Iraq - Emergency Medicine Care Development Program

Proposal for Funding
(July 2009-2011)

Submitted by:
International Medical Corps (IMC)
June 30, 2009

REVISED SUBMISSION
December 15, 2009

Contents

Contact Information and Project Abstract

Name of Organization:	International Medical Corps	
Contact Information:	*Headquarters Contact*	*In-country Contact*
	[redacted] Director of EMCD 1919 Santa Monica Blvd, Ste 300 Santa Monica, CA 90404 [redacted] [redacted] www.imcworldwide.org	[redacted] Country Director Al-Karada Kharej [redacted] [redacted] Baghdad, Iraq Iraq: + 964-7901-912-164 [redacted] www.imcworldwide.org
Point of Contact:	[redacted]	
Project Title:	Iraq - Emergency Medical Care Development (I-EMCD)	
Country/ Regions targeted:	Iraq	
Proposed Period of Activity:	22 months	
Amount Requested:	**AUS $ 9,178,308 (US $ 7,963,283)**	
Project Abstract:	The Iraq-Emergency Medicine Care Development (I-EMCD) program will compliment the current grant agreements between the Australian Government/Australian Government Overseas Aid Program (AusAID) and IMC. The Iraq Ministry of Health and the provincial Directorate of Health have highlighted the urgent need for establishing, strengthening and sustaining national and provincial emergency medicine services. Building upon the current success of the Baghdad I-EMCD program and via its current strategic and operational partnership with the Iraq Ministry of Health; the National Emergency Medicine Working Group (EMWG); Provincial Directorates of Health; targeted hospitals management; targeted program areas and Governors and provincial/city councils, IMC has designed this National Iraq - Emergency Medicine Care Development Program to address this critical need. I-EMCD aims to improve current emergency medical care standards and raise them to the international standard models of pre-hospital	

	and in-hospital care through a combination of technical assistance, training, and capacity building for medical professionals. The program's implementation is based on a collaborative approach whereby the MoH/MoI/MoD assumes an executive strategic role and IMC provides technical and logistical support. Over time it is expected that through this joint approach the various relevant line Ministries will develop the capacity to assume all areas of implementation. **<u>Goals:</u>** 1) Improve public education in regards to emergency medical care 2) Further strengthen the Iraqi prehospital system 3) Further improve hospital-based emergency medical care

Introduction

Emergency Medical Care and Global Health

Morbidity and mortality from injuries and noncommunicable disease processes have begun to dominate the health dangers threatening persons in low- and middle-income countries (see Figure 1: Top Seven Causes of Death in Low- and Middle-Income Countries, below age 70).[1] The WHO predicts that this transition will only continue to accelerate with ongoing human development. However, to date, little of the global health focus has been targeted towards these growing problems (see Figure 3: Allocation of PEPFAR and USAID Global Health Funding by Category).[2]

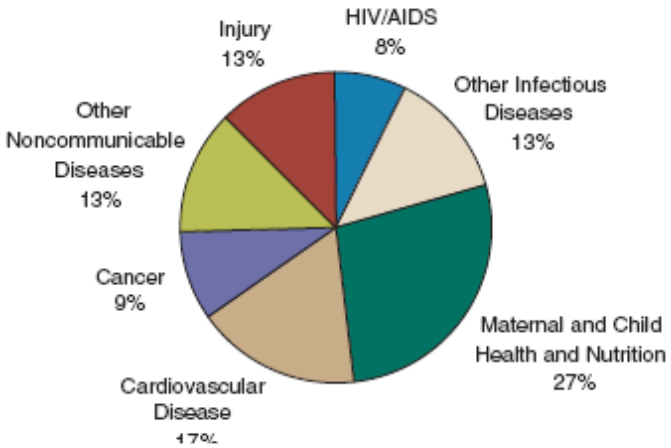

Figure 1: Top Seven Causes of Death in Low- and Middle-Income Countries, below age 70 (2001)

One prominent example of the changing global demographics is road traffic accidents, which now claim 1.2 million lives each year.[3] They are the leading worldwide cause of death in people between 10 and 24 years,[4] with the highest burden of such injuries borne disproportionately by the poor.[5] Currently, they account for a loss of 1% - 1.5 % of GNP in low- and middle-income countries, and are predicted by the WHO to become the third largest contributor to the global burden of disease by 2020.[6]

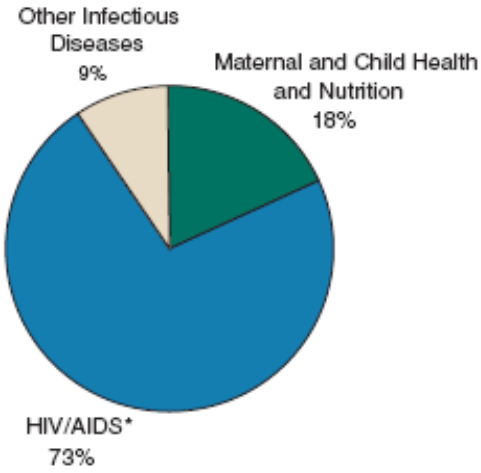

Figure 2: Allocation of PEPFAR and USAID Global Health Funding by Category (average for 2004-2008)

Non-communicable conditions, like cardiovascular disease, have also joined the

[1] Institute of Medicine. 2009. The U.S. Commitment to Global Health: Recommendations for the New Administration. Washington, DC: The National Academies Press.
[2] Institute of Medicine. 2009. The U.S. Commitment to Global Health: Recommendations for the New Administration. Washington, DC: The National Academies Press.
[3] Morris, J. R. 2006. Improving road safety in developing countries: Opportunities for U.S. Cooperation and engagement. *Transportation Research Board - Special Report* (287):1-80.
[4] WHO (World Health Organization). 2007. *Road traffic crashes leading cause of death among young people: New WHO report marks first UN Global Road Safety Week.*
[5] Nantulya, V. M., and M. R. Reich. 2002. *The neglected epidemic: Road traffic injuries in developing countries.* BMJ 324(7346):1139-1141.
[6] WHO (World Health Organization). 2004. *Road traffic accident fact sheet.*

traditional list of "poor country" diseases. By 2001, cardiovascular disease was alone responsible for almost three times as many premature deaths in low- and middle-income countries as AIDS, malaria, and TB combined.[7] In response to this collective data, the World Health Organization (WHO), the U.S. National Academies of Science, and other lead organizations, have all called for an increased global focus on injuries and non-communicable diseases.

Medical Response

Although emergency medical care is a key response to the health threats of injuries and non-communicable diseases, it is a new concept to much of the developing world.

Many countries lack national emergency medicine policy, coordinated public outreach, prehospital care systems, specialized emergency training for health staff, and other basic founding blocks of emergency medical care. As a result, morbidity and mortality related to trauma, cardiovascular emergencies, and other acutely treatable conditions are much higher than in areas with well-developed emergency medical care services.

Emergency medical care addresses many of the top worldwide causes of death. These include road traffic injuries, ischemic heart disease, drowning, fires, self-inflicted injuries, interpersonal violence, and war wounds, among others.

There is good evidence that both injuries and various non-communicable health processes respond favorably to emergent intervention. For example, an expeditious approach to trauma (incorporating a concept known as "The Golden Hour") has resulted in dramatic improvements in case fatality rates in Western nations (see Figure 3: Chronologic Distribution of Deaths from Trauma by Possible Intervention). Initiating a prompt approach to acute ischemic heart disease has also demonstrated similar, well-documented gains.

