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INFECTION PREVENTION AND CONTROL

PALESTINIAN HEALTH SECTOR REFORM AND DEVELOPMENT PROJECT
(THE FLAGSHIP PROJECT)

SHORT-TERM TECHNICAL ASSISTANCE REPORT- (**FINAL**)

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ACRONYMS

APIC	Association for Professionals in Infection Control and Epidemiology
BBP	Blood Borne Pathogen
CLABSI	Central Line Associated Blood Stream Infection
CMR	Confidential Morbidity Report
CSSD	Central Sterile Services Department
HAI	Hospital Acquired/Associated Infection
HH	Hand Hygiene
ICP	Infection Control Practitioner/Preventionist
ICC	Infection Control Committee
IPC	Infection Prevention and Control
MC	Medical Center (Loma Linda University)
MDRO	Multi-Drug Resistant Organism
PHC	Primary Health Care
PPE	Personal Protective Equipment
RSV	Respiratory Syncytial Virus
SHC	Secondary Health Care
SOW	Scope of Work
SSI	Surgical Site Infection
UTI	Urinary Tract Infection
WHO	World Health Organization

SECTION I: INTRODUCTION

The Flagship Project is a five-year initiative funded by the U.S. Agency of International Development (USAID), designed, and implemented in close collaboration with the Palestine Ministry of Health (MoH). The Project's main objective is to support the MoH, selected non-governmental organizations, and selected educational and professional institutions in strengthening their institutional capacities and performance to support a functional and 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.

This report covers the activities that were done over the course of the assignment as shown below. The Scope of Work (SOW) changed slightly in light of the fact that the Palestine Medical Complex (PMC) was granted approval by USAID to move forward with hands on activities later than expected within the term of the assignment. The consultant focused her efforts primarily on collaborating with the MoH, Flagship Project, and IPC staff in making progress with reform and capacity building in the area of infection prevention and control.

The goal of an organization's infection prevention and control program is to identify and reduce the risks of acquiring and transmitting infections among patients, staff, health care professionals, contract workers, volunteers, students, and visitors.

The infection risks and program activities may differ from organization to organization, depending on the organization's clinical activities and service, the patient population(s) served, geographic location, patient volume, and number of employees. (Joint Commission, 2008)

An organization's infection prevention and control department is responsible for oversight and coordination of processes to control and reduce hospital-acquired infections. The department functions in a consulting role to clinical staff and physicians in matters of infection control. Ongoing surveillance is conducted according to regulatory requirements. Further, the department plays an important role in education in the area of infection prevention and epidemiological information. The department is responsible for these issues in all areas of the institution, for all patients of all ages. The department contributes to the mission of the institution by the following:

- Proactively providing surveillance for nosocomial infections and communicable diseases
- Ensuring infection prevention issues addressed in policy are scientifically sound
- Providing education on infection prevention and infectious diseases
- Serving as a liaison to the community

Frequent services include:

- Collection, evaluation and dissemination of epidemiologically significant data
- Policy review and input
- Staff and community education
- Liaison to the Ministry of Health
- Consultants to all departments on infection prevention issues

- Monitoring of resistant pathogens
- Monitoring of isolation precautions
- Interpretation of regulatory requirements related to infection prevention

This consultancy and report contributes to Flagship Project's implementation plan as follows:

Component 1, Objective 1.1: Improve Good Governance and Management Practices in the Palestinian Health Sector

Task 1.1.1: Strengthen the capacity of the Ministry of Health to implement reforms needed for improved quality, sustainability, and equity in the Palestinian Health Sector

Deliverable 1.1.1.5 Put systems in place and provide technical assistance to operationalize the Palestine Medical Complex (PMC) in the area of administration and management of health facilities and services

Component 2, Objective 2.1: Improve the Quality of Essential Clinical Services for Palestinians

Task 2.1.1: Strengthen the Capacity of Palestinian Health Institutions to Deliver a Quality Package of Essential Primary Health Care Services

Deliverable 2.1.1.4 Integrated Quality Improvement Program for Delivery of the Package of Essential PHC Services

Task 2.1.2: Strengthen Quality Improvement Systems within Palestinian Health Institutions to Deliver Better Secondary Health Care Services

Deliverable 2.1.2.3 Integrated Quality Improvement Program for Delivery of Hospital Services

This consultancy also contributed to the MoH IDP module numbers 11 ("Improve clinical MoH primary care system") and 12 ("Improve the quality of clinical services").

SECTION II: ACTIVITIES CONDUCTED

The consultant focused her efforts primarily on collaborating with the MoH, Flagship Project, and IPC staff in making progress with reform and capacity building in the area of infection prevention and control. Through meeting with and collaborating with doctors and nurses alike, the consultant found that this group of professionals has strong passion toward improving the quality of care of the Palestinian people, and an openness to do what needs to be done to accomplish that goal. The commitment of these professionals toward making improvements was significant and led to progress toward reform, even within the short time of this initial assignment. Multiple meetings were held (on individual and group basis) to strategize how to catalyze reform measures. After initial IPC assessments of hospital facilities, it was realized that beginning the reform process necessitated bringing together IPC professionals from various MoH facilities to work on standardizing IPC practices.

