Establishing Postabortion Care Services in Nepal

FCA-25

Prepared by

Kasturi Malla, DGO, FAMS; Savitri Kishore, MD; and Saraswati Padhye, FRCOG
Paropakar Shree Panch Indra Rajya Laxmi Devi Maternity Hospital
Kathmandu, Nepal

Richard Hughes, MA; Monica Kerrigan, MPH (Consultant); Noel McIntosh, MD, ScD; and Linda Tietjen, BSN, MPH (Consultant)
JHPIEGO Corporation
Baltimore, Maryland, USA

June 1996

United States Agency for International Development

A

CREDITS
Editors: Chris Davis and Elizabeth Oliveras
Graphics editing: Holly Simmons

JHPIEGO, an affiliate of Johns Hopkins University, is a nonprofit organization dedicated to improving the health of women and families in developing countries. JHPIEGO works to increase the number of qualified health professionals trained in modern reproductive health care, especially family planning.

B

ACKNOWLEDGMENTS

We wish to thank USAID/Nepal for its support. In particular, we are indebted to Molly Gingerich, Health, Population and Nutrition Chief, for her encouragement and commitment to initiating postabortion care services using manual vacuum aspiration in Nepal. Finally, we wish to acknowledge the efforts of Louise Dierks, JHPIEGO South Asia Office, for editing many early drafts.

This publication was made possible through support provided by the Office of Population, Center for Population, Health and Nutrition, Global Bureau, US Agency for International Development, under the terms of Cooperative Agreement No. CCP-3069-A-00-3020-00. The views expressed in this document are those of the authors and do not necessarily reflect the views of USAID.

Revised and reprinted June 1996

C

TABLE OF CONTENTS

APPENDICES

ABBREVIATIONS AND ACRONYMS

CBT	Competency-based training
CGI	Computer-generated image
D&C	Dilatation and curettage
DMPA	Depot-medroxyprogesterone acetate
FP	Family planning
Hb	Hemoglobin
HBV	Hepatitis B virus
HLD	High-level disinfection
HMG	His Majesty's Government of Nepal
IIDS	Institute for Integrated Development Studies
IP	Infection prevention
IPAS	International Projects Assistance Services
IPPF	International Planned Parenthood Federation
IUD	Intrauterine device
JHU/CCP	Johns Hopkins Center for Communication Programs
LMP	Last menstrual period
MCH	Maternal and Child Health
MD	Doctor of medicine
MO	Medical officer
MOH	Ministry of heallth
MVA	Manual vacuum aspiration
MWRA	Married women of reproductive age
NFHS	Nepal Fertility, Family Planning and Health Survey
NIV Joint Ventures	(New Era, IIDS and VaRG)
Ob/Gyn	Obstetrics and Gynecology
OJT	On-the-job training
OPD	Outpatient department
OT	Operating theater
PAC	Postabortion care
POC	Products of conception
TBA	Traditional birth attendant
TCu	Copper T intrauterine device
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VaRG	Valley Research Group
VS	Voluntary sterilization
WHO	World Health Organization

EXECUTIVE SUMMARY

In Nepal, studies estimate that 15–30% of maternal mortality can be attributed to the complications of incomplete, spontaneous or septic abortion. As the major maternal referral center in Nepal, the Paropakar Shree Panch Indra Rajya Laxmi Devi Maternity Hospital treats about 1,400 women annually who are suffering from complications of incomplete abortion. Until recently, all of these cases have been treated by dilatation and curettage (D&C) in the operating theater (OT) under general anesthesia. This involves admitting patients to the hospital, and from 1 to 7 days spent waiting for treatment and recovery. In addition, until now there has been no linkage between treatment and much-needed family planning (FP) counseling and services.

Following nearly a year of planning, a model postabortion care (PAC) service and training program was established at the Maternity Hospital in June 1995. This new unit, which is located next to the admitting area, is designed to manage these cases in an ambulatory setting using manual vacuum aspiration (MVA). During the first 6 months of operation (June to December 1995) the PAC unit has saved the hospital and patients over 400 bed days and 282 operations under general anesthesia in the OT. The average length of stay has been reduced from 36 to 3 hours, and no serious complications or deaths have occurred. Discussion of the woman's reproductive goals and FP counseling are provided before or after treatment, depending on her medical condition. In addition, the previously nonexistent link to other reproductive health services has been established.

Despite the fact that almost one quarter of the patients are primigravidas who want children, acceptance of FP has been high (70%) and generally has involved counseling of both husband and wife. Excluding condoms (a small supply of which are provided to all patients who do not leave with another FP method), the contraceptive methods provided include: Depo Provera (37%), oral contraceptive pills (27%), and IUDs (5%). In addition, about 3% of patients/couples were referred for Norplant® implants or voluntary sterilization.

The Nepal program is one of a few PAC programs worldwide and is a model for the management of incomplete abortions using MVA. Based on the initial experience with the Nepal program it is concluded that MVA is a safe, effective procedure that can increase access to FP and other reproductive health services.

Establishing Postabortion Care Services in Nepal

OVERVIEW

In Nepal, the Paropakar Shree Panch Indra Rajya Laxmi Devi Maternity Hospital in Thapathali, Kathmandu, (hereafter referred to as the Maternity Hospital) is the major referral hospital providing treatment for complications of incomplete abortion. During the past 18 months the JHPIEGO Corporation, an affiliate of Johns Hopkins University, has assisted staff at the Maternity Hospital to establish ambulatory (outpatient) postabortion care (PAC) services using manual vacuum aspiration (MVA).

The primary objective of the PAC unit is to provide management of the complications of incomplete, spontaneous and septic abortion. It also serves as a model service delivery center where physicians, nurses and other health professionals will receive training in:

- MVA, the preferred method of emergency treatment for bleeding problems associated with incomplete abortion
- The management of life-threatening complications which sometimes occur following both spontaneous and induced (illegal) abortion
- Postabortion family planning (FP) counseling and provision of contraceptive services
- Assessment of other reproductive health needs and either treatment or referral for identified reproductive health problems (McIntosh and Tietjen 1993)

This technical report documents the programmatic strategy and training approach used by JHPIEGO staff to assist in developing the model PAC unit at the Maternity Hospital, highlights the accomplishments achieved during the first 6 months of the program (June to December 1995) and shares the collective lessons learned from this initial experience.

Demographic Situation

According to the 1991 *Nepal Fertility, Family Planning and Health Survey* (NFHS), Nepal's population is estimated to be 18.5 million and the annual population growth rate is about 2.4% (HMG 1993). Although the current population is expected to double in approximately 30 years, the fertility transition appears to have taken place because couples are now choosing to have smaller families than in the past (Thapa and Pandey 1994). Specifically:

- The total fertility rate in 1991 was estimated to be 5.1, down from 5.6 in 1986.
- The number of desired children also decreased from 4.0 in 1981 to 3.2 in 1991.
- In 1991, the contraceptive prevalence rate (CPR) was estimated to be about 24%.

Information from the 1991 NFHS indicates that nearly 35% of married women of reproductive age (MWRA) want no more children, and another 20% want to space their next birth. Despite this, data from the survey indicated that only 45% of the total demand for FP services has been satisfied and, in particular, demand for voluntary sterilization (VS) and temporary methods is high. The major constraints of the current FP program include:

- Limited number of trained staff
- Poor access to service sites
- Lack of temporary methods, especially injectables
- A shortage of clinical supplies (*Nepal Priority Country Strategy* 1993)

The lack of accessible FP services continues to contribute to the growing problem of unwanted, unplanned pregnancies and induced abortions.

Magnitude of The Problem

As in many countries worldwide, the lack of accurate abortion statistics for Nepal makes it difficult to document the magnitude of the problem. In Nepal—where abortion is illegal and the laws do not permit abortion under any circumstance—legal punishment can be carried out for both the woman undergoing an abortion and the person who performs it (Thapa, Thapa and Shrestha 1992).