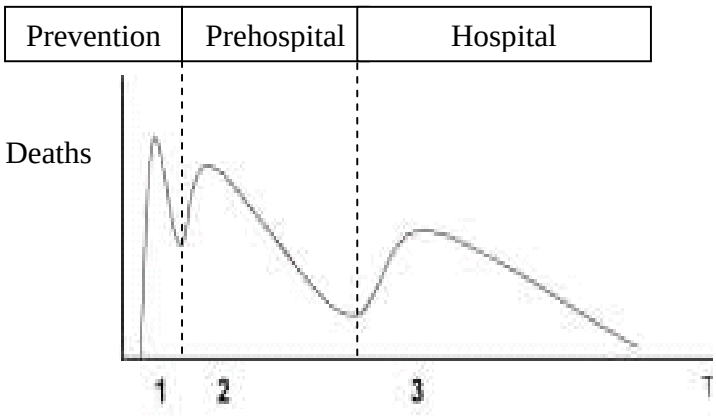

Figure 3: Chronologic Distribution of Deaths from Trauma by Possible Intervention

Additionally, many of these interventions can be efficiently translated into resource poor areas. Successful management of a large portion of emergencies is cost effective in a wide variety of settings. For example, over 80% of traumatic injuries can be managed non-operatively

[7] Disease Control Priorities Project. 2006. *Noncommunicable diseases now account for a majority of deaths in lowand middle-income countries.*

using simple protocols. Furthermore, non-invasive pharmacologic management of ischemic heart disease accounts for over 50% of the mortality reduction in the first world.

A robust emergency medical system can also have overall synergistic effects for the entire healthcare system. Examples include:

- Increasing public awareness and support through community first aid education;
- Assuring prompt evaluation of all patients in the pre-hospital setting;
- Assisting transport of patients with a wide range of diseases processes;
- Augmenting the response to mass casualty and other disaster situations;
- Improving triage of the acutely ill and injured, while reducing the need for inter-facility transfers;
- Enhancing the parallel processing of multiple patients;
- Centralizing the stewardship of resources, while minimizing duplication of services and overhead;

Current Status of Emergency Medical Care in Iraq

Over the last half-decade, Iraq has gone through a rapid series of changes due to war and sectarian violence. After the 2003 U.S. led invasion, a lack of safety was the primary concern for the occupying forces and the Iraqi government. However, as the security situation has shown hopeful signs of stabilization, efforts have turned to focus on the additional needs of the populace, including access to adequate healthcare.

For the majority of countries in the Middle East, formal emergency care is a relatively new concept. Its development in Iraq has had the additional challenges of violence, sanctions, and intellectual isolation. The emergency medical infrastructure is still in the primary stages in the country, although last year has shown significant improvement.

The Iraqi Ministry of Health (MoH) provides governmental authority for the country's health system. The 18 Iraqi governorates all have a director general of health, except for Baghdad which has three. According to recent MoH data, Iraq nationwide currently has 180 hospitals, each with some form of emergency department. Within the MoH, the division of Medical Operation and Specialized Services is responsible for the provision of emergency medical care. Both MoH ambulance services, as well as hospital-based emergency care fall within its purview.

Outside of the MoH, other governmental ministries also are relevant to emergency medical care. These include the Ministry of Higher Education (MoHE), which is responsible for the physician education. Additionally, both the Ministry of Defense (MoD) and the Ministry of Interior (MoI) play a role in the provision of prehospital care. The ministries respond to emergencies in the community and both groups maintain some form of ministerial-specific ambulance services.

Iraqi nongovernmental groups furthering emergency medical care development include the Iraqi Emergency Medicine Working Group (EMWG), which has been established with the assistance of the IMC. Its goal is to help support the development of emergency policy that will provide a framework for the practice of emergency medicine in Iraq. The EMWG is comprised of officials from MoH and the Ministry of Higher Education (MoHE), practicing physicians, and members of the Iraqi Medical Specialty Society.

IMC/AusAID Iraqi Emergency Medical Care Development Program

IMC is the only international entity with a Memorandum of Understanding with the MoH to provide training and capacity building in emergency medicine and primary health care. The EMCD program was founded based on this relationship.

In partnership with the Iraq Ministry of Health, and via funding from AusAID, IMC has implemented two sequential phases of its Emergency Medicine Care Development Program (EMCDP) in Iraq over the last year and a half (see **Annex A: Brief Summary of IMC**). This has been the first in-depth attempt ever to build civilian emergency medicine infrastructure for the country. Despite a history of violence and trauma in Iraq, formal emergency medical care was previously exceedingly limited.

Through this comprehensive reform package, IMC has addressed the country's critical requirement for essential emergency medical services across the health spectrum. These activities have received encouraging praise from numerous levels. Participant reviews of the different training courses have been exceedingly positive, with many noting that the education was the most valuable training they have ever undergone.

This high profile program has also generated significant press, both at the academic and lay press levels. Iraqi News on Al Hura (local Iraq satellite channel) presented a long documentary piece highlighting improvements in prehospital care, and specifically thanked IMC and the Australian government (video available upon request). The Iraqi government has commended the EMCDP and have strongly requested further support (see **B: Letters Requesting Additional Support**).

These programs have focused on supporting pre-hospital care, in-hospital care, policy development, and public education and awareness.

Pre-hospital Care

As part of the IMC/AusAID EMCDP, Iraq's prehospital medical system has been significantly strengthened over the last year. This has included the establishment of a program to train Iraqi prehospital providers to the Emergency Medical Technician-Basic (EMT-B) level – the first such effort ever to educate EMTs in the country.

> "This course saved patients lives!"
>
> -Hasan Farhan Mutashar
> Medic Trainee, Baghdad.

This instruction has utilized a standard U.S. format, translated into Arabic and adapted to local circumstances. Over 700 EMTs will be trained and certified through the program. Ares of coverage are limited to Baghdad, Anbar, Thi-Qar, and Ninnewa.

> "An old Iraqi proverb says: "seek out knowledge, even if you have to travel to China to find it." We thank IMC and AusAID for the giving us this rare chance to learn by this program…the knowledge is priceless. Best wishes to all who have so served our pained country."
>
> -Ahmed Hadi Said
> Medic Trainee, Baghdad

In conjunction with medic training, IMC has setup emergency medical training centers in Baghdad and in the other governorates that have thus far hosted training courses.

Hospital-Based Care

Hospital-based emergency medical care is the final destination for most patients experiencing traumatic or medical emergencies and the IMC/AusAID EMCDP has also focused on educating doctors across Iraq on emergency medical skills at this level. At the beginning of 2008, the IMC sponsored the first formal lectures in emergency medicine ever given in Iraq, as part of a now annual continuing medical education program.

> "I feel most grateful for this training and now feel confident about performing my job in the emergency department. This made me love my job even more…I am so thankful for this opportunity."
>
> Dr. Hiba Ali Ghanim
> Physician Trainee, Baghdad

To update the abilities of the physicians currently working in emergency departments across Iraq, the EMCDP has established a month-long intensive training program that teaches up-to-date advanced life support skills (i.e. airway skills, Advance Cardiac Life Support, Advanced Trauma Life Support, etc.) via theoretical lectures, practical trainings, and real clinical experiences. Over 300 physicians will be trained in Baghdad, Anbar, Thi-Qar, and Ninnewa.

For this course, the EMCDP has introduced the first practical animal lab ever done in the country, to improve further the operative trauma skills of the trainees. Surgical teams use anesthetized sheep to practice lifesaving skills, such as cricothyroidotomy, chest tube placement, and diagnostic peritoneal lavage.

Policy Development

One of the main components of the EMCDP package in Iraq has been the development of unifying, high-level policy to guide the development of emergency medical care in the country. Towards this end, the IMC and the MoH have together sponsored the formation of the Iraqi Emergency Medicine Working Group (EMWG), which has assembled the various actors involved in Iraq's emergency care.

IMC has further supported the EMWG in designing a formal 5-year national strategy for emergency care, the first attempt ever to provide an overarching roadmap for improving

emergency medical care in Iraq. In conjunction with this document, further policy assistance has been provided on multiple levels, including work toward establishing creation of Iraqi trauma centers for higher levels of care, and trauma way stations for the provincial areas.

