

**Details of paper submitted to the International Journal of Gynecology and Obstetrics,
Averting Maternal Death and Disability section**

Full title: Integrating post abortion care into an essential obstetric care program: the contribution of a national Safe Motherhood project in Nepal

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Synopsis: The findings from project-supported district hospitals demonstrate the advantages of integrating nurse-led post abortion care services into an essential obstetric care program in Nepal.

Integrating post abortion care into an essential obstetric care program: the contribution of a national Safe Motherhood project in Nepal

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Abstract

Objective: The objective of this review is to present the findings and lessons learned over the first four years (1999-2002) of implementation of post abortion care services outside of major urban centers in Nepal, where a significant proportion of services are provided by nurses. The contributions made by a national safe motherhood project to the establishment of the national post abortion care program within an integrated program of essential obstetrical care services are highlighted.

Method: Clinical competency assessments and service utilization data from three district hospital-based post abortion service sites supported by the Nepal Safer Motherhood Project are analyzed. The relationship between the findings of this assessment and two previous assessments, one covering two districts and one nationwide, are discussed.

Result: This review found that nurses are competent post abortion care service providers. The integration of post abortion services within a project focused on increasing access to essential obstetric care was shown to have a number of advantages in establishing an effective nurse-led post abortion care service.

Conclusion: Competency-based training of mid-level providers is the key to making life-saving post abortion care services accessible and affordable in Nepal. Ensuring that these mid-level providers are able to implement services requires strategic planning, careful advocacy and support from physician colleagues and the presence of adequate infrastructure and equipment. The successful introduction of post abortion care services into three district hospitals also offering essential obstetric care provides an example of how a nurse-led service can be integrated into an EOC support project that provides just such an enabling environment and affect national policy on the expansion of the post abortion care program throughout Nepal.

Keywords: Post abortion care; Developing Countries; Manual Vacuum Aspiration; Essential Obstetric Care, Nurses' roles

1. Introduction

Nepal has one of the highest maternal mortality ratios (MMR) in Asia, with an official MMR of 539/100,000 live births, and an estimated MMR as high as 1300/100,000 in some remote rural areas¹. An estimated 5.4% of maternal deaths were a result of abortion complications². However, it is probable that this figure is underestimated as other studies suggest that 15-30% of all maternal mortality, and up to 50% of all maternal deaths in Nepal's hospitals, are attributable to complications of unsafe abortion^{3,4}

Concerted efforts to reduce maternal mortality commenced in 1997 with the launch of His Majesty's Government of Nepal (HMGN) Safe Motherhood Program. This was followed in 1998 by the National Safe Motherhood Policy, a far-reaching comprehensive policy that addresses health service needs (excluding post abortion care), as well as the social aspects of safe motherhood. The strategies outlined for achieving the goals of the Safe Motherhood Policy

include a national IEC campaign for Safe Motherhood; increasing community involvement; increasing access to skilled delivery attendance; improved access to Basic Essential Obstetrical Care (BEOC) and Comprehensive Essential Obstetrical Care (CEOC); improved neonatal care; more efficient and effective human resource development, improved quality of care and enhanced monitoring and evaluation systems.

In 1997, the Nepal Safer Motherhood Project (NSMP), funded by DFID and managed by Options UK, began with the explicit purpose of promoting access to essential obstetric care (EOC) through the development of a District EOC Model to address the availability and quality of care, as well as the complex barriers to EOC-seeking behaviour in project communities. During Phase One of the project (1997-2000), NSMP operated in three districts expanding to a total of ten districts in Phase Two (2001-2004), representing 15% of Nepal's (2001) population. The total NSMP direct programming budget for both phases is 3.4 million Pounds Sterling, equivalent to 5.5 million US dollars.