Because there is little information regarding abortion (both spontaneous and induced), the rate of abortion-related maternal mortality in Nepal is not known. It is estimated, however, that 15–30% of maternal mortality in Nepal is due to lack of effective treatment of complications arising from incomplete abortion such as hemorrhage, infection and injury to the genital tract (Thapa, Thapa and Shrestha 1992).[1] It is also estimated that morbidity, including infertility, chronic pelvic pain and ectopic pregnancy may affect nearly 40% of Nepalese women who have a serious postabortion complication(s) (McIntosh and Tietjen 1995). Finally, it is generally recognized that many women presenting with spontaneous or induced abortion are in need of immediate medical care.

The most complete information regarding the magnitude of this problem is contained in two recent abortion studies. The first was conducted in five hospitals in urban Nepal (Thapa, Thapa and Shrestha 1992) and the second in rural Nepal (Thapa, Thapa and Shrestha 1994.) Collectively these studies provide information regarding abortion providers, abortion methods used and the reasons women give for having an abortion.

In the **urban study**, 12 of 165 women (7%) died in the hospital, mainly due to tetanus. Deaths due to abortion-related complications represented more than half of all maternity-related deaths in the five hospitals participating in the study (Thapa, Thapa and Shrestha 1992). Two-fifths of the cases admitted to the hospitals were suffering from complications of incomplete abortions performed by traditional birth attendants (TBAs). Generally, the abortion practices used were unsafe and carried out under unhygienic conditions. The methods used included insertion of unknown vaginal

[1] The National Health Policy issued in 1991 by His Majesty's Government of Nepal (HMG) highlighted the poor health status of Nepalese women. For example, Nepal has one of the highest maternal mortality rates worldwide (8.5 per thousand).

preparations and foreign objects as well as taking various oral medications. These unsafe practices often led to infection, disability and death. In addition, delays in referring women to hospitals were longer and hospital stays were lengthier for induced abortion cases than for spontaneous abortion cases. For example, the average number of days elapsing between the reported attempt to induce the abortion and hospital referral was approximately 7 days—significantly longer than the average 3.2 days elapsing before hospital referral for spontaneous abortion cases. The majority of women in the study (75%) did not want to have another child, and 13% wanted to delay their next pregnancy. Economic hardship was the reason given by most of the women who did not want to have another child.

The second abortion study, which was conducted in **rural** Nepal, confirmed several key findings presented in the urban study. Because the majority of the population in Nepal lives in rural areas, not surprisingly a larger proportion of induced abortions are performed there. As was the case in the urban study, this study documented that these abortions usually were carried out clandestinely, under unsafe conditions by untrained personnel. Moreover, the data confirmed that TBAs were the primary abortion providers, and they relied upon methods similar to those observed in the urban study. In addition, because TBAs had little or no knowledge regarding modern FP methods, they normally did not provide any contraceptive advice or referral for FP services. As in the urban study, the primary reason given for abortion was economic hardship due to too many children (Thapa, Thapa and Shrestha 1994).

ELEMENTS OF POSTABORTION CARE

Women who have experienced spontaneous or induced abortion are in need of quality PAC services. When comprehensive PAC services that include both medical and preventive health care are available, maternal mortality and morbidity from incomplete abortion are largely preventable. The key elements of PAC are:

- Emergency treatment of incomplete abortion and potentially life-threatening complications
- Postabortion FP counseling and services
- Links between emergency postabortion services and other reproductive health care (Postabortion Care Consortium 1995)[2]

The World Health Organization (WHO) has identified the prompt treatment of incomplete abortion as an essential element of obstetric care that should be available at every district-level hospital (WHO 1991). Because management of uncomplicated incomplete abortion usually requires removal of retained products of conception (POC) from the uterus, treatment can be provided through the use of MVA.

The reduced number of maternal complications and deaths in developed compared to developing countries is attributable in part to the replacement of dilatation and curettage (D&C) with MVA.

---

[2] The Postabortion Care Consortium member organizations are AVSC International, International Planned Parenthood Federation (IPPF), IPAS (International Projects Assistance Services), Johns Hopkins Center for Communication Programs (JHU/CCP), the JHPIEGO Corporation and Pathfinder International.

Manual vacuum aspiration is the preferred method of uterine evacuation to treat bleeding problems associated with incomplete abortion because:

- the risk of serious complications is reduced,
- access to services is increased,
- the cost of postabortion services is reduced, and
- the resources used are reduced (Postabortion Care Consortium 1995).

THE NEED FOR SERVICES

Each year an increasing number of women throughout Nepal seek emergency treatment at the Maternity Hospital, a tertiary care, referral facility. Currently, about 1,400 women are admitted annually to the hospital for treatment of the complications of incomplete abortion—nearly 10% of the annual number of deliveries at the hospital (McIntosh and Tietjen 1995).

Prior to initiating the PAC program, the standard treatment for uncomplicated cases of incomplete abortion was sharp curettage (D&C), which is performed in the operating theater (OT) under general anesthesia. Based on a limited survey of the OT's roster, for any given day 20–30% of the cases were directly related to treatment of incomplete abortion (McIntosh and Tietjen 1995). As the number of cases of incomplete abortions has increased, the demand for OT space and hospital beds has become critical. This has prompted senior staff at the Maternity Hospital to seek alternatives for managing patients with these problems.

Needs Assessment

Limitations

A training needs assessment conducted by JHPIEGO in 1993 found that patients presenting with an incomplete abortion at the Maternity Hospital were admitted for D&C and usually had to wait from 1 to 7 days **after** hospital admission for treatment and recovery. Moreover, there was no linkage between treatment and much-needed FP counseling, FP services and referrals for other reproductive health care needs.

The training needs assessment identified the following additional constraints:

- the need to strengthen infection prevention (IP) practices,
- high staff turnover due to the government's transfer policy, and
- the need for upgrading and renovating the space chosen for the PAC unit.

Strengths

The Maternity Hospital plays a critical role as a clinical training site for reproductive health care providers and for students. Approximately 15 to 20 medical students, 40 to 60 nurses, 12 medical interns and 4 to 6 physicians in postgraduate training rotate through the FP/MCH outpatient

department (OPD) of the Maternity Hospital each year. The commitment, interest and political will of the Director and hospital staff to provide quality clinical training in reproductive health have been strong (Magarick 1993). Additional strengths of the hospital include a high client caseload for reproductive health training—the hospital serves over 18,000 FP clients and handles approximately 16,000 deliveries annually. Moreover, adequate numbers of Ob/Gyn specialists and medical officers (MOs) are available, and the staff are experienced in providing clinical FP methods.

Site Selection

The Maternity Hospital was selected as the initial site for the development of a postabortion care program for the following reasons:

- Hospital staff currently provide treatment for incomplete abortions
- Patient caseload seeking treatment for incomplete abortions is high (about 1,400 cases per year)
- Sufficient physicians (Ob/Gyn specialists and MDs) and support staff are available to establish PAC services
- The Director and staff demonstrated a strong commitment to provide PAC services
- The hospital serves as the primary site for pre- and inservice clinical training as well as continuing education of heath care professionals in Nepal

PROGRAM PLANNING

The planning process was comprehensive and highly dependent upon good coordination and communication among all stakeholders: the Maternity Hospital staff, key Ministry of Health officials and the USAID Mission. Several cooperating agencies—especially AVSC International, JHU/CCP and Family Health International as well as the United Nations Population Fund (UNFPA) who are working in Nepal—were fully apprised of the proposed PAC program and provided valuable assistance at all stages. In addition, JHPIEGO worked with hospital administrators and key staff at a pace that allowed sufficient time to develop a strong foundation for the program before beginning renovation of the space for the unit and introduction of PAC services.

In the final analysis, the successful development and initiation of PAC services was dependent on the leadership and commitment of the Director and the active support of senior staff and administration of the Maternity Hospital. For example, the Director was able to secure approval from the hospital's Board of Trustees for establishing a PAC unit despite many other equally important needs.

The following six components, which are briefly described below, were identified and addressed during the planning process:

- Renovation of space
- Equipment and supplies

- Staffing plan
- Coordination of services
- Orientation of staff
- Service delivery

Renovation of Space

In most cases, emergency postabortion care services can and should be delivered in an outpatient setting such as an emergency room, with minimal use of anesthesia (Postabortion Care Consortium 1995). Transferring PAC services out of OTs can allow for more effective and efficient use of OT staff and resources for other emergency procedures.