Public Education

Since emergent interventions are by definition time dependant, public education is a key element of such medical care. The EMCDP has thus far worked on advertizing the availability of the universal telephone number for emergency response (122), which only around 10% of the populace were aware of at the beginning of the program according to estimates from the MoH.

The EMCDP has worked with the Iraqi press to publicize this number and results have included the aforementioned documentary video. IMC has also designed and printed advertisement posters highlighting the use of the emergency phone number in both Arabic and English, which have been prominently displayed in the all the health facilities and departments that hosted the various trainings.

Need for Future Improvements

Although the last year has seen significant progress in Iraqi emergency medical care, the country still has system wide deficiencies needing immediate interventions on numerous levels. First, there is a general lack of education in the general public in regards to medical emergencies. This spans many levels including how to prevent the leading causes of avertable emergency morbidity and mortality (e.g., avoidable accidents, heart attacks, etc.); how to quickly recognize medical emergencies in the community; how to provide community first aid; and, how to access emergency medical services.

Second, additional resources are necessary to continue the advance of quality prehospital care throughout the rest of the country. Currently, prehospital providers have only been trained to international standards in Baghdad, Thi-Qar, Ninnewa, and Anbar. Because this has been the limit of the IMC/AusAID EMCDP funding to date, outside of these areas there are essentially no trained pre-hospital providers and no training programs. Additionally, thus far the EMCDP trainings have been limited only to medics on MoH based ambulances.

Additionally, large Multiple Casualty Incidents (MCIs) are unfortunately common in Iraq, due to the sectarian violence. These place a significant burden upon emergency medical services. Unfortunately, at present there is very poor training and coordination within the respective responding agencies, leading to unnecessary added death and disability.

Third, although there have been significant improvements in physician training via the month-long EMCDP physician program, there is still a lack of trained emergency specialists in the country. The MoHE has started a training track to produce such physicians (a four year process), but the program is still lacking in several areas. Specifically, since there are

essentially no trained Iraqi emergency specialist-physicians in the country, the trainees lack mentors and practical direction.

Additionally, ancillary emergency staff currently are poorly trained and under-skilled. This results in poor patient care and outcomes, as much of the medical care in the country is provided by staffing at this level.

Fourth, despite significant policy improvements, the administrative implementation of such policy is still lacking. There is a general lack of understanding about the emergency medicine care by bureaucrats, and pre-hospital and hospital-based administrators.

Based on the need as described above, this proposal details a program for the extension of the current activities of the EMCD. This will include expansion of the training programs for EMTs and physicians to other governorates beyond Baghdad, Anbar, Thi-Qar, and Ninnewa. It will couple this governorate expansion with community based initiates and public education. It will include the development of new programs for first responder training, nursing training, administrator training, and Mass Casualty Incident Management.

This proposal describes the next phase of an integrated approach to improving emergency medicine services in Iraq and builds on the success of the current EMCD programs.

Proposed Technical Activities

Goals

Further expansion of the IMC/AusAID Iraq Emergency Medicine Care Development Program (EMCDP) will continue to improve the quality of emergency medical care within Iraq, while simultaneously spreading gains already achieved in Baghdad and select governorates out to the rest of the country.

The primary goals of further EMCDP expansion are to:

I. **Improve public education in regards to emergency medical care**
II. **Further strengthen the Iraqi prehospital system**
III. **Further improve hospital-based emergency medical care**

Activities are described in detail by goal below.

Activities

Goal I: Improve public education in emergency medical care

Objective 1: **Implement community outreach programs that focus on injury prevention and safety promotion, including first aid community responders training**

Step 1: Develop and implement community publicity programs that focus on identification of medical emergencies and how to access the emergency system

The MoH representatives and IMC, along with relevant stakeholders, will design community outreach programs focusing on publicizing the 122 (universal emergency medical number) system. A full media campaign, as well as local community initiatives, will be included in the I-EMCD to foster an awareness of the emergency medical system and how to appropriately activate it during emergencies.

Step 2: Develop and implement community outreach programs that focus on injury prevention and safety promotion

The MoH representatives and IMC, along with relevant stakeholders, will design community outreach programs focusing on injury prevention and safety promotion for the general population. A media campaign as well as local community initiatives and training for more than 4000 community members in first aid will be included in the I-EMCD to foster a new culture of accident prevention and safe practices.

Goal II: Further enhance the capacity of the Iraqi pre-hospital system to deliver quality emergency medical services

Objective 1: Expand the current IMC/AusAID EMCDP prehospital training program to additional governorates

Step 1: Establish additional provincial emergency medicine training centers

Three regional provincial emergency medicine training centers will be established, to serve as the training centers for continuing professional development initiatives on emergency medicine. This will include provision of essential equipment; adaptation of the training curricula; selection and training of lead trainers; and the delivery of accredited training in emergency medicine prehospital providers.

Step 2: Train 700 pre-hospital providers in the targeted provincial areas to established international norms

The already developed EMCDP EMT training program will be expanded to provide training to additional governorates. The curriculum includes modules on basic life support care; first aid, stabilization and triage procedures; cardiopulmonary resuscitation; splinting and cervical spine immobilization; rapid, safe emergency transport; and the use of automated external defibrillators. Teaching methods include class presentations, lectures, skill stations/practical skills sessions, group discussions and demonstrations, and written and practical testing.

Curriculum certification: The curriculum has been adopted by the Iraqi MoH as the standardized core curriculum for EMT nation-wide.

Profile of Trainees: The I-EMCD program will select and train 700 EMTs to improve the quality of first line response. Experience has demonstrated that most trainees have no more than a secondary school education and speak limited English; therefore the trainings are conducted entirely in Arabic for maximum effectiveness. IMC will provide these EMTs with skills and training to enable them to respond more efficiently and effectively to emergencies.

Implementation of trainings: Upon completion of the curriculum, trainers will deliver the EMT program. The trainings will be held at the provincial level emergency medicine centers established under this program, which will be operated and managed by the provincial health authorities.

The training of more than 700 EMTs will be conducted in at least 23 groups of 30 participants each. This will allow an adequate instructor to trainee ratio and manageable class sizes, while also ensuring daily services.

IMC will provide all necessary equipment to program participants for the training. Training materials will include hand-outs, stationary, medical training supplies (bandages, dressings, gauze pads, CPR masks, etc.) to perform the required trainings.

Post-training supplies include essential non-disposable supplies (i.e. stethoscope, blood pressure cuff, trauma shears, etc.), which IMC will provide to all trainees who successfully complete the training.

Trainee evaluation and follow-up: At the beginning of the training, participants will undergo an overall basic emergency medicine knowledge and skills assessment to establish a baseline by which to compare their improvement. During the training, participants will be assessed in a similar fashion at the beginning and end of each course module. At the end of the training, participants will be re-evaluated through practical skills and written testing. Only those trainees who successfully demonstrate uptake of core skills and knowledge will graduate from the program and be eligible for certification. Upon successful completion of the training program, trainees will be certified by their appropriate line ministry.

IMC's extensive experience in capacity building has demonstrated that trainings must be followed up with regular, on-the-job supportive supervision and feedback to translate into improved quality of service delivery. Through the I-EMCD, IMC will build the capacity of program trainers and provincial Ministry of Health and whenever possible and Ministry of Interior staff to provide effective supervision, support and refresher training to graduated EMTs.

Objective 2: Expand the current emergency medical training of Ministries of the Interior and Defense

Step 1: Include 100 pre-hospital providers from the Ministries of the Interior and Civil Defense in the Baghdad area to established international norms

Both the Ministry of the Interior (i.e. police enforcement) and Ministry of Defense (i.e. fire) have ministry-specific ambulance services that fall under their jurisdiction. To date, these services lack any significant emergency medical training and are poorly prepared to respond to medical emergencies. To improve the overall care in the country, prehospital personnel on these vehicles will be trained via the aforementioned EMT training program. Training side by side with their health counterparts, will help foster cohesion among the departments, when responding to later emergencies.

