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Emergency Medicine in the West Bank – Improving the Quality of Emergency Divisions and Investing in Emergency Personnel

**PALESTINIAN HEALTH SECTOR REFORM AND DEVELOPMENT
PROJECT**

SHORT-TERM TECHNICAL ASSISTANCE REPORT (FINAL)

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Submitted on JUNE 23, 2011

Contract No. 294-C-00-08-00225-00

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ACRONYMS

ACGME	American Council for Graduate Medical Education
ACLS	Advanced Cardiac Life Support
ECG	Electrocardiogram
ED	Emergency Department (Division)
EMAP	Emergency Medicine Assistance Program
EMS	Emergency Medical Services
ESI	Emergency Severity Index
HIS	Health Information System
ICU	Intensive Care Unit
MOH	Ministry of Health
PALS	Pediatric Advanced Life Support
PM Council	Palestine Medical Council
RRC	Residency Review Committee
SOW	Scope of Work
STTA	Short Term Technical Assistance
USAID	United States Agency for International Development

ABSTRACT

The consultant, a Pediatric Emergency Physician and an Assistant Professor from Loma Linda University School of Medicine, worked with the Palestinian Health Sector Reform and Development Project from May 22 through June 2, 2011 as related to Task 2.1.3: Strengthen the Capacity of Palestinian Health institutions to Provide Quality Emergency Care Services.

The methodology of addressing this task involved the following:

- (1) Supporting the newly developed Emergency Medicine Residency Training (EMRT) Program by:
 - a. Reviewing the current progress of each training site in relation to the development of clinical rotations with the MOH, training site Medical Directors and EM Coordinators.
 - b. Meeting with the Division Heads for Pediatrics at each training site to help support Pediatric teaching and clinical rotations for the EMRT.
 - c. Meeting with the various stakeholders who oversee the EMRT to define and determine level of each stakeholder's responsibility.
 - d. Providing an overview of the anticipated plan for the remainder of the academic year to the Emergency Medicine (EM) residents and the EM coordinators that will roughly follow the EMRT curriculum developed by An-Najah University.
 - e. Addressing resident accountability for their educational learning by creating an individualized learning plan program.

SUMMARY OF RECOMMENDATIONS

Within the next two (2) weeks:

- Each EM resident to have a defined individual learning plan.
- Rafidia and Ramallah EMRT sites to have a defined plan to initiate clinical rotations.

Within the next one (1) month:

- Each EMRT site has begun clinical rotations for the EM residents.
- Residents to be provided with selected components of the PM Council's EM Scientific Committee meeting minutes from June 1, 2011 that describes the required elements that will be needed to allow promotion to the senior year of residency training.

Within the next six (6) months:

- EM residents will have completed advance resuscitation training in cardiac care (ACLS), pediatric care (PALS), and trauma care.
- Assure all EM residents have completed their individualized learning plan.
- Designated members of the PM Council EM Scientific Committee to have visited their assigned site to monitor progress.
- PM Council to administer the Part I promotional examination.

Within the next one (1) year:

- Assure that there is a defined process for the promotion of residents in the EMRT program.
- Reassessment of initiated processes to determine:
 - Whether they have been implemented in a manner that provides for a sustainable EMRT program.
 - Whether this has resulted in the improved education of EM residents.

SECTION I: CURRENT STATUS OF EMRT PROGRAM

The EMRT program entered its second year in April of this year without a clear understanding of whether the remaining 12 residents that had started the program met the required competencies for promotion to the third level of training. The residents informed various individuals that they were promoted based on a small salary increase and referred to themselves as “seniors” despite the fact that only two had passed the EM evaluation examination (based on Emergency Medicine board questions administered by the Project team) and only half passed the basic-knowledge examination in Internal Medicine and Surgery (based on United States Medical Licensing Exam Part I administered by An-Najah University).

One new resident entered the program in April after following the traditional method of passing the required qualifying examination and selecting EM as his residency of choice. This individual had been practicing EM at Ramallah General at upon starting the EMRT it was unclear as to whether he was to follow the traditional track or the ‘modified track’ per the EMRT curriculum.

The oversight process that exists for the other residency programs in the West Bank and was recommended for the EMRT during meetings in January (refer to previous EMRT report) had not been implemented and it was discovered during this trip that the High Scientific Committee for Emergency Medicine had never met to determine how they were to monitor the program at each training site. Because the EMRT was established by the MOH, the PM Council and the Postgraduate Officers and EM Coordinators felt they lacked the authority to implement any recommendations to improve the training of these residents. The limited communication between the MOH, the PM Council, and the individuals that are to oversee the EMRT at each site has impeded the progress and sustainability of this program.

There is limited didactic learning unless the EM STTA is present at a training site. Despite creating a didactic lecture schedule, the EM Coordinators at Ramallah and Alia Hospitals have failed to make any progress and state that the residents themselves do not seem to support their proposed educational plan stating they have lack of time. The coordinators feel they have no authority to implement any consequences to lack of resident attendance.

A. Site-specific Findings

Alia Hospital – Hebron

- Has initiated clinical rotations with one of the EM residents currently in his second month on general surgery.
- The Administration is the most supportive towards educational training in a residency program as proven by the quality of their other residency training programs.
- Still lacks an organized ED patient flow process, but plans are underway to begin ESI-triage training and nursing educational support.

Rafidia Hospital – Nabulus

- Clinical rotations to provide exposure to medical cases in various specialties have been suggested but have yet to be implemented.

Ramallah Hospital – Ramallah

- Two Internal Medicine specialists have been assigned to the ED during A and B shifts but do not provide any bedside coaching. The residents utilize them as a consultant only if they have questions regarding a case.
- Continues to have the best ED organizational processes and structure.

SECTION II: CHALLENGES AND RECOMMENDATIONS

A. The Busy Working Environment

The on-going outpatient clinic strikes have significantly impacted the patient load in all the EDs. The challenge to balance the patient flow and teaching is not unique to the EMRT in the West Bank, but rather a constant challenge to all busy EM training programs. To overcome this challenge, the mindset of “we are too busy to teach and learn” must change, and the EM residents and coordinators themselves should find creative ways to implement the practice of learning in a busy ED setting.

