"To Determine Effectiveness of Expansion of the Post Partum Hemorrhage Program in the Target Area of Afghanistan"

A dissertation submitted in partial fulfillment of the requirements

For the awards of

Post Graduate Diploma in Hospital & Health Management

by

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ACTD

Afghanistan Center for Training and Development

Enabling people to make informed decisions

Date: May 2, 2012

Letter No: 28/2012

Certificate of Internship Completion

To whom it may concern

This is to certify that Mr. **Arshad Beg** has successfully completed his 3 months internship in our organization from January 30, 2012 to April 30, 2012. During this intern he has worked on his dissertation titled **"To Determine Effectives of Expansion of Post-Partum Hemorrhage Program in The Target Area of Afghanistan"** under the guidance of me and my team at ACTD (Afghanistan Center for Training and Development).

Beside his tireless work for the mentioned dissertation, he has been cooperative, polite and professional to all staff of ACTD.

We wish him good luck for his future assignments

(Signature)

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Certificate of Approval

The following dissertation titled "To determine effectiveness of expansion of the post partum hemorrhage program in the target area of Afghanistan" is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post- Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name	Signature
PRAGYA T. GUPTA	
DR. NITISH DOGRA	

Certificate from Dissertation Advisory Committee

This is to certify that Mr. **Arshad Beg**, a graduate student of the Post- Graduate Diploma in Health and Hospital Management, has worked under our guidance and supervision. He is submitting this dissertation titled **"To Determine Effectiveness of Expansion of Post-Partum Hemorrhage Program in The Target Area of Afghanistan"** in partial fulfillment of the requirements for the award of the Post- Graduate Diploma in Health and Hospital Management. This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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Date: May 13, 2012

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Acknowledgement

I take this opportunity with much pleasure to thank all the people who have helped me through the course of my journey towards producing this report.

I sincerely thank Dr. Sidiq for giving me the opportunity to work with his organization and his continuous guidance, help and motivation.

I would like to express my gratitude to Dr. AbdurRehmanfor much help at each step of the internship and dissertation with their helpful comments and guidance throughout my period in ACTD. Apart from the subject of my research, I learnt a lot from him, which I am sure, will be useful in different stages of my life. I would like to express my gratitude tomy mentorsDr. FrahadFrahmand in Afghanistan Center for Training & Development (ACTD).

I am really thankful to Dr. Mirza Jan,Dr Abdul QadeerQadiri and Dr. Shah Maqsood for their support and guidance throughout my period in ACTD.

I would like to thank all other staff of ACTD who has blissfully welcomed me and treated me as a part of the organization. I am especially grateful to my Director Dr. L P Singh and my mentor Dr. Preetha for their guidance and support throughout the training.

Finally, this report would not have been possible without the confidence, endurance and the support of my family.

ABBREVIATIONS

ACTD	Afghanistan Center for Training and Development
BHC	Basic Health Center
BPHS	Basic Package of Health Services
CBHC	Community based health care
CHW	Community Health Worker
HSSP	Health Service Support Project
MCH	Maternal and Child Health
MOPH	Ministry of Public Health
NGO	Nongovernmental Organization
PPH	Post Partum Hemorrhage
SBA	Skilled Birth Attended
SAFE	Safety , Acceptability, Feasibility, and program Effectiveness
TBA	Traditional Birth Attendant
USAID	United States Agency for International Development
WHO	World Health Organization

INTERNSHIP REPORT :1

Part I-Internship Report:-

Introduction:1

Objective of Internship

The internship caters to the specific objectives:

To understand the health system of a post conflict country- Afghanistan

To understand the functioning and working of a National NGO in Afghanistan

My role in the organization involved assisting in the "public health research department Which involved

- Proposal development
- Coordination of the projects assigned
- Making action plans for the project and workshop
- To Assist in Analysis and report writing

In the course of three months I was assisted in following projects:

- Proposal development for Community health nursing education program (CHNEP (MoPH as the client).
- Proposal development for Community Integrated management of childhood illness (C IMCI) (MoPH as the client).
- Literature review to understand the health system of Afghanistan.

For this purpose I visited following departments in the Ministry of Public Health:

- Health Economics and financing department

- Monitoring and Evaluation department
- Grants& Contracts Management Unit

Organizational Profile:1.1

Afghanistan Center for Training and Development "ACTD" is a registered non for profit, non-political and non-governmental organization working for development and transformation of civil society in Afghanistan. ACTD was established in March 2007 by a group of Afghan professionals to offer research, training and consultancy services in order to develop practical applicable knowledge.