Abortion was not legalized until November 2002; therefore, post abortion care (PAC) was not originally included in either the Safe Motherhood Policy or the subsequent 15 year Plan. However, in May 1995, in advance of this change in the abortion law, the Department of Health Services (DoHS) responded to the need to improve the management of the life-threatening complications of abortion by launching a PAC program. The original pilot site was the Maternity Hospital, Kathmandu and the program was gradually expanded to other urban referral centers.

Despite the efforts of the early PAC program, a 1998 study noted that complications of abortion accounted for the highest caseload in obstetrics departments of district hospitals⁵. A needs assessment⁶ carried out in three NSMP supported Phase One district hospitals in 1997 demonstrated that doctor-led PAC services at that level were unresponsive to client needs. Doctors treated complications of abortion by dilation and curettage (D&C), no clinical protocols were available, infection prevention practice was poor, the blood supply was erratic, and neither counseling nor referral was considered an integral part of the service. In addition, services were not available on a 24 basis due to the frequent absence of doctors from their posts. There was clearly a need to expand access to services through the training of other health staff but there was no policy to allow for this.

Abortion has been a sensitive political issue in Nepal. PAC has been a medically-dominated area with few doctors having confidence that nursing staff have the ability to perform what had always been seen as "medical" procedures. The core group of partners supporting PAC (the Department of Health Services, NSMP and JHIEPGO) agreed that an aggressive advocacy campaign for nurse-led PAC services risked being counterproductive. The entry point that presented itself as an ideal platform to advocate for the extended role of nurses was the development of national reproductive health clinical protocols for each cadre of health care provider. The protocols were given a "seal of approval" by the DoHS in 1998 thus opening a door to train nursing staff in variety of BEOC skills including PAC. A strategic decision was made to initiate nurse lead PAC services from NSMP-supported districts. The training for nurses that commenced in 1998 was competency-based and focused on four key areas: 1) emergency treatment of any potentially life-threatening complications; 2) pre-procedure counseling and treatment of incomplete abortion using Manual Vacuum Aspiration (MVA) for cases in the first trimester; 3) post-procedure family planning (FP) counseling and services; and 4) ensuring links exist and making referrals between emergency PAC services and other reproductive health care services.

NSMP began supporting the initiation of nurse-led PAC services as an integral element of the full spectrum of EOC services. NSMP's holistic support to EOC services included provision of a

wide range of human resource development; the provision of appropriate BEOC equipment; infrastructure improvements (new buildings such as operating theaters, and renovation work e.g. improved water and electricity supplies); and establishment of safe blood transfusion services. The newly-trained PAC service nursing teams were therefore able to establish their services within this “enabling environment”. While PAC-specific equipment such as MVA syringes came from the national program, all other onsite support, including establishment of PAC monitoring systems, was provided by NSMP’s EOC support package.

The importance of mid-level providers in the decentralization of PAC services has been described in countries such as Ghana^{7,8} and Kenya⁹ as has the importance of creating an enabling environment for PAC services in Nepal¹⁰. However, there is little information available about how PAC can be successfully integrated and managed as a critical element of EOC programming as is described in this paper.

2. Methods

Clinical competency assessments and service utilization data from the first three NSMP-supported district PAC sites in Nepal over the years 1999-2002 were reviewed and analyzed by NSMP staff. The first of these was an NSMP-supported review of the first 12 months (January-December 1999) of nurse-led PAC services at two (of the three) district hospitals. The second set of data reviewed by NSMP was from a 30-month period (March 2000-August 2002) in three district hospitals. The findings from these reviews were shared with HMGN and other external development partners and the effect of this dissemination on national health policy and PAC program development are discussed. These reviews also brought to light a number of issues, one of which – the cost of PAC services – led to an investigation of direct and indirect PAC costs at NSMP-supported hospitals.

The findings from a national PAC program assessment completed in 2001 and supported by JHPIEGO are also briefly reviewed here. The clinical skills evaluation tools used in these assessments are explained. NSMP’s reviews are compared to the findings of the national assessment.

A graphic representation of the progress of the national PAC program and the timing of the assessments reviewed in this paper is shown in Figure 1. As of May 2002, 250 providers and assistants have been trained in PAC in Nepal. These providers are working in 23 districts at 34 established PAC service sites.