During the EM Scientific Day, this consultant provided some examples of learning modalities such as a five to ten minute discussion over a patient case during the hand-off process. Each EM STTA will be encouraged to share their own work experience and provide other creative solutions to learning in a busy work setting. There are also several educational articles specific to teaching in an ED setting that can be provided to all EM STTAs. The EM STTAs will also need to continue to encourage the EM residents and coordinators to find their own solutions so that they can take ownership of the development of this training program.

Each resident has been asked to work with this consultant to develop their own individualized learning goal that incorporates the use of internet resources, direct interaction with a specialist, and /or providing a lecture as part of their plan to achieve their learning goal. This structure will hopefully give the residents a framework on how to develop life-long habits to incorporate learning into their practice of medicine.

B. Lack of Adequate Bedside Coaching

With the lack of EM specialists to provide 24-hour bedside coaching, the Project must depend on the local specialists to share their expertise with the EM residents. The main drawback to utilizing the local specialists is that there are variable levels of teaching expertise and the quality of medicine practiced by the specialists is also varied. For example, during the meeting with the Scientific Committee for EM, the neurosurgeon on the panel commented that although Rafidia is a surgical hospital and that they have neurosurgeons, he states that the quality of neurosurgical care they provide is poor, and would not recommend that this particular group be relied upon for teaching nor would they provide an adequate clinical rotation.

This lack of adequate clinical teaching is not unique to the EMRT. Dr. Franco Carli from the Canadian Anesthesiology Society, who has begun supporting an Anesthesiology training program in three sites in the West Bank, stated that they are also experiencing the same lack of teaching initiative and clinical supervision from their local counterparts.

The EMRT must depend on the PM Council to determine which specialty groups can be relied upon to provide the necessary training for the EMRT. The EM STTAs must also serve as examples (for the other consultants) on how to perform adequate bedside coaching and supervision.

C. Providing Medical Emergency Exposure for the Rafidia EM Residents

Because of the low EM examination scores, Dr. Naim Sabra, Director General of Hospitals at the MOH, gave approval to the Project team to explore a clinical rotation at Al-Watani Hospital for the EM residents at Rafidia Hospital. After meeting with the Medical Director and visiting the ED at Al-Watani, it was determined that despite this hospital's willingness to collaborate with the EMRT, this site would not be able to provide adequate training for the EM residents primarily due to the:

1. Lack of resident supervision.
2. The lower patient volumes which would not support the use of an STTA assignment to this one site.

The only available alternatives at this time would be to:

1. Have the EM STTAs encourage the EM residents and staff to begin the initial evaluation and treatment of all cases presenting to the Rafidia ED (including those with presumed medical emergencies).
2. Exchange rotation between the EM residents in Rafidia and Ramallah Hospitals.
 - a. The main challenge with this recommendation is related to the constraints from the travelling distance required for each resident involved.

D. Providing an Oversight Committee with Authority

The meeting with the EM Scientific Committee was very productive as it seemed to establish the necessary oversight to allow for proper implementation of this EMRT. The committee will also assist in defining the appropriate level of training for each resident based on a combination of test results and clinical evaluations and will proceed without reliance on the MOH (as is the case for the other residency programs in the West Bank).

The EM Scientific Committee also provided insight regarding the sustainability of this training program which was very similar to the recommendations given by previous STTAs: Provide a single designated training site for the EMRT with alternative training sites for those EM residents in their senior year (third or fourth). This discussion must continue after evaluation of the progress at the end of this training year and should also take into consideration the development of An-Najah University Hospital.

The Project's Hospital Support team will continue to serve as a conduit to improve the communication regarding the program's progress between the oversight committee (PM Council and the EM Scientific Committee) and with the training sites (EM Coordinator and Residents, Hospital Directors). This will hopefully provide the residents with a structure to know how they need to be accountable for their own learning and training.

SECTION III: ACTION PLAN

A. Action Plan

Item	Action	Timeframe	Responsible party(ies)
Individual learning plan	Develop a resident specific learning plan for each of the EM residents	1 week	Dr. Besh and Project to contact resident and coordinator if resident has not responded to Dr. Besh by June 5. EM STTA and residency coordinator will monitor progress monthly.
Resident expectations	PM Council to provide EM residents with notification of expected requirements for promotion to 3 rd year level of training	1 week	Project to verify with coordinators. Dr. Nadim Islam to verify residents understand promotion criteria will be consistent with other Palestinian residencies and that promotion exam will be given sometime after Ramadan.
Clinical rotations	Each training site is to provide a working plan for how to implement clinical rotations by July 1, 2011	Next 2 weeks	Rafidia and Ramallah EM residency coordinators. Dr. Besh and Project to follow-up. Project to provide rotation plan/schedule to Dr. Naim Sabrah.
Clinical rotation performance evaluation	Create an resident evaluation form for clinical rotations	Next 2 weeks	Dr. Besh
Improve bedside coaching for Ramallah residents	Internal Medicine specialists assigned to the ED to provide direct bedside coaching	1 month	Dr. Mazen

Item	Action	Timeframe	Responsible party(ies)
Clinical rotation EM goal and objectives	Provide the core clinical rotations (Pediatrics, Internal Medicine, Surgery, Critical Care/Anesthesia) with expected performance competencies for each rotation	1-2 months	Dr. Besh
Internal Medicine rotation for Rafidia residents	Need to determine whether Rafidia residents can rotate/exchange with Ramallah residents so that they can get exposure to Medical cases	2-3 months	Project team and Dr. Bisan Salhi to lead discussion with Dr. Naim Sabra and Ramallah and Rafida ED Coordinators and Medical Directors
EM modules	Provide PM Council Scientific High Committee with expected knowledge and/or skill competency for each designated specialty area (example: Obstetrics)	2-3 months	Dr. Besh
Leadership and Observation rotation at Loma Linda University	Identify 4 residents who exhibit the most potential to be leaders in EM training and development in Palestine.	3-4 months	Project w/STTAs; PM Council Scientific High Committee for EM

ANNEX A: SCOPE OF WORK

Short-Term Consultancy Agreement Scope of Work

SOW Title: Physician Consultant – Emergency Medical Services Program

SOW Date: February 10, 2011

SOW Status: Final

Consultant Name: Besh Barcega, MD

Job Classification: Short-Term U.S. Expatriate Consultant

Reporting to: Amal Daoud

I. Project Objective

The Palestinian Health Sector Reform and Development Project (the Project) is a five-year initiative funded by the U.S. Agency for International Development (USAID), and designed in close collaboration with the Palestinian Ministry of Health (MOH). The Project's main objective is to support the MOH, select non-governmental organizations, and select educational and professional institutions in strengthening their institutional capacities and performance to support a functional, democratic Palestinian health sector able to meet its priority public health needs. The project works to achieve this goal through three components: (1) supporting health sector reform and management, (2) strengthening clinical and community-based health, and (3) supporting procurement of health and humanitarian assistance commodities.