Step 2: Train 150 police and fire staff in advanced first aid

Police and fire personnel are frequently the first on scene of medical emergencies and need to have a basic understanding of first aid skills. Trainings targeted toward these workers will provide such skills and further the cooperation among agencies responding to emergencies. Those personnel (i.e. police) who are expected to be first responders to medical emergencies while potentially under fire, will have specific curriculum to address their needs. This will be customized to the Iraq setting and will include at a minimum (for police):

Introduction

1. Epidemiology of Injury
2. "The Die-Off Curve"
3. Overview of Tactical Combat Casualty Care guidelines.
4. Physiology of Shock

II. Tactical Combat Casualty Care – "Care Under Fire"

1. Achieve Fire Superiority FIRST
2. ABC – ***Assess, Bleeding, Carry***
3. Rapid Medical Assessment – Vitals and Consciousness
4. Hemorrhage Control
5. Tourniquets and Pressure Bandaging Techniques
6. Carrying Techniques
7. Review

III. Tactical Combat Casualty Care – "Tactical Field Care"

1. Re-Assess
2. ABC – ***Airway, Breathing, Circulation***
3. Airway Management
   a) Nasopharyngeal Airways
4. Respiratory Assistance
   a) Rescue Breathing
   b) Flail Chest Wound
5. Circulation / Shock Management
   a) Chest Compressions
6. Definitive hemorrhage management

a) Review Tourniquet/Pressure Dressing Management
7. Review

IV. **Tactical Combat Casualty Care – "Casualty Evacuation"**
1. Re-Assess
2. ABCD
3. Head Trauma
4. Chest Wall Trauma
5. Abdominal Trauma
6. Spinal Trauma
7. Extremity Fractures / Pelvic Fractures
8. Burns
9. Blast Injury
10. Review

Objective 3: Improve emergency response to Multiple Casualty Incidents (MCIs)

Step 1: Train police, fire, and medical staff in appropriate MCI triage techniques

The aforementioned trainings will cover the response of appropriate staff to MCIs. It will include organizational structure, triage techniques, communication, and interdepartmental cooperation both in the classroom and in practicum.

Step 2: Hold group trainings involving police, fire, and medical staff to practice MCI response and further interagency cooperation

The IMC will support the respective ministries in holding interdepartmental meetings and group trainings, to foster much needed cooperation during MCIs. This will cover overall organizational structure, triage techniques, communication, and interdepartmental cooperation. IMC will hold a MCI Management Conference to bring senior representatives from the MOH, MOI, and MOD together with international experts to design the overall plan for MCI coordination and translate this into action for mock events. During this initial conference, IMC will facilitate the establishment of a MCI Coordination Committee that will serve as the oversight entity for MCI related activities.

Three mock events with all of the respective stakeholders will take place to allow for the improvement of the governmental response. These activities will include first-line personnel, up to senior management involved in the response to MCIs. After each simulated event, IMC will support the communication among participants to find lessons-learned and to problem-solve solutions to structural problems.

Step 3: Hold a policy meeting with appropriate governmental stakeholders to further interagency cooperation

After the three mock events, IMC will help the respective agencies sponsor a policy meeting through the MCI Coordination Committee with the high-level governmental stakeholders to foster cooperation and communication between relevant departments. IMC will encourage participants to incorporate lessons-learned from the exercises to support the development of new policy documents that improve the governmental response to MCIs and inter-agency cooperation to emergency situations.

This policy meeting will aim to draft a formal policy document for agreement by the core Ministries (MOH, MOI, and MOD).

Goal III: Further improve hospital-based emergency medical care

Objective 1: Improve the education of Iraqi physicians currently providing emergency medical care countrywide

Step 1: Continue training Iraqi physicians in the advanced emergency medical training course

The current, very successful EMCDP is slotted to train 300 physicians countrywide by the end of its funding in an advanced emergency medical training course that covers material from ACLS, ATLS, advanced airway skills, and others. However, the need in Iraq far exceeds the current 300 students and this program will be continued, to continue to spread essential emergency medical knowledge to attending-level physicians currently caring for patients within the country. Another 300 physicians will be trained by the end of the current proposal.

Objective 2: Improve the training of Iraqi emergency department nursing personnel in Iraq

Step 1: Provide intensive continuing medical education on advanced in-hospital emergency care to 100 Iraqi nursing personnel working in Baghdad emergency departments

Curriculum development: During the first quarter of the project, IMC will engage the support of technical experts in the field of emergency nursing to design a core curriculum for the training of Iraqi emergency department nurses. IMC's extensive work in emergency medicine across the globe has helped build a network of highly qualified institutions and individuals from which to draw for this activity. The curriculum design will be subject to nationally agreed upon standards and will use models from the US system as a guide.

Curriculum certification: Upon completion and initial reviews, the curriculum will be translated into Arabic and shared with the Iraqi MoH for a formal review. IMC expects that

this curriculum will be adopted by the Iraqi MoH as the standardized core curriculum for emergency medicine nursing training nation-wide.

Trainee evaluation and follow-up: The evaluation of the CME will follow a similar approach as outlined for the basic emergency medicine training, utilizing baseline knowledge and skill assessments, module-by-module testing and a comprehensive assessment to demonstrate uptake of core skills and knowledge prior to certification. Evaluation methods will include written examinations, in-service exams, clinical case simulator (mannequin) testing, written evaluations by faculty for each rotation, formal performance reviews and practical exams. Upon successful completion of the training, participating nurses will receive special certification by the Ministry of Health.

IMC will work with the Ministry of Health to strengthen their capacity to provide follow-up support to these nurses, with routine supervision and assessment to ensure the highest level of emergency medical care is maintained.

Monitoring and Evaluation

IMC, together with the provincial and national I-EMCD Technical Working Group, will monitor and evaluate program effectiveness, revising activities and approaches where necessary. Impact and effectiveness will be measured through various proven methodologies. Feedback and recommendations from beneficiaries of the intervention will further inform the impact of the program.

IMC has designed a Participatory Monitoring and Evaluation Framework (PMEF) for the program. The PMEF will provide a structure for translating the program goal and project objectives into measurable terms. IMC will construct the PMEF by establishing within the first month of the program a program review and evaluation team that includes the Iraq MOH, AusAID Technical Officer,and IMC's technical project staff. This team will prepare a detailed project monitoring plan that will provide for systematic and timely collection of performance data. The purpose of the monitoring plan is to provide performance information used to manage for results. The plan will contain a detailed description of the agreed upon indicators for the Program and the mechanisms that will be used to obtain baseline and ongoing data.

An important element of this program is long-term sustainability. As part of the monitoring plan, IMC will work with AusAID, the MOH, and other stakeholders to determine the most appropriate means to measure the program's impact on sustainability of interventions. In addition to evaluating progress toward sustainability, this approach will help to guide implementation

Monitoring of the program will be achieved through an on-going process of monthly reports, training records, and supervisory visits that are compiled by the IMC program staff in the field. Monthly reports will emphasize the accomplishments by activity, summarize

the constraints encountered, make recommendations for improvements, and elaborate action plans for the following month.

As outlined earlier, IMC will employ rigorous evaluation of capacity building activities to ensure that the acquired knowledge from training is effectively translated into improved service quality. This will occur through pre and post test evaluations at the time of the training and on-the-job supportive evaluation of skill levels several weeks after training is completed. These follow-up assessments will be part of the regular supportive supervision activities and allow IMC to identify and respond to any gaps in a timely manner. At project end IMC will follow-up this assessment to measure the changes since project start.

Additionally, research and overall quality assurance programs will be integrated into the program. This will include overall outcomes research, when feasible, as well as implementation data.

Management and Security

Program Management
I-EMCD will be managed and coordinated by IMC project staff (**see Annex C**). The project management team will be based in Baghdad. In addition, the program consultants and trainers will provide support and technical assistance to I-EMCD. Project management will be lead by the IMC Director of Health Programs, who will be responsible for the overall supervision of the I-EMCD, coordinating with donors, progress report preparation and submission, financial reporting and compliance, and monitoring and evaluation.