2.1. Assessment of the first NSMP-supported PAC sites - 1999

NSMP conducted an assessment of the clinical competency of PAC providers and also reviewed the service utilization figures for the first 12 months (January-December 1999) of the nurse-led PAC services at two district hospitals. The assessment tools used were the written knowledge exam (mid-course questionnaire) and the clinical competency checklist from the national PAC training curriculum¹¹; a combined score of 85% was deemed to reflect overall competence. The results reflected the clinical competence of nursing staff, who all achieved scores of 85% or better. It was also encouraging to note that family planning information and services, not previously given to women with abortion complications, became routinely offered by the nurse-led service.

The service utilization figures in Table I show that before the introduction of PAC training, all post abortion complications requiring surgical intervention (61) were treated by doctors using dilation and curettage (D&C). During the first year of nurse-led PAC services, the numbers of women presenting for PAC to the district hospital increased by 37% and the majority (67/93) of cases requiring surgery were treated by nurses using MVA.

In spite of this improvement, 10% of cases were still being referred on to other centers for PAC. This high referral rate was partly due to some PAC-trained staff being transferred soon after completion of training thus compromising the ability to provide 24 hour care. While PAC training promoted these services as being offered as part of the regular outpatient services, in reality it was revealed that PAC was usually available only during daytime hours. Subsequent PAC training has emphasized the importance of providing 24 hour service.

Overall utilisation for abortion complications was still somewhat low versus the expected number of complications given the district's populations. This finding resulted in the nursing staff actively promoting PAC services through a range of innovative means with peers and community groups.

Despite its small scale (just two hospitals), the findings of this first assessment has critically influenced PAC policy. The DoHS was persuaded that nurses were competent PAC providers and that the nurse-led program should be scaled up.

The assessment itself has had a significant impact on improving the services at all three NSMP hospitals. PAC has become fully integrated into 24-hour EOC services, capitalizing on the general enabling environment created – due to both improved general clinical care and enhanced hospital management. For example, PAC services were integrated into the institutional quality of care review system - a process used by local level teams to monitor the quality of EOC services, identifying problems and seeking local solutions.

2.2. *National Assessment - 2000-2001*

A performance evaluation focusing on the training and service delivery components at nine established PAC centers, both rural and urban (including the three NSMP Phase One district hospitals discussed previously) was jointly carried out by JHPIEGO and HMGN's Family Health Division (FHD) between December 2000 and April 2001¹².

While the numbers of providers evaluated in this study were small (17 total, 6 nurses and 11 physicians), the results showed that nurses were good providers of PAC services as assessed by a competence score derived from the Critical Steps in Observation of Postabortion Care Service Provision tool.¹³ The tool analyzes 77 steps considered essential in the delivery of quality PAC services; a score of 90% or more was considered to reflect overall competence. The mean score for PAC-trained nurses was 77% with a range of 53-96% with one third of the nurses achieving scores of 90% or more. While it was also evident that nurses scored higher than physicians, the authoritarian relationships between doctors and nurses sometimes forced nurses into more subservient roles, making it difficult for them to fulfill their duties as PAC providers. The study also found that infection prevention practices were good overall but that record keeping was generally poor and that pain control management needed improvement.

The key recommendations presented by the National Assessment team included the need for:

- facilitating a 24-hour service;
- strengthening the role of nurses as PAC providers;

- reinforcing PAC provider skills through follow-up and monitoring/supervision visits; and
- improved record keeping.

2.3. Assessment of PAC services at three NSMP-supported district hospitals - 2000 -2002

PAC provider competency, measured using the same Critical Steps in Observation of Postabortion Care Service Provision tool developed for the National PAC Assessment, was examined in three district hospitals during the month of September 2002. NSMP assessed the competency of 18 PAC providers (6 at each site), the results are shown in Table 2. This study of three district hospitals, therefore, looked at comparable numbers to the national assessment and added significantly to the review of the national program by also examining service utilization figures.