During this visit the consultant, working in close collaboration and coordination with Flagship Project staff conducted the following activities:

- **Visits and tours of hospitals/facilities:**
 1. Ramallah
 - a. PMC Emergency Wing (MoH) (18 beds)
 - b. PMC Children's Hospital (MoH) (not open at this time)
 - c. PMC Surgical Hospital (MoH) (not open at this time)
 2. Nablus
 - a. Rafidiah Surgical (Orthopedic) Hospital (MoH) (165 beds)
 - b. Al-Watani General Hospital (MoH) (101 beds)
 - c. Primary Health Care (PHC) Clinic Directorate (MoH)
 - d. PHC Level 2 Clinic (MoH)
 3. Qalqiliah
 - a. Qalqiliah General Hospital
 - b. UNRWA (63 beds)
 4. Hebron
 - a. Alia Hospital (MoH) (182 beds)
 5. Jerusalem
 - a. Augusta Victoria General Hospital (NGO) (117 beds)
 - b. Al Makassed General Hospital (NGO) (250 beds)
 6. Bethlehem
 - a. Caritas Baby Hospital (NGO)
- **Meetings**
 - Dina Nasser, Infection Prevention Nurse, Augusta Victoria Hospital, and Juzoor University.
 - Dr. Naim Subra, Medical Director of Hospitals
 - Ammar Sbouh, Director of Hospitals Quality Improvement
 - Nablus Infection Control Committee/Flagship Workgroup

- Due to the global nature of IPC, the consultant had many discussions with multiple Flagship staff regarding IPC in their respective project areas.
 - IPC teams and Administration at each of the facilities listed above
 - Daily office meetings
- **Products Delivered**
 - IPC situation analysis and needs assessment of Ministry of Health (MoH) Primary and Secondary Health Care systems.
 - Creation of strategic steps and time-line that outlines the development of a quality package of IPC.
 - Formation of an IPC Workgroup that represents the MoH, Flagship, and other health services to review and update the policies and protocols
 - Review of currently used policies and protocols with comments on revision and encouragement of standardization through participation in IPC Workgroup.
 - Creation of an IPC “Comprehensive Aspects – Infection Control” policy.
 - Creation of an IPC Manual table of contents with comparative graph showing what content already exists between the various current materials, and what needs to be updated or created.
 - Workshop meeting minutes showing evidence of problem solving regarding the stop-gaps preventing implementation of a complete IPC Program.
 - Procurement of the following resources:
 - APIC Text 2009
 - Assessing and Developing an IC Program: Acute Care (APIC)
 - Creative Nursing Leadership & Management (Clark, C. 2009)
 - Priorities in Critical Care Nursing, 5th Edition (Urden, D., 2009)
 - Musculoskeletal Medicine (Bernstein, J., 2009)
 - Examples of LLU Medical Center (MC) Infection Control Policies, for comparison purposes
 - Examples of an Infection Control Plan, IC Hospital Risk Assessment, and yearly report.
 - Glow Germ for Hand Hygiene training (procurement in progress)
 - PDF copies of LLU MC Perioperative Nursing Manual on a CD
 - Assist in the creation of the Draft Master Plan for the Development of the PMC.
 - Creation of graphics illustrating patient flow for the Emergency Wing, PMC Organizational Structure Chart, and Service Matrix.
 - Assistance in the creation of the Palestine Medical Complex Action Plan
- **Review of:**
 - Infection Prevention and Control Protocol, Part I, Hand Washing Antiseptics, hand Gloving and Skin Preparation. Palestinian Medical Relief Society, December 2005. Prepared by Dr. Adel Takruri, adapted for PMRS clinics mainly from the MOH/MARAM protocol published November 2004.
 - Infection Prevention and Control Protocols, Maram Project report, USAID, November 2004
 - Preventing Nosocomial Infections in Reproductive Health Service Delivery Points, report for Ministry of Health, with support from UNFPA, June 2008. Prepared by Dina Nasser, Juzoor “Foundation for Health & Social Development”.
 - East Jerusalem Hospital Network Infection Prevention Manual, 2005

- Egyptian IPC Policies & Guidelines, obtained from Muna Abdel Raouf, IPC/Director of Nursing at Al Watani MoH Hospital in Nablus
 - Pending – Jordanian IPC Manual – being translated into English
 - Assessing and Developing an IC Program: Acute Care (APIC)
 - APIC Text 2009
 - Gulf Area Infection Control Manual, obtained from Dr. Salem Jaraiseh
-
- Presentation on the basics of Infection Prevention and Control for the Flagship staff
 - Creation of a photo contact list of Flagship staff and STTA's

SECTION III: FINDINGS, RECOMMENDATIONS, AND NEXT STEPS

A. Findings

One of the most encouraging discoveries in the first week after arrival was meeting an excellent in-country Infection Prevention and Control nurse, Dina Nasser (Augusta Victoria Hospital, Jerusalem); and a very active and creative Microbiologist/Infection Preventionist (Caritas Baby Hospital – Bethlehem). In addition, it was found that the MoH and their facilities have a good knowledge base on the importance of Infection Prevention and Control.

The consultant also found that the MoH was supportive of the IPC efforts, especially Dr. Naim Subra and Ammar Sbouh.