In order to initiate PAC services at the Maternity Hospital, there was a need to establish an outpatient MVA treatment room and several small areas for pre- and postoperative care, handwashing and instrument processing. In September 1994, the Maternity Hospital administration took the initiative and identified potential space immediately adjacent to the hospital's admitting unit. Gaining approval to use this space was a lengthy and complicated process, but was essential if MVA was to be seen as the primary treatment for postabortion complications (McInerney, McIntosh and Tietjen 1994).This space was ideal because it:

- enabled patients to be quickly and easily transferred to the PAC unit;
- eliminated lengthy delays in the process of admitting patients; and
- provided a low-level treatment area where general anesthesia, which is not needed for MVA, would not be deemed safe to use.

JHPIEGO, key Maternity Hospital staff and an IP consultant worked closely with a USAID-recommended architecture and engineering firm to develop the engineering drawings and budget that were needed to establish an ambulatory PAC unit within this existing space at the hospital. In designing the space for the PAC unit several factors needed to be considered. For example, when fully operational the unit would need to be able to manage up to 10 PAC cases per 24-hour period as well as other gynecologic emergencies. In addition, the design had to be simple, inexpensive and easy to maintain with minimal staffing. Also, because this unit would serve as the major training facility for service provider teams (physicians/nurses and support staff) from secondary (district hospitals) and even primary (polyclinic) level facilities, the design had to reflect conditions similar to those encountered at these lower level facilities where:

- The caseload would be lower (1 to 2 cases per day).
- Only rotating (not permanent) staff would be available.
- Soiled instruments and other items would need to be handled within the unit using high-level disinfection (HLD) by steaming or boiling for final processing.

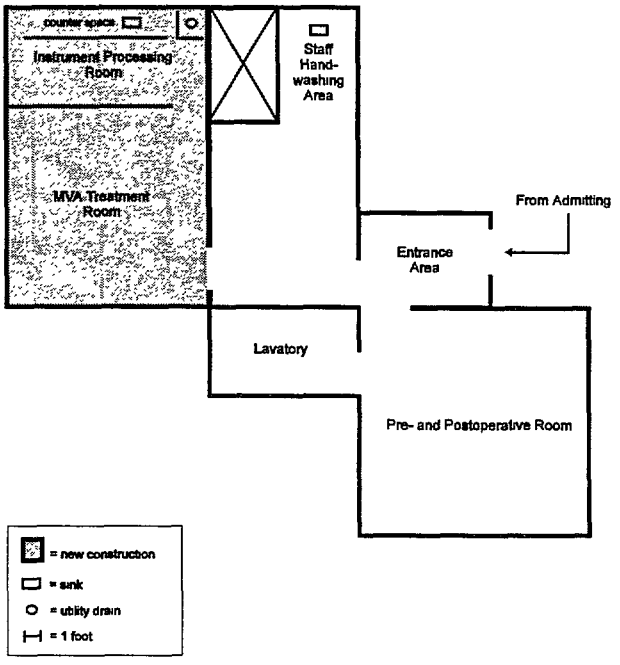
Finally, the PAC unit would have to function as a self-contained unit that could be equipped to provide emergency treatment and have staff capable of:

- Providing immediate treatment/stabilization for patients with serious, potentially life-threatening conditions
- Teaching simple, practical IP practices to minimize the risk of HBV or HIV/AIDS as well as safe processing of soiled instruments, gloves and other items, including the MVA syringe and plastic cannulae
- Providing FP counseling and selected contraceptive services

Figure 1. Postabortion Care Unit

Through inexpensive renovation of the existing space, the pre- and postoperative area, including a toilet, and handwashing area were created (**Figure 1**). Also, as shown in this working drawing, a 12 x 18 foot area was constructed to house the MVA treatment room (12 x 12 foot) and instrument processing area (12 x 6 foot).

The design of the MVA treatment room and instrument processing area deserve special comment. First, the treatment room was designed to be large enough to permit the patient trolley, if needed, to be quickly and easily moved in and out of the room. In addition, the walls and floor were covered with ceramic tile, which was inexpensive and locally available, to permit easy clean up. Also, because the PAC unit was located on the ground level, the windows were positioned well above eye level with tight-fitting screens to permit privacy yet enable them to be opened for ventilation.



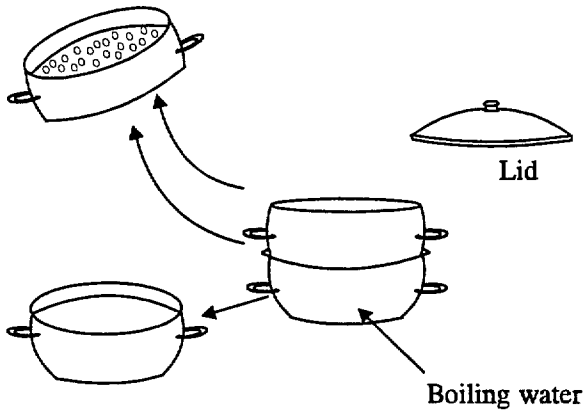
Adapted from. Joshi D. *MVA Unit Floor Plan.* Mr. and Mrs. ML Kayastha and Associates.

Second, the instrument processing area was designed to permit a circular flow of instruments from soiled to clean to high-level disinfected areas according to the following scheme:

- On entering this area, the decontaminated instruments and gloves and waste items would be processed in the waste disposal area which contains a large utility drain and sink.
- Next, the instruments, surgical gloves and MVA equipment (MVA syringe and plastic cannulae) would be thoroughly washed, rinsed and air or towel dried.

- Finally, the clean, dry items requiring HLD would be steamed using a 2-tiered steamer (locally purchased rice cooker, **Figure 2**) and stored in covered steamer pans prior to subsequent use.

Figure 2. Steamer Used for HLD



Equipment and Supplies

Postabortion care using MVA can be provided with very little specialized equipment and drugs. It is imperative, however, that certain equipment, supplies and medications (e.g., antibiotics, IV fluids, oxytocins) be readily available and accessible to stabilize and, if possible, treat potentially life-threatening complications such as shock and septicemia. The Maternity Hospital staff worked with the JHPIEGO/Nepal Country Representative to review the list of equipment and clinical supplies needed for the PAC unit. Where possible, instruments and supplies were obtained from existing hospital sources. Other needed items were purchased locally from a number of medical supply houses (Hughes 1994). (A list of recommended equipment and supplies can be found in **Appendix A**.) The MVA instrument kits were supplied by IPAS through a special grant.

Staffing Plan

To be effective in treating postabortion complications and preventing mortality, emergency abortion care should be accessible 24 hours a day. For a period of several months during the planning phase, discussions were held with the staff and administration of the Maternity Hospital regarding the major challenge of providing adequate 24-hour staffing for the unit. Although staff at the hospital were very committed to the establishment of the PAC unit, they were also extremely busy with a high volume of obstetric patients in need of care.

In February 1995, two senior medical staff were appointed and were available for training (Hughes and Schaefer 1995); however, sufficient support staff were not available to operate the PAC unit on a 24-hour basis. For a number of months prior to starting PAC services, the hospital had been experiencing a shortage of support staff due to an increasing number of employment opportunities in the private sector. Although JHPIEGO and the Maternity Hospital worked to overcome these barriers, it has only been possible to provide PAC services during normal hospital hours—Sunday through Friday, 8 am to 2 pm. Depending on the diagnosis and severity of individual cases, patients presenting outside of these hours are either admitted to the hospital and treated in the OT or taken to the PAC unit the following day.

The limited hours of services did, however, produce an unexpected but fortuitous outcome. Patients managed by the conventional treatment (D&C under general anesthesia in the OT) provided a control population that could be compared with MVA services provided in the PAC unit. For example, several months after starting services, concern was raised that patients in the PAC unit were different from those sent to the OT. Specifically, it was alleged that they were younger and of lower parity. Comparison of age and parity data for 300 patients treated in the PAC unit

versus 358 patients treated in the OT, however, showed no significant difference for either variable. Also, because less than 50% of patients were treated in the PAC unit, the impact of shifting the site of surgery from the OT was less dramatic. Even this reduced impact, however, was sufficiently great to cause several of the most senior staff to raise questions about their dwindling OT schedule and the wisdom of moving to 24 hour per day, 7 day per week PAC services. Thus, the decision to make the PAC unit fully operational was not made until 11 months after initiating MVA services in the PAC unit and after a great deal of deliberation.