Observer evaluation of provider competency in two of the three hospitals (Districts A and B) was very encouraging; the average scores were 90.2% and 92.0 % respectively with perfect scores attained by all providers on post-procedure tasks, recording and reporting and client discharge instructions. The scores from District C were significantly lower with an average score of 70.8%. However, the providers at this hospital attained near-competence in the areas of performing the MVA procedure (81.2%) and post-procedure tasks (88%) with the overall average brought down by poor performance on recording and reporting (60%) and client discharge instructions (50%). The delivery of PAC services at District C differed significantly from the other two districts in that PAC training was introduced later - in the middle of 1999. In addition, all 8 of the nursing staff originally trained in PAC had been transferred to other facilities during 2000-2001. Therefore, during a 6 month period, only the two PAC trained doctors were involved in delivering PAC services and they routinely referred clients to the outpatient department or maternal child health clinic for post-procedure counseling and discharge instructions rather than perform this task themselves. It became clear that although “PAC” was meant to encompass care for all gestations, doctors that had attended PAC training had perceived the comprehensive package of care as being restricted to gestations of less than 12 weeks where MVA was used. For more advanced gestations they felt that their role was limited to performing the evacuation procedure alone. This realization led the DOHS to place greater emphasis in subsequent PAC training on the importance of comprehensive care for all gestations; even when treatment besides MVA is required.

Cumulative data on the utilisation of PAC services over a 30 month period (March 2000-August 2002) in the three hospitals are presented in Tables 3, 4 and 5. In all, 682 post abortion cases presented during the time period reviewed. Some of the key findings from the analysis of the data include the fact that 1 in 6 post abortion care clients were adolescents aged 15-19 years (15.2%). This is not unexpected since the median age at marriage is now 16.8 years and 19% of all pregnancies are among women less than 20 years of age¹⁴. However, it does point to the importance of ensuring that PAC and family planning counseling services are attentive to the needs of adolescents.

Record-keeping regarding gestational date of the pregnancy was very poor with nearly half (49.7%) of all cases lacking this information. Of the abortion complication cases where gestational date was recorded (350/682), 69% were less than 12 weeks gestation. A closer look at this issue revealed that PAC cases most often presented to the outpatient department (OPD) and were assessed by general nursing staff not necessarily trained in PAC. In addition, outpatient history forms do not request any information specific to pregnancy. This understanding informed strategic changes made to the national EOC reporting systems in 2003.

Over 96% of the PAC cases included a diagnosis. The majority of cases (80.9%) were diagnosed as “incomplete abortion” and less than 1% of cases were recorded as complications of induced abortion (0.7%). Given the legal status of abortion in Nepal at the time of the assessment, some induced abortions may have been represented by patients or providers under the less stigmatized diagnosis of incomplete abortion.

The proportion of cases treated by MVA was 38.3%, very close to the proportion of cases with recorded first trimester gestational dates (35.8% of all cases). Nurses performed 30% of all procedures and since they are only certified to use MVA, they are assumed to have performed the majority of the MVA procedures. However, the proportion of cases managed by MVA has dropped significantly from the 1999 findings of nearly 60% (58.7%) treated using MVA. There are a number of reasons for this change. After the completion of the original PAC training in 1999-2000, nearly a third of those trained (10/29) were transferred to other institutions; the majority of those transferred were nursing staff (7/10). This created intermittent gaps or shortages of PAC trained nurses at all of these hospitals and increased the reliance upon doctor-led services. As elaborated below, such services have tended to use D&C/D&E more than MVA. Frequent transfers of staff are a systemic constraint in Nepal’s health sector and are not a problem specific to the PAC program.