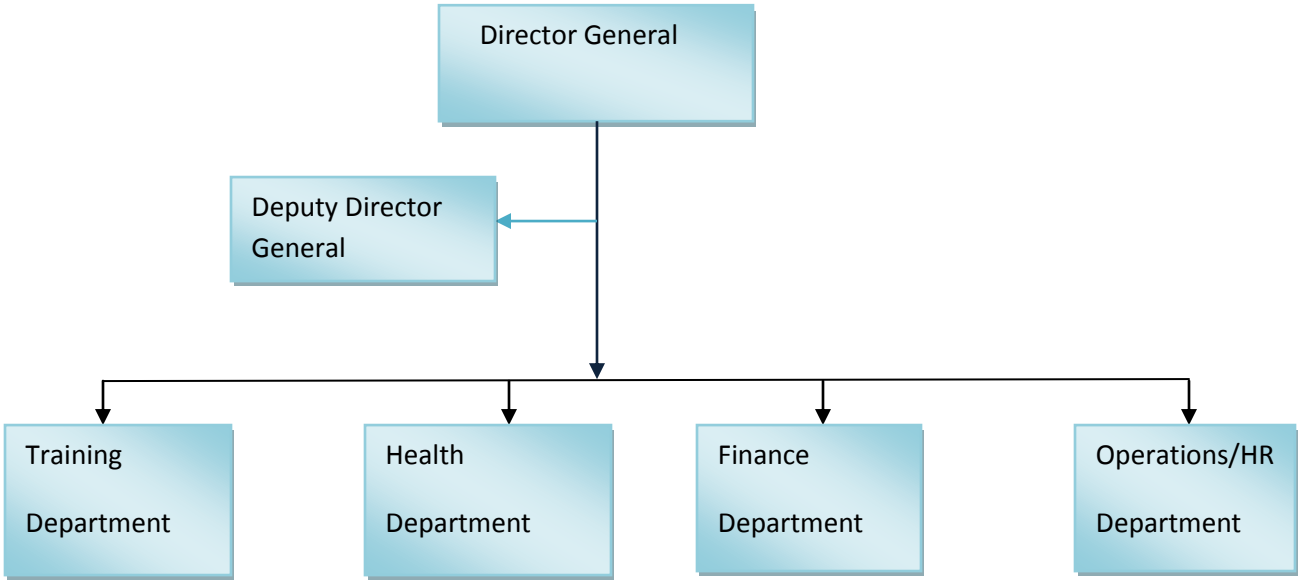
ACTD Vision:

ACTD vision is to see the realization and development of a vibrant and vital civil society in Afghanistan where the interest, concerns, and dignity of the civilians, the citizen, and the common man are taken seriously and more people have access to resources and power over choices.

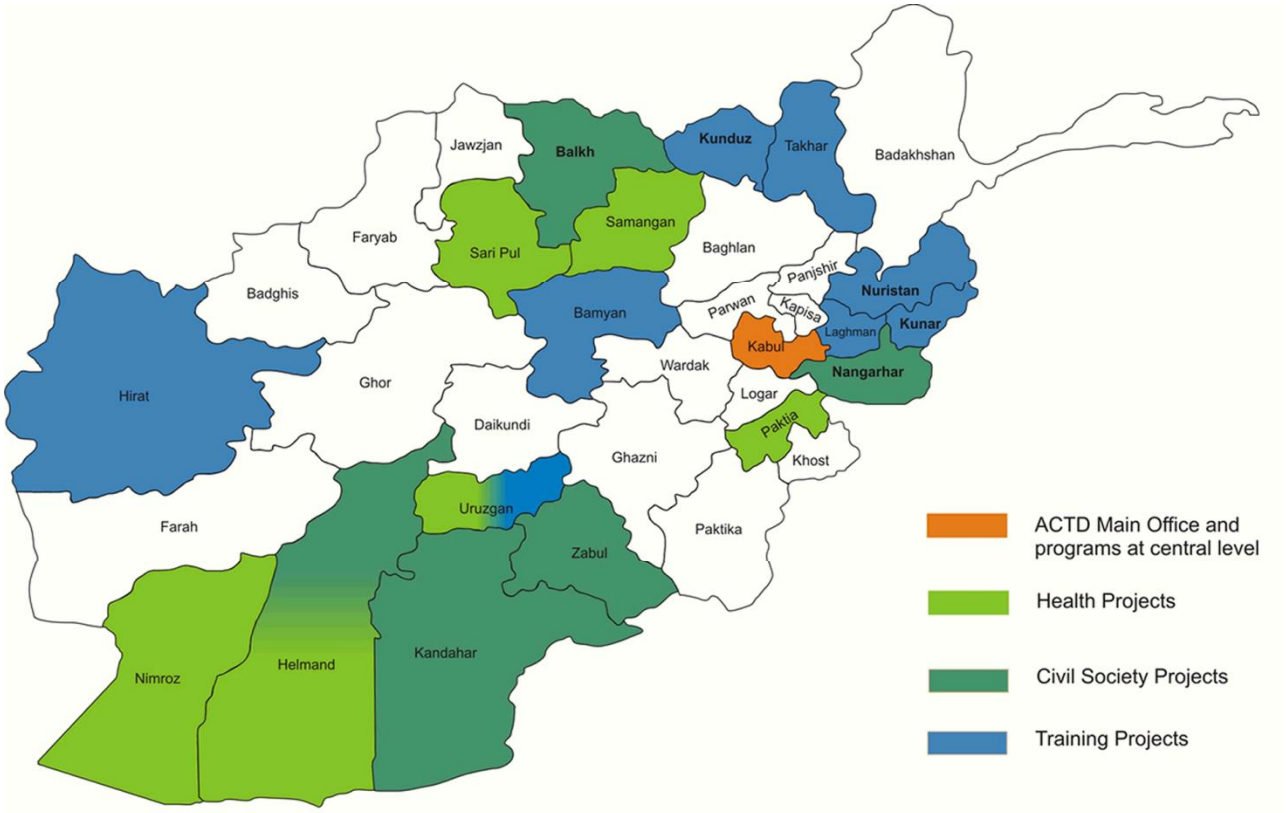
ACTD Mission:

ACTD will contribute to bring about and support genuine and coherent development practice among people, organizations, and institutions working for the development of Afghan Nation through civil society development, capacity building, service delivery and research. ACTD is committed to achieve its mission through transparent, equitable, professional, ethical and gender sensitive services with dignity to human being. Sustainable development, as viewed by ACTD is bringing desired positive changes in a community through enabling and capacitating the target communities to identify and respond to their perceived needs. This is the only way of bringing about atrue sustainable and manageable Afghanistan-oriented development. ACTD believes that sustainable development is not something that could be (and neither should be) attained overnight, but extreme caution should be exercised to maintain the provision of basic assistance to the community, while gradually introducing community-oriented development practices and disciplines.