Emergency care specialists identified by IMC will conduct the training sessions for basic EMT and CME for emergency medicine physicians. Training sessions will follow curriculum developed. Arabic speaking emergency physicians and Iraqi physicians from the EM Technical Working Group will collaborate to ensure that there are not any language barriers.

Financial Management
IMC Iraq internal accounting controlling mechanism is based on the core principles of IMC policy. It consists of the plan of the IMC Iraq, procedures and records to safeguard the assets and to assure the reliability of financial reporting. The structure includes a series of checks-and-balances required for the appropriate authorization and recording of transactions and ensures that access to assets is limited to authorized personnel.
Each transaction is divided into component tasks completed by different staff members in order to increase the likelihood of detecting unintentional errors and prevent misappropriation of IMC's assets. IMC maintains a high degree of separation between its program, procurement, finance, warehousing, human resources and information technology departments. IMC's Procurement Department has instituted global procedures and processes as a part of our overall financial management mechanism, including protection against fraud. In country staff is provided training and materials on how to minimize and locate fraud. Additionally, to make certain IMC's policies and procedures are

being followed, IMC ongoing conducts quarterly internal audits that are performed by a team of staff that do not have a say in the running of or managing of its' various in-country grants.

Security

Staff and beneficiary security is a priority in IMC's security approach and security measures are taken to maintain the flow of operations. IMC maintains a level of discretion when implementing activities so as not to compromise any program staff or beneficiaries. Travel is of particular concern when ensuring that staff is secure. IMC security officers who are familiar with and have contacts in each area of operation keep abreast of the environment and assess routes before any travel. Two forms of communication remain open at all times and a quick response and adjustment system is always maintained. Furthermore, IMC benefits from added security by coordinating activities with local authorities and leaders.

IMC has effectively operated in Iraq for over five years without incident, even in many of the areas that are considered "hot" such as Tel Afar, Mosul, Ramadi, Fallujah, Haditha, Al Qaim, Baquba and Tikrit. This is in part due to IMC's ability to contextualize threats, assess risk and apply strategies that are relevant to the localized area of operations (AO). IMC staff takes the time to develop each program and itemize security measures to address the potential threats it may meet in each location. Effective travel management procedures—from extensive route planning through route reconnaissance and surveys, to convoy integration and low profile movement—have proven to be successful in protecting its staff as they travel extensively throughout Iraq.

Although IMC works on interventions country-wide, it strives to localize the nature of each intervention so that its work in the community is well respected and appreciated. Community acceptance and ownership play a major role in the protection of IMC staff and assets, as well as the safety of the projects. IMC engages local business leaders, influential local religious clerics and local-level government officials to obtain assurances of loyalty. IMC's ability to recruit and train in this manner, while managing and avoiding the pitfalls of organized crime, religious extremism and ethnic issues, is a testament to IMC's implementation of contextualized policy and procedures. Thus IMC is able to create a pool of security staff who are dedicated to the protection of life and who have a stake in ensuring the continuation of IMC operations. In-house security training is provided at every level within the organization.

IMC and its Board of Directors adopted the InterAction Security Planning Guidelines as a minimum standard for overseas operations in 1998. IMC has in-house team operating as low profile security teams that enable to successfully conduct field operations for extended durations. IMC offices are carefully chosen by selecting relatively secure areas of the cities in which it operates.

IMC has an established security manual and corresponding security systems and procedures. IMC offices have security officers whose responsibilities ensure that adequate security precautions are provided for national staff and international staff, multiple communications channels (mobile phone, VHF radio, and internet), adequately provisioned

office for fire, medical and hibernation requirements including first aid trained staff. IMC expatriate staff travel in light low profile vehicles. IMC expatriate staff are currently based in Baghdad's red zone and travel regularly to IMC field offices.

Coordination

IMC has a strategic and operational partnership with the MoH and coordinated closely with ministry officials to design the EMCD project. IMC's overarching country objective is to build the capacity of key service provider ministries, including the MoH. IMC is providing the MoH with the assistance needed to establish frameworks and protocols that will be applied to standardize and improve health services at the national level. MoH capacity building is focused on strengthening the ministries ability to plan, budget for, manage, and evaluate health services. At the same time, IMC is playing a key role, in collaboration with the MoH, to improve existing health services by providing capacity building training to health practitioners. Enhancing emergency medical services through I-EMCD is a key component of MoH capacity building interventions.

IMC will coordinate with international partners on the ground to capitalize on respective organizational strengths. IMC will also rely on solid institutional partnerships that have been developed over twenty-five years of emergency medical response. These partnerships provide IMC with a key source of technical input. Institutional partners have included UCLA, Cook County Hospital, Yale University, Harvard, Johns Hopkins University, and the Lebanese Red Cross.

Key strengths and opportunities include the involvement of international EM experts in the development and implementation of EM training and policy dialogue. IMC has already formed key partnerships with international medical experts and technical specialists who are dedicated to building the capacity of the Iraqi healthcare system (**see Annex C**). Their skills will help to support and inform EMT and physician training and continuing medical education as well as EM curriculum development. Despite the current lack of EM human resources, there is an adequate supply of well-equipped ambulances in Iraq that can be mobilized to provide care by trained EMTs.

Gender Equality

The EMCD program specifically furthers gender equality via several mechanisms. First, the program seeks to study and analyze gender-based barriers to care and employment. Using information from surveys and other studies, IMC then uses such information to advocate for policy changes to improve gender equality for both emergency patients and providers.

Second, the EMCD program strives to employ and train women whenever possible. This includes training programs at every level and the support for key female Iraqi administrators and leaders. Due to demographic distribution and local cultural norms, the EMCD III program will additionally focus new training on nurses working

in the emergency departments, as one way of reaching a higher number of female trainees.

IMC is also implementing several women's empowerment programs funded by several donors including AusAID. IMC will draw from our experience in this field in Iraq and hire a gender specialist from the women's empowerment program to support and advise as the EMCD III Program is implemented. This specialist will assist the program by providing technical guidance and advice for all aspects of the program as appropriate. In addition, the specialist will help to coordinate activities with the Ministry of Women and gain support if needed.

IMC is currently finishing several studies that address gender issues from both the patient and provider perspective. The results of these studies, with support from the gender specialist, will help IMC structure the media and promotional campaign to better include women as professionals and address potential barriers to the entrance of women into the emergency medicine field.

Sustainability

Sustainability is a key component of all IMC programming, where we are committed to the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action. As such, IMC builds sustainability as a core principle into all of its EMCD programming.

First, by focusing on training of existing ministry staff with strong buy-in from the ministries, EMCD III will expand the number of existing personnel in Iraq trained to international standards in the provision of emergency medical care. As such training has long-lasting effects on patient management, it will leave the country after the program with a sustainable core of practitioners to support emergency care far into the future.

Second, by training existing ministry employees to be program instructors, IMC ensures that training expertise remains within the country. Agreements with the ministries and the instructors ensure that ongoing trainings will continue after cessation of the formal grant activities (see Annex D). To the extent that infrastructure for centers of excellence are non-durable, IMC achieves agreements with the ministries to continue provision of future equipment needed. Additionally, almost all instructors have other teaching responsibilities (i.e. with medical students and residents), ensuring that their new knowledge passes to future generations of medical providers via multiple routes.

Finally, through structured policy agreements and ministerial protocols, EMCD III ensures that the changes made through the program make sustainable changes in Iraq's provision of emergency medical care. Such policy documents for EMCD III include those addressing inter-agency coordination during MCIs.

Expected Impact and Results

The overall aim of the proposed intervention is to establish effective systems for quality emergency medical care, which will positively contribute to changes in policies, regulations, and financing for EM services.