Nearly half of all abortion complications (49.7%) were treated by dilation and evacuation (D&E), a procedure associated with more advanced gestational ages. Because of the large proportion of cases with no recorded gestational date it is difficult to say whether or not the use of D&E was strictly necessary. It was noted that although all of the district hospital doctors are trained PAC providers, they performed an extremely small number of MVA procedures. If, as suspected, there is a significant number of first trimester gestations included in the ‘unrecorded’ category attended by doctors, these women may be undergoing procedures entailing greater risk and cost than is necessary. Although it is possible that an unusually large proportion of abortion complications presented at advanced gestational dates to the three hospitals during the assessment period and were therefore treated appropriately, it is more likely that reliance on D&C/D&E has to do with provider convenience, e.g. gathering up a number of cases for treatment in the operating theater at a time convenient for the staff rather than treating each case as it presents in the outpatient MVA unit.

The large proportion of cases treated by D&C and D&E led the project to consider that there may be other incentives apart from physician comfort and convenience. Investigation in 2003 into the costs charged at all three hospitals revealed that financial gain was another possible incentive. The average cost for a case managed with MVA was Nepali rupees (NRs) 683, approximately equal to US\$9 and for D&C or D&E it was NRs 983 (US\$13). Therefore, the average actual cost to the patient (service charges plus costs of drugs, supplies and hospital stay) was 44 % higher for D&C and D&E procedures than for MVA.

Only about half of the post abortion care patients (55.7%) received counseling on FP methods, according to records. Again, this proportion was skewed by the one physician provider at District C who did no counseling. Just over 1/4 of patients who received FP counseling chose condoms (27.7%). This acceptance level is high when compared to national condom use which accounts for only 11.6% of modern contraceptive use of ever-married women¹⁵. One reason for this difference is that PAC clients are anxious to return home and do not feel ready to make a long term decision about family planning so they accept condoms as the simplest recourse. Some providers are also still insisting upon delaying the start of some methods until after the client’s next menstrual period and give condoms as an interim measure until the client returns. These realizations led to a greater emphasis during PAC training on the importance of giving

appropriate FP methods immediately post PAC with no need to wait for the next menstrual period.

4. Summary

The lessons learned from Nepal's experience of implementation and expansion of the national post abortion care program are applicable to many developing countries where competency-based training of mid-level providers and the integration of PAC into EOC may be critically important steps towards making life-saving post abortion care services accessible and affordable.

Some of the general lessons learned from the establishment of PAC and its expansion through nurse-led services in Nepal are:

- Nurses are competent providers of PAC services and generally provide more comprehensive care than physician providers.
- Advocacy for an expanded role for nurses was important in the establishment of a nurse-led PAC training program.
- There is a need for continuing advocacy for nurse-led PAC services and for expanding the role of other mid-level providers as PAC providers. Advocacy must take place at the macro level with the Ministry of Health and at the micro level with hospital administrators and medical colleagues.
- Family Planning counseling skills and easy access to FP methods are also critically important to the success of the PAC program. The PAC training program needs to strengthen this component and follow it up with close supervision at the institutional level.
- The transfer of trained staff has a large impact on the type of PAC services provided. Wherever possible, trained staff should be retained at their original post for as long as possible.
- Program and hospital managers should be aware of the probable influence of cost/profit on the selection of PAC procedures by providers.
- Adequate record-keeping is a major challenge that must be addressed in order to properly monitor and evaluate the national PAC program. Ensuring that outpatient and admission records include information specific to pregnancy is a simple but important step in improving these records.

Specific lessons learned from the integration of PAC services into an EOC program (as provided by NSMP) include:

- Establishing PAC services at district hospitals has required more than simply training PAC providers. Creating an enabling environment for the whole spectrum of EOC services has been crucial in the successful introduction of nurse-led PAC by NSMP.
- PAC services can be effectively managed as part of an EOC program as opposed to a stand-alone or vertical program. The recent (2003) establishment of a national EOC monitoring system that includes PAC reporting reflects how PAC is increasingly being recognized as a component of EOC at national policy level.
- Continuing collaboration between HMGN and external development partners, based on sound PAC policies, appropriate training, and support to implementation, is key to the scaling up and integration of PAC into EOC programming.