Organizational Structure:



Geographical presence:



DISSERTATION REPORT:

CHAPTER: 2

ABSTRACT:2.0

Introduction:

Postpartum hemorrhage (PPH) is the major cause of maternal mortality in all low-resource settings, contributing 25% to 60% of all maternal deaths worldwide. The rate is higher in countries with limited health infrastructure. Once hemorrhage occurs, the situation can rapidly deteriorate requiring rapid resuscitation, blood transfusion and measures to deal with the cause of the hemorrhage. Atonic uterus, retained placenta and cervical tears are the commonest causes of PPH. About 80% of PPH can be prevented by appropriate care at labor and delivery, the most significant of which is active management of the third stage of labor by a skilled provider.

In situations where many births are not attended by skilled providers, prevention of postpartum hemorrhage by active management of the third stage is not possible, and survival once hemorrhage occurs is dependent on rapid referral, transport and emergency preparedness at the referral site. The latter is often not an option, and so preventing hemorrhage for births not attended by skilled providers remains a major challenge for improving maternal survival.

Recent studies demonstrate that trained volunteers can effectively provide information about PPH to women not reached by skilled providers and can safely distribute ***Misoprostol*** for use immediately after childbirth. Such community-based interventions can significantly reduce the burden of postpartum hemorrhage at homebirth and in situations where there are no skilled providers.

Aim:

The overall Aim of the prevention of PPH intervention is to reduce the incidence of PPH and reduce the contribution of PPH to maternal mortality in the targeted areas of Afghanistan. The intervention is focused at the community level; however, complimentary activities at facility and national levels will be conducted as part of a holistic approach to PPH prevention.

Objectives of the study:

The general objective of the study is To determine uterotonic protection coverage in the target area of the Islamic Republic of Afghanistan.

Methodology:

The study design being used in this study is cross-sectional household survey.

Results and findings:

The study shows thatproportion of vaginal deliveries protected by auterotonic protection coverage is increased ,Among women living within three hours of a suitable facility, a significantly higher proportion of deliveries took place in health facilities at after the intervention.the largest gains in protection from PPH were among the poor, illiterate, and those living in remote areas. The study shows that Misoprostol is acceptable in the community .

Conclusion:

The study shows that uterotonic protection coverage is high among those who got the information about Misoprostol and actually take the Misoprostol , in some cases we have found people needs BCC counseling .

Introduction & Background:2.1

Postpartum hemorrhage (PPH) due to atonic uterus (failure of the uterus to contract after delivery of the placenta) is the major cause of maternal mortality in Africa and Asia . Once a hemorrhage occurs, the woman's condition can rapidly deteriorate, requiring rapid re-suscitation, blood transfusion, and other costly and invasive measures. In low-resource settings, rapid referral/transport and emergency preparedness at the referral site are often suboptimal. so these challenges can create a very serious situation for the women suffering from post partum hemorrhage .due to rapid blood loss there comes a serious threat to the life of the women having hemorrhage.The World Health Organization (WHO) indicates that coverage for effective prenatal care, skilled birth attendance (SBA), institutional delivery, and emergency obstetric care is less than 50% in 75 of the highest mortality countries .these figures throw light on how serious the situation is in the developing countries .The importance of SBA is highlighted because between 60% and 80% of PPH could be prevented if appropriate care were available during labor and childbirth . Unfortunately, while attempting to increase SBA continue, recent WHO figures indicate that only 63% of births worldwide were attended by a skilled provider .When SBA is available, the most effective intervention for preventing PPH is by providing the advance management of third stage of labor in which the first step is to give Misoprostol during the first hour after the expulsion of the placenta .The second step involves the controlled cord traction and lastly the third step involves massage over the uterus . Implementing active management of the third stage of labor reduces the amount of bleeding following normal delivery, resulting in a shorter third stage, complete delivery of the placenta and a well-contracted uterus. Oxytocin is useful in reducing hemorrhage, but it must be refrigerated and given by injection. Ergometrine works well but has more side effects is even less stable in warm temperatures and cannot be used in 15% of women who have high blood pressure. Synthetic prostaglandins however are better at causing the uterus to contract but most are very expensive. The exception is a prostaglandin analogue Misoprostol which is inexpensive, very stable, has a long shelf life and can be given orally as well as rectally and sublingually.

Where skilled providers practice active management of third stage of labor, including the use of oxytocin or Misoprostol, PPH has been significantly reduced. This is important because managing complications such as PPH requires significant health infrastructure, and patients that

have difficulty reaching the health care facilities are significantly affected. This is further compounded when the first level referral site is unable to provide essential care, necessitating the transfer to a provincial hospital or to a tertiary level of care.

