

National Infection Prevention Program Strategy for Afghanistan

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National Infection Prevention Program Strategy for Afghanistan

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FORWARD

This updated National Infection Prevention Strategy for Afghanistan was prepared to address the need to increase the improvement in quality of care in the provision of health services at all levels of the health system. Although it has been lead by a sub-group of the Hospital Management Task Force, and guided by the Department of Curative Medicine of the MOH, it recognizes the need for these services in all areas of the health sector, including hospitals, health centers, health posts and outreach services.

The Strategy was developed using guidance and technical expertise from JHPIEGO – Johns Hopkins University, including the use of the JHPIEGO manual “*Infection Prevention Guidelines for Healthcare Facilities with Limited Resources*” as the primary technical resource.

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INTRODUCTION

Infection prevention (IP) is a combination of policies, procedures (protocols) and practices that are designed to limit the spread of serious life threatening infections to both patients and staff within health care facilities and outreach programs. It is not only preventing infections but also protecting staff and patients, especially in this time when serious viral infectious agents such as hepatitis B (HBV) and C (HCV) viruses and human immunodeficiency virus (HIV) are so wide spread.

Furthermore, a national infection prevention program helps to minimize the transmission of infections to communalities, as well as protect the environment through adequate waste management practices.

Infection prevention practices are simple, inexpensive and effective. Infection prevention is

- washing of hands
- appropriate use of gloves and other barriers
- proper processing of instruments, gloves and equipment
- thoughtful traffic flow and activity patterns to separate clean from dirty, and
- proper waste disposal.

Proper adherence to infection prevention principles allows basic health services, especially maternal and child health services, to be moved out to more remote peripheral settings. Understanding and following good IP practices helps to improve the quality of service in large clinics and hospitals and promote the provision of high quality service in small basic health centers. This is accomplished without increasing the risk of infection to either patients or staff.

NEED FOR A NATIONAL INFECTION PREVENTION PROGRAM

The UNICEF national assessment, *Assessment of Services and Human Resource Needs for the Development of the Safe Motherhood Initiative in Afghanistan* (May 2002), made it clear that infection prevention and hospital hygiene practices were below a desired level. Knowledge and practice of appropriate infection prevention practices was limited due to lack of awareness of dangerous practices, limited familiarity with international best practices and a scarcity of needed commodities (e.g., chlorine solution for decontamination). Statistical information regarding hospital-acquired infection is scarce, as are rates of infection of hospital staff. It is estimated that 8% of the population in Afghanistan are carriers of the hepatitis B antigen. The Hepatitis B carrier rate is lowest in younger children, and increases

with age and exposure to the health care system¹. This poses a real threat to hospital personnel and the ability of the country to retain qualified staff. Current seroprevalence studies in high risk populations of intravenous drug users indicate that 4% are positive for HIV, and 50% are positive for Hepatitis C. All of these diseases are transmissible to health care workers and to other patients if IPC principles are not followed. No data exist on wound infection rates, but observations in some maternity wards in large hospitals indicate that up to 100% of caesarean sections develop wound infections. This has led to the common practice of administering antibiotics before and after any clean surgery, leading to inappropriate and excessive antibiotic use, and ultimately to increased antibiotic resistance in common microorganisms.

Initial assessments of 13 hospitals across Afghanistan have demonstrated that hospitals generally are not familiar with, nor do they adhere to, standard precautions for the prevention of infection, and overall, they achieve between 4 – 32%² of the national standards for IPC. Current practices related to instrument processing, sharps disposal and waste management unnecessarily expose health care workers, patients and the community to infection. Evidence suggests that inappropriate cleaning and sterilization of equipment is a major factor in the spread of Hepatitis B and C in Afghanistan. As well, evidence indicates that there is country-wide lack of application of standard precautions for the prevention of nosocomial infections.

Since the first strategy was written training courses in accepted IP practices have been held for health care workers from 16 hospitals. These workers have included doctors, nurses, midwives, lab technicians and cleaners. We have also trained a select group in “Effective Training Skills” so that they can train other health care workers in their hospitals and outside. This program still must reach the remaining hospitals (central, provincial and district) and into health centers (CHC and BHC) and health posts. As well, the program should respond to the need to give guidance to the many providers who provide home-based outreach services.

STRUCTURE OF A NATIONAL INFECTION PREVENTION PROGRAM

Goal and Objectives

¹ Immunization Coordination Council Report 2005, ICRC and Afghan refugee seroprevalence studies.