The Project will support the MOH implement health sector reforms needed for quality, sustainability, and equity in the health sector. By addressing key issues in governance, health finance, human resources, health service delivery, pharmaceutical management, and health information systems, the Ministry will strengthen its dual role as a regulator and main health service provider. The Project will also focus on improving the health status of Palestinians in priority areas to the Ministry and public, including mother and child health, chronic diseases, injury prevention, safe hygiene and water use, and breast cancer screening for women.

II. Specific Challenges to Be Addressed by this Consultancy

The West Bank has unique emergency medicine needs. It is a region vulnerable to both natural disasters (earthquakes) and man-made disasters (war). Historically, physicians working in emergency rooms have been poorly trained, with limited hospital support, no triage systems in place, poor access to emergency equipment, a limited pharmaceutical formulary, with fragmented pre-hospital emergency services, and in an austere medical environment. Other projects predating the Project have specifically recognized the need for emergency physicians to be trained as specialists to emerge as the leaders in a sustainable Palestinian emergency healthcare infrastructure. The Palestinian emergency medicine curriculum was created by An-Najah National University in collaboration with Lille University/ France and later approved by the Palestinian Medical Council in December, 2009. The Palestinian Ministry of Health is currently in the process of implementing this curriculum. The newly implemented emergency residency program faces the challenge that no certified emergency specialists are available in the MOH system; currently there are only 2 emergency certified specialists in the West Bank. To assure the proper procedures, standards, and protocols of emergency medicine are adhered to based on international standards requires qualified personnel to harness a high caliber residency program and mentor the residents and emergency care teams at the emergency rooms. The consultant will face the additional challenges posed by the lack of training, equipment, and support staff. Overcoming these challenges will be key to ensuring that the residency program is sustainable and high quality.

III. Objective of this Consultancy

The Consultant will serve as an expert in supporting the improvement of quality of Emergency Medical care provided and help in the implementation of the emergency residency program. The Consultant will focus on improving emergency care services at the MOH secondary health care level and will serve as a clinical mentor working alongside Palestinian counterparts to help build capacity of the emergency care professional staff at MOH hospitals. The Consultant will collaborate to further develop the design and implementation of a structured program of training and education leading to the successful credentialing of physicians as internationally-recognized board-certified specialists in Emergency Medicine.

IV. Specific Tasks of the Consultant

Under this Scope of Work, the Consultant shall perform, but not be limited to, the specific tasks specified under the following categories:

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- A. **Background Reading Related to Understanding the Work and Its Context.** The Consultant shall read, but is not limited to, the following materials related to fully understanding the work specified under this consultancy:
- Previous Loma Linda University technical reports relating to Emergency Medicine
 - Previous Project technical reports, work plan, etc.
 - MOH National Strategic Health Plan
 - USAID Quarterly Reports
 - USAID Needs Assessment Report, December 2008
 - USAID MOH Institutional Development Plan
 - Selected paper on status of emergency medicine in Palestinian Territories to be provided to the consultant prior to entry into the field or during orientation upon entry into the field.
 - The Project's Year 2 and 3 Work Plan as relating to emergency services and deliverables to USAID
 - Palestinian Medical Council approved curricula for emergency residency program, and additional materials related to curriculum development in emergency training.
- B. **Background Interviews Related to Understanding the Work and Its Context.** The Consultant shall interview, but is not limited to, the following individuals or groups of individuals in order to fully understand the work specified under this consultancy:
- Chemonics Project Management Unit (PMU), if appropriate
 - Chemonics Field Office Staff, as needed
 - Appropriate MOH Staff and others appropriate
 - Hospital Emergency Staff and others as appropriate
 - LLU-Palestine Project leadership
- C. **Tasks Related to Accomplishing the Consultancy's Objectives.** Under the supervision and guidance of the technical team at the FO, the Consultant shall use his/her education, considerable experience and additional understanding gleaned from the tasks specified in A. and B. above to:
- Liaise with stakeholders to implement the emergency medicine residency training program work plan, monitor progress, and advise revisions as necessary.
 - Provide guidance to the EM residency coordinator at each site to develop a site-specific residency program, including rotation of in-hospital specialty consultants, lecture topics, resident schedule, and rotation of STTAs and local EM physician consultants.
 - Provide orientation, guidance, and regular communication with STTAs, local physicians, and EM residency coordinators.
 - Identify and provide an EM test question bank resource.
 - Identify and provide expected competencies per training year.
 - Develop a test bank for interval written, oral, and simulation testing for all four years of training.
 - Take the lead in drafting the remediation plan with input and collaboration from stakeholders for current EM residents who have not been promoted to the 2nd year of training.
 - Collaborate closely with MOH hospital staff to create ways to improve emergency services and the standard of care at MOH facilities.
 - Promote teamwork, cooperation, and a coordinated patient care approach among the stakeholders.
 - Outline educational/training materials to support the curriculum.
 - Support the identification of additional STTAs and individualization of Scopes of Work to help accomplish Project goals and objectives.
 - In addition to the above-listed tasks, the Project welcomes additional contributions and creative ideas in support of the Project objectives.

V. Expected Products.

The Consultant is required to provide the following products:

- EM test question bank resource
- Expected EM residency competencies per training year
- Test bank for interval written, oral, and simulation testing for all four years of training
 - Bi-weekly status update, by email or phone.
 - Quarterly status report

Within three days of the consultant's first day of work on assignment in the West Bank (unless otherwise specified), the consultant should provide the methodology for successfully completing the work (using Annex I: STTA Methodology). The substance of, findings on, and recommendations with respect to the above-mentioned task shall be delivered by the Consultant in a written report, policy statement, strategy, action plan, etc. for

submission to USAID (using Project-provided STTA report template provided in the Welcome Packet). A draft of this report is due no later than 3 business days prior to the consultant's departure (unless otherwise specified), and final no later than 7 business days after the consultant's departure. Please note that USAID requires a debrief to be scheduled prior to your departure. You will find a list of debrief topics in the STTA Methodology template to cover with your team leader before you meet with USAID.