This paper also demonstrates the critical role a mature project can play in ensuring that learning from monitoring exercises informs national policy and program expansion. This kind of policy-level feedback is an important responsibility of all reproductive health and safe motherhood projects.

The PAC program has now been integrated into 22 district hospitals with many, though not all, providing the full range of EOC services. It is now well established that nurses are critical players in bringing life-saving services to rural women. Nepal's ever-improving PAC program is making a significant contribution to the prevention of maternal deaths related to abortion complications.

Acknowledgements

The authors acknowledge the support of the Nepal Safer Motherhood Project funded by DFID and managed by OPTIONS, U.K. For further information, please contact m.cole@options.co.uk.

Figure 1: Timeline of National PAC Program Expansion

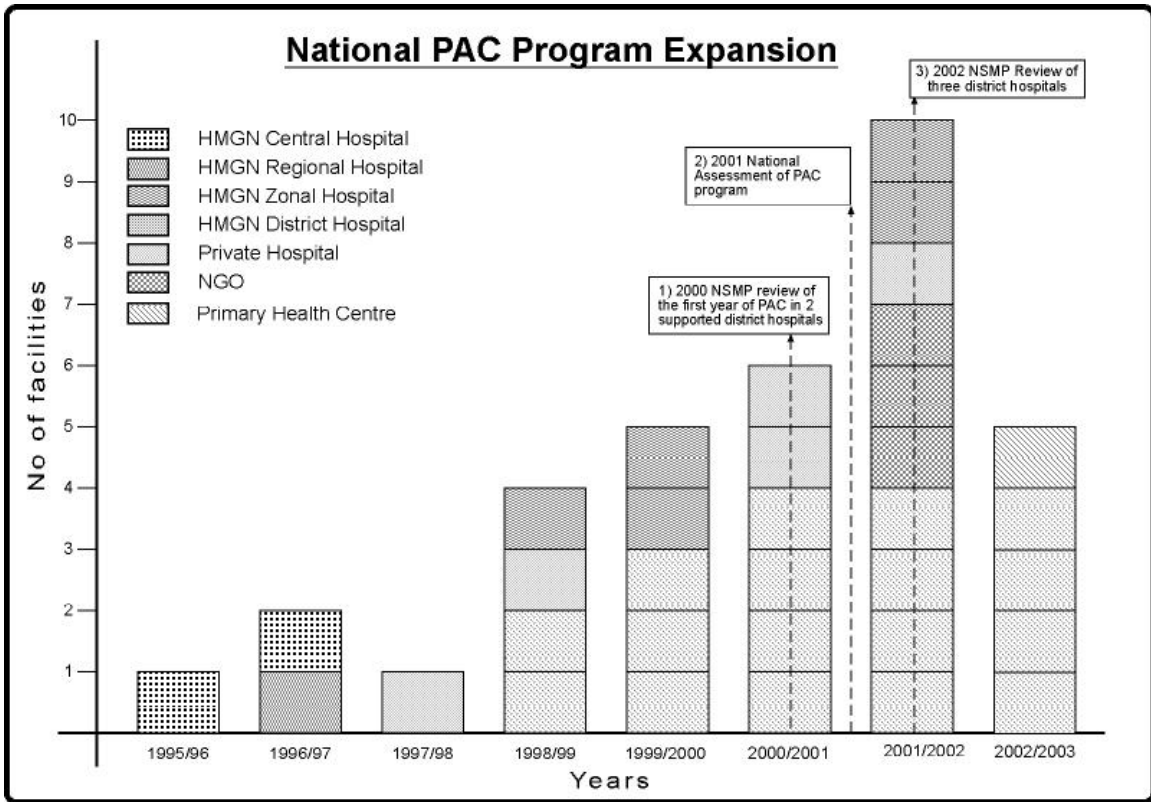


Table 1: Service utilization of abortion-related services at two district hospitals before and after introduction of PAC Services