Coordination of Services

As the major obstetrical referral hospital in Nepal, the Maternity Hospital has a full complement of departments that work together to provide treatment, referrals, services and supplies. To establish the PAC unit as an integral part of the hospital's reproductive health services, a linkage needed to be created and fostered between the PAC unit and the following departments:

- Admitting
- Operating theater
- Obstetrics and gynecology clinic
- Outpatient FP clinic
- Central sterile services
- Pharmacy
- Equipment and supply
- Medical records
- Clinical laboratory

This coordination among hospital departments and linkage to other services, which is an integral component of PAC services, has greatly improved quality of care and has allowed PAC patients to utilize a range of needed services at the hospital effectively.

Orientation of Staff

Orienting hospital staff to gain support, momentum and commitment to establishing an operational PAC unit was critical during the planning phase of the program (Hughes et al 1995). JHPIEGO staff and consultants provided information regarding the benefits and safety in using MVA with local anesthesia. They also worked closely with key hospital staff to gain the support of physicians for managing PAC patients in an outpatient setting; for example, the proposed program was extensively discussed at Grand Rounds and during informal meetings (Hughes et al 1995). Also, before starting PAC services, the two hospital physicians assigned to the unit had the opportunity to visit programs in Bangladesh where MVA has been integrated into the reproductive health services for many years. This study tour provided these key staff with the relevant medical information needed to gain their support and commitment to the development and implementation of this new program.

Service Delivery

Prior to the actual PAC training, the JHPIEGO/Nepal Country Representative and IP consultant worked with the staff of the Maternity Hospital to resolve several important service delivery issues. For example, the team worked to develop an efficient system of patient flow that would allow for the smooth transfer of patients from the admitting area to the MVA unit. And, they developed a system for continued resupply of consumable items (cotton, gauze, soap, bleach, etc.) and pharmaceutical items (antibiotics, IV fluids, oxytocin, contraceptives, etc.) that must be available at all times in the unit to meet emergency needs. In addition, the staff worked with the Director of the hospital and the accounting staff to develop a fee system and method of payment for patients admitted to the PAC unit. The medical record keeping system was reviewed and integrated into the daily activity of the PAC unit. Finally, as noted above, a referral system was established between other hospital units and the PAC unit and linkages were worked out with the outpatient FP clinic to enable PAC staff to provide FP methods to each client as requested (McIntosh and Tietjen 1995).

INITIAL TRAINING

JHPIEGO supports competency-based training (CBT) programs worldwide that focus on learning by doing (Sullivan et al 1995). A key component of the JHPIEGO training approach is the utilization of humanistic training techniques. With this approach, trainers use anatomic models to guide participants as they learn the basic steps and sequence required to perform a clinical procedure. The CBT training approach employs:

- A clinical coaching process that ensures continual feedback until mastery of the procedure has been achieved
- Use of learning guides and competency-based performance checklists to assist the participant in progressing from skills acquisition to skills competency

Training Materials

This was the first PAC training conducted by JHPIEGO using the new training materials developed by the Postabortion Care Consortium. The training package contained the following components:

- *Postabortion Care: A Reference Manual for Improving Quality of Care*
- MVA participant handbook and trainers notebook (including an MVA course schedule and outline)
- MVA clinical skills and FP counseling learning guides and checklists
- ZOE® anatomic (pelvic) model—modified for use in performing MVA

This initial training provided an excellent opportunity to evaluate the training materials. For example, the steps in performing the MVA procedure (Chapter 6 in the PAC Manual) were substantially revised to reflect actual practices. To document these changes, photographs were

taken detailing the steps in performing the MVA procedure, including recommended IP practices. Subsequently, these photos were used to develop a comprehensive training video photoset, *Postabortion Care Services: Use of Manual Vacuum Aspiration and Recommended Practices for Processing MVA instruments.* This video photoset, which also contains computer-generated images (CGIs) and video clips from the JHPIEGO/AVSC International IP video (training demonstration segments), has proved to be very useful and now is available in English and Nepali.

Medical Staff Orientation

One week prior to initiating PAC services, five 1-hour orientation sessions for nearly 150 medical and administrative staff were conducted at the hospital. The sessions provided staff with an opportunity to review important information regarding the problem of incomplete abortion, the elements of postabortion care services, information regarding MVA, how the PAC unit would function at the hospital, and the overall plan for introducing outpatient PAC services. The orientation sessions were conducted for the following staff at the Maternity Hospital:

- Physicians and anesthetists
- Admitting: all staff from all shifts including maintenance personnel
- Labor and delivery floor: staff and nursing students
- Administration: all supervisors, sisters-in-charge and the hospital matron

Team Training Approach

In late May 1995, JHPIEGO utilized a team training approach (physician trainer and IP specialist trainer) to provide the initial, on-the-job (OJT) training to both the physicians and support staff responsible for starting up the unit at the Maternity Hospital. This approach, which allowed all staff to have input into "how" services would be provided, also allowed clinicians and support staff to provide a range of services jointly (initial medical assessment, pain management, FP counseling, IP, etc.) so that the quality of care provided to the patient could be improved. Moreover, to be effective, procedures and protocols had be adapted to the local conditions during training, and the rationale for each change clearly understood by staff at all levels (McIntosh and Tietjen 1995). For example, in order to replace general anesthesia with the use of non-narcotic analgesics and only local anesthesia for MVA, all members of the PAC team—not just the physicians—needed to be skilled in explaining MVA to the patient and be able to provide "vocal local" or "verbacaine"[3] during the procedure.

The JHPIEGO trainers modeled the team training approach. For example, during the course, the PAC training team and participants jointly managed the initial 24 cases. During training, the focus was not just on the MVA procedure, but also on the problems experienced by the women. Caring for the total needs of the patient, not just the medical emergency, was stressed as an important element of the training program. Participants learned how to manage uncomplicated cases as well

---

[3] Because the patient is awake during the MVA procedure, health care providers must be very attentive to the management of pain through supportive treatment (so-called verbal anesthesia or verbacaine). Use of verbacaine by the provider can make the procedure much easier for the patient. To use verbacaine the provider must be able to establish a positive relationship quickly with the patient, and talk comfortably and openly with the patient throughout the procedure (Postabortion Care Consortium 1995, Reference Manual, Chapter 5, *Pain Management*).

as life-threatening emergencies. This practical OJT training approach was extremely valuable in developing a competent staff. Because team members had to share roles and responsibilities to provide effective treatment to the patient, the entire PAC staff soon came to appreciate the value of learning all aspects of how to organize and provide postabortion care services.

Clinical Training of Physicians

The two physicians assigned to the PAC unit quickly learned the standardized approach for managing postabortion complications, which ranged from using MVA to control vaginal bleeding due to retained products of conception to managing women with serious, life-threatening complications. Physician training was conducted during a 1-week (6-day) course. Before performing MVA on patients, however, the clinicians spent approximately 30 to 60 minutes on both the first and second day of the course practicing the MVA procedure using the pelvic model. In addition, all team members practiced verbal anesthesia techniques and client counseling using role play with volunteers daily throughout the course. (A copy of the training course schedule can be found in **Appendix B**.)