The Consultant is required to provide the following products to LLU:

- Bi-weekly status update, by email or phone.
- Monthly Personal Activity Report (PAR).

VI. Timeframe for the Consultancy.

The timeframe for this consultancy is from on or about February 12, 2011 and will conclude on or about December 31, 2011. The Consultant will be working remotely, as needed, throughout this time period and with potential field visits.

VII. LOE for the Consultancy.

The days of level of effort (LOE) are estimated to be up to **60**. This allows 31 days for work outside of West Bank and Gaza, including 6 days for mentorship of staff sent to Loma Linda – and potentially up to 24 days of work in the West Bank if deemed necessary by the field office. Additionally, this total allows LOE for 3 days of travel, 2 days of post-trip report writing. The consultant shall submit the expected products required of this consultancy prior to the completion of assignment.

VIII. Consultant Qualifications.

The Consultant shall have the following minimum qualifications to be considered for this consultancy:

Educational Qualifications

- Shall be a currently licensed physician in good standing
- Shall be board certified in Emergency Medicine

Work Experience Qualifications

- Minimum of three years of work as an Emergency Physician
- Background in medical education and work; experience in a teaching hospital environment is desired
- Successful involvement and participation in international health and/or development is also desired

IX. Other Provisions.

This Scope of Work document may be revised prior to or during the course of the assignment to reflect current project needs and strategies.

ANNEX B: ASSIGNMENT SCHEDULE

Date	Participants	Agenda/Discussion
5/22/11	Dr. Jihad Mashal, Dr. Amal B., Amal Daoud, Noor Hussein, Amany D	Discuss agenda items for planned meetings during consultancy. Discuss overview of goals for consultancy trip.
	Dr. Jihad Mashal, Amal D, Dr. Munzer Sharif	Role of PM Council to help support Project's recommendation to MOH. Plan first meeting of EM Scientific High council.
	Dr. Hosni Atari	Interview for role as local STTA for EM residency program.
5/23/11	Dr. Naim Sabra, Amal Daoud	EM Residency evaluation; Resident evaluations; Initiation of resident rotations, Providing authority to Resident Coordinators; Proposed LLU Leadership training for selected residents
	Dr. Samar Musmar, Dr. Amal Bandak, Amal Daoud	Review EM curriculum and academic courses; Academic evaluation of residents; Proposed resident rotation schedule
	Dr. Jihad Mashal, Dr. Franco Carli, Amal Daoud	Explore collaboration between Anesthesiology residency program supported by Canadian Anesthesiology Society and EM residency program
5/24/11	Dr. Rashid Bakeer, Dr. Mariam Bassir, Dr. Nihal Sawalha, Dr. Harry, Dr. Amal B, Amal Daoud	Discuss status of clinical rotations for Ramallah residents; Discuss recommendations to improve resident accountability; Review Dr. Nihal's didactic plan for residents
5/24/11	Dr. Samir Saliba	Interview for role as local STTA for EM residency program
5/26/11	Meeting with Dr. Wael Sadaqah, Dr. Hasan Fityan and Dr. Iyhab Abu Jaish., Amal D, Dr. Harry Gunkel	Clinical rotation for EM residents; Evaluation of EM resident and program at Rafidia
5/28/11	All EM residents, Dr. Iyhab, Dr. Murad, Dr. Mazen, A Daoud, A Bandak	EM residency Scientific day
5/29/11	Meeting with Dr. Husam Jawhari , med dir Al-watani Hosp, Amal Daoud	Explore option for Internal Med rotation at Al-watani
5/30/11	Meeting with Dr. Suleiman Khdoor, Dr. Saed Sarahneh, Dr. Ibrahim, and Dr. murad jabber, Amal D., Dr. Amal B., and Noor Hussein	Clinical rotation for EM residents; Evaluation of EM resident and program at Rafidia
6/1/11	Lisa Baldwin(USAID) and USAID staff, Kirk Ellis, Amal Daoud, Amal Bandak, Dr. Salam Jaraiseh, Dr. Harry Gunkel	Focus Group D presentation to USAID
6/1/11	Dr. Muzer Sharif, Dr. Anwar Dudin, Dr. Ibrahim El-Hour, Dr. Samar Musmar, Dr. Daoud Abdeen, Dr. Jihad El-Baba, Dr. Osama Malhis, Dr. Bassam El-Akdhar, Dr. Jamal Ghosheh, Amal Daoud	Discussion on how Scientific EM Committee can assist with progress and development of EM Residency program

ANNEX C: CONSULTANT CV

Besh Rhyl Bernardo Barcega, MD, MBA, FAAP, FACEP Pediatric Emergency Medicine

Personal Data

E-mail: bbarcega@llu.edu
Office Address: Department of Emergency Medicine
Loma Linda University Medical Center and Children's Hospital
Room A-108
Loma Linda, CA 92350
Office Phone: 909-558-8297 (Faculty Medical Group)
909-558-4344 (Dept. of Emergency Medicine)
909-558-7698 (Division of Pediatric EM)

Current Positions

Medical Director, Pediatric ED 2/2005-present
Department of Emergency Medicine
Loma Linda University Medical Center and Children's Hospital
Loma Linda, CA

Assistant Professor 9/2001-present
Pediatrics and Emergency Medicine
Division of Pediatric Emergency Medicine
Department of Emergency Medicine
Loma Linda University School of Medicine
Loma Linda, CA

Faculty, Emergency Medicine 11/2009-present
Arrowhead Regional Medical Center
San Bernardino, CA

Current LLUMC Committees

Children's Hospital Multidisciplinary Team Quality Improvement Committee
Children's Hospital Patient Care Committee
Children's Hospital's Mortality Review Committee
Emergency Department Quality Improvement Committee
Emergency Medicine Faculty Compensation Committee
Emergency Medicine Residency Advisory Committee
Emergency Medicine Residency Remediation and Promotions Committee

National Committee(s)

Cerner PowerNote ED Taskforce- Pediatric Leadership Council 11/2006-present

Education

Undergraduate: Loma Linda University College of Arts and Sciences 1982-1984
Riverside, CA
Loma Linda University 1984-1986
School of Allied Health Professions
Loma Linda, CA
B.S. Medical Technology, Summa Cum Laude