Treatment of abortion-related cases	1997-98 before introduction of PAC training	1999-2000 after introduction of PAC training and service
	Number of patients/procedures (% of total) n=71	Number of patients/procedures (% of total) n=114
Treated by MVA	0	67 (59%)
Treated by D&C	61 (86%)	26 (23%)
Referred to next level hospital	8 (11%)	11 (10%)
Supportive care only (threatened or spontaneous complete abortion)	2 (3%)	10 (9%)
Admitted for complications of abortion	71 (100%)	114 (100%)

Table 2: PAC Provider Competency as scored by observer using the “Critical Steps in PAC” checklist

Critical Steps in PAC	District A – overall score in %, all 4 providers	District B score in %, all 5 providers	District C – overall score in %, all 3 providers
1. PAC Counseling – pre and post procedure (total 26 steps = 100%)	80	80	76
2. MVA Procedure			
a) Preparation for Procedure (total 17 steps = 100%)	80	85	70
b) Performing MVA Procedure (total 16 steps = 100%)	81.2	87.5	81.2
b) Post-procedure tasks (total 9 steps = 100%)	100	100	88
c) Recording and reporting (total 5 steps = 100%)	100	100	60
d) Client discharge Instructions (total 4 steps = 100%)	100	100	50
Average total score	90.2	92.0	70.8

**Table 3: Abortion complications presenting at three district hospitals
(30 month period from March 2000 - August 2002)**

a) Abortion Cases by Age Group					
Age Group (Yrs)	District A	District B	District C	Total	Percentage
15-19	43	11	50	104	15.2
20-24	76	27	142	245	35.9
25-29	51	26	78	155	22.7
30-34	25	9	40	74	10.9
35-39	10	20	31	61	8.9
40-44	3	8	19	30	4.4
45-49	0	7	6	13	1.9
Total	208	108	366	682	100.0
b) Gestational Dating of PAC Cases					
Number of Weeks	District A	District B	District C	Total	Percentage
Less than 12 wks	88	84	72	244	35.8
Greater than 12 wks	54	23	29	106	15.5
Not Recorded	66	1	265	332	48.7
Total	208	108	366	682	100.0
c) Diagnoses of Abortion Complication Cases					
Diagnosis	District A	District B	District C	Total	Percentage
Incomplete Abortion	201	43	306	550	80.6
Molar Pregnancy	0	1	5	6	0.9
Threatened Abortion	0	0	15	15	2.2
Missed Abortion	0	0	25	25	3.7
Septic Abortion	5	3	14	22	3.2
Induced Abortion	0	4	1	5	0.7
Spontaneous Abortion	0	37	0	37	5.4
Not recorded	2	20	0	22	3.3
TOTAL	206	88	366	682	100.0

**Table 4: Types of post abortion procedures performed at three district hospitals
(30 month period from March 2000 - August 2002)**

a) Type of Procedure					
Procedure	District A	District B	District C	Total	Percentage
MVA	104	80	77	261	38.3
D&C	6	28	48	82	12.0
D&E	98	0	241	339	49.7
Total	208	108	366	682	100.0
b) Numbers of Procedures by Type of Provider					
Type of Provider	District A	District B	District C	Total	Percentage
Doctor	137	38	300	475	70.0
Nurse	71	67	66	204	30.0
Total	208	105	366	679	100.0

**Table 5: Post abortion family planning acceptance at three district hospitals
(30 month period from March 2000 - August 2002)**

Method	District A	District B	District C	Total	Percentage
Depo-Provera	46	11	10	67	9.8
Condom	72	58	59	189	27.7
Pills	17	25	42	84	12.3
Norplant	0	1	1	2	0.3
Tubal Ligation	3	0	0	3	0.4
Vasectomy	2	0	0	2	0.3
Not Wanted	-	-	33	33	4.8
Not Recorded	68	13	221	302	44.3
Total	208	108	366	682	100.0

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