If the advanced management of third stage of labor is provided appropriately than the risk of death associated with women suffering from postpartum hemorrhage can be reduced to a great extent .

PPH in Afghanistan:2.2

The maternal mortality ratio in Afghanistan is 1600 per 100000 live births , one of the highest in the world. Hemorrhage is the most common cause of maternal mortality, responsible for about 38% of maternal deaths. The lifetime risk of maternal death is in a range between 1 in 6 and 1 in 9. This translates into an estimated 26,000 women dying from pregnancy related causes per year or in stated another way, 1 woman dying every 27 minutes. Between 48% and 55% of deaths among reproductive age women (15-49 years) are from pregnancy related causes.

The most common cause of maternal mortality is postpartum hemorrhage (PPH). PPH is responsible for about 30% of the maternal deaths or approximately 7600 women per year. Another 26%of women are dying because of obstructed labor. Obstructed labor is the second cause of maternal death especially in the remote areas. Other direct maternal causes are sepsis and pregnancy induced hypertension. Overall, 82% of maternal deaths are related to direct maternal causes and another 9% to indirect causes (malaria, TB, and tetanus).

Given that only an estimated 19% of women deliver with an SBA, the Government of Afghanistan's goal to reduce its maternal mortality ratio by 50% by 2015 presents an enormous challenge . Since much of the country is snowbound during winter, even if SBA was available, providers would not be able to reach many rural women. In short, although a substantial effort is underway to increase the number of births attended by skilled providers, pro-viding skilled professional care to all women in Afghanistan is still many years away. Therefore, any maternal survival strategy to reduce PPH at home births must consider what can be achieved at the community level, beyond the reach of skilled professional providers.

CHAPTER: 3

LITERATURE REVIEW

Literature review

Postpartum hemorrhage (PPH) due to atonic uterus (failure of the uterus to contract after delivery of the placenta) is the major cause of maternal mortality in Africa and Asia . Once a hemorrhage occurs, the woman's condition can rapidly deteriorate, requiring rapid re-suscitation, blood transfusion, and other costly and invasive measures. In low-resource settings, rapid referral/transport and emergency preparedness at the referral site are often suboptimal. so these challenges can create a very serious situation for the women suffering from post partum hemorrhage .due to rapid blood loss there comes a serious threat to the life of the women having hemorrhage. The World Health Organization (WHO) indicates that coverage for effective prenatal care, skilled birth attendance (SBA), institutional delivery, and emergency obstetric care is less than 50% in 75 of the highest mortality countries .these figures throw light on how serious the situation is in the developing countries .The importance of SBA is highlighted because between 60% and 80% of PPH could be prevented if appropriate care were available during labor and childbirth. Unfortunately, while attempting to increase SBA continue, recent WHO figures indicate that only 63% of births worldwide were attended by a skilled provider .When SBA is available, the most effective intervention for preventing PPH is by providing the advance management of third stage of labor in which the first step is to give Misoprostol during the first hour after the expulsion of the placenta .The second step involves the controlled cord traction and lastly the third step involves massage over the uterus . Implementing active management of the third stage of labor reduces the amount of bleeding following normal delivery, resulting in a shorter third stage, complete delivery of the placenta and a well-contracted uterus.

In a study conducted by Rajbhandari, S. Etal to view that Is community-based distribution of misoprostol to pregnant women through community volunteers working under government health services feasible for prevention of postpartum hemorrhage showed that The proportion of vaginal deliveries protected by a uterotonic drug increased from 11.6% to 74.2%. Among women living within three hours of a suitable facility, a significantly higher proportion of deliveries took place in health facilities at after the intervention. Among the 447 respondents who took misoprostol, none reported taking it at the wrong time; only 1.8% reported taking less than three

tablets. The largest gains in protection from PPH were among the poor, illiterate, and those living in remote areas. The results of this study showthat Community-based distribution of misoprostol for PPH prevention can be successfully implemented using existing government health services in low-resource, geographically challenging settings. This intervention can result in increased population-level protection against PPH, with particularly large gains among the disadvantaged. Community-based distribution of misoprostol with messages about the importance of facility delivery can complement other efforts to increase institutional deliveries.

In an another study conducted by Prata, N. Et al. In Ethiopia to know that How did the need for bleeding-related referrals and additional interventions differ between those who took misoprostol and those who did not .Suggestedthat Of the 966 vaginal deliveries attended by TBAs, only 8.9% of those who took misoprostol for PPH prevention needed additional intervention due to excessive bleeding, compared to 18.9% of those who did not take misoprostol. Of those women receiving additional interventions, 6.2% ofnonintervention areas received blood transfusions, compared to less than 1% of women from the intervention area. The relevance of the results of this particular study isthat Misoprostol for PPH prevention in home births is safe and feasible.

Community-based providers trained in its use can correctly and effectively administer misoprostol and be essential in reducing PPH-related morbidity and mortality. Efforts to increase skilled attendance at births should continue, but as an interim measure misoprostol can have an immediate impact in helping poor women in rural areas .

In another study conducted by Langenbach, C. to know that is mesoprostol effective in the prevention of PPH showed that Misoprostol is similar to other oxytocics and Misoprostol should be used for prevention of PPH . The importance or the role of mesoprostol especially in the low resource settings is of great help in reducing the post partumhemorrhage which ultimately helps in reduction of maternal mortality ratio .