Graduate: Loma Linda University School of Medicine 1986-1990
Loma Linda, CA
Doctor of Medicine

University of California-Irvine	2002-2005
Paul Merage School of Business	
Master in Business Administration	

Post-Graduate: Loma Linda University Medical Center and Children's Hospital	
Internship and Residency in Pediatrics	7/1990-6/1993
Assistant Chief Resident	7/1992-6/1993
Chief Resident/Assistant Program Director	7/1993-6/1994
Fellowship, Pediatric Emergency Medicine	9/1994-8/1996

Certifications and Licensures

Diplomate, National Board of Medical Examiners	7/1/1991
Board Certified, American Academy of Pediatrics	4/2001 (recert)
General Pediatrics	
Board Certified, American Academy of Pediatrics	10/2005 (recert)
Pediatric Emergency Medicine	
Medical Licensures: State of California (active)	
State of Florida (inactive)	

Work Experience

Director, ED Quality Improvement	2/2007-8/2009
Department of Emergency Medicine	
Loma Linda University Medical Center and Children's Hospital	
Loma Linda, CA	

Medical Director	1/1997-7/2001
Children's Emergency Center	
Florida Hospital/Florida Children's Hospital	
Orlando, FL	

Physician	9/1996-7/2001
Florida Emergency Physicians	
Maitland, FL	

Co-director, Pediatric Disaster Medical	7/1995-8/1996
Assistance Team, Division CA-2	
San Bernardino, CA	

Pediatric Consultant	9/1994-8/1996
OTC Medical Services, Inc.	
San Bernardino, CA	

Pediatrician	7/1994-8/1994
Guam SDA Clinic	
Tamuning, Guam	

Pediatrician	1/1993-6/1994
Children's Walk-in Medical Clinic	
Riverside, CA	

Medical Technologist in Hematology	7/1986-5/1990
Clinical Laboratory	
Loma Linda University Medical Center	
Loma Linda, CA	

International Medicine Experience

Consultant Pediatrician/Peds EM	8/2008
Malamulo SDA Hospital	
Malamulo, Malawi	

Consultant Pediatrician Asamang SDA Hospital Kumasi, Ghana	3/2000
Consultant Pediatrician Iquitos SDA Clinic and Iquitos General Hospital Iquitos, Peru	3/1999
Consultant Pediatrician Sopas Adventist Hospital Wabag, Papua New Guinea	10/1995
Medical Student International rotation Mwami Adventist Hospital Chipata, Zambia	4/1990
Medical Student International trip ADRA/SIMS-Traveling Medical Mission Calbayog, Philippines	7/1987

Professional Societies

Fellow, American Academy of Pediatrics
Member, Section on Emergency Medicine
Fellow, American College of Emergency Physicians
Member, Section of Pediatric Emergency Medicine

Peer-reviewed Publications

- Mansbach JM, Clark S, **Barcega B**, Haddad H, and Camargo CA: Factors associated with longer Emergency Department (ED) length-of-stay for children with bronchiolitis: A prospective multicenter study. *Pediatric Emerg Care* 2009 October (10):636-641.
- Brown L, Christian-Kopp S, Sherwin TS, Khan A, **Barcega B**, Denmark TK, Moynihan JA, Kim G, Stewart G, Green S: Adjunctive atropine is unnecessary during ketamine sedation. *Acad Emerg Med* 2008 April; 15 (4) 314-18.
- Vargas EJ, Mody AP, Kim TY, Denmark TK, Moynihan JA, **Barcega B**, Khan A, Clark RT, Brown L. Pediatric upper esophageal coin removal by emergency physicians: A pilot study. *Canadian Journal of Emerg Medicine* 2004 6(6): 434-440.

Abstracts

- Mansbach J, Clark S, **Barcega B**, Haddad H, Camargo CA: Prospective Multicenter Study of Bronchiolitis in the ED: Predicting ED Length-of-stay. (Presented at the AAP NCE Section of Pediatric Emergency Medicine meeting, October 11, 2008)
- Brown L, Pableo G, Sherwin TS, Denmark TK, Khan A, Vargas E, Moynihan JA, **Barcega B**, Kim G, Stewart G, Green SM: Ketamine, Adolescents, and the Emergence Phenomenon. *Acad Emerg Med* 2004; 11: 494. (Poster presentation at the Society for Academic Emergency Medicine Annual Meeting, May 17, 2004, Orlando, Florida)
- Brown L, Green SM, Sherwin TS, **Barcega B**, Denmark TK, Moynihan JA, Khan A: Ketamine with and without atropine: What's the risk of excessive salivation? *Acad Emerg Med* 2003; 10: 482-483. (Poster presented at Society for Academic Emergency Medicine Annual Meeting, May 30, 2003, Boston, MA)

Book chapters

Barcega B, Minasyan L: Lower Extremity Trauma. *Pediatric Emergency Medicine*. 2008 Baren J (ed)

Barcega B, Bansil N: Tendon Lacerations. Fleisher and Ludwig's 5-Minute Pediatric Emergency Medicine Consult. Publication in progress.

Barcega B, Piroutek MJ: Constipation. Fleisher and Ludwig's 5-Minute Pediatric Emergency Medicine Consult. Publication in progress.

Barcega B, Rose E: Hypertension. Fleisher and Ludwig's 5-Minute Pediatric Emergency Medicine Consult. Publication in progress.

Barcega B, Vasquez E: Abdominal Distension. Fleisher and Ludwig's 5-Minute Pediatric Emergency Medicine Consult. Publication in progress.