Below is a listing of strengths and weaknesses the consultant found during her assessments of several MoH facilities:

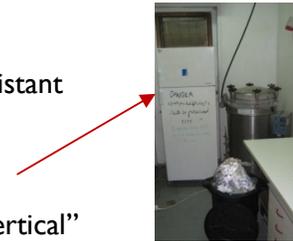
Strengths:

- Staff and administration that are very passionate in caring for the patients and providing a safe environment. The leaders and administration have great enthusiasm!
- There are active part-time IPC nurses who are keenly aware of how to prevent infection, and are very passionate in providing the best care possible to the patients and staff
- The facilities have local Infection Control Committees (ICC) that have begun to meet more regularly
- The facilities have a system to report infectious diseases to the MoH, contributing to surveillance for the national infectious disease database

Weaknesses:

- Policies/Procedures
 - The MoH hospitals are using policies/protocols/procedures that are not consistent from facility to facility
 - Many of the policies/protocols/procedures being used are attempting to be too educational, and need to be more to the point
 - The terminology within the policies/protocols/procedures themselves are not consistent (i.e., terms mean the same thing, but need to “be” the same)
 - Guidelines for specific areas need only state those specifics that are “different” for that area, not include information that is already stated in the general guideline it falls under.
- Staffing:
 - The facilities lack full time staff (persons) to organize the efforts of Infection Prevention and Control (the NGO’s usually having at least one full-time IPC).
- IPC Program

- IPC lacks computer for access to internet resources, organization of an IPC program, and ability to collect and analyze data
- Surveillance
 - The facilities lack a surveillance system to track infections, resistant organisms, re-admitted patients, etc.
- Clinical lab system
 - Many laboratories have autoclaves that are so old that it is “vertical” and very difficult to empty and clean after using. Staff have to empty water and clean by hand, etc. It is used not only for waste decontamination, but for agar micro growth. It is not appropriate.
- Surgery Database
 - After surgery patient discharge, there is a lack of follow-up about possible infection development. Follow-up is done at private hospitals/doctors with no communication back to original surgical hospital.
- Refrigerator temperature monitoring
 - The medication refrigerators in the hospitals typically lacked a log and/or check of temperatures. (The consultant found food in one refrigerator. This is not appropriate.)
- Admission surveillance
 - Currently, most MoH hospitals do no admission surveillance data collection and are thus unable to distinguish at times between community acquired vs. hospital acquired infections/colonization
- Systems – There is a need for standardization of, unification between, and computerization for the following departments and the IPC Department to work towards the collection of surveillance data and prevention of infection:
 - Clinical Lab
 - Pharmacy
 - Central Sterile Services Department (CSSD)
 - Sterilization
 - Employee health
 - Infection Prevention
 - Engineering Services
 - Construction
 - Waste management
 - Linen Management
 - Housekeeping
 - Resource Management – Staffing
- Clinical Lab System
 - There is a lack of consistent Clinical Lab reporting systems (i.e., some machines have readouts while others are handwritten)



- Microbiology lacks a computerized system (only “chemistry” is computerized)
 - Current cultures that are collected are random environmental cultures of miscellaneous surfaces.
- Hand Hygiene Standards
 - Staff state that they are unable to apply the principal of hand hygiene due to lack of sinks, soap, paper towels, and clean towel. There is also a lack of waterless hand hygiene products, despite many staff requests from MoH staff. (Staff reported that sometimes it takes a year to get approval, which is a major limitation.)
 - Staff state that there are no convenient locations to put paper towels. However, the consultant found that most facilities did have adequate space.
 - Administrative Support:
 - The MoH has a centralized system, which can create long waiting periods for decision making to take place, or products to be approved.
 - Housekeeping
 - Housekeeping contracts are typically made without input from IPC, creating issues with quality and monitoring of performance and products used. However, the consultant found that Alia Hospital in Hebron has initiated a system to effectively manage their contracted cleaning service, with monthly audits and input from managers of every hospital department. Staff have seen improvement in service due to close and frequent evaluation of service performance
 - Logistics system
 - IPC supplies suffer from frequent shortages, creating an inability to comply with policies/protocols/procedures; placing patients, visitors and staff at risk of contracting an infectious disease

- CSSD
 - Most CSSD’s lack sterilization. There are no indicators inside packs. The sterilizers have paper to validate machine, but staff doesn’t know how to change the paper, etc.
 - Lack of knowledgeable maintenance staff for sterilizer(s)
 - A sterilizer was found to be over-crowded



- Waste Management
 - The Clinical Lab area was the area that consistently utilized plastic autoclave bags to treat medical waste – posing potential sharp threat if glass breaks in the process



- Ventilation
 - Staff are unable to comment on the ventilation system, or whether there is the ability to place a patient with an airborne communicable disease in a room with adequate airflow/air exchanges to prevent the spread of disease

- Vector Control
 - Found many windows and outside doors open, allowing for the entrance of dust, flies, etc.



- General Asepsis
 - Nurses check expiration dates every month. There is a piece of tape next to each medicine cubby stating the nearest expiration date, which is a good system. However, the cubbies are frequently “cardboard” and are often very old and appear dirty.