By the end of the course, the trainers found both physicians competent and confident in their ability to treat patients with postabortion bleeding by MVA. Skills and competencies required for successful completion of the course included:

- Using the MVA equipment (MVA syringe and plastic cannulae)
- Perfecting "verbacaine" skills
- Using the no-touch surgical technique
- Using and overseeing the use of recommended IP practices

The physicians also quickly recognized the need to provide:

- More detailed pre- and postoperative information to their patients
- Counseling on the range of FP methods available
- Family planning (either providing the contraceptive method selected or making arrangements for the patient to receive the method of choice elsewhere if it could not be provided in the MVA unit)

Training of Support Staff

The supervisor, sister-in-charge, ward attendant and helper assigned to the admitting unit were selected to receive support staff training. Over a 2-week period, they were trained to do all tasks required to operate the PAC unit on a daily basis. During the first week these staff members worked closely with the JHPIEGO IP specialist trainer to organize the clinic, arrange for optimal patient flow, and ensure adequate equipment, supplies and contraceptives. During this time they also adapted recommended IP practices to deal with:

- A potentially high-risk procedure (heavy vaginal bleeding/hemorrhage)
- Decontamination and clean-up of large blood spills
- Reuse and processing of MVA equipment, instruments, surgical gloves, etc.
- Disposal of contaminated wastes, clotted blood and POC
- Establishing a routine maintenance system for the PAC unit

During the second week, support staff and physicians were trained together to manage and treat patients with incomplete abortion using the team training approach. They were jointly trained in the following areas:

- Patient screening and diagnosis
- Patient-provider interaction
- Management of complications and stabilization of emergency conditions
- Use of recommended IP practices
- Family planning counseling and method provision
- Referral for other reproductive health needs

Because good communication skills are necessary, all members of the PAC team worked to improve their ability to verbally reassure patients during the procedure (i.e., provide "verbacaine"). Team members also improved the content of and the way they provided pre- and post-service MVA instructions to the patients. All staff worked to become comfortable in providing FP counseling and provision of FP services (McIntosh and Tietjen 1995).

The support staff also worked with the training team to develop procedural protocols (e.g., how to prepare the chlorine solutions used for decontamination of instruments and other items) for the PAC unit. At the end of the training program the support staff assigned to the PAC unit outlined their respective roles and responsibilities and developed a draft plan for staffing the unit on a 24-hour basis (see **Appendix C**). By the end of the 2-week period, the assigned support staff were qualified in all duties required to provide full PAC services, including counseling for FP and other reproductive health services.

PATIENT MANAGEMENT DURING TRAINING

Medical Assessment

After being transferred to the PAC unit, which is located next to the admitting unit, the patient is quickly assessed to determine if she is stable. Following this, a brief reproductive history is taken and a limited physical exam is performed. Patient information, which covers the risks and benefits of the MVA procedure as well as counseling regarding reproductive health goals and available FP methods, is also provided.

Because patients presenting with postabortion bleeding complications range in the severity of their problems, a screening system was developed to determine which patients are suitable for

immediate treatment in the PAC unit versus those who require stabilization before MVA (**Figure 3**). During the first training course, this flow diagram was tested extensively and revised. It has proved to be very useful and continues to be used in the PAC unit.

Treatment

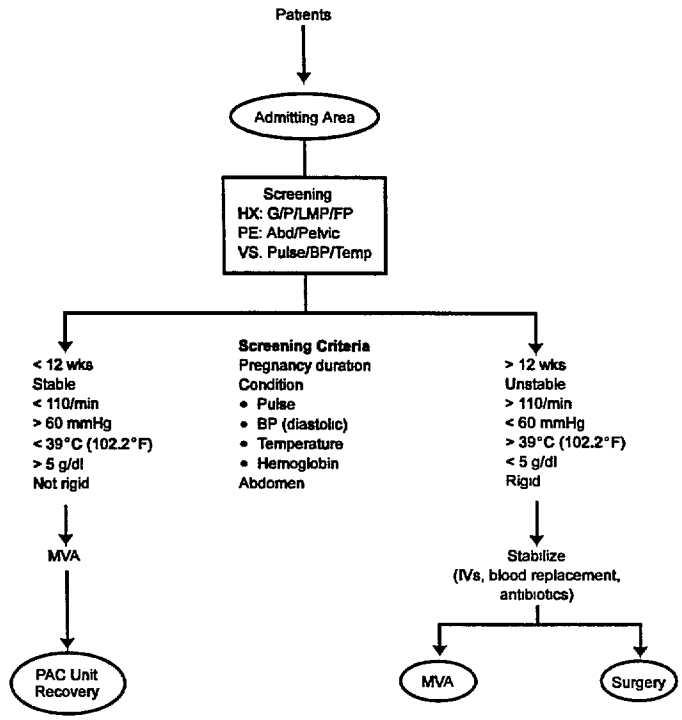
Using verbal anesthesia given by the service provider team (physician and support staff member), the MVA procedure is performed with or without supplemental local anesthesia. The procedure time averages 7–10 minutes, and patients are observed postoperatively for 1–2 hours after which they are discharged to home or admitted to the hospital if they require continuing treatment (e.g., IV antibiotics). All patients who request a FP method are provided with one and asked to return in 6 weeks for followup or earlier if any problems occur.

During the **initial training**, 24 patients (42%) of the total number with an admitting diagnosis of incomplete abortion[4] were treated in the PAC unit. Of these, 22 were less than 14 weeks by last menstrual period (LMP) when treated, while 2 were 20 and 26 weeks, respectively. The most frequent complication encountered was persistent bleeding (< 14 weeks) in 17 patients (71%) followed by persistent bleeding (> 14 weeks) in 2 patients and septic abortion (temperature > 39°C) in 2 cases. One case with shock due to heavy bleeding (Hb < 5 g/dl) also was managed in the unit.

For 20 patients (83%), MVA was the **only** emergency treatment used. Curettage with a sharp curet was not used for any case. In 2 patients, vacuum aspiration was accomplished using both MVA and the electric vacuum pump because of extensive bleeding (more than 500 ml blood loss) during the procedure. In addition, 1 patient presented with a paracervical puncture wound incurred during the attempted abortion. The uterine bleeding was treated using MVA

Figure 3

Postabortion Care Flow Diagram: Patient Management



HX: History; G: Gravidity; P: Parity; LMP: Last (normal) menstrual period; FP: Family planning; PE: Physical examination; VS: Vital signs; BP: Blood pressure; g/dl: grams per deciliter

[4] All patients met the medical definition of incomplete abortion: vaginal bleeding, history of passing tissue, or dilated cervical os and uterine size less than or equal to the LMP.

and subsequently the patient was transferred to the OT for repair of the puncture wound. The 2 patients with septic abortion initially were stabilized with IV fluids and IV antibiotics and 1 of the patients also required transfusion with 2 units of blood prior to MVA.

The only premedication used prior to MVA was a non-narcotic analgesic and no patient required use of local anesthetic (paracervical block) for additional cervical dilation. Only 6 patients (25%) needed progressively larger suction cannulae to enlarge the cervix to the appropriate size before MVA could be performed.

The time required to perform the MVA ranged from 3 to 15 minutes, and no patient required re-aspiration during the initial training course. Furthermore, the average stay in the MVA unit was 2 hours 43 minutes, with a range of from 1 to 6 hours.

Because FP counseling is part of the complete range of PAC services, all members of the PAC team needed to be able to provide this counseling during the short period of time patients were available to receive it. All 24 patients treated during the training course were provided FP counseling. Fifteen patients (62.5%) voluntarily accepted a FP method and the remaining 9 patients (37.5%) were interested in having another child. The 15 patients wanting FP selected the following contraceptive methods:

- Oral Contraceptives 4
- Injectables (DMPA) 7[5]
- IUD (TCu 380A) 4

Of the 9 patients not wanting FP, 6 had 2 or more pregnancy losses and no living children. They and their spouses, who usually were available, were counseled regarding the possible need for further evaluation to determine the cause(s) of pregnancy losses. The three remaining patients were young (ages 18 to 21), and this was their first pregnancy. These patients, along with their spouses, were counseled to determine their desire for FP. In addition, all patients/couples who wanted to achieve another pregnancy received a small supply of condoms and were advised to use them for 1 month to delay postabortion conception (McIntosh and Tietjen 1995).

Quality of Care

The following observations documented by the trainers during the initial course had a positive impact on the quality of care provided by the PAC team:

- Communication between the medical and support staff increased considerably and their interactions became more collegial throughout the training.
- Physician participation in the nonmedical aspects of PAC services (e.g., providing patient information, both pre- and post-MVA procedure, and counseling patients on FP) increased dramatically as the training progressed.

---

[5] Three of the 7 patients accepting DMPA requested it only as a temporary method until they could receive Norplant implants or voluntary sterilization.

- As the course progressed, caring for the total needs of the patient—not just the medical aspects—was seen as the responsibility of every PAC team member (McIntosh and Tietjen 1995).