Grants

MARC-30: Bronchiolitis Admissions: Etiology and Disposition
Principal Investigator for Loma Linda University
Overall principal investigator, Camargo, CA
Site grant: \$ 18,000 (estimated)
Overall grant through the NIH: \$900,000

MARC-31: Lower Respiratory Tract Infection (LRTI) Diagnostic Study
Principal investigator for Loma Linda University
Overall principal investigator, Camargo, CA
Site grant through Astra-Zeneca: \$ 5000 (estimated)

Bronchiolitis in the ED: Low-risk Discharges and High-risk Admissions
Principal investigator for Loma Linda University
Overall principal investigator, Carmargo CA
Site grant through the Thrasher Foundation: \$7280

National Conferences and Lectures

Faculty, 12 th Annual EMS Conference for Children Sponsored by the State of California EMS Authority. Sacramento, California	11/12/2009
Faculty, Pediatric Procedures Skills Lab, Scientific Assembly Sponsored by the American College of Emergency Physicians. Boston, Massachusetts	10/ /2009
Faculty, Pediatric Procedures Skills Lab, Resus 2008 Las Vegas, Nevada	4/13/2008
Faculty, Pediatric Procedures Skills Lab, Emergency Medicine Spring Congress Sponsored by the American College of Emergency Physicians. San Diego, California	4/23/2007
Faculty, Pediatric Procedures Skills Lab, Emergency Medicine Spring Congress Sponsored by the American College of Emergency Physicians. Las Vegas, Nevada	4/20/2006

Lectures

Complementary and Alternative Medicine in the Peds ED	PEM Forum
Pediatric Coagulopathies	PEM Forum
Infectious Disease Update: Immunizations	PEM Forum
Nuances of the Peds ED	Peds Resident Noon Conference
Fever: Separating Myth from Fact	PEM Forum

Fever the PEM Approach
 Pericardial effusion in SLE
 V-tach in Kids
 Documentation and Coding series for PEM
 Patient/Family-centered care in the Peds ED
 Brain-tickling cases
 Approach to the Pediatric Patient

 The Basics of History-taking in the ED
 Respiratory Distress

Peds Resident Noon Conference
 ARMC EM lecture series
 Peds Resident Noon Conference
 PEM Education Day
 PEM Education Day
 PEM Education Day
 Peds Resident Noon Conference
 Peds Resident Noon Conference
 Intro to EM course
 PEM Forum
 Intro to EM course
 Intro to EM course

Community Service

California Riverside Ballet	
Member-at-large	12/08-12/09
Guild Secretary	4/09-4/10
BRAVO volunteer	12/08-12/09
Room Parent	9/2008-6/2009
Riverside Christian School-Kindergarten	
Children's Day Volunteer	5/2004
Loma Linda Univ. Children's Hosp	
Guest Columnist	2005-2006
The Mommy Newsletter	
Azure Hills SDA Church	

ANNEX D: BIBLIOGRAPHY OF DOCUMENTS COLLECTED AND REVIEWED

- I. Zink B. *Anyone, Anything, Anytime: A history of Emergency Medicine*. Elsevier 2006.

ANNEX E: LIST OF MATERIALS DEVELOPED AND/OR UTILIZED DURING ASSIGNMENT

1. Reading the Medical Literature (prepared by LLU GHI) – *on file at Project office*
2. Reading Materials provided to the EM residents (for preparation for Procedure Skills Lab) – *on file at Project office*
 1. Mace S. Challenges and Advances in Intubation: Rapid Sequence Intubation. Emer Med Clin N Am 26 (2008) pp 1043-1068.
 2. El-Orbany M and Connolly LA. Rapid Sequence Induction and Intubation: Current Controversy. Anes and Analg May 2010 pp 1318-1325.
 3. Tube Thoracostomy. ACCESS-Emergency Medicine.
 4. Syllabuses from Resuscitation 2011 Conference (courtesy of University of Southern California EM Faculty, Dr. D. Mandavia and Dr. S. Mandavia):
 - a. Pediatric Emergency Procedures
 - b. Critical Procedures in Trauma
 - c. Ultrasound-Guided Procedures
 - d. Advance Cardiac Cases
 - e. Risk Management for Critical Patients
 - f. Ultrasound in Emergency Medicine and Critical Care
3. Reading Materials posted on Wiggio for Resident education – *on file at Project office*
4. Supplemental Readings provided to EM resident Mohammad Karayeh (see previous STTA report Nov. 2010) – *on file at Project office*
5. Palestine EM Residency Individualized Learning Plan – *on file at Project office, sample follows below*
6. Emergency Medicine Resident Evaluation General Pediatric Clinical Rotation – *follows below*
7. (Updated) Emergency Medicine Resident Evaluation Emergency Medicine Service – *follows below*
8. PowerPoint presentation: Scientific Day Presentations, 5/28/11
9. PowerPoint presentation: PM Council, Scientific High Committee for Emergency Medicine, 6/1/11

5. Example of One of the EM Resident's Learning Plan

Palestine EM Residency Individualized Learning Plan

Resident: Adli Jabari

Hospital: Alia Hospital

Learning Goal	Learning Objective	Assessment Tool(s) & Approach	Timeline	Verification
What do you want to learn or improve upon?	What will you do or use to increase your knowledge or skill in this area?	What tool(s) will you use to measure whether you have accomplished this learning goal?	When will you start and when will you measure or test whether you have accomplished this learning goal.	Signature of person(s) who evaluated your competency.
Learn the presentation and early management of congenital heart disease in the Emergency setting.	<ol style="list-style-type: none"> 1. Use internet sources to find articles about diagnosing congenital heart disease in the ED. Provide the article information to Dr. Besh so she can obtain the articles. 2. Read the articles as described above. 3. Read a Pediatric ED textbook chapter or review article on the ED management of suspected congenital heart disease. 	<ol style="list-style-type: none"> 1. Recite to Dr. Suleiman or Dr. Murad: <ol style="list-style-type: none"> a. the cyanotic congenital heart defects b. the noncyanotic congenital heart defects 2. Give a lecture to other residents on: <ol style="list-style-type: none"> a. the presenting signs and symptoms of congenital heart disease in the ED b. How to differentiate congenital heart disease from respiratory disease in a patient presenting with cyanosis c. Initial ED management for an infant suspected of having a congenital heart disease 	Start: June 2011 End: September 2011	1.
				2.