² REACH Infection Prevention Program Assessments in 13 Afghan Hospitals, 2005

The **goal** of the national IP program is to improve the quality of care in health care services and to limit the spread of infections to patients, hospital staff and the community. IP is a key element of quality that impacts the client's and the community's perception of care and thus, can impact service utilization rates.

The **objectives** of the national infection prevention program are to:

- Establish and support infection prevention committees/officers in health facilities that will guide the implementation of comprehensive infection prevention programs
- Provide all facilities with the supplies and equipment needed to implement appropriate infection prevention practices
- Train health personnel in proper infection prevention practices
- Support health personnel in the adoption of and compliance with proper infection prevention practices using a ***standards-based management approach*** that empowers staff to make changes and objectively and explicitly measures the progress of those changes.

The IP Working Group has begun meeting these objectives in the nine hospitals which were chosen to be the first for implementation.

- IP Committees have been established in all the hospitals
- Supplies and equipment have been provided or are on order for meeting the implementation needs, within the budget set by REACH.
- Approximately 100 health care personnel have been trained in IP practices with an additional 50 cleaners trained.
- 18 participants attended an Effective Training Skills course
- Standards-Based Management teams have been formed in all the hospitals and are working to achieve the standards set.

IP Policies, Protocols and Clinical Guidelines

The starting point of a national IP program is the production of clear and explicit IP standards and policies. IP Policies outline the priorities, responsibilities and authorities and minimum acceptable standards for different levels of healthcare facilities.

IP Protocols define the necessary steps that each facility should take including the establishment of IP committees, requirements of staff and equipment, etc.

Adherence to these protocols would be accomplished by implementation of clear and explicit IP guidelines. This would give detailed guidance about:

- proper handwashing, both simple and surgical
- use of gloves and other barriers (caps, gowns, masks, etc.)
- acceptable and appropriate antiseptics and disinfectants³, including procurement and distribution of such items
- instrument processing (decontamination, cleaning and either high-level disinfection or sterilization)
- proper storage of prepared instruments and supplies
- sterile technique and maintenance of a sterile field in a surgical environment
- housekeeping and maintenance of a clean hospital environment
- client flow and traffic patterns,
- facility-based protocols for management and containment of infectious disease outbreaks, and
- waste disposal, including the disposal of sharps and solid and liquid waste.

The manual *Infection Prevention Guidelines for Healthcare Facilities with Limited Resources* has been adopted as the national standard. It has been translated into Dari and Pashto and has been re-titled *Infection Prevention Guidelines for Afghanistan*. It serves as the primary technical resource for infection prevention in the country. While it is a comprehensive document, it may not address all areas of need for Afghanistan. However, it is a reasonable starting point from which to address the major issues that affect the transmission of infections in healthcare facilities. These guidelines provide IP standards and details regarding appropriate IP practices in hospitals, health centers and health posts, as well as mobile outreach services, such as immunization programs. 1900 copies of the manual in Dari have been distributed to participating hospitals and the REACH midwifery schools (for both students and trainers).

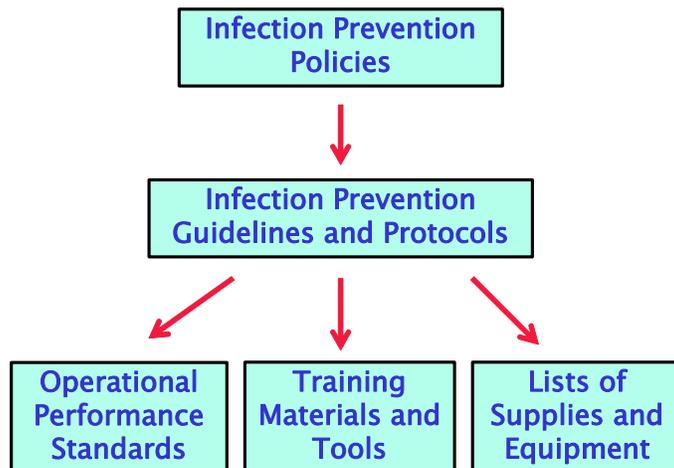
These standards, based on international reference materials, comprise the basis for additional materials such as job aids, supportive supervision materials, curricula, etc.