Followup and Support after Initial Training

From the outset of the project, it was understood that technical backup would be needed after training was completed. This backup was provided by the Reproductive Health Coordinator in Nepal, a nurse with experience in PAC with MVA. She participated in the training and provided on-site followup and support for the service providers running the PAC unit during the first few months after starting services. Through regular visits to the unit, she was able to provide assistance to the PAC team running the unit in problem-solving, and obtaining needed consumable supplies and materials. Her visits also helped reinforce the importance of the service being provided in the PAC unit and, in particular, the importance of maintaining the standards agreed to during initial training.

Three months after the initial training course, a technical team from JHPIEGO visited the Maternity Hospital to review the progress of the PAC unit. They found that staff were totally committed to providing high-quality care and demonstrated a strong interest in expanding services (Lu and McIntosh 1995). The technical team also found that patients treated in the PAC unit:

- had a high FP acceptance rate, and
- had not experienced any serious intraoperative problems.

In addition, recommended IP practices were being used, and the unit was well maintained.

To further institutionalize PAC in the hospital and make it part of regular hospital services, the PAC team began to select candidates from each of the physician teams (both Ob/Gyns and medical officers) covering the admitting unit to receive practical, OJT training in the MVA procedure and supporting services. After several physicians had received practical training in MVA, the team, with assistance from the local Reproductive Health Advisor (an Ob/Gyn with experience in postabortion care), began to supplement the practical training with more structured training. Subsequently, during five 2-hour sessions, focusing on theory and with practice on anatomic models, these physicians and support staff went through the PAC training materials in a systematic way to complement their practical experience. To date, about 40 physicians and 10 additional support staff have completed practical and classroom OJT training.

PROGRAM ACCOMPLISHMENTS

In June 1995, an ambulatory PAC unit designed to manage and treat incomplete, spontaneous and septic abortion was successfully established at the Maternity Hospital. At present (6 months after services were started) the PAC unit operates almost entirely without outside assistance. Well-trained and qualified staff are present on a daily basis. They are competent and confident in providing MVA for uncomplicated cases and can manage life-threatening complications. The staff also provide postabortion FP counseling and needed contraceptive services (with the exception of Norplant implants and voluntary sterilization), and they also provide referrals for patients with other reproductive health needs.

Initial **results** for the first 6 months of the program (June to December 1995) show the following:

- 282 patients treated using MVA only.
- Hospital stay shorter for patients treated using MVA than for those treated in the OT; approximately 3 hours as compared with 36 hours.
- An estimated 413 bed days saved and 282 D&Cs under general anesthesia avoided (Maternity Hospital Service Statistics 1995).
- A 20–30% decrease in the daily operating schedule in the hospital as a result of the establishment of the ambulatory postabortion care unit.
- About 40 physicians as well as 10 additional support staff trained in MVA.
- Counseling on FP and other reproductive health services provided to all patients
- 70% of patients treated in the PAC unit requested a contraceptive method. Excluding condoms (a small supply of which were provided to all patients who did not leave with another FP method), the contraceptive methods provided include: injectables (37%), oral contraceptives (27%), IUDs (5%) (Maternity Hospital Service Statistics 1995). In addition, referrals were made for women selecting Norplant implants and voluntary sterilization.

Patient Data

Age

The age breakdown of patients admitted to either the PAC unit or to one of the inpatient wards of the hospital is presented in **Table 1**.

Table 1. Age breakdown for patients

Age	PAC Unit		Ward	
15–19	44	15%	48	13%
20–25	175	58%	226	63%
26–30	45	15%	45	13%
31–35	19	6%	19	5%
> 35	17	6%	20	6%
TOTAL	300	100%	358	100%

Location

More than half (61%) of the 300 patients were from Kathmandu while 24% were from Lalitpur and 13% from Bhaktapur (both are neighboring sites). A very small percentage (2%) came from other

areas of Nepal outside the Kathmandu valley. Regarding the parity of women treated at the MVA unit, 37% were nulliparous (primigravida), 39% were multiparous and 24% were grand multiparous (having 5 or more children).

Admitting Diagnosis

The admitting diagnosis of the 686 patients seen at the Maternity Hospital from June to December 1995 is listed in **Table 2**.

Table 2. Admitting diagnosis (includes those treated in the PAC unit and OT)

Incomplete abortion (sent to MVA unit)	178
Incomplete abortion (sent to main OT)	159
Incomplete abortion (refused treatment)	13
Complete abortion	4
Hydatidiform mole	7
Ectopic pregnancy	20
Septic abortion	21
Inevitable abortion	67
Missed abortion	17
Threatened abortion (no procedure)	200
TOTAL	**686**

If the initial diagnosis was unclear, further clinical investigation was carried out by examination or ultrasound. Those ultimately diagnosed as incomplete abortion were then either referred to the main OT or to the PAC unit for management. Over the 6-month interval, 282 patients (41%) were treated in the PAC unit by MVA and 404 (59%) were admitted to the ward and either treated in the OT by D&C or discharged without further treatment.[6]

Postoperative Complications

Postoperative complications were minimal with the MVA procedure. Two patients had retained products of conception after the MVA procedure. One case was a missed abortion of 10 weeks' size and the other involved a case in which the uterus was greater than 12 weeks' size. Both cases required a repeat procedure, 1 in the PAC unit and 1 in the OT.

---

[6] Of the 404 patients not treated in the PAC unit, 250 were sent to the ward or OT because the PAC unit only operates from 8 am to 2 pm, Sunday through Friday (6 days per week).

REMAINING PROBLEMS

As with any new program, the PAC initiative has encountered problems that need to be addressed. For example:

- Even though strong support and commitment for the PAC unit exists, a number of senior staff physicians require further orientation to the procedures and protocols used in the PAC unit to be totally convinced.
- Staffing issues continue to prevent the PAC unit from functioning 24 hours a day. A resolution of the staffing plan could greatly increase the number of women provided with MVA services in the PAC unit.
- More effective use of hospital resources and staff would further decrease use of the OT as well as hospital stay and the use of highly specialized staff.
- Although recommended IP practices have been well established in the PAC unit, these practices are not followed throughout the hospital.

LESSONS LEARNED

Because no blueprints or road maps were available for introducing PAC services in Nepal, the collaborators in this project have had to learn a great deal in a short time. The programmatic and training experiences collected should be useful in developing programs in other countries. The following are some of the lessons learned from introducing PAC services at the Maternity Hospital in Kathmandu:

- Commitment—by the local mission and by key staff within an institution—to establish PAC services is critical to the successful integration of this new way of managing postabortion complications. The USAID/Nepal mission and senior staff of the Maternity Hospital demonstrated this commitment.
- Development of a PAC program requires careful planning and coordination. At the Maternity Hospital, a number of policy decisions and program planning steps had to be completed prior to the initiation of training and delivery of services.
- Activities during the planning phase must proceed at a pace that ensures commitment. For example, at the Maternity Hospital it took almost one year to complete the planning process, but a solid foundation was in place to launch PAC services when the first training course was conducted.
- The site selected for initiation of MVA services must provide a high volume of incomplete abortion cases, staff who are aware of the magnitude and seriousness of the problem, and commitment by a majority of the staff to the development of the PAC program. The Maternity Hospital proved to be an excellent site that fulfilled all of these qualifications.

- The location of the PAC unit is critical to the success of a PAC program. Situating the unit adjacent to the admitting area (as was done at the Maternity Hospital) ensures that, upon entering the hospital, the patient is in close proximity to the PAC unit and transfer from the admitting area to the PAC unit is convenient.

- Introducing MVA services can be a complicated process that demands a high level of technical assistance, especially in the start-up phase. JHPIEGO staff and consultants needed to make frequent programmatic and technical visits to work with the hospital staff prior to initiation of services.

- The successful introduction of PAC services can reduce barriers such as resistance by anesthesiologists and other medical providers to accept MVA and the use of local anesthesia. The positive results observed by staff have increased their support, commitment and morale.

- From the planning phase onwards, staff must play an active role and feel ownership for the program. This was the case at the Maternity Hospital, and as a consequence, the PAC unit already is entirely operated by hospital staff.

- Introducing PAC is very different from introducing a new contraceptive or any other elective service. Elective procedures can be scheduled and the client is usually healthy; however, patients presenting with incomplete abortion are often quite sick and may require stabilization prior to MVA. Therefore, providers and trainers must be prepared to provide a range of treatments from performing an uncomplicated MVA to treating life-threatening emergencies.