In a study conducted by Derman, R.J. et al. to know whether misoprostol safe and effective when administered at the community level .showed that Misoprostol reduced PPH incidence by 53%, from 12 to 6%.and For every 18 women given misoprostol for prevention, one case of PPH is averted . these statistics suggests that Misoprostol is safe, effective and affordable for women

giving birth in low-resource settings. It is often the only pharmacological option for preventing PPH and reducing postpartum blood loss in these communities.

In 2005, the MOPH and the ACCESS program, initiated a pilot project with the support from USAID which demonstrated the safety , accessibility,feasibility,and the effectiveness of the programmei.e (SAFE)of the role of the Misoprostol in preventing post partum hemorrhage in births taking place at home not supervised by skilled attendants . several with the support from the US Agency for International Development (USAID), initiated a pilot project to demonstrate the safety, acceptability, feasibility, and program effectiveness (SAFE) of the use of Misoprostol in preventing PPH at home births in Afghanistan.

Data was collected from 2,039 women in the intervention areas and 1,148 women in the control areas. Several key findings are summarized below:

- **High coverage is possible even in difficult areas.**Total of 96% of the target population received an uterotonic agent, compared to 26% in the control areas. This was achieved in geographic areas where less than 25% of births are attended by a skilled provider.
- **Women *do* act on educational messages.** In spite of only 45% coverage with antenatal care by skilled providers, the main source for information about birth preparedness, complication readiness, PPH, and misoprostol was CHWs. Contrary to popular belief, the concept of prevention was understood by rural women.
- **The intervention is safe.** The educational message, the strategy of asking women to repeat key information before supplying the drug, and the pictorial warning information on the drug packaging resulted in not a single case of misuse of misoprostol prior to the birth of the baby.
- **Misuse of misoprostol for other purposes was suitably avoided.** The strategy of distributing small quantities of the drug to CHWs, tailored to use and weather conditions, as well as records kept by facility providers, resulted in no misuse of the drug.
- **The intervention was highly acceptable to women and their families.** The intervention was highly acceptable to medical staff in the area, as they see far fewer cases of severe PPH. In addition, any concern that women may choose not to seek care from skilled providers were allayed because the proportion of births with skilled providers actually ***increased***.

- **The intervention is feasible.** Trained CHWs were an acceptable source of education and misoprostol distribution. CHWs reached many women previously not reached by the health care system. District leaders and heath councils are fully supportive and are finding innovative means of rewarding volunteer CHWs.

The purpose of this study was to test a strategy for community education about PPH prevention accompanied by provision of Misoprostol directly to women for self-administration post partum. The study sought to assess whether community-based distribution of Misoprostol was safe and not likely to be misused, acceptable to women and their families, feasible; and programmatically effective. Afghanistan has a growing community education and health outreach program, and in the last 3 years most districts have achieved the target of having at least 1 community health worker (CHW) per 100–150 households. These CHWs, who are generally semi-literate, are widespread and accepted in the community. CHWs are already identifying pregnant women in the community and distributing hematinics. Moreover, infrastructure and supervision systems already exist to manage them and keep them supplied. It is therefore reasonable to expect that a strategy for prevention of PPH at home births in Afghanistan can be implemented using a community-based distribution model that relies on CHWs. Based upon the promising results from the demonstration project; the MoPH has approved gradual expansion of the intervention in Afghanistan

Demonstration of project

Expansion of the prevention of post partum hemorrhage will ultimately reduce the incidence and contribution of PPH to maternal mortality in the target areas of Afghanistan which is a massive concern for the country.

The objectives of the project are :

1. To demonstrate that community –based distribution of three 200-mcg tablets of Misoprostol to pregnant women , and subsequent use immediately after home birth of the baby , can protect at least 20,000 births against PPH.

2. To demonstrate that the methodology used is safe , acceptable , feasible and programmatically effective .
3. To promote and increase the knowledge of women and their families in the importance of skilled birth attendance, birth preparedness, complication readiness and recognizing PPh.
4. To strengthen capacity of health workers in referral health facilities so they can better respond to emergency cases and referrals from communities for complication and normal deliveries
5. To strengthen the program monitoring system to gather data on uterotonicprotection , coverage , safety , and delivery complications in home birth settings .

Objective of the study:

General objective:

The general objective of the study is To determine uterotonic protection coverage in the target area of Islamic Republic of Afghanistan.

Specific objective:

1. To determine the overall uterotonic protection coverage in relation to the wealth index of the people .
2. To determine the acceptability of uterotonic protection coverage .
3. To determine the overall uterotonic protection coverage based on the ethnic background of the people.
4. To identify the distance of the health facility from the homes of the subjects interviewed.

Chapter 3

Methodology

Methodology

Study design:

The study design being used in this study is cross-sectional household survey.

Sample size and sample technique

The sample size for each district and the sampling technique used has already been proposed by HSSP through the stratified sampling methodology for both pre and post design surveys .sample has been drawn from districts where the PPH prevention project was implementeds. Stratified sampling technique was used and the sample was drawn as stratum in two levels :

a) The districts which were considered as first level stratum
b) The villages as the second level stratum

Using a proportionate to size approach , five districts were selected out of the 20 implementation districts, population of districts was divided by population of Zibak district (7100).Population of Zibak was the lowest among all and this was considered as rank of districts .Four ranks were categorized ingroup of four to obtain weight for sampling . the same methodology (proportionate to size approach) was applied for the selection of villages in each selected district and 24 villages were selected.