6. Emergency Medicine Resident Evaluation General Pediatric Clinical Rotation

Resident Name: _____ Hospital: _____

Rotation Supervisor: _____ Reviewed with resident: Yes No

Date: _____

Competency	Evaluation Score			
	Below Expectations	Meets Expectations	Above Expectations	Not able to Evaluate
Medical Knowledge				
Able to perform an age-based history pertinent to the presenting complaint.				
Able to perform an age-based physical examination.				
Able to recognize the age-based differences in pediatric vital signs and recognizes abnormal pediatric vital signs.				
Recognizes the early signs and symptoms of a child in distress (sepsis, respiratory distress, hypovolemic shock) and provides the appropriate early interventions.				
Displays understanding of the anatomical and pathophysiological differences of the Pediatric airway.				
Has an understanding of the treatment and management of fever in: (1) the newborn period and (2) infants and older children.				
Able to provide an adequate differential diagnosis for the majority of the common pediatric complaints.				
Patient Care				
Delivers compassionate care.				
Able to perform effective fluid resuscitation in a child with sepsis and/or hypovolemic shock.				
Able to recognize the levels of dehydration and provide appropriate treatment for dehydration.				
Uses appropriate weight-based dosing of medications.				
Develops an appropriate management plan for individual patient complaint(s).				
Interpersonal Skills & Communication				

Communicates to the older child in an age-appropriate manner.				
Provides appropriate communication and interaction to family and other members of the healthcare team.				
Professionalism				
Demonstrates commitment to responsibilities.				
Actively participates in discussions during rounds and lecture sessions.				
Practice-based learning				
Demonstrates the ability to investigate and evaluate the care they provide.				
Able to identify the limitations of their knowledge (know when to ask for help).				
System-based practice				
Able to develop a treatment plan based on an understanding of the limitations of resources and family expectations.				
<u>Comments:</u>				

Overall Evaluation:

Pass Pass with reservation Recommend repeating rotation training

7. (Updated) Emergency Medicine Resident Evaluation

Emergency Medicine Service

Resident Name: _____

Faculty: _____

Reviewed with resident: Yes No

Date: _____

	Performance is below average for their level of training for >50% of patient encounters	Performance is below average for their level of training for up to 25% of patient encounters	Performing at the level of the average resident for their year in training	Performing at above the average level for a resident for their year in training	Performance is at the best in their class in this category for their level of training	Unable to Evaluate
Patient Care						
Medical Cases						
Pediatric Cases						
Surgical Cases						
Medical Knowledge						
Medical Cases						
Pediatric Cases						
Surgical Cases						
Practice-based Learning						
Interpersonal Skills & Communication						
Professionalism						
Systems-based Practice						
Comments:						

8. Scientific Day Presentations, 5/28/11



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The “Flagship Project”

EM Residency Program Review and Updates
May 28, 2011



Evaluation Examination/
(In-service Exam) Debrief



Moving Forward

- Expectation from Resident-learners
- Individualized learning plan(s)
- Clinical rotation plan
- Expectation from Residency stakeholders
- Loma Linda University Leadership rotation



Core Competencies

- Patient Care
- Medical Knowledge
- Interpersonal and Communication Skills
- Professionalism
- Practice-based learning
- Systems-based practice



Individualized Learning Plans

Learning Goal	Learning Objective	Assessment Tool(s) & Approach	Timeline	Verification
What do you want to learn or improve upon?	What will you do or use to increase your knowledge or skill in this area?	What tool(s) will you use to measure whether you have accomplished this learning goal?	When will you start and when will you measure or test whether you have accomplished this learning goal?	Signature of person(s) who evaluated your competency.
Example: To perform endotracheal intubations competently.	<ol style="list-style-type: none"> 1. Read about rapid sequence intubation. 2. Learn how to assess for a difficult airway. 3. Read how to prepare for endotracheal intubation. 	<ol style="list-style-type: none"> 1. Perform a minimum of 5 adult endotracheal intubations. 2. Perform a minimum of 5 pediatric (under 8 years old) intubations. 3. Give a lecture on intubation tips to fellow residents. 	Start: June 2011 End: September 2011	



“You have to teach me something before I give you this patient... teach me what you know so that we can keep your patient alive (because dead patients don’t pay)”.

- Karl Mangold, MD



Interdisciplinary Approach

- Clinical Rotations
 - Surgery
 - Internal Medicine
 - Critical Care/Anesthesia
 - Pediatrics
- Orthopedic consultant
- EM consultants



2011 Educational Plan

- Procedure Skills Lab
- Advanced resuscitation training and teaching
- Simulated 'Code Blue' team training
- Oral board preparation
- Journal club
- Selected topics in: Pediatrics, Toxicology, Gynecology
- Resident Scientific Day
- **GOAL:** Ultrasound training once competency in resuscitation is obtained.



Educational Support

- Improving Communication
 - Use of Wiggio: Palestine EM Residency group
 - Google docs: <https://docs.google.com>
- Internet resources
- Quarterly review between Post-graduate Officer, Residency Coordinators and Flagship
- Annual 360-degree program evaluation



Loma Linda University EM Leadership Rotation

- 2 weeks at Loma Linda University in California
 - Learn how an EM residency is managed
 - Learn EM departmental processes
 - Learn how the ED interacts with the hospital organizational processes
 - Clinical time in Adult and Pediatric EDs
 - Simulation lab experience



To Do List

- Create your individual learning plan
- Keep up your log book
- Develop a lecture plan for each site
- Encourage medical students and general interns to do EM residency



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The "Flagship Project"

Reading the Medical Literature

May 28, 2011

 **USAID** Favorite Internet Resources

- Google
- Google scholar
- Wikipedia
- Pub Med
- Medscape
- Thedoctorschannel
- You Tube

 **USAID** 2010 International Consensus on CPR and Emerg Cardiovasc Critical Care

- 2010 Levels of Evidence for Studies of Therapeutic Interventions
- LOE 1: Randomized controlled trials (RCTs) (or meta-analyses of RCTs)
- LOE 2: Studies using concurrent controls without true randomization (eg, "pseudo"-randomized)
- LOE 3: Studies using retrospective controls
- LOE 4: Studies without a control group (eg, case series)
- LOE 5: Studies not directly related to the specific patient/population (eg, different patient/population, animal models, mechanical models, etc)

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Pediatric Resuscitation: Really Cases in the Life of Besh Barcega, MD

May 28, 2011

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Overview

- Goals
 - Recognize a child in distress before the cardiac arrest
 - Have a systematic approach for Pediatric resuscitation
 - Understand the 2011 AHA CPR recommendation of CAB vs ABC

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What is the most common reason for Pediatric cardiac arrest?