- Family planning counseling and provision of services following the MVA procedure are central to the mission of the PAC program. Acceptance of FP methods by PAC patients has been high, and the PAC program has fostered an important link to needed FP and other reproductive health services.

- Because husbands often accompany their wives to the hospital, they should be included in the decision-making process.

- An OJT, team training approach can effectively prepare staff to operate the PAC unit. This type of training approach allowed physicians and support staff to become confident and competent within a short period of time to provide a range of services.

- The training approach must provide substantial "hands-on" experience, and the training team needs to be highly skilled and experienced in performing MVA and managing emergency situations in order to provide positive feedback, coaching and necessary support throughout the training period.

- Because an accurate initial assessment and diagnosis must be made to avoid inappropriately managing life-threatening complications, introduction of MVA requires close medical supervision by an experienced clinician during the first few months. Although providers can be quickly trained to perform MVA, it is difficult to train them to perform

accurate screening and diagnosis, and the ability to triage patients adequately is variable from provider to provider.

- Recommended IP practices must be adhered to at all times by all staff. Because MVA is an invasive procedure, which may involve significant bleeding, the risk of contact with blood and other body fluids and subsequent infection is great.

NEXT STEPS

Now that the PAC unit is well established during regular hospital hours (8 am to 2 pm), the major ongoing task is to maintain the standards and enthusiasm at the Maternity Hospital. JHPIEGO will continue to provide on-site technical support and continued support to the training of hospital staff. In particular, technical support will focus on continuing to strengthen the ability of providers in the screening (triaging) of cases, pain management including use of paracervical block when necessary, postabortion IUD insertion and IP. At the same time, JHPIEGO will continue to work with and support the hospital in finding ways to overcome staff shortages and other barriers to making this service available on a 24-hour basis.

Future plans are to continue to support the program at the Maternity Hospital while beginning to roll out these services to other sites in the country. Building on the success in establishing a PAC unit at the Maternity Hospital, additional sites will be selected in the near future. Working with the government of Nepal key members of the hospital's PAC team and JHPIEGO local staff will assist in choosing sites that have a high demand for services, adequate medical staff, necessary facilities and space that can be easily and inexpensively adapted or developed, and a commitment to providing high-quality postabortion care. These facilities will be developed, staff trained and on-site assistance provided to establish PAC services. In the first year of this roll-out phase (starting in July 1996), 3 to 4 new PAC units will be established. Based on that experience, further plans to identify appropriate sites and establish PAC services will be made in collaboration with the Ministry of Health and National Health Training Center.

REFERENCES

Annual Report. 1995. JHPIEGO Corporation: Baltimore, Maryland.

Baker J et al. 1994. Understanding quality of service in family planning in Nepal. *Journal of the Nepal Medical Association* 32(111):154-174.

Greenslade FG et al. 1994. Post-abortion care: A women's health initiative to combat unsafe abortion. *Advances in Abortion Care* 4(1)1-4.

Henshaw SK and E Morrow. 1990. *Induced abortion: A world review.* 1990 Supplement. The Alan Guttmacher Institute: New York.

HMG. Ministry of Health. Family Planning, Maternal and Child Health Division. Planning, Research and Evaluation Section. 1993. *Nepal Fertility, Family Planning and Health Survey (NFHS 1991).* Submitted by NIV Joint Ventures (New Era, IIDS and VaRG). MOH: Kathmandu, Nepal.

Hughes R. 1994. *Trip Report: Nepal, November 30–December 14, 1994.* JHPIEGO Corporation: Baltimore, Maryland.

Hughes R and L Schaefer. 1995. *Trip Report: Nepal, January 11–February 11, 1995.* JHPIEGO Corporation: Baltimore, Maryland.

Hughes R et al. 1995. *Trip Report: Nepal, January 11–28, 1995.* JHPIEGO Corporation: Baltimore, Maryland.

Johnson BR, J Benson and B Lebson Hawkins. 1992. Reducing resource use and improving quality of care with MVA. *Advances in Abortion Care* 2(2):1-6

Lu R and N McIntosh. 1995. *Trip Report: Nepal, August 19–September 2, 1995.* JHPIEGO Corporation: Baltimore, Maryland.

Magarick R. 1993. *Modified Training Needs Assessment Maternity Hospital Kathmandu, Nepal October 1993.* JHPIEGO Corporation: Baltimore, Maryland.

McInerney T, N McIntosh and L Tietjen. 1994. *Trip Report: Nepal, August 29–September 18, 1994.* JHPIEGO Corporation: Baltimore, Maryland.

McIntosh N. 1993. *Nepal Reproductive Health Training Sector Assessment and Five-Year Action Plan.* JHPIEGO Technical Report FCA-02. JHPIEGO Corporation: Baltimore, Maryland.

McIntosh N and L Tietjen. 1995. *Nepal PAC Activity Report.* JHPIEGO Corporation: Baltimore, Maryland.

McIntosh N and L Tietjen. 1995. *Trip Report: Nepal, May 21–June 4, 1995.* JHPIEGO Corporation: Baltimore, Maryland.

Office Of Health and Family Planning USAID/Kathmandu. 1993. *Nepal Priority Country Strategy.* USAID: Kathmandu, Nepal.

Paropakar Shree Panch Indra Rajya Laxmi Devi Maternity Hospital. 1995. *Six Months Preliminary Postabortion Care Statistics. May 28–November 31, 1995.* Kathmandu, Nepal.

Postabortion Care Consortium. 1995. *Postabortion Care: A Reference Manual for Improving Quality of Care.* JHPIEGO Corporation: Baltimore, Maryland.

Presern C. 1992. Maternal Mortality in Nepal. *Nursing Times* 88(9) 64-65.

South Asia Office of JHPIEGO. 1994. *Strengthening the Capacity of the Maternity Hospital in Kathmandu, Nepal, to Provide Pre-Service Clinical Training in Reproductive Health.* FSP-5439. JHPIEGO Corporation: Baltimore, Maryland.

Sullivan et al. 1995. *Clinical Training Skills for Reproductive Health Professionals.* JHPIEGO Corporation: Baltimore, Maryland.

Thapa P, S Thapa and N Shrestha. 1992. A hospital-based study of abortion in Nepal. *Studies in Family Planning* 23(5):311-318.

Thapa S and K Pandey. 1994. Family planning in Nepal: An update. *Journal of the Nepal Medical Association* 32(111): 131-143.

Thapa S, P Thapa and N Shrestha. 1994. Abortion in Nepal: Emerging insights. *Journal of the Nepal Medical Association* 32(111): 175-190.

WHO. 1991. Essential Elements of Obstetric Care at First Referral Level. WHO: Geneva, Switzerland.

APPENDIX A
Equipment and Supplies Needed for MVA

Instruments and Equipment

- Pan and pan cover (1 each)
- Bivalve (Graves) specula (small and medium)
- Uterine tenaculum (Braun, straight, 9½") (1) or Vulsellum forceps (1)
- Pan emesis basin (1)
- Sponge (Foerster, straight 9½") forceps (2)[1]
- 10–20 ml syringe and 22-gauge needle for paracervical block (6 each)
- MVA instruments
  - MVA vacuum syringe, double valve (1)
  - Plastic cannulae of different sizes (6 mm to 12 mm)
  - Adapters
  - Silicone for lubricating MVA syringe o-ring (1 tube)
- Light source (to see cervix and inspect tissue)
- Strainer (for tissue inspection)
- Clear container or basin (for tissue inspection)
- Simple magnifying glass (x 4–6 power) (optional)

Consumable Supplies

- Swabs/gauze
- Antiseptic solution (preferably an iodophor such as povidone iodine)
- Gloves, sterile or high-level disinfected surgical gloves or new examination gloves
- Gloves, utility

Items that should be on hand, but are not required for all MVA procedures:

- Local anesthetic (e.g., 1–2% lidocaine without epinephrine)
- Curette, sharp, large (1)
- Tapered mechanical dilators: Pratt (metal) or Denniston (plastic)

---

[1] If available, a curved placental forceps is preferable to the sponge forceps for removing POC.