Expected impact/results include:

- Three Provincial Emergency Medicine Training Centres established and equipped
- Modular in service training curricula on emergency medicine developed, standardized, and endorsed by the Ministry of Health
- Modular training package for first responders developed and endorsed by Ministry of Health
- Modular first aid training package for community members developed and endorsed by Ministry of Health
- Rationalized emergency human resource use
- Improved capacity of more than 1000 emergency medical providers to manage critical care cases
- Improved capacity of more than 4000 community members surrounding targeted areas of intervention to deliver first aid
- Pre-hospital ambulatory services equipped to provide emergency services in targeted areas of intervention
- Improved patient case management and treatment, including those requiring Triage, Stabilization, Surgery, Post Op, and intensive care services
- Improved health outcomes for patients requiring emergency health services
- Comprehensive media campaign to support community outreach on EM implemented in at least 9 targeted provinces
- Population better informed about injury prevention and safety
- Decreased mortality from trauma cases (pre vs. post intervention comparison)

Program Implementation Plan

The Program has been designed to be implemented over a 22 month period. A detailed plan for implementation is described below according to the deliverables discussed in the narrative.

IMC will work with AusAID to further refine this plan within the first 45 days following award. During this period, additional meetings with stakeholders and the donor will allow for broader input and adjustment of activities if needed.

Timeline		Months																				
#	Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Goal I: Improve public education in emergency medical care																							
Objective 1: Implement community outreach programs that focus on injury prevention and safety promotion, including first aid community responders training																							

Timeline		Months																					
#	Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Community Level Interventions																						
	Community First Aid and Injury Prevention (3, 2 day training events in 14 governorates: 4000 people targeted)																						
	Media Campaign																						
	Content Development (3 TV PSAs, print material)																						
	PSA Broadcast																						
	Print Material Production and Distribution (78,000 brochures, 2800 posters to distribute in 14 governorates)																						
Goal II: Further enhance the capacity of the Iraqi pre-hospital system to deliver quality emergency medical services																							
Objective 1: Expand the current IMC/AusAID EMCDP pre-hospital training program to additional governorates																							
	EMT Training Program National Expansion																						
	Governorate Training Centers																						
	EMT Training (700 EMTs)																						
	EMT Equipment Package																						
Objective 2: Expand the current emergency medical training of Ministries of the Interior and Defense																							
	Train pre-hospital providers from MOI/MOD																						
	EMT Training (100 EMTs)																						
	EMT Equipment Package																						
	First Responder Training Program in Advanced First Aid (MOI/MOD)																						
	Central Training Center (Baghdad)																						
	Curriculum Development																						
	First Responder Training (150 first responders)																						
Objective 3: Improve emergency response to Multiple Casualty Incidents (MCIs)																							
	MCI Training Program																						
	Central Training Center (Baghdad)																						
	International Technical Experts																						
	Curriculum Development																						
	MCI Training (3 trainings/mock events)																						
	Develop policy with appropriate governmental stakeholders to further interagency cooperation																						
	Policy Conference/Workshop																						
Goal III: Further improve hospital-based emergency medical care																							

Timeline		Months																					
#	Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Objective 1: Improve the education of Iraqi physicians currently providing emergency medical care countrywide																							
	Doctor Training Program National Expansion																						
	Governorate Training Centers																						
	Doctor Training (300 doctors trained)																						
	Conferences/Workshops																						
Objective 2: Improve the training of Iraqi emergency department nursing personnel in Iraq																							
	Emergency Nursing Training																						
	Curriculum Development																						
	Nurse Training (100 nurses trained in Baghdad)																						

Budget

Detailed estimated cost for this program is provided in **Annex E: Detailed Program Budget** and in **Annex F: Detailed Budget Notes**.

Annexes

Annex A – About International Medical Corps (IMC)

Highlights of IMC Global Emergency Medicine Development Activities

Azerbaijan
IMC is leading a consortium of organizations including Johns Hopkins University and the United States Center for Disease Control and Prevention (CDC) to implement the Emergency Medicine Development Initiative. The program aims to improve patient outcomes and access to high quality emergency medical care provided by well-trained and equipped physicians and nurses. To achieve this goal, IMC and its partners provided technical and material assistance to the Government of Azerbaijan (GoAZ) in a collaborative effort to reform and strengthen the delivery of pre-hospital and in-hospital emergency medical services. IMC established an Emergency Medicine Technical Working Group that met regularly to develop a policy framework for emergency medicine. To promote the use of accurate data for informed decision-making, injury surveillance systems were developed and piloted in two District Hospitals and all relevant physicians were trained on the use of the systems.

Technical support was complemented by the establishment of four pilot sites in health clinics to test and demonstrate the delivery and effectiveness of new, enhanced emergency medicine services, improved management techniques, and injury surveillance systems. The four pilot health facilities were rehabilitated and re-equipped with essential medical supplies to enhance their operational capacity. Two emergency medicine training centers were established and close to 250 emergency department physicians and nurses, ambulance physicians, and first responders were trained to ensure that patients will receive improved emergency medical care through better access to quality emergency medicine services.

Afghanistan
IMC was established in 1984 in response to the desperate need for medical care and training in war-ravaged Afghanistan. Against prevailing wisdom, which held that training and local capacity-building could not be conducted within emergency settings, the founder of IMC, Dr. Simon, created the organization to prove that both could be accomplished simultaneously. By 1990, IMC had graduated more than 200 medics who helped establish 57 clinics and 10 hospitals in 18 provinces throughout rural Afghanistan—serving more than 50,000 patients per month. With its emphasis on health care through training, IMC continues to challenge the boundaries of traditional relief.

Indonesia
As one of the most disaster-prone countries in the world, Indonesia has witnessed the importance of rapid emergency deployment. In light of this, IMC embarked on a training and capacity building program aimed at improving the indigenous capacity to respond to disasters and major emergencies through the training of medical staff and civil authorities in disaster management and medical response. Since 2004, International Medical Corps (IMC) has been working to build the capacity of Ambulan 118, an Indonesian NGO with a broad network of emergency health personnel. The IMC-Ambulan 118 disaster preparedness program focuses on developing management, training, finance, logistics, and human resource systems for rapid and effective emergency response across Indonesia. Local response teams are trained using best practices in emergency relief according to SPHERE standards, while

also expanding and improving Ambulan 118's management and instructor training capacity. Ambulan 118's emergency response time has decreased from seven days in 2005 to less than 24 hours in 2007. The program has also raised the capacity of nearly 700 first responders in emergency medical response and disaster management in seven provinces of Indonesia while building collaboration between 118 chapters in nine provinces, achieving a unified response. The disaster-preparedness program has also compiled a valuable database of contacts and health facility capacities in key disaster-prone urban centers around Indonesia. This database has been shared with other organizations conducting disaster response and will improve the coordination of rapid and effective responses.

Bosnia

IMC's curriculum for emergency medicine physician training developed in Bosnia 1992-1994 is now incorporated into the sub-specialty at the Medical University in Sarajevo developed after the war. Similarly, the IMC training curriculum for Emergency Medical Technicians (EMTs) is still utilized today by the Bosnian MoH for EMT training at health facilities countrywide, as well as taught by IMC-trained trainers.

Annex B – Letter from MoH Requesting Additional Support

IMC received the following official letter from Dr Jasib L. Ali General Director of Medical Operations and Specialized Services Department in Ministry of Health. The translation is below followed by a scan of the original letter in Arabic.

Dear Dr. Evans,

It has been a pleasure to work with you and IMC on improving Iraq's emergency medicine capabilities in Baghdad, Ninnewa, Thi-Qar, and Anbar. The training of EMTs and doctors is of the highest quality and it is saving lives now in Iraq. It is because of this that the MOSS is working only with IMC and IMC is providing the only certified training programs for EMTs and doctors that is recognized by the Iraq MOH. On behalf of the MOH and MOSS I would like to thank you for the tremendous support IMC has provided us.