Epi.info was used to calculate the number of recently delivered women to be interviewed in the selected villages . with the design effect of 1.5 significant level of 5% power of 80%, precession of 12.5 % and assumed non-response rate of 10% , the sample size was estimated to be 401 recently delivered women (17 recently delivered women for each selected village)

Selection of villages and households:

The number of villages were calculated according to the population density and differs for each district .the villages were selected through random selection from the lists of villages provided by district authorities and PPHDs or any other authentic source .the number of women to be interviewed in each village were “17” and were selected through random selection . it was

selected by going to either left or right side direction from the centre of the village . it was possible that some household might not have eligible women where in that case next household were selected . it was also possible that some householdswith in the villages might had more than one eligible women where in that case next household were selected . it was also possible that some households with in the villages might hadmore than one eligible women where in that case only one women was selected from one household with younger age .

Primary Sampling Unit

For easy understanding and feasibility of work total persons to be interviewed in each district were divided in primary sampling units. The number of persons each primary sampling unit contains were 20 meaning that PSU did not had more than 20 women to be interviewed. i.e. for quarabagh we had 8 PSUs , for Zibak 3 , for Acqcha 6 and for Kushtba and Qaramqul 3 PSUs respectively.

Inclusion and Exclusion criteria

All women who delivered in the last six months (17women/village selected randomly) were included in the study . all women who refused to participate and those who did not delivered in the past six months were excluded from the study .

Sample Selection method

As discussed that the districts were identified and the number of villages in each district were calculated by HSSP through stratified sampling technique while selecting households ACTD proposed and adopted the random sampling method . in each village 17 women have delivered in last six monthsbefore the survey start were randomly selected .

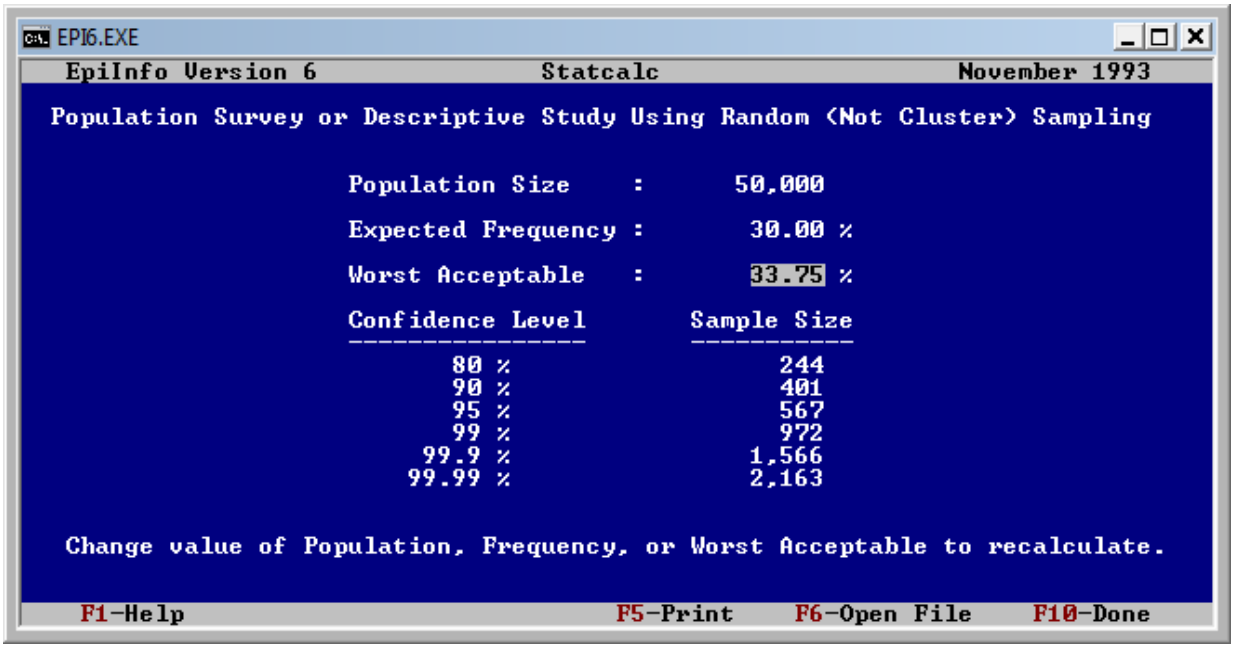
Data collection and data analysis plan

ACTDproposed management team and field team for the management and collection of data which could be discuss in more details in team structure /composition .

Community Survey Sample: A stratified sampling methodology was used for the pre-/post-intervention household surveys. The intervention were implemented in 20 select districts in five provinces and the sample was drawn from these 20 districts. Stratums were delineated at two

levels: the first stratum was the districts and the second stratum was the villages. Using a proportionate-to-size approach, five districts were selected out of 20. The population of these districts was divided by the population of Zibak district (pop: 7,100), which is the lowest population among all the districts. This was considered as a rank of districts. Four ranks were categorized in groups of four to obtain the weight for sampling. The proportionate-to-size approach was also applied for selection of villages in each selected district. This process led to the selection of 24 villages.