ANSWER: RESPIRATORY FAILURE

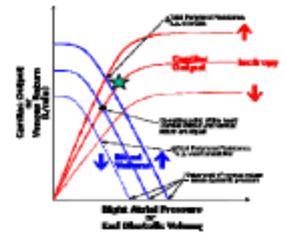
 **USAID**

CAB vs. ABC

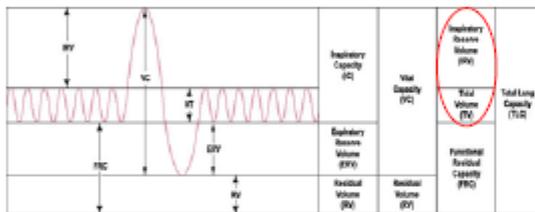
- 2011 AHA recommendation for cardiac arrest:
 - Begin chest compression 1st
 - Then assess airway and breathing

- Out-of-hospital: 8-15%
 - Pediatrics 2004, NEJM 2006
- In-hospital: 27%
 - JAMA 2006

- **Cardiac Output**=
Stroke Volume
x Heart Rate



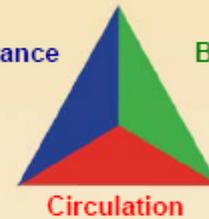
Minute Ventilation= Tidal Volume x
Respiratory Rate



Pediatric Assessment Triangle

Appearance

Breathing



Circulation

APLS The Pediatric Emergency
Medicine Resource

- 4-month-old female sent to the ED by her clinic doctor for difficulty breathing
- URI symptoms for almost 2 weeks
- Seen by clinic doctor 2 days ago and diagnosed with bronchiolitis

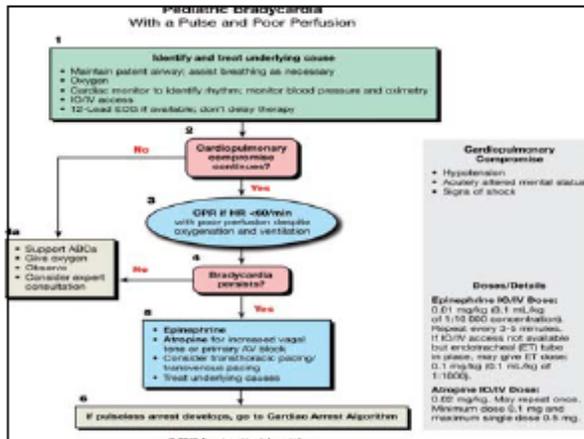
- Temperature 100.8 °F (rectal)
- Heart rate 175
- Respiratory rate 65
- Pulse ox 94% (room air)

- Fussy
- Retractions and head bobbing
- Skin pink
- Auscultation: diffuse wheezing

Sick or Not Sick ?

What is your next step?

- HR: 80
- RR: 45
- Pulse ox saturation: 92% (RA)
- Respiratory and auscultation examination unchanged
- No longer fussy and eyes are closed
- Skin is pale pink and mottled

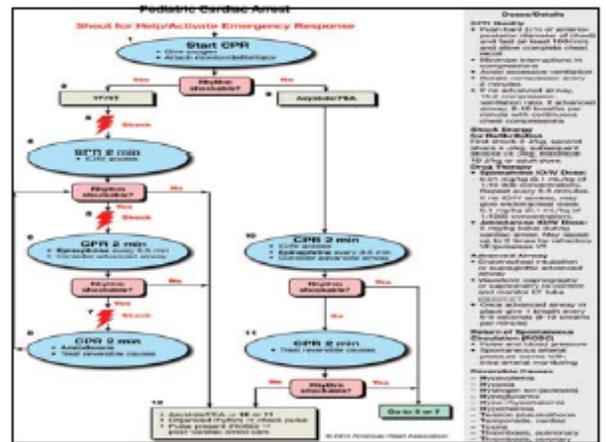


- N: Nalaxone
- A: Atropine (Albuterol)
- V: Valium
- E: Epinephrine
- L: Lidocaine

- 3-year-old female hit by a car
- EMS arrived to scene in 9 minutes and found patient to be asystolic
- Chest compressions and bag-valve-mask ventilation started
- Patient placed in spinal precautions and transported to ED

- HR: none
- BP: none
- Resp: none
- Cervical collar in place and patient is on a backboard
- Blood from nose and mouth

- A- Airway
- B- Breathing
- C- Circulation
- D- Disability
- E- Exposure



- Treat shock
 - Crystalloid 20-60 ml/kg
 - Colloid (packed RBCs) 10-20 ml/kg
- Check glucose and hemoglobin
- Check temperature
 - Define acceptable temperature
- Treat underlying etiology
- Reassessment

- Return to Spontaneous Circulation (ROSC)
- Determine futility of care
- Talking to family
- Team debriefing

- <http://youtu.be/4EWINpKrCuc>

9. PM Council, Scientific High Committee for Emergency Medicine, 6/1/11



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FROM THE AMERICAN PEOPLE

USAID Palestinian Health Sector Reform & Development Project

The “Flagship Project”
EM Residency Program Review and Update for
PM Council Scientific High Committee for Emergency Medicine
June 1, 2011



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FROM THE AMERICAN PEOPLE

Emergency Medicine

- The treatment of the acutely ill and injured patient (acute episodic care)
- Emergency departments serve as the public’s “Safety net” and supports a country’s healthcare infrastructure
- EM physician: Required to have general medical & surgical knowledge to support the “traditional” medical specialties



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FROM THE AMERICAN PEOPLE

Program Overview

- EM residency started on April 2010 with 15 residents
- Training sites:
 - Alia Hospital, Hebron
 - Rafidia Hospital, Nablus
 - Ramallah General Hospital, Ramallah
- EM Residency curriculum provided by An-Najah University in collaboration with Lille University
- Currently 15 EM residents
 - Nablus, 4
 - Ramallah, 4 (1 began April 2011)
 - Hebron, 5
- Flagship provides EM-trained physician supervision from Loma Linda University Global Health Institute



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Plan for 2011-2012 training year

- Begin a rotation program for defined specialty knowledge gaps
 - Pediatrics
 - Critical Care/General Anesthesia
 - Internal Medicine
 - General surgery
- Create an individualized learning plan for each resident
- Specific training modules
 - Procedure lab
 - Resuscitation: ACLS, PALS, Trauma care
- Routine clinical evaluations from supervising physicians
- Routine testing after teaching and training modules



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Questions for the EM Scientific High Council

- Current training level of residents that started on April 2010
 - Internal Medicine and General Surgery exam results from An-Najah University
 - EM evaluation exam
- Giving authority to residency structure
 - Program Coordinators
 - Clinical rotation specialist
 - Postgraduate Officer
- Defining how promotion to 4th training year will occur:
 - Who will determine promotion?
 - What criteria will be used?