Furniture and Equipment

Before beginning the MVA procedure, make sure that the following equipment and supplies are in the treatment room and in working order:

- Examination table with stirrups
- Strong light (e.g., gooseneck lamp)
- Seat or stool for clinician
- Plastic buckets for decontamination solution (0.5% chlorine)
- Puncture-proof container for disposal of sharps (needles)
- Leak-proof container for disposal of infectious waste

For High-Level Disinfection or Sterilization of Instruments

These items should be available for processing instruments:

- Nonmetal (plastic) containers
- Detergent or liquid soap
- Clean water
- Chlorine solution (concentrated solution or dry powder)
- High-level disinfectant or sterilization agent (optional)
- Large pot for boiling metal instruments
- Steamer for steaming surgical gloves, cannulae and surgical instruments
- Autoclave (steam) or convection oven (dry heat)

For Emergency Resuscitation

These items are seldom required in uterine evacuation cases but are needed for possible emergency use:

- Spirits of ammonia (ampules)
- Atropine
- IV infusion equipment and fluid (DSW or D/S)
- Ambu bag with oxygen (tank with flowmeter)
- Oral airways

APPENDIX B

MODEL POSTABORTION CARE COURSE SCHEDULE (Standard Course: 6 days, 12 sessions)

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
0830-1230 **Opening** • Welcome • Participant expectations **Overview of course** • Goals and objectives • Approach to training • Review of course material **Exercise**: "How People Learn" **Precourse Questionnaire** • Identify individual and group learning needs **Lecture/Discussion**: • Elements of Postabortion Care • Scope of the Problem • Rational for Use of MVA **Demonstration/Exercise**: Assemble and Prepare MVA Equipment	**0830-1230** **Tour**: Clinical training facilities **Clinic Practice**: Demonstration by trainer of standard method for: • MVA procedure (administering paracervical block and cervical dilation, if appropriate) Divide into three groups (counselors and two groups of clinicians). **Counselors**: Practice counseling using volunteers **Clinicians Group 1**: Clinic Practice **Clinicians Group 2**: Classroom Practice - verbacaine and MVA on pelvic models Participants assess each other's performance using learning guides	**0830-1230** **Warmup Exercise** **Clinic Practice (Group 2)**: Provide postabortion care in the clinic: • Initial Assessment • Assessment and Treatment of Complications • Pain Management • MVA Procedure **Clinicians Group 1**: Classroom Practice - Talking with patients (role play) **Counselors**: Practice counseling patients (Group 1) Participants assess each other's performance using learning guides	**0830-1230** **Warmup Exercise** **Clinic Practice**: Provide postabortion care in the clinic (Groups 1 and 2) **Counseling Practice**: Provide postabortion family planning counseling Participants assess each other's performance using practice checklists **Lecture/Discussion**: Management of Problems and Complications During MVA Precautions for Performing MVA	**0830-1230** **Warmup Exercise** **Clinic Practice**: Provide postabortion care in the clinic: (Groups 1 and 2) **Counseling Practice**: Provide postabortion family planning counseling Participants assess each other's performance using practice checklists Clinical trainer reviews results of Midcourse Questionnaire with each participant (1/2 class) Competency-based evaluation by clinical trainer using checklist (qualification)	**0830-1230** **Warmup Exercise** **Clinic Practice**: Provide postabortion care in the clinic (Group 1 and 2) **Counseling Practice**: Provide postabortion family planning counseling Competency-based evaluation by clinical trainer using checklist (qualification)
LUNCH	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
1330-1630 **Precourse Assessment** Assess each participant's skills: • Counseling (role play) • Pelvic examination (pelvic models) **Demonstration**: MVA Procedure • Slide set • Videotape • Pelvic model **Exercise**: How to Use the Learning Guides for MVA Counseling and Clinical Skills **Classroom Practice:** Divide into groups to practice on pelvic model **Clinicians**: MVA procedure **Counselors**: Talking to MVA Patients Participants assess each other's performance using learning guides **Review of day's activities**	**1330-1630** **Lecture/Discussion:** • Initial Assessment • Assessment and Treatment of Complications Divide into teams to practice **Counselors**: Practice counseling patients (Group 2) **Clinicians Group 1**: Classroom Practice - verbacaine and MVA procedure **Clinicians Group 2**: Clinic Practice Participants assess each other's performance using learning guides **Review of day's activities**	**1330-1630** **Discussion**: Talking to the Patient **Exercise**: Strengthening Interpersonal Skills **Lecture/Discussion**: Postabortion Family Planning • Counseling • Postabortion contraception **Clinicians (Group 1 and 2)**: Clinic Practice **Counselors**: Practice counseling patients Participants assess each other's performance using learning guides **Review of day's activities**	**1330-1630** **Clinical Conference** (discuss cases from clinic) **Discussion**: Followup Care **Role Play**: Counseling patient regarding followup care **Exercise/Discussion**: Who has AIDS **Discussion/Videotape**: Role of infection prevention practices in postabortion care services • Definitions • Handwashing and use of gloves • Processing Instruments • Waste Disposal **Demonstration**: In simulated clinical area, demonstrate infection prevention practices for each step of postabortion care **Midcourse Questionnaire** **Review of day's activities**	**1330-1630** **Clinical Conference** (discuss cases from clinic) **Discussion:** • Linkages to other reproductive health services • Maximizing access to MVA services • Policy issues • Problems and constraints to postabortion care service delivery in participant's clinical setting **Lecture/Discussion**: Pain Management **Demonstration**: How to administer paracervical block using: • Slide set • Videotape • Pelvic model Clinical trainer reviews results of Midcourse Questionnaire with each participant (1/2 class) **Review of day's activities**	**1330-1630** **Clinical Conference** (discuss cases from clinic) **Discussion**: • Assessing and improving quality of postabortion care services • Organizing and managing postabortion care services **Discussion**: Course accomplishments relative to objectives, training methods and materials **Course Evaluation** by participants **Closing**
Assignment: Chapters 1, 2, 3, 6, 8, 9 and Appendices A, B and I	**Assignment**: Chapters 5, 6, 7 and Appendices G, H and I	**Assignment**: Chapter 4 and Appendices D, E and F		**Assignment**: Chapters 9 and 10	

APPENDIX C

PAC Unit: Support Staff Requirements and Duties

Support Staff Requirements for the PAC Unit

Personnel	Day Shift	Afternoon Shift	Night Shift
Existing Staff			
Sister-in-Charge	x	x	x
Ward Attendant	x		
Helper	x		
New Staff			
Ward Attendant		x	x
Helper		x	x
Nurse/counselor	x		

Proposed Duties of Support Staff

Sister-in-Charge

- Oversees day-to-day operation of PAC unit
- Transfers patients into and out of the PAC unit
- Assists physician in provision of pre- and post-MVA instructions
- Helps provide "vocal local" to patients
- Assists physician in FP counseling and provision of contraceptives (COCs, condoms, and DMPA)
- Makes FP and other reproductive health referrals
- Supervises the Ward Attendant

Ward Attendant

- Maintains the PAC unit (daily cleaning of procedure room, checks all equipment, assures up to 8 MVA kits are prepared and sent for autoclaving, maintains adequate amounts of consumable supplies)

- Helps provide "vocal local" to patients
- Responsible for seeing that recommended infection prevention practices and procedures are followed
- Responsible for steaming gloves, cannulae and extra/spare instruments
- Assists in FP counseling
- Prepares chlorine solution daily and as necessary
- Assists in cleaning up after each case
- Assists in cleaning and processing instruments, gloves and other items
- Supervises Helper

Helper

- Washes floors (all rooms in PAC unit) daily
- Cleans holding/recovery room, bathrooms, entry area and scrub area daily
- Washes linens and other items
- Cleans up after each case
- Cleans instruments, gloves and other items
- Assists in steaming gloves, cannulae and extra/space items
- Prepares MVA instrument packs for sterilization
- Runs errands
- Helps out where needed

Nurse/Counselor (day shift only)

- Counsels post-MVA patients treated during the night shift
- Coordinates FP services with OPD FP staff (maintains contraceptive supplies and makes up appointments)
- Assists physician in provision of pre- and post-MVA instructions
- Assists Sister-in-Charge whenever needed with all PAC duties