Epi Info was used to calculate the number of recently delivered women to be interviewed in the selected villages. With the design effect of 1.5, significance level of 5%, power of 80%, precession of 12.5% and an assumed non-response rate of 10%, the sample size has been estimated at 401 recently delivered women (17 for each selected village).



The following tables summarize the sampling strategy for the proposed household survey.

DNo	DisCode	District	Number Villages	Population	Weight (7100 =1)	Weight (rank categories of 4)	SNO	# Village=Weight Rank*3	Persons Per Village	Total Persons
3	0105	Qarabagh	32	69500	10	3	5	9	17	153
1	1105	Zibak	11	7100	1	1	10	3	17	51
1	1706	Aqcha	49	53900	8	2	18	6	17	102
1	1711	QushTipa	10	21400	3	1	21	3	17	51
1	1810	Almar	18	17900	3	1	29	3	17	51
							Total	24		**408**

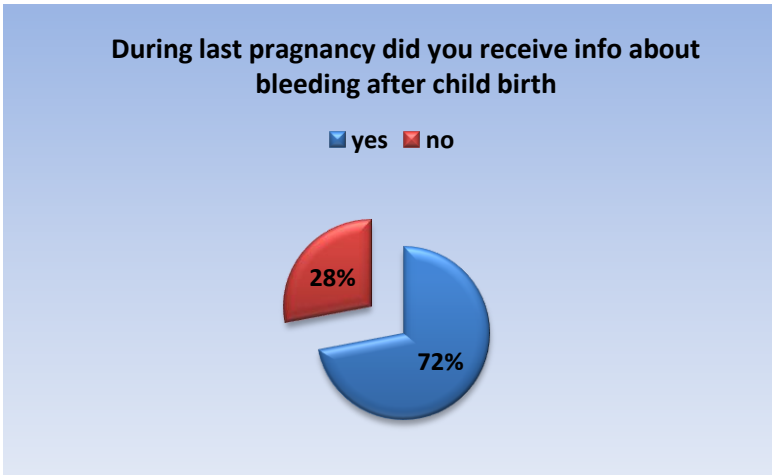
CHAPTER4:

RESULTS&FINDINGS

Results and Findings

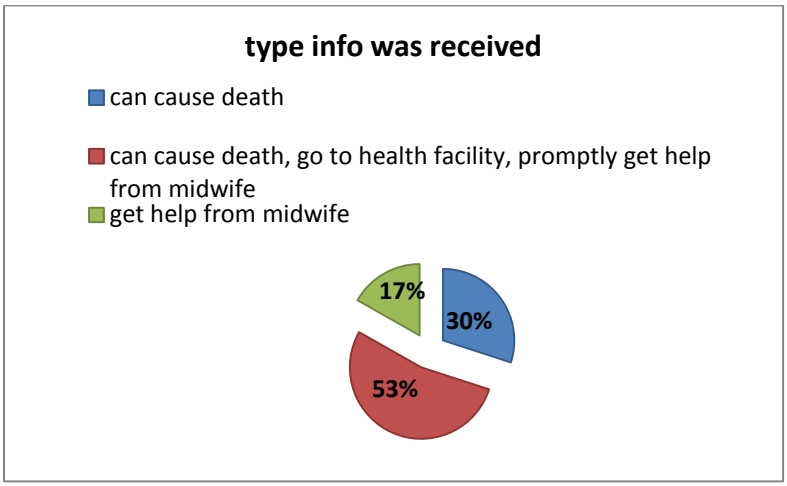
Exposure and Comprehension :

Figure 1: During your last pregnancy, did you receive any info about bleeding after child birth?



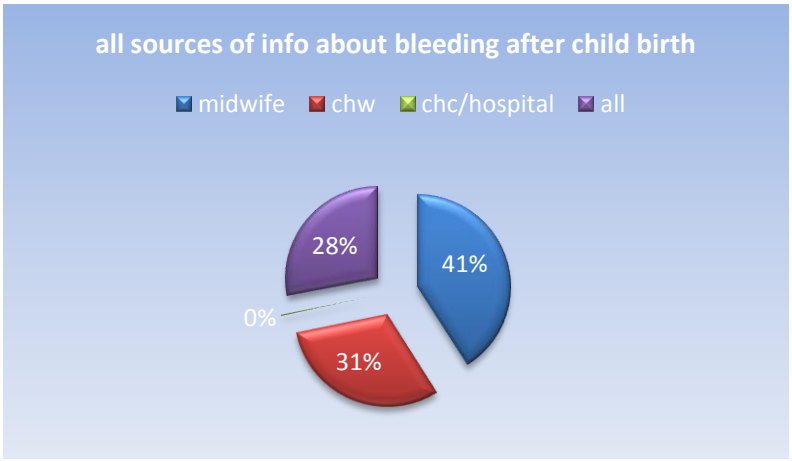
Out of the sample size of 408 who were being interviewed 72% of the people received information about PPH and 28% of people did not receive knowledge about PPH .