IP Policies, Standards and Accompanying Materials

As demonstrated in Figure 1, National Infection Prevention Guidelines and Protocols serve as a starting point for the development of numerous other tools and approaches for implementation of the program.

³ Policy on appropriate antiseptics and disinfectants should inform the updating of the National Essential Drug and Supply List and be part of the supply and logistics systems.

Figure 1. *The Use of National Guidelines for Infection Prevention to Guide Program Implementation.*



The Guidelines are the basis for the development of

- Operational performance standards, which reformulate the IP guidelines into tools that providers and facility managers can use to improve IP practices
- Training materials for group-based and on-the-job training approaches, and
- Lists of essential supplies and equipment, including standard pictorial atlas, needed at all levels of the health system.
- Job aids (simple posters or illustrations that remind providers to adhere to acceptable IP practice)

All of these documents, Policies, Guidelines and Implementation Tools have been translated into Dari and Pashtu and are being made widely available to all health facilities and managers. The documents are in a format that is easy to understand and use.

A variety of training courses have been and are being developed to match the job descriptions of the different cadre of staff. For example, a one-day course may be enough for cleaners and ward attendants, whereas a 5-day course is essential for the nurses charged with instrument handling and processing. Specific courses should be or have been designed to tailor to the needs of

- nurses, midwives, doctors and other service providers
- theatre nurses

- cleaners and ward attendants
- specialist nurses/technicians from the sterile processing area, and
- others as identified.

These courses are only a step in the behavioral changes necessary to implement the program.

Facility Based Infection Prevention Committees

Each facility that is working to improve practices in infection prevention has a committee that leads the changes in clinical practices. This Infection Prevention Committee includes the following members:

- Hospital director or designate
- Hospital administrator or designate
- Chief physician
- Chief nurse
- 2 – 3 senior clinicians from the hospital who are actively working in the area of infection prevention.

These people guide the implementation of a hospital based infection prevention program according to the national strategy and methodology. They guide the implementation of a Performance and Quality Improvement methodology so as to provide specific guidance and measure achievement toward results.

Standards–Based Management

Infection prevention guidelines are reference standards for what “should be done”. But they do not describe “how it should be done”. The guidelines are adapted into tools that are performance or operational standards that describe in detail how the standards can be achieved. These are then applied in clinical settings by teams in order to establish a baseline and measure progress.

The Standards–Based Management (SBM) approach follows four basic steps:

- Setting of standards of performance: in which consensus is achieved on an assessment tool that contains the operational performance standards to be implemented
- Implementation of the standards: consists of the implementation of the tool at the facility level to determine actual levels of performance and identify performance gaps, as well as the systemic analysis of causes of gaps and the

selection and implementation of interventions to close these gaps, beginning with the less complex.

- Continuous measurement of progress: achieved through the periodic implementation of assessments (basically internal assessments). Work in networks of facilities and benchmarking of best practices are encouraged during this phase.
- Recognition of achievements: in which different types of rewards such as feedback and social and material recognition are used to enhance motivation and continuous improvement.

Infection Prevention Supplies and Equipment

Based on the standards an essential supply and equipment list is being developed. Facilities should then be supplied with these items in order to implement best practices in IP. For example, concentrated chlorine in either a powder or a liquid form is necessary for the preparation of a 0.5% chlorine solution. This chlorine powder is currently not routinely supplied to health facilities.

There will be an initial necessary input of non-consumable items such as buckets, brushes and utility gloves. Items such as chlorine powder, antiseptics and soap would be needed on a continual basis. The logistics management system should be adapted to include these items to ensure a steady re-supply.

If this is not currently available in country, a local agency should be contracted to procure it in bulk and repackage it in aliquots (single-use packets) for easy preparation of the appropriate solution.

IP Experts and Trainers

To advance the implementation of appropriate IP practices, IP experts or “champions” have been identified, trained and are being supported. They serve as the program managers who coordinate and conduct the training at their facilities. Furthermore, they are on-site problem solvers who visit the wards and the out patient departments after the training to facilitate implementation.

These experts have been given an intensive and comprehensive course in IP. They have gained some experience in implementing these procedures. Some of the proficient practitioners of IP have been given training skills to enable them to train others. These training skills included some problem solving skills as well so that they are able to work with ward/clinic teams to address some of the challenges to

implementation. They have lead courses in their own facilities and for other health care providers in their communities.