However, there is still much to do. On behalf of the MOH, I request IMC to continue this very valuable training and expand this to other governorates in Iraq. In addition, we have a tremendous need to train emergency nurses and we would like IMC to start a training program for these staff in Baghdad initially and then expand it nationally. Iraq is also struggling with properly trained managers for emergency medicine and we would like IMC to start a training program for these staff as well, beginning in Baghdad. We also think it is essential to begin integrating training in mass casualty incident management to our MOH staff as well as other first responders. Finally we need to continue a public awareness program and we ask IMC to continue its current program and expand into more community focused activities.

I look forward to continuing to work with IMC on improving Iraq emergency medicine.

Sincerely,

Dr. Chasab
DG of MOSS

جمهورية العراق
وزارة الصحة
دائرة العمليات الطبية والخدمات المتخصصة
العدد : د.ع.ط/5/ ١٣٥
التاريخ : ١ / ٧ / 2009م

الى / د. جيرالد ايفانس / الهيئة الطبية الدولية
د. طارق حسون / الهيئة الطبية الدولية

لقد اسعدنا التعامل معكم شخصيا ومع الهيئة الطبية الدولية من خلال تحسين امكانياتَ طب الطوارىء في بغداد ونينوى وذي قار والانبار . أن تدريب المسعفين والاطباء من خلال برنامج التدريب عالي الكفاءه قد اسهم في انقاذ حياة المصابين من العراقيين. وليس غريبا ان تتمسك دائرة العمليات الطبية والخدمات التخصصية في وزارة الصحة بالهيئة الطبية الدولية كونها الجهة المعتمدة الوحيدة الان من قبل دائرة العمليات الطبية في تقديم برنامج التدريب التخصصي المعتمد للمسعفين والاطباء والمعترف به من قبل وزارة الصحة العراقية. ولا يسعنا في هذا المقام اصالة عن نفسنا ونيابة عن وزارة الصحة الا أن نتقدم لكم بالشكر الجميل لما قدمته الهيئة الطبية الدولية من جهد كبير في هذا المجال.
على ان الموضوع لم ينتهي الى هذا الحد وهناك الكثير لعمله , وحيث ان دائرة العمليات هي الدائرة المختصة في هذا المجال فانه يسعدنا الاستمرار بالتعاون مع الهيئة الطبية الدولية في توسيع برنامج التدريب النافع هذا ليشمل بقية محافظات العراق أيضا. كما اننا بحاجة ماسة الى تدريب الكوادر التمريضية ونأمل ان تقوم الهيئة الطبية الدولية بهذا الدور وتبدأ التدريب كمرحلة اولى للكوادر التمريضية في بغداد ثم التوسع بالبرنامج ليشمل بقية المحافظات كذلك.
ولايمكن للصوره ان تكتمل الا من خلال تدريب الكوادر الادارية المسؤولة عن عمل طب الطوارىء التدريب الاداري المناسب حيث ان دائرة العمليات ترى في الدعم الذي تقدمه الهيئة الطبية الدولية في هذا الخصوص الحل المناسب والوافي ونقترح ان يبدأ التدريب للكوادر الادارية في بغداد اولا .
أننا في دائرة العمليات الطبية والخدمات التخصصية نعتقد بضرورة واهمية ادماج برامج التدريب على التعامل مع الاحداث الكارثية التي ينتج عنها اصابات كثيرة في برنامج التدريب الخاص بكوادر وزارة الصحة المعنية بهذا الشأن كذلك تدريب من يمثلون الواصلين الاوائل الى مكان الحدث التدريب المناسب مما يوفر فرصة انقاذ اكبر عدد من المصابين لاي سبب كان .

وأخيرا اننا نرى أهمية برامج توعية المواطنين بخدمات طب الطوارىء ونأمل ان تقوم الهيئة الطية الدولية بالاستمرار في دعم برنامج التوعية المعمول به حاليا كما نأمل توسعة البرنامج للتركيز على نشاطات تستهدف المجتمع في رسالتها التوعوية.

أننا نتطلع الى استمرار العمل مع الهيئة الطبية الدولية لتحسين برامج طب الطوارىء في العراق وفق مذكرة التفاهم التي تم ابرامها بين دائرتنا وهيئتكم الموقرة بتاريخ 1 ايار 2008.

هذا وتقبلوا منا فائق الاحترام

الدكتـــور
جاســـب لطيـف علـــي
المديـــر العـــام
2009/٧/١

E-Mail الدائرة: moh.doss@yahoo.com
تـلفـــون : 4151311

Annex C – Key Program and Technical Advisory Personnel

Ross I. Donaldson, MD, MPH, CTropMed
Dr. Ross I. Donaldson is the Director of IMC's Emergency Medical Care Development (EMCD) program, as well as an Assistant Clinical Professor of Medicine at UCLA and the Assistant Director of Quality & Process Improvement in the Harbor-UCLA Department of Emergency Medicine. A Fellow of the Royal Society of Hygiene & Tropical Medicine, Dr. Donaldson received a Masters of Public Health from the London School of Hygiene & Tropical Medicine and a Certificate of Knowledge in Clinical Tropical Medicine & Travelers' Health (CTropMed) from the American Society of Tropical Medicine & Hygiene. The recipient of numerous academic honors, Dr. Donaldson is an internationally invited speaker. He is the chief editor of the Tarascon Medical Translation Handbook, an aid helping healthcare workers communicate with their foreign speaking patients in 18 different languages. Academically, he is interested in the provision of emergency medical care in low- and middle-income areas and has worked in Latin America, Africa, Asia, and the Middle East.

Waleed Ibraheem Al-Ansari, MD
Dr. Al-Ansari currently serves as a head of the Emergency Medicine Working Group (EMWG). Dr. Al-Ansari is also a manager of the intensive care unit at the Surgical Teaching Hospital, Medical City in Baghdad.

Sharaf Aldeen M. Aziz, MD
Sharaf Aldeen M. Aziz currently serves as IMC's Senior Health Services Program Officer in Baghdad. Since 1992, he has been serving as the Senior Advisor for Anesthesia and Intensive Care at Al-Jadria Hospital and has held several senior consultancy positions at several other prominent hospitals in Baghdad, Iraq.

Dr. Sharaf Aldeen M. Aziz is a trained expert in the field of Anesthesiology. In addition, he has served as a Committee Member on the Anesthesia Scientific Council for the Iraqi Board for Medical Specialization from 1994 to 2005 and served on several other Anesthesia Committees as both a Chairman and Director. Dr. Sharaf Aldeen M. Aziz is well known in his field and has been recognized in several publications for his work in Anesthesia and Intensive Care for Critical Patients by Medical Educational Booklet No.33, First Arab Congress of Emergency Medicine and Intensive Care Management of Severe Tetanus, among others. Dr. Sharaf Aldeen M. Aziz possesses a M.B. Ch.B. from the University of Baghdad and a FEARCSI from the Royal College of Surgeons from Ireland

Robert R. Simon, MD FAAEM
Founder and Chairman of the Board of International Medical Corps, Dr. Robert R. Simon is a nationally recognized expert in the field of emergency medicine. He is Executive Chair of the Department of Emergency Medicine at the Cook County Bureau of Health Services and Rush University Medical Center. Previously, he was Chairman of Emergency Medicine at Cook County Hospital in Chicago. He is the author of a number of textbooks on Orthopedic Emergencies and Surgical Procedures, used as standards in Emergency Medicine throughout the country. He has also done a great deal of work modifying and developing new, more rapid procedures in emergency surgical techniques. In 1984, Dr. Simon established IMC in response to the desperate need for medical care and training in war-ravaged Afghanistan. Then, an Associate Professor in the Division of Emergency Medicine at UCLA, he was the first American physician to enter Afghanistan following

its invasion by the Soviets in 1979. Dr. Simon also served in Bosnia where he initiated IMC's emergency relief and training program.