- The consultant also observed equipment with a lot of rust and peeled paint – of which cannot be adequately cleaned. Also observed furniture in disrepair, exposed foam on chairs, exposed wood, etc.



B. Recommendations

The following are recommendations to lead toward ensuring optimal health outcomes following contact with MoH facilities (including clinics). With continued cooperation, coordination, and accountability, facilities will be able to strengthen their systems, and build their healthcare capacity.

The following recommendations are put forward by the consultant based on her assessment of MoH PHC and SHC facilities:

- Staffing – need full time IPC nurse/clinical staff
 - Need dedicated nurse/clinical staff for just Infection Prevention and Control , who’s only responsibility is to coordinate facility infection control endeavors:
 - Continued or increased specific surveillance
 - Reporting
 - Collaboration with all departments

- Tracking the reporting of actions by those receiving data or memos that suggest areas for improvement
 - Review and updating of infection control policies, procedures, techniques
 - Ability to form emergency ad hoc committee to institute any surveillance, prevention, and control measures or studies necessary for identification and control of the perceived communicable disease danger
 - Review any laboratory tests, charts, examinations, diagnostic testing, inoculation procedures and culturing of patients, employees, Medical Staff, contract service workers, volunteers students, or visitors, and the environment
 - Alter the location of patients, restrict traffic flow, and close units.
 - Have the authority to define, institute, and enforce Isolation Precautions as the need arises
 - Clinical Laboratory support
 - Need an Infectious Disease physician to support Infection Prevention and Control, and act as liaison with the Infection Control Practitioner to gain administrative support and change within the facilities
- IPC Program
 - IPC Nurse needs to have a computer with internet access (preferably a laptop)
 - Ability to form emergency ad hoc committee to institute any surveillance, prevention, and control measures or studies necessary for identification and control of the perceived communicable disease danger/risks
 - Review any laboratory tests, charts, examinations, diagnostic testing, inoculation procedures and culturing of patients, employees, Medical Staff, contract service workers, volunteers, students, or visitors, and the environment
 - Alter the location of patients, restrict traffic flow, and close units
 - Have the authority to define, institute, and enforce Isolation Precautions as the need arises
 - Surveillance
 - Develop a surveillance system and protocols for infection prevention and control
 - Develop definitions of hospital acquired infections (HAI) (including criteria to be met to call an HAI)
 - Priority-directed, targeted surveillance
 1. Disease Specific surveillance
 - a. Blood Stream Infection (BSI)
 - b. Infection/Colonization due to multi-drug resistant organisms (MDRO)
 - c. Respiratory Syncytial Virus (RSV)
 2. Surgical Site Infections (SSI)
 3. Selected Disease from Confidential Morbidity Report (CMR)
 - a. TB
 4. Monitoring inanimate environment for potential risk of HAI
 - a. Ancillary Services
 - b. Data Collection and methodology
 - c. Rationale

5. Monitoring effectiveness of sterilization and high-level disinfection
 6. National Patient Safety Goals (US)
 - a. Hand Hygiene
 - b. Sentinel Events
 - c. Prevention of central line associated blood stream infection (CLABSI)
 - d. Prevention of SSI
 - e. Prevention of HAI due to MDRO
- Need to have systems in place to facilitate standardized infection prevention and to provide data to be used in analyzing infection rates (e.g., provides denominator data)
 - Clinical Lab system
 - Medical Records
 - Respiratory Care Database
 - Ventilator usage
 - Surgery Database
 - Number of surgeries compared to infection development
 - Pharmacy
 - Antibiotic usage
 - Temperature monitoring of medication refrigerators
 - Employee Health
 - Needle stick and blood borne pathogen (BBP) exposure surveillance
 - Nutritional Services
 - Temperature control and monitoring
 - Sterilization
 - Compliance monitoring
 - Admission surveillance
 - Monitoring of community vs. nosocomial infections
 - Clinical Lab System
 - Microbiologist with computer and system capable to track and analyze organisms
 - Need to hire, have access to, a microbiologist that can facilitate ability to identify organisms for surveillance of nosocomial infections
 - Perform cultures for environmental testing
 - Dialysis water, endotoxin and dialysate testing on a regular basis to ensure water compliance standards
 - Pharmacy hood cultures to ensure the sterility of hood for mixing/compounding medication standards
 - Scope surveillance cultures
 - Development of a Reporting System - Evaluation and Monitoring of community and nosocomial infections
 - Hand Hygiene Standards
 - Housekeeping Standards

- Need MoH to make recommendation to have better contracts with housekeeping
 - Need a system that provides trained cleaning staff that provide routine cleaning and removal trash
 - Need ability to supervise staff and to affect performance improvement
 - Need ability to ensure appropriate dilution of detergents and disinfectants
- Development of departmental participation infection prevention plans – integrating standardized components of infection prevention into every department
 - Policies/Procedures/Protocols
 - clear policies, procedures and protocols, with empowerment to implement
 - Regular review and updating of infection control policies, procedures, techniques
- Infection Control Committee (ICC)
 - Ensure that ICC has inclusive membership – Members, invitees that span the scope of departments to address issues of concern
 - Ensure that issues are resolved and documented before taking them off the agenda
 - Develop clear authority for the ICC, with decentralization from the MoH to provide empowerment to implement infection prevention strategies and recommendations set forth by the ICC
- Networking – having a forum where IPC staff can gather to support each other, express concerns, solve problems, and keep up to date on international regulations/recommendations.
- Administrative support
 - Develop budgets for Infection Prevention and Control at the individual MoH facilities
 - Ensure that Infection Prevention and Control at the Primary Health Care level gets placed on the National Health Care agenda
 - Housekeeping
 - Need MoH to make recommendation to have better contracts with housekeeping
 - Logistics system to ensure par levels of IPC supplies
 - Ensure storage capacity needs for personal protective equipment (PPE) products – gowns, gloves, masks, eye protection, and resuscitative devices.
 - Emergency/disaster plan
 - Infectious Disease outbreaks (e.g., H1N1 Flu)
 - Water Disruption plan
 - specified water tanks on roof – esp. for dialysis room, operating room
 - plastic bags for toilets, and method of disposal for the duration of disruption
- Other Departmental Support
 - CSSD
 - Working sterilizer(s)

- Preventive Maintenance Plan
- Auditing process of sterilization performance
- Backup plan for sterilizer failure
- Need more stringent monitoring on the quality of sterilization
- Waste Management
 - Utilization of colored bags for separation of medical waste
 - Ensure cardboard sharps boxes are waxed on the inside to protect from potential spillage
- Laundry Services
- Ventilation
- Product Selection
- Pharmacy – hoods for compounding, mixing
- Vector Control
 - Minimize accessibility of rats, cats, cockroaches, ants, flies, etc. into the facility
 - Minimize clearance of outside door jams
 - Minimize open windows
 - Provide window screens when windows need to be opened
 - Provide adequate temperature control to avoid having to open windows
- Training
 - Orientation and yearly training on IPC
 - Juzoor to implement training program/education to increase staff knowledge of the importance of everyone taking part in the prevention of infections not only in patients, but visitors and staff as well.
 - Job Aid development

The following recommendations were developed by MoH staff at two IPC workshops held in Nablus:

Rafidiah MoH Hospital - Nablus

1. Develop an infection control manual.
2. Activate the national IPC committee to take its duties in planning and policy making.

MoH PHC Directorate - Nablus

1. The need for an outstanding functioning and viable system of IPC was cleared and understood and adopted by the committee.
2. Review job descriptions, reports and other technical documents.
3. Coordination between the PHC and SHC should be strengthened.

C. Next Steps

The next steps would be to continue to encourage the IPC teams within the MoH facilities to continue with their efforts to facilitate complete IPC programs, and for the MoH to support them in these goals. Part of these efforts would include the use of training and staff education, supported by Juzoor, contracted by Flagship to provide needed training and education.

The next steps are detailed below in the strategic steps and timeline for Infection Prevention and Control (draft).

DRAFT – Strategic Steps and Timeline for Improvement Infection Prevention and Control

Activity	Month													
	August	September					October					November		
	Week 4	Week 1	Week 2	Week3	Week4	Week 5	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3
Infection Prevention Assessment														
Ramallah General Hospital	8/24					x								
Al Sheikh Zayid - Emergency Hospital	8/24													
Children's Hospital	8/24													
Surgical Hospital	8/24													
Rafidiah Surgical Hospital - Nablus			9/8											
Al-Watani General Hospital - Nablus			9/8											
Qalqiliah General Hospital			9/9											
UNRWA Hospital - Qalqiliah			9/9											
Augusta Victoria Hospital - Jerusalem		9/2												
2 Primary Care Clinics - Nablus (level 2 and level 4)						x								
Caritas Baby Hospital - Bethlehem								10/7						
Al Makassed Hospital - Jerusalem								10/7						
Workshops/Trainings on new Policy and Protocol updates														
Workshops/Trainings series development														
Work with Dina Nasser - Juzoor ICP								10/5						
Workshops/Trainings series implementation														
Infection Prevention RN's/MD's/Administrators/Pharmacists														
Other Healthcare employees														
Topics														
Hand Hygiene														
Asepsis														
Personal Protection														
Surveillance														
Pilot Project														
Rafidiah Surgical Hospital- Nablus														
Component 2 – Clinical and Community-Based Health														
Objective 2.1: Improve the Quality of Essential Clinical Services for Palestinians														
Task 2.1.2: Strengthen Quality Improvement Systems within Palestinian Health Institutions to Deliver Better Secondary Health Care Services														

Strategic Steps															
A. Perform a Situation analysis and needs assessment regarding IPC in the MoH Primary & Secondary Health Care Settings	X	X	X	X	X	X	X	X	X	X	X	X			
1. Review and update the MoH assessment as needed		X	X	X	X	X	X	X	X	X	X	X			
2. Develop an update analysis and needs assessment report		X	X	X	X	X	X	X	X	X	X	X			
3. Share final report with counterparts at the MoH											X	X	X	X	
B. Develop and Integrate Infection Prevention and Control Program into the MoH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1. Form a work group that represents the MoH, Flagship, and other health services to review and update the policies and protocols						X	X	X							
2. Identify the policies and protocols that are available through the MoH and other health services	X	X	X	X	X	X	X	X							
3. Review and Standardize the policies and protocols into a National Infection Prevention and Control Program							X	X	X	X	X	X	X	X	X
C. Develop Continuing Training and Education Modules for Infection Prevention and Control Program for PHC and Secondary Health Care Settings	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1. Identify and review existing Infection Prevention and Control training and education programs	X	X	X	X	X	X	X	X							
2. Update PHC Infection Prevention and Control training and education programs						X	X								
3. Develop Secondary Health Care Infection Prevention and Control training and education programs							?	?	?	?					
4. Conduct workshops to implement the PHC Module										X	X	X			
5. Conduct workshops to implement the Secondary Health Care Module															
D. Develop a Monitoring and Evaluation Program	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1. Identify current methods of	X	X	X	X	X	X	X	X	X						

monitoring and evaluation															
2. Develop a report of findings						X	X	X							
3. Share report of findings with counterparts at MoH							X	X							
4. Standardize an Infection Prevention and Control Monitoring and Evaluation Plan							X	X	X	X	X	X	X	X	X

ANNEX A: SCOPE OF WORK

Palestinian Health Sector Reform and Development Project Scope of Work (SoW)

Lisa Highton

- 1. Request:** Loma Linda University requests approval for Lisa Highton to travel to the Ramallah, Palestine to provide short-term technical assistance (STTA) to the Palestinian Health Sector Reform and Development Project (“the Flagship Project”) for the period of August 2, 2009 to November 23, 2009.
- 2. Background:** Loma Linda University (LLU) has been requested to assist with capacity building and training staff in partnership with the Flagship Project at Ministry of Health facilities throughout the West Bank. Priority will be given to management support and training and improving the quality of care.
- 3. Purpose of Proposed Visit:** To provide project support in the area of Nursing management, Infection Prevention and Control (IPC) and quality of care. Lisa plans to work closely with project leadership, MoH staff and local hospital staff to mentor, help manage and improve nursing care at the PMC and Rafidiah General Hospital, Nablus.
- 4. Scope of Work:**
 1. To meet with USAID, MoH staff and Flagship staff as needed.
 2. To work with Flagship and MoH personnel to assess and develop an IPC strategy for Nursing at the Rafidiah General Hospital in Nablus, Palestine.
 3. Initiation of an IPC Manual, which includes standardizing policies and procedures, to work towards collaboration with Flagship, Rafidiah General Hospital leadership, and Juzoor to mentor and train nursing staff focusing on IPC and developing a plan to meet an international standard in this area.
 4. To begin the process of assisting Rafidiah General Hospital in such a manner that improvement to IPC can be exported and adopted at other MoH facilities—as needed.
 5. To help initiate collaboration with hospital nursing leadership to dialogue about nursing issues and concerns, and patient safety issues and working jointly to solve problems through the accepted method of assessment and data collection; change planning; implementation; and evaluation of outcomes.
 6. To initiate work with Flagship leadership and appropriate MoH staff on the processes necessary to further the formation and activation of the Palestine Medical Complex (PMC) and improve nursing care and IPC in PMC facilities – to be activated only if working at the PMC is approved.
 7. To work closely with LLU, Flagship leadership and MoH personnel to identify key STTA needed to help accomplish Flagship goals and objectives.
- 5. Products**
 1. IPC situation analysis and needs assessment of Ministry of Health (MoH) Primary and Secondary Health Care systems.
 2. Creation of strategic steps and time-line that outlines the development of a quality package of IPC.

3. Formation of an IPC Workgroup that represents the MoH, Flagship, and other health services to review and update the policies and protocols
4. Review of currently used policies and protocols with comments on revision and encouragement of standardization through participation in IPC Workgroup.
5. Creation of an IPC “Comprehensive Aspects – Infection Control” policy.
6. Creation of an IPC Manual table of contents with comparative graph showing what content already exists between the various current materials, and what needs to be updated/created.
7. Workshop meeting minutes showing evidence of problem solving regarding the stop-gaps preventing implementation of a complete IPC Program.
8. Procurement of the following resources:
 - a. APIC Text 2009
 - b. Assessing and Developing an IC Program: Acute Care (APIC)
 - c. Creative Nursing Leadership & Management (Clark, C. 2009)
 - d. Priorities in Critical Care Nursing, 5th Edition (Urden, D., 2009)
 - e. Musculoskeletal Medicine (Bernstein, J., 2009)
 - f. Examples of LLUMC Infection Control Policies for comparison purposes
 - g. Examples of an Infection Control Plan, IC Hospital Risk Assessment, and yearly report.
 - h. Glow Germ for Hand Hygiene training (procurement in progress)
 - i. PDF copies of LLUMC Perioperative Nursing Manual on a CD
9. Assist in the creation of the Draft Master Plan for the Development of the PMC.
10. Creation of graphics illustrating patient flow for the Emergency Wing, PMC Organizational Structure Chart, and Service Matrix.
11. Assistance in the creation of the Palestine Medical Complex Action Plan

6. Time frame for the Consultancy.

The time frame for this consultancy is on or about 90 days and will conclude on or about January 30, 2010

7. LOE for the Consultancy.

The days of level of effort are estimated to be 2 days for travel; 90 days for work in West Bank and Gaza; and 20-30 days for work outside of West Bank and Gaza. Unless otherwise specified, up to two (2) days may be allocated for preparation of the work and up to two (2) days upon conclusion of work in West Bank and Gaza to complete the assignment (unless otherwise specified).

ANNEX B: ASSIGNMENT SCHEDULE

1. Dina Nasser – meetings/discussions on status of current Palestinian IPC, and role that Juzoor will have developing a continuing training and education module for Infection Prevention and Control Programs in Primary Health Care and Secondary Health Care Settings
2. Jerry Daly – meetings/discussions related to the PMC, strategy and work plans for the PMC, focusing on the steps necessary to open the Emergency Wing and Children’s Hospital; identifying other areas where LLU STTA expertise would be useful to achieve project objectives
3. Dr. Amal Bandak – meetings/discussions related to both Infection Prevention and Control and PMC work plans.
4. Dr. Damianos Odeh and Dr. Taroub Faramand– meetings/discussions/briefings related to both Infection Prevention and Control and PMC work plans
5. Suzanne Sharmali - – meetings/discussions related to both Infection Prevention and Control and PMC, related to Waste Management
6. Noor Hussein — meetings/discussions related to both Infection Prevention and Control and Emergency Wing work plans
7. Nadera Shibly and Hazem Khweis– meetings/discussions related to procurement of equipment with consideration of Infection Prevention and Control
8. Nadira Sansour - – meetings/discussions related to Infection Prevention and Control training and education and Juzoor
9. Dr. Salem Jaraiseh, Dr. Daoud Abdeen , Dr. Jihad Mashal– meetings/discussions related to both Infection Prevention and Control and PMC work plans
10. Naim Sabra and Ammar Sbouh – meeting to gain approval of plans on IPC capacity building within MoH facilities
11. Group meeting with Flagship nurses and the heads of the Palestinian Nurse Association
 - a. Capacity building for nursing association members/branches
 - b. Task force to work on Scientific Day
 - c. Training for continuing education licensing
12. Joyce Utz – brainstorming activities on capacity building of nurses within Palestine

ANNEX C: CONSULTANT CV

Lisa R. Highton, RN

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Education

Loma Linda University, School of Nursing, Loma Linda, California

- Master of Public Health, Global Health, *in progress*
- Bachelor of Science, Nursing, 1986
- Associate of Science, Nursing, 1984

Highlight of Qualifications

International Consultation

- Rural reconstruction community development project for maternal and child health – Masbate, Philippines (2009)
- Hospital epidemiology consultant and conducted training and site assessment at sister hospital – Sir Run Run Shaw Hospital, Hangzhou, China (2006)
- Preceptor to the following international nurses, providing mentoring and training and follow-up when the nurses returned to their home institution:
 - Chief Samson Popoola, Director of Nursing – Ile-Ife Adventist Hospital, Ile-Ife, Nigeria (2009)
 - Terry Tong, Infection Control Nurse – Sir Run Run Shaw Hospital, Hangzhou, China (2006)
 - Margaret Pang, Infection Control Nurse – Hong Kong Adventist Hospital, Hong Kong (2005)

Nursing Management and Leadership

- Designated resource person/consultant for infection control information in clinical and ancillary areas within the hospital and clinic settings
- Epidemiology consultant during Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Department of Health Services (DHS), and Centers for Medicare & Medicaid Services (CMS) visits
- Develop organizational action plans (Sterilization, Nutritional Services and Dialysis compliance) that include: issues identified, immediate action plan, plan to ensure issue(s) is prevented in the future, target date of completion, date completed, monitoring schedule and person(s) responsible; ensures appropriate follow-through within a timely basis
- Conduct infection control rounds of hospital and clinic settings, and provide feedback on compliance, including issues needing improvement.
- Consult with and assist staff as they develop clinical practice guidelines

Communication and Training

- Experienced speaker who has presented and lectured to large groups
- Collaborate with other local and national infection control practitioners in a professional manner

- Communications liaison with staff from local public health departments regarding epidemiological issues
- Consult with medical staff, hospital staff, managers/directors, and administration on epidemiologic matters
- Instructor for the following:
 - General employee and clinical orientations on infection control and employee health (since March 1991)
 - Basic CPR for the American Heart Association
 - Conscious IV Sedation and Nitrous Oxide Sedation – LLU School of Dentistry
 - Infectious Diseases for masters-level students – LLU School of Public Health
 - Infection Control for Clinical Lab Technicians – LLU School of Public Health
 - "SARS – is this just the beginning" during the 8th Annual Respiratory Care Fall symposium at Wong Kerlee International Conference Center, Loma Linda California, September 18, 2003

Project/Protocol Management and Development

- Evaluate scientific validity, and development, review and revision of policies, procedures, protocols and techniques
- Initiate the Standardization/Consolidation of techniques (e.g. vascular access device care), procedures, protocols and policy
- Review and evaluate hospital-wide and departmental policies on rotating 'every 3 year' basis
- Interpret and implement standard and recommendation changes from regulatory agencies
- Review and evaluate environmental cultures for regulatory compliance, reporting
- Update assigned website resource materials (e.g., comprehensive disease information list with hyperlink capabilities to website, isolation, transport, and mandatory reporting information)
- Develop audit forms to evaluate departmental compliance with infection control practices

Investigation and Regulatory Compliance

- Manage infection and organism clusters and outbreaks and survey for resistant organisms
- Collect and analyze surveillance data with implementation of control strategies as needed
- Collect, prioritize, and evaluate quarterly denominator/numerator data (e.g., surgery, central line, and ventilator data); then distribute and explain to area managers and/or staff as needed
- Conduct projects to decrease endemic "common cause nosocomial infections"
- Prioritize daily workload of infection surveillance data and communicate with staff and physicians
- Conduct quality improvement initiatives by initiating development of educational materials, pamphlets, booklets, and departmental newspapers

Work History

Nurse Epidemiologist and Infection Control Practitioner – March 1991 to present
Loma Linda University Medical Center, Loma Linda, California

Public Health Nurse II – February 1990 to March 1991
San Bernardino County Public Health Department, Epidemiology Program,
San Bernardino, California

Registered Nurse – September 1986 to February 1990
Medical Personnel Services, Inc. (MPSI) at Loma Linda University School of Dentistry,
Department of Oral Surgery, Loma Linda University, Loma Linda, California

Registered Nurse and Basic CPR Instructor – June 1987 to February 1990
American Heart Association, Life Support Education, Loma Linda University, Loma Linda
California

Registered Nurse, Pediatric Intensive Care Unit – May 1985 to October 1986
Loma Linda University Medical Center, Loma Linda, California

Committees and Taskforces

- International Nursing Committee
- Infection Control Committee
- Food Safety & Sanitation Committee
- Dialysis Administrative and Continuous Quality Improvement Committee
- Scabies Outbreak Response Team
- Standardization of Sterilization Practices Taskforce
- Standardization of Supplies Taskforce

Licenses and Credentials

California State Registered Nursing License #RN389424 (expires 5-31-2011)

Public Health Nurse, #40680

Professional Associations

Member of APIC (Association for Professionals in Infection Control and Epidemiology).
Inland Empire Chapter #74, 1991 to present

Member of Sigma Theta Tau, International Honor Society of Nursing, 1986 to present

Hobbies

International travel, photography, scrap-booking, card-making

ANNEX D: BIBLIOGRAPHY OF DOCUMENTS COLLECTED AND REVIEWED

1. Infection Prevention and control Protocol, Part I, Hand Washing Antiseptics, hand Gloving and Skin Preparation. Palestinian Medical Relief Society, December 2005. Prepared by Dr. Adel Takruri, adapted for PMRS clinics mainly from the MOH/MARAM protocol published November 2004.
2. Infection Prevention and Control Protocols, Maram Project report, USAID, November 2004
3. Joint Commission International (2008). Joint commission International Accreditation Standards for Hospitals, 2007. *Prevention and Control of Infections (PCI)*, pages 155-166.
4. Preventing Nosocomial Infections in Reproductive health Service Delivery Points, report for Ministry of Health, with support from UNFPA, June 2008. Prepared by Dina Nasser, Juzoor “Foundation for Health & Social Development”.
5. Association for Professionals in Infection Control and Epidemiology (APIC), APIC Text 2009
6. Association for Professionals in Infection Control and Epidemiology (APIC), Assessing and Developing an IC Program: Acute Care

ANNEX E: LIST AND COPY OF MATERIALS UTILIZED DURING ASSIGNMENT

1. Association for Professionals in Infection Control and Epidemiology (APIC)
2. Assessment and Development of Infection Control Programs Toolkit Series (APIC)
3. AAMI (Association for the Advancement of Medical Instrumentation) Standards
4. CDC (Centers for Disease Control and Prevention) Guidelines
5. Dina Nasser 2008 IPC Assessment, "Preventing Nosocomial Infections in Reproductive Health Service Delivery Points" for Ministry of Health, June 2008, Juzoor Foundation for Health & Social Development
6. Egyptian IPC Policies & Guidelines
7. Infection Prevention – Guidelines for Healthcare Facilities with Limited Resources, JHPIEGO-an affiliate of Johns Hopkins University
8. LLUMC (Loma Linda University Medical Center) Infection Prevention and Control Policies
9. Nablus Directorate CD Contents
10. Palestinian Medical Complex (PMC) Activation & Renovation of PMC graphic grid
11. PMC Action Plan
12. Emergency Wing Startup Matrix
13. PMC Organizational Chart
14. IPC Pocket Guide
15. SHEA (Society for Healthcare Epidemiology of America) Guidelines
16. APIC State of Surveillance – Cultivating Your Infection Control Program
17. WHO (World Health Organization) Guidelines
18. LLUMC General Infection Prevention and Control Orientation PowerPoint Presentation
19. FLIN (Foundation for the Fight against Nosocomial Infections) & INICC (International Nosocomial Infection Control Consortium) Infection Control Guidelines
20. USAID (United States Agency for International Development) handwashing and sterilization booklets, posters, etc.
21. APIC, The Role of the Infection Control Practitioner
22. The Joint Commission, on Accreditation of Healthcare Organizations, Accreditation Program: Hospital, Pre-Publication Version, 2009