They have been given some skills in monitoring infection rates and assessing the causes of outbreaks of infections in hospitals.

Whole-site IP Training at Hospitals

Experience has demonstrated that IP practices must be consistent throughout the various departments and areas of the hospital for it to be effective. If nurses in the OPD handle sharps in one manner, but those in the labor room handle them in another, it leads to inconsistent application of the standards. Therefore, any intervention to improve IP practices must have a whole-site approach and include clinical as well as non-clinical staff. The concept of IP was initially presented during a hospital-wide meeting, to convey the idea that IP only works as a team effort.

While improved IP practices are seen as an urgent need throughout the country, implementation of an effective IP program must be done in a sequential and orderly fashion. The sites selected to initially receive IP training and support were the previously identified “Centers of Excellence”. These are centers that were already identified to implement and demonstrate best practices. They are also training centers where these best practices will be taught to other practitioners.

Cascade of Improved IP Practices

When IP practices have been brought up to standard in the various hospitals identified as “Centers of Excellence”, these centers will serve as local hubs for demonstrating and training other facilities. Selected staff from peripheral hospitals can come to one of the centers for training. They then return to their hospital as the local IP leader or champion. They are then charged with conducting training, first to the staff of their own facility, then to future IP leaders from more peripheral facilities.

To accomplish this cascade of training a package of training tools and materials must be made available to those who receive the initial training. They would then use these materials to conduct the 1-, 3- or 5-day courses in their institutions.

IP in Preservice Education

To ultimately improve the quality of infection prevention practice in facilities across Afghanistan and to reduce the need for continued in-service training, IP must

become part of the pre-service curriculum in medical, midwifery and nursing schools. The students in these institutions must become skilled from the start in appropriate IP practices.

The midwifery education program of the IMEI and the national curriculum for community midwives both contain a module on infection prevention. This could serve as a prototype module for other pre-service training programs.

ACTION PLAN

Appendix 1 shows the updated objectives and timetable for the national Infection Prevention Program. It identifies specific activities and goals for implementation.

Implementation of a national infection prevention program should be a high priority to improve the quality of healthcare, especially maternal and child health services in Afghanistan. To accomplish this, the MoPH should continue implementing the action plan to rapidly and broadly implement this initiative.

Action steps include:

1. Continuing to secure the necessary **commodities** (both consumable and non consumable) that facilities need for IP practices
2. Facilitating the implementation of IP practices at other sites through a **standards-based management and performance and quality improvement** approach, including self-assessment, standards distribution, training and trouble-shooting during implementation
3. Continuing to assess and **respond to the need of facilities** throughout the country for IP training, through a series of national courses
4. Continuing to **develop capacity** within the MoPH to implement, manage, monitor and evaluate the national IP program.
5. Implement training within other courses, such as family planning courses and refresher training courses for medical school graduates.

Infection Prevention Program Plan

		2004												2005						
Activity		Outputs/Deliverables	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Notes			
1	Develop core national IP Committee	National IP committee established	X	X																
2	Develop national IP Strategy	Approved National Strategy exists		X	X	X											Will need to be translated to Dari and Pashto			
3	Develop proposals and attempt to secure funding	Funding available					X										Will need to be translated to Dari and Pashto			
4	Finalize translation of IP Reference Manual	IP Reference Manual in Dari					X	X												
5	Technical update and training for core national IP trainers	24 National IP Experts trained								X							5 days			
6	Review and finalize National IP Policies	National IP Policies										?					2 days			
7	Identify basic equipment for IP	Standard IP Equipment List								X							At all levels PH, DH, CHC, BHC			
8	Launch National IP Policies	Approved National IP Policies exist											X				At an appropriate MOH event			
9	Develop in-service and pre-service training modules	Training modules exist									?									
10	Establish SBM/PQI tools for IP	PQI Tools for IP exist									X									
11	Procure basic IP equipment	Standard IP Equipment procured										X	X	X			Including the construction of incinerators			
12	Translate and print IP standards and training materials	Translated standards and training materials											X				Dari and Pashto			
13	SBM/PQI Workshop Part 1 and baselines	Performance and Quality Improvement (PQI) process underway in key hospitals										X	X				3 days + field visits			
14 *	Training Skills Course	One group of IP trained personnel trained in training skills											X							
15 *	Modified IP skills for Khost, Paktiya and Paktika hospitals	Selected hospital personnel trained in IP practices											X							