William Robinson, MD FAAEM

Dr. William Robinson is long-time member of IMC's Board of Directors. He served as a Professor and Chair of the Department of Emergency Medicine at the University of Missouri-Kansas City School of Medicine and Truman Medical Center since 1986. In 1986, Dr. Robinson served as Medical Director of IMC's training program for Afghan medics in Peshawar, Pakistan. Dr. Robinson participated in an assessment mission to Uganda and in 1993, helped launch IMC's emergency response program in Bosnia. In 1983, Dr. Robinson was named "Emergency Physician of the Year" by the Greater Kansas City Emergency Physicians Foundation, and in 1994 he became President Elect and President of the Association of Academic Chairs of Emergency Medicine (AACEM). Dr. Robinson is the author of many books and articles published in a variety of professional journals and is a regular speaker at professional conferences.

Mukesh Kapila, CBE DRCOG MRCGP MFPHM FFPHM

Dr. Mukesh Kapila is Vice President of Global Health for International Medical Corps. Dr. Kapila brings experience in crisis and conflict management, humanitarian aid, disaster reduction, and post-conflict peace-building and recovery, leading or participating in several international missions worldwide over the past two decades. From 2004-2006 Dr. Kapila was Director of the Department of Health Action in Crises at the World Health Organization and Adviser to its Director General.

He served as United Nations Resident and Humanitarian Coordinator for the Sudan from 2003-2004. Prior to that, he was Special Adviser to the UN High Commissioner for Human Rights and to the Special Representative of the United Nations Secretary General in Afghanistan. From 1990-2002 Dr. Kapila worked at the UK Government Department for International Development, first as Senior Health and Population Adviser and later as Head of a new Department for Conflict & Humanitarian Affairs. He helped create and served as deputy director of the first UK National AIDS Programme in 1987-1990.

Dr. Kapila also serves as Special Representative of the Secretary General of the International Federation of Red Cross and Red Crescent Societies and as Policy Adviser to the World Bank on South-South Cooperation in the Global Facility for Disaster Risk Reduction. He is a member of the UN Disaster Assessment and Coordination system and a Council member of Minority Right Group International. Dr. Kapila also sat on the Board of Trustees of the UN Institute for Training and Research, and the International Peace Academy.

Dr. Kapila has won several awards for his relief and development work. In 2003 he was honored for international service by being bestowed as a Commander of the Order of the British Empire by Her Majesty Queen Elizabeth II. In 2007 he received a Global Citizenship award. Originally schooled in India, he studied further in England at the Universities of Oxford and London, from where he holds advanced degrees in medicine and surgery, public health and international development.

Robert Norris, MD FACEP

Dr. Norris is Associate Professor of Surgery and Chief of Emergency Medicine at Stanford University, where he has been on the faculty for over 16 years. His interests include international medicine and he has done international work in Emergency Medicine in India and Latin America. He is Editor-in-Chief of Wilderness and Environmental Medicine, the journal of the Wilderness Medical Society, and he has special interests in advanced airway management, environmental toxins (especially related to venomous snakes and arthropods), and disaster medicine. Dr. Norris is a Fellow of the American College of Emergency Physicians and member of the Society for Academic

Emergency Medicine, and teaches many advanced airway management workshops each year, including several such workshops in India. He is also an Advanced Trauma Life Support Instructor.

Craig Manifold, DO

Dr. Craig Manifold is Chief of Emergency Services, Southeast Baptist Hospital, San Antonio, Texas. He serves as Assistant Medical Director for San Antonio AirLIFE, a rotary and fixed wing aeromedical transport organization for South Texas. Additionally, Dr Manifold is a Lieutenant Colonel in the Texas Air National Guard. His duties include Chief of Professional Services and Flight Surgeon for the 182 Fighter Squadron. He is a Fellow of the American College of Emergency Physicians and Fellow of the American Academy of Emergency Medicine. Dr. Manifold has lectured in emergency medicine, disaster medicine, trauma and emergency medical services system development throughout the world. Research interests include hypothermic resuscitation, procedural competency, and pre-hospital interventions.

Jamil Bayram, MD MPH FAAEM

Dr. Jamil Bayram was board certified in Emergency Medicine at Cook County Hospital in Chicago, was Chairman of the largest emergency department in Lebanon for three years, and is now working at Rush University Medical Center where he has held the title of assistant Professor, as well as Director of the Rush/Cook County International Emergency Medicine Fellowship, since 2004.

Mamta A. Malik, MD MPH

Dr. Malik currently holds numerous positions at the Maimonides Medical Center for Emergency Medicine, including Attending Physician, Emergency Department Liaison to Department of OB/GYN, Assistant Residency Director, Director of Emergency Ultransonography, and Continuous Quality Improvement Committee member. Previously, he has served as the OB/GYN Editor for the Israeli Journal of Emergency Medicine and the Chief Resident of the Department of Emergency Medicine at Mt. Sinai Medical Center. He is board certified by the American Board of Emergency Medicine and is a member of numerous professional associations, including the American Academy of Emergency Medicine, the South Asian Public Health Association, and the American College of Emergency Physicians. He is on the Board of Directors of the American Academy for Emergency Medicine in India.

Annex D – Sustainability through the MOH

IMC has worked closely with the MOH to ensure that investments made in Iraq emergency medicine will have long term benefit and activities will continue after the end of funded programs. The MOH has been committed to this and has provided a letter indicating their support. This is provided below in Arabic with English translation.

In addition, the Minister of Health has agreed to provide financial support for trainers of the IMC EMCD program and will continue with this incentive after completion of the program. This incentive amounts to 10,000 Iraqi Dinar (approx $8) per hour of instruction of students within one of the IMC established training centers. This is a significant step forward and is further indication of the vision and commitment of the MOH to continue and sustain the EMCD Program.

English translation of MOH letter:

Republic of Iraq

Ministry of Health

Office of Medical Operations and Specialized Services

Ref #: 5/ 603

Date : Dec 3, 2009

To: IMC

Subject: confirmation

Best Regards

As per the implementation of the Emergency Medicine Development Program in Iraq, and in regard to the training centers that were opened in Baghdad and other governorates (Ninawa, Anbar, Thiqar), we would like to confirm that Iraqi Ministry of Health as represented by our office (office of Operation and Specialized Services) will be ready to continue the implementation of the training program and will continue to support the training centers and make sure they are ready for training even after the end of IMC support to this program. This aspect has been always considered as most important priority for MOSS.

For your information with Respect

Doctor

Chasib Latif Ali

Director general

Dec 3, 2009

جمهورية العراق
وزارة الصحة
دائرة العمليات الطبية والخدمات
المتخصصة
العدد :د.ع.ط./٥/ ٢٠٦
التاريخ : ٢ /١٢/ ٢٠٠٩

الى // الهيئة الطبية الدولية

م // تأكيد

تحية طيبة ...

استنادا" الى تنفيذ برنامج تطوير طب الطوارئ في العراق وفيما يخص مراكز التدريب التي تم فتحها في بغداد والمحافظات(نينوى-الانبار- الناصرية).....نود التأكيد بأن وزارة الصحة العراقية متمثلة بدائرتنا/دائرة العمليات الطبية والخدمات المتخصصة ستكون على استعداد للاستمرار بتنفيذ البرنامج التدريبي ودعم استمرارية تلك المراكز وجاهزيتها حتى بعد انتهاء الدعم المقدم من قبل هيئتكم الموقرة,حيث يعتبر ذلك واحد من اهم اولوياتها... تفضلكم بالاطلاع مع الاحترام.

الدكتـــــور
جاســب لطيــف علـــي
المديـــر العــام
٢٠٠٩/١٢/٢

البريد الالكتروني للدائرة E-Mail : moh.doss@yahoo.com

Annex E – Detailed Program Budget

Please see the enclosed detailed program budget.

Annex F – Detailed Program Budget Notes

Please see the enclosed detailed budget narrative.