Figure 2: Type of info:



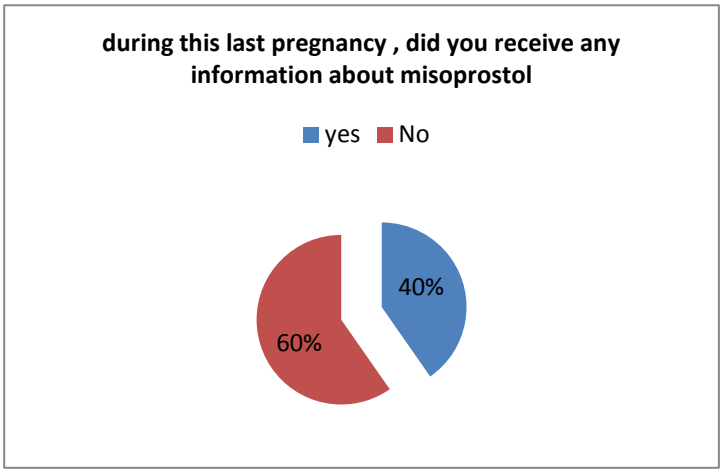
When we asked the people who were interviewed about the kind of info they have regarding PPH 53% of the people said that PPH can cause death, go to the health facility and promptly get help from midwife. 30% of people said that PPH can cause death and 17% of people said that get help from midwife.

Figure 3: sources of info



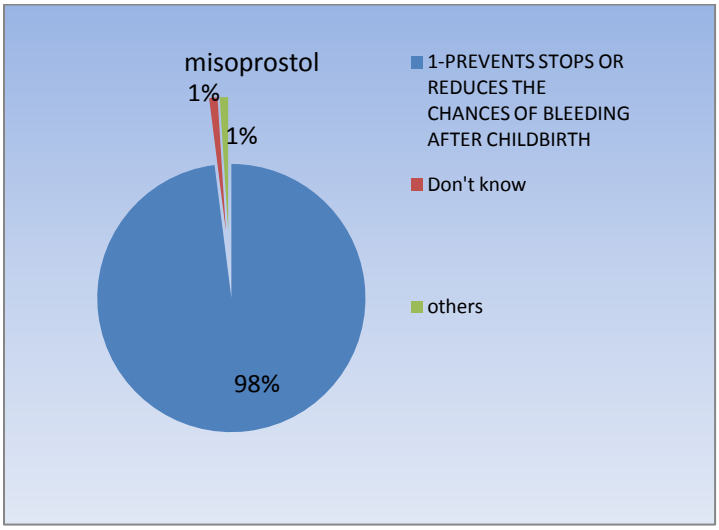
When asked about the source of info 31% of the respondents received info from chw , 41% received info from midwife , .2% received info from chc/hospital , 28% received info from all the sources .

Figure4: during this last pregnancy , did you receive any information about a drug called **Misoprostol.**



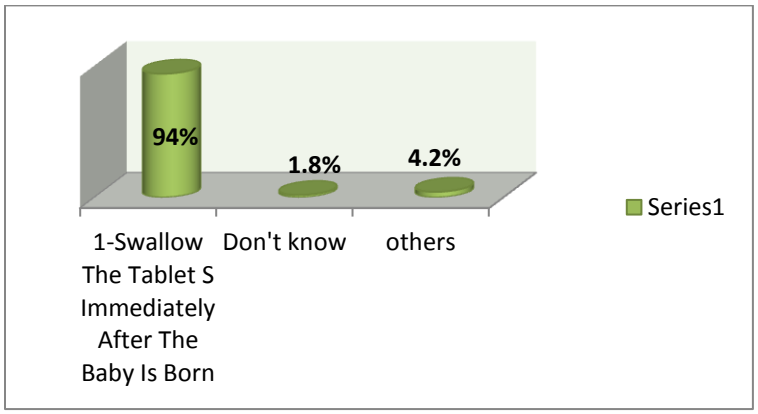
When asked about the info regarding misoprostol 60% did not receive info regarding misoprostol and 40% did not receive info regarding misoprostol .

Figure5: what does Misoprostol do?



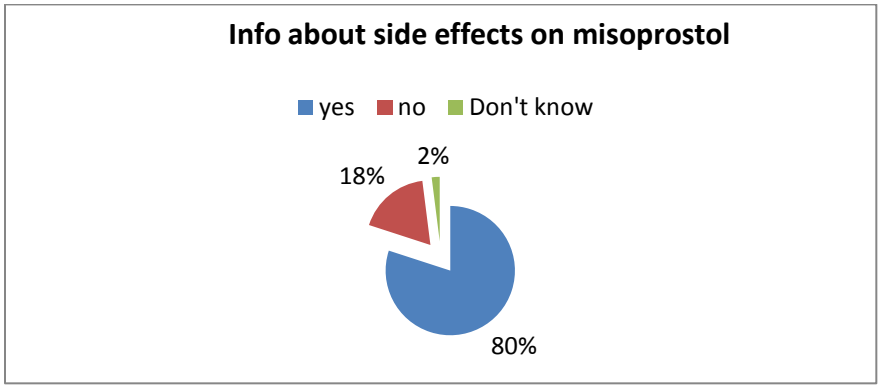
When asked about that what does mesoprostol do 98% of the people who know about misoprostol said that it prevents or reduces the chances of bleeding after childbirth and 1% did not know about what does misoprostoldo .

Figure 6 : when and how should the Misoprostol be taken :



94% of people who knew about misoprostol said that it should be swallowed immideately after the baby is born and 1.8% people did not know about when and how it should be taken .

Figure 7 :Info about side effects of Misoprostol:

