861
3.2. Essential Vehicles and Equipment	75.328	—	75.328
Component Total	**81.189**	**—**	**81.189**
4. Project Management	1.687	—	1.687
Component Total	**1.687**	**—**	**1.687**
Total Cost	100.000		100.000

C. Lessons Learned and Reflected in the Project Design

32. The partnership and joint projects of the World Bank and the Government of Uzbekistan during the last 16 years have shown the Government's ownership and commitment to strengthen and improve the health sector. There were many sources of lessons to be considered and reflected in the project design. Most significantly, these include the World Bank's lending history in Uzbekistan and specifically three health projects (Health Project [P009125], Health 2 Project [P051370] and Health System Improvement Project [P113349]). The proposed project would be the fourth health sector investment in Uzbekistan.

[4] According to the World Bank classification: Uzbekistan is a blend country, i.e. a country determined i) by IDA eligible for IDA credits and ii) by IBRD to be creditworthy for borrowing IBRD loans.

33. The World Bank has supported some limited interventions in the EMS to date, primarily on purchasing ambulances under the Health System Improvement Project. Useful lessons have been drawn from international experience and countries where the World Bank supported reforms of the EMS, including in Croatia, Latvia, Lithuania, Moldova, Bulgaria, and Romania. These engagements prove that the approach to the reforms should be comprehensive and include all aspects of chosen areas of the health system. Thus, for EMS, the reforms or improvements should be introduced all the way from the point of received calls (dispatcher center) to the final point of emergency health care provision looking at the demand and supply sides. In this context, it is important to address issues such as advancement of protocols of the triage system at dispatcher and hospital levels; adjustment of skill mix of labor force (emergency doctors and paramedics); improvement of budgetary and regulatory arrangements of EMS; and increase of public awareness information, communication, and education activities.

34. The critical lessons that are considered in the project design are as follows:

- The project will build on the successful discrete investments that the World Bank has previously supported in the area of improved PHC delivery, providing the basis to support the transfer of nonemergency calls to this level of care and a level of confidence that these cases will be appropriately treated;
- The project will include both 'hard' and 'soft' components, because the acquisition of equipment alone will not lead to improvements in operational efficiency and quality of care;
- The project will pay specific attention to ensuring that the national legislative and policy environment fully supports the service delivery reform;
- The project will focus on extensive behavior change and communication initiatives, so that the beneficiaries of the reform are aware of the changes that will take place and are prepared to use the EMS system appropriately once the reforms have been made; and
- The project will seek to ensure that reforms are institutionalized by fostering a culture of data analysis, data-based decision making, and continuous quality improvement through appropriate use and exploitation of dispatch, communication, and information systems.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

35. The MOH will have the overall responsibility for implementing the proposed project providing a strategic link between the introduction of health sector reforms and effective delivery of the project. The RSCEMC, through the PIU, located in the RSCEMC, will be responsible for implementation of all activities under the project. The PIU will be composed of a project director, deputy director(s), component coordinators, procurement officers, financial management (FM) specialist, chief accountant, disbursement officer, M&E officer, and environmental and social safeguards specialist. Technical experts in the working groups that were on the preparation of the project, would provide technical support during the implementation of the project. The draft first 18-months' Procurement Plan will be finalized before negotiations. A Project Operations Manual (POM) will contain details on implementation arrangements,

including procurement and financial management arrangements, and will be submitted to the World Bank for review and adopted by the MOH before project effectiveness.

B. Results Monitoring and Evaluation

36. The results M&E of activities will be coordinated and overseen by the RSCEMC. The PIU will consolidate and aggregate data provided by various entities involved in the implementation of the project. The PIU will hire a specialist (within 60 days upon effectiveness) who will be responsible for M&E, including coordinating the collection of information from the MoH and other implementing agencies and communicating these results to the World Bank according to the frequency of reports described in the Results Framework (annex 1). Under the project, the M&E capacity of the MoH, RSCEMC and other key agencies involved in EMS would be further developed to allow more effective sector management going forward.

37. Data would be collected at national and oblast levels. The PDO level and intermediate results indicators would be monitored using the following data collection instruments:

(a) Regular surveys and data collection processes;

(b) Administrative data currently available in the health sector and the management and integrated information systems (Subcomponent 1.3 and Component 2) to be supported by the proposed project;

(c) Monitoring reports prepared by the PIU.

38. The monitoring data would be reviewed by the World Bank during its periodic meetings to assess the likelihood of achieving the PDO and to take timely corrective measures as needed. The project M&E data would also be used by the MoH and RSEMC in its analytical reports on the progress and impact of the EMS. International technical assistance could also be engaged, including for midterm and final evaluation of the project.

39. **Data sources.** To the extent possible, progress on results will be monitored using routine data sources, such as those available from the management and integrated information systems and administrative records of the MoH and RSCEMC, its subordinated agencies, and other key agencies.

40. **Frequency of reporting.** Data on most project indicators will be reported on an annual basis. Quarterly progress reports will be prepared by the PIU with technical support of RSCEMC and will include data on grievances and resolution to allow for timely corrective action. Evaluation of project implementation will be done at the midterm review and before project closing.

C. Sustainability

41. The project is in line with the Government's development plans. The sustainability of the project depends on the Government's political commitment to improve the EMS system at the national and oblast levels. It also depends on sustained levels of recurrent costs and the implied budgetary outlays from the investments to upgrade the system. However, the proposed project is aimed at supporting the

Government of Uzbekistan in the implementation of its overall vision for effective and efficient EMS system. The specific activities under the project are critical to help with the achievement of this overall vision. While the investments in equipment and vehicles are substantial, the related investments in developing a robust legal and regulatory framework are essential for realizing the vision for the EMS and guiding the implementation and operation of the system. The proposed project has a significant focus on capacity building in operational management at all levels of the EMS system, including in the areas of human resource management, budget management, and data-based decision making. Support will also be provided to develop and/or update protocols for both dispatchers and operational crews to guide their performance in line with the established vision for the EMS system, and in the development of both pre-hospital and in-hospital triage and acuity scoring systems, which will be essential in ensuring that the focus of the EMS system remains predominantly on emergency and urgent cases.

D. Role of Partners

42. The World Bank has established partnerships with the WHO, UNICEF, ADB, IDB, GIZ, JICA, and other development partners who are active in the health sector. Several bilateral and donor organizations are mainly engaged through technical assistance programs.

43. There is a possibility that the project receives technical assistance from UNICEF in the improvement of emergency pediatric services, development of clinical protocols and guidelines, capacity building of health care providers on hospital childcare for children, and Behavior Change Communication. BCC.

V. KEY RISKS

A. Overall Risk Rating

44. The overall risk rating of the project is Moderate.

45. **Political and Governance** risk is rated *Substantial*, reflecting the ongoing political and structural transition. The Bank will be monitoring the transition process closely and adapt its program, if necessary and when requested, to changing priorities of the new Government.

46. **Fiduciary** risk is assessed as Substantial based on the procurement and FM assessments of the existing capacity of the implementing agency and experience under previous projects. Fiduciary aspects of project implementation will be closely monitored through regular portfolio reviews and continuous support to the government efforts to improve the legislative and regulatory framework for procurement, and strengthen the implementation capacity. Also, the Bank team will seriously consider and assess the process of selection of fiduciary staff to secure recruitment of credible professionals**.**

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

47. This project aims to improve quality and efficiency of the EMS system in Uzbekistan. This project is expected to generate some direct savings from (a) reducing the number of dispatch centers; (b)

integrating emergency departments in hospitals; and (c) shifting nonemergency transportation from the EMS system to other less costly alternatives. The separation of emergency from nonemergency transport is the foremost direct benefit of the project. This separation will improve allocative efficiency of health service delivery. In addition, there are indirect benefits related to mortality reduction. Because of the direct impact of EMS on the health outcomes of patients, efficiency gains will be closely related to lower mortality rates and better health outcomes. The project will also contribute to cost-saving efforts significantly by reshaping the emergency health facility networks to better fit with the existing primary care and hospital care system.

B. Technical

48. The proposed interventions are common to many World Bank-financed projects or activities designed to improve the functioning of the EMS system, such as those in Croatia and Romania, and have proved to be effective in this regard. In Croatia, the Implementation Complemention and Results Report for the Development of Emergency Medical Services and Investment Planning Project (P086669) noted that the project supported interventions were instrumental in "improving the efficiency and outcomes of the EMS system in Croatia and contributed positively to reducing adult mortality rates, especially for ischemic heart disease and Mosaic Variegated Aneuploidy." The central role of the dispatch center in determining priority, sending the most appropriate vehicle(s), and ensuring overall operational control of the fleet is well recognized globally as an essential element of a well-functioning EMS system, both in day-to-day operations and in disaster situations.

49. The project also addresses the Government's desire to focus on the role of EMS for emergency situations rather than PHC-related home visits. Therefore, the Government has supported a number of recent decrees and pronouncements in this area.

C. Financial Management

50. The RSCEMC, through the PIU will be responsible for FM and disbursement during project implementation, including planning, budgeting, accounting, financial reporting, funds flow, internal controls, and auditing.

51. The PIU will manage project payments and maintain project accounting records. The PIU will be responsible for submission of quarterly unaudited interim financial reports and audited annual project financial statements to the World Bank. The annual audited financial statements together with the auditor's opinion and the management letter will be provided to the World Bank within six months of the end of each fiscal year and at the closing of the project. The PIU will be responsible for the selection and appointment of the project auditor based on terms of reference acceptable to the World Bank, to be financed from the credit funds. FM and disbursement arrangements will be acceptable once the following conditions are met if: (a) a final POM, satisfactory to the World Bank, is adopted by the MoH (describing planning, budgeting, accounting, internal control, reporting, and auditing procedures to be followed by the RSCEMC and the PIU); (b) an experienced FM specialist is hired. As a covenant to the proposed project: an accounting system will be installed and tailored to meet World Bank requirements within 30 days after project effectiveness. The overall FM residual risk for the project is Substantial in the current environment considering the country risk.

D. Procurement

52. Applicable Procurement Framework: The activities under the project will be subject to the New Procurement Framework. All procurement of contracts will be conducted through the procedures as specified in the World Bank's Procurement Regulations for IPF Recipients - Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services, July 2016 (Procurement Regulations). The project will also be subject to the World Bank's Anti-Corruption Guidelines, dated July 1, 2016. The procurement and contract management processes will be tracked through the Systematic Tracking of Exchange in Procurement (STEP) system.

53. Summary of Project Procurement Strategy for Development (PPSD): The PPSD has been developed, and on the basis of which the Procurement Plan has been prepared. Market analysis for main packages, like: (1) Procurement of Computer Scanners and Angiography Systems; (2) Procurement of X-Ray and Ultrasound machines; (3) Procurement of diagnostic equipment; (4) Procurement of medical instruments and supplies for RMUs and urban Pilot polyclinics and (5) Procurement of endoscopic equipment with consumables confirmed that this market is a very competitive market with large number of manufacturers and suppliers.

54. Risks Assessment: Procurement capacity assessment was performed by the Bank using the Procurement Risk Assessment and Management System (P-RAMS). Based on the assessment and taking note of the existing capacity within MoH and the risks associated with procurement of medical equipment is considered "High". The key risks concerning procurement for implementation of the project include systemic weaknesses in the areas of: (i) procurement capacity at the national level; (ii) accountability of procurement decisions-making in the MoH; (iii) the technical expertise in preparing the specifications for medical equipment; (iv) potential risk of delays in the implementation of the project due to the complexity of procurement processes and decision-making that involves a large number of government officials. Preliminary Risk mitigation measures: (i) technical specifications preparation capacity building at the MoH; (ii) training for new and current staff on Bank Procurement Regulations; (iii) update of Project Operational Manual (POM) with a detailed chapter on procurement, including description of decision-making processes and accountability for procurement decisions; iv) putting in place an efficient contract management mechanism.

55. Use of National Procurement Procedures: All contracts for goods following national market approach shall follow the procedures set out in the Resolution of the UZ Cabinet of Ministers (COM) #456 for procurement raw materials, spare parts and equipment dated Nov 21, 2000. The provisions of Resolution are consistent with the World Bank Procurement Regulations Section V – Para 5.4 National Procurement Procedures subject to a few conditions specified in the PPSD. It is expected, that draft Public Procurement Law (PPL) will be finalized and submitted to the Parliament shortly with a target date if its enactment and entry into effect by January 1, 2018. To promote transparency, efficiency and value for money under the new country public procurement system, the draft PPL provides for a gradual introduction of e-procurement system. When the new PPL will become effective, the Bank team will update the assessment for use of National Procurement Procedures.

E. Social, Gender, and Citizen Engagement

56. The project will engage beneficiaries through extensive collection of feedback and satisfaction surveys.

57. *Public feedback on EMS.* As part of Subcomponent 1.2, the project will administer regular surveys to assess patients' satisfaction with the EMS system, and results will be disaggregated by gender to evaluate any gender-differentiated impacts.

58. *Beneficiary satisfaction surveys - EMS trainings***.** As part of Subcomponents 3.1, the project will regularly distribute surveys to EMS staff (both pre-hospital and in-hospital) who participate in project trainings.

59. *Information campaigns.* As part of Subcomponent 1.2, information interventions will be carried out to educate the public on the EMS system and encourage citizens to use the system for emergency cases only.

60. *Strengthening the GRM of the MOH***.** Given the importance assigned by the Government to citizen engagement and the operationalization of GRMs by all line ministries, the project will also provide the MoH with ongoing support on strengthening its general GRM.

61. *Addressing the risks of forced labor in cotton harvest among medical workers.* Risks of forced labor remain although explicit policy measures are taken by the Government to eradicate the practice of mobilizing medical and technical staff of medical facilities for agricultural works. To address these risks, the project would collaborate with the ILO on designing an awareness raising campaign to prevent forced labor targeting medical facilities and disseminating information about the National Feedback Mechanism on Labor Issues and Ministries' GRM as channels where any labor right violations could be reported by workers. Project sites would also be covered by third-party monitoring (for instance, ILO).

62. *Gender differentiated approaches to the information campaign.* Women and men have different health care needs and different social norms with regard to access to the medical services. To properly target information campaign messages to the needs of different groups, the messages would be designed to appropriately target women and men according to an assessment of gender differences in health care utilization planned to be conducted during the initial phase of the project under component 4.

F. Environment

63. There might be some civil work activities financed by the Government, such as minor refurbishment and rehabilitation of the RSCEMC and its 12 subsidiaries and 175 branches. Civil works might include roof replacement, replacement of windows and doors, plastering, crack bridging, reinforcement of the bearing beams, and others similar works. Environmental impacts associated with such works are usually low and limited to the construction site. They include dust, noise, vibration, generation of construction waste including asbestos containing materials, hazards associated with traffic safety and transportation of construction material, and health and safety issues in construction. Risks associated with these hazards are easily manageable by applying good housekeeping and construction

practices. Nevertheless, the project has triggered the World Bank Operational Policy 4.01 Environmental Assessment and was assigned environmental category 'B'.

Environmental Management Plans

64. The MOH has gained substantial experience and has involved two consultants to develop an EMP Framework to deal with the environmental risks of the proposed project. The EMP Framework covers risks that usually occur during civil works and associated mitigation measures. In addition, even though the project will not directly finance activities associated with the management of medical waste, the document describes current waste management practices in Uzbekistan and recommended waste management measures. The EMP Framework also covers the regulatory framework in Uzbekistan and project implementation arrangements and provides a template for the site-specific EMP checklists.

65. The Project is Category B and triggers the OP 4.01 on Environmental Assessment. In accordance with the WB's Access to Information Policy. the Framework Environmental Management Plan was disclosed in-country on September 18, 2017, and the World Bank website on October 13, 2017 following the formal public consultation meeting with stakeholders on September 23, 2017.

H. World Bank Grievance Redress

66. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit *www.inspectionpanel.org*.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY : Uzbekistan
Emergency Medical Services Project

Project Development Objectives

The Project Development Objective (PDO) is to increase the effectiveness and efficiency of the emergency medical services (EMS) system.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Percent of pre-hospital EMS patients hospitalized		Percentage	10.30	20.00	Yearly	Only data in the EMC service will be considered	PIU
Description: Number of patients hospitalized.							
Name: Average response time for ambulance calls		Minutes	20.00	15.00	Yearly	Only data in EMC service will be considered.	PIU
Description: Average response time for urban and rural calls (minutes)							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Share of hospitalized patients coming to EMS wards by ambulance		Percentage	25.00	30.00	Yearly	EMS	PIU
Description: Number of hospitalized patients coming in by ambulance / total number of hospitalized patients coming through ER.							
Name: Percentage of poly-trauma cases surviving through hospital discharge		Percentage	0.00	100.00	TBD	TBD	TBD
Description: Total number of polytrauma cases surviving to hospital discharge / total number of polytrauma cases received in hospital EMS units * 100							
Name: Percentage of heart attack cases surviving through hospital discharge		Percentage	0.00	100.00	Yearly	EMS	PIU
Description: Total number of heart attack cases surviving to hospital discharge / total number of polytrauma cases received in hospital EMS units * 100							

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Law has been amended to allow redirecting of non-urgent case		Yes/No	N	Y	Yearly	EMS	PIU
Description: Number of protocols for dispatchers and operational crews developed and/or updated							
Name: Number of dispatch protocols updated under the project		Number	1.00	10.00	Yearly	EMS	PIU
Description: Number of updated dispatch protocols							
Name: Severity scoring system developed and implemented in pre-hospital level		Yes/No	N	Y	Yearly	EMS	PIU
Description:							
Name: Percent of pre-hospital EMS cases that are emergency and urgent		Percentage	0.00	60.00	Yearly	EMS	PIU

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: Number of emergency and urgent cases / total number of pre-hospital cases							
Name: Reduced variation in ambulance teams per capita (ratio)		Number	18.10	12.10	Yearly	EMS	PIU
Description: Teams per capita (largest) / teams per capita (smallest)							
Name: Number of newly established regional dispatch centers with relevant software		Number	0.00	14.00	Yearly	EMS	PIU
Description: Number of centers established with dispatch software							
Name: Number of EMS (pre-hospital) related medical and other personnel who underwent training under the Project		Number	0.00	13000.00	Yearly	EMS	PIU
Description: Number of EMS (pre-hospital) personnel trained under the Project							
Name: Number of ambulances furnished according to the approved		Number	0.00	60.00	Yearly	EMS	PIU

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
list of equipment							
Description: Number of ambulances fully furnished according to equipment list							
Name: Number of clinical protocols developed and/or updated for the departments of emergency and urgent medical care under the project		Number	0.00	15.00	Yearly	EMS	PIU
Description: Number of clinical protocols developed and/or updated for the departments of emergency and urgent medical care							
Name: Number of regional EMC training departments created and/or equipped under the project		Number	0.00	4.00	Yearly	EMS	PIU
Description: Number of centers							
Name: Number of trainers trained for EMC training departments		Number	0.00	0.00	Yearly	EMS	PIU
Description: Number of training personnel trained for regional EMC training departments							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Severity scoring system developed and implemented in hospitals		Yes/No	N	Y	Yearly	EMS	PIU
Description: Yes/No							
Name: Percent of hospital EMS cases that are emergency and urgent		Percentage	0.00	60.00	Yearly	EMS	PIU
Description: Number of emergency and urgent hospital EMS cases / total number of hospital EMS cases							
Name: Number of the departments of emergency and urgent medical care furnished per the approved list of equipment		Number	0.00	190.00	Yearly	EMS	PIU
Description: Number of the departments of emergency and urgent medical care furnished according to the approved list of equipment							
Name: Percent of in-hospital EMS patients treated within the clinically recommended time		Percentage	0.00	20.00	Yearly	EMS	PIU
Description:							

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Percent of personnel satisfied with trainings by EMS training departments (male/female)		Percentage	70.00	90.00	Yearly	EMS	PIU
Description: TBD							
Name: Percent of patients satisfied with the EMS system (as measured by patient satisfaction surveys)		Percentage	0.00	80.00	Yearly	TBD	PIU
Description:							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Percent of pre-hospital EMS patients hospitalized	10.30	10.30	10.30	13.00	15.00	17.00	20.00
Average response time for ambulance calls	20.00						15.00
Share of hospitalized patients coming to EMS wards by ambulance	25.00	25.00	25.00	26.00	27.00	28.00	30.00
Percentage of poly-trauma cases surviving through hospital discharge	0.00						100.00
Percentage of heart attack cases surviving through hospital discharge	0.00						100.00

Intermediate Results Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Law has been amended to allow redirecting of non-urgent case	N						Y
Number of dispatch protocols updated under the project	1.00	1.00	3.00	6.00	10.00	10.00	10.00

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Severity scoring system developed and implemented in pre-hospital level	N	N	Y	Y	Y	Y	Y
Percent of pre-hospital EMS cases that are emergency and urgent	0.00	0.00	20.00	25.00	30.00	40.00	60.00
Reduced variation in ambulance teams per capita (ratio)	18.10	18.10	18.10	16.10	14.10	13.10	12.10
Number of newly established regional dispatch centers with relevant software	0.00	0.00	0.00	3.00	6.00	10.00	14.00
Number of EMS (pre-hospital) related medical and other personnel who underwent training under the Project	0.00						13000.00
Number of ambulances furnished according to the approved list of equipment	0.00	0.00	60.00	60.00	60.00	60.00	60.00
Number of clinical protocols developed and/or updated for the departments of emergency and urgent medical care under the project	0.00	0.00	5.00	10.00	15.00	15.00	15.00
Number of regional EMC training departments created and/or equipped under the project	0.00	0.00	1.00	2.00	3.00	4.00	4.00
Number of trainers trained for EMC training departments	0.00						0.00

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Severity scoring system developed and implemented in hospitals	N	N	Y	Y	Y	Y	Y
Percent of hospital EMS cases that are emergency and urgent	0.00						60.00
Number of the departments of emergency and urgent medical care furnished per the approved list of equipment	0.00	0.00	0.00	50.00	100.00	150.00	190.00
Percent of in-hospital EMS patients treated within the clinically recommended time	0.00						20.00
Percent of personnel satisfied with trainings by EMS training departments (male/female)	70.00			75.00	80.00	90.00	90.00
Percent of patients satisfied with the EMS system (as measured by patient satisfaction surveys)	0.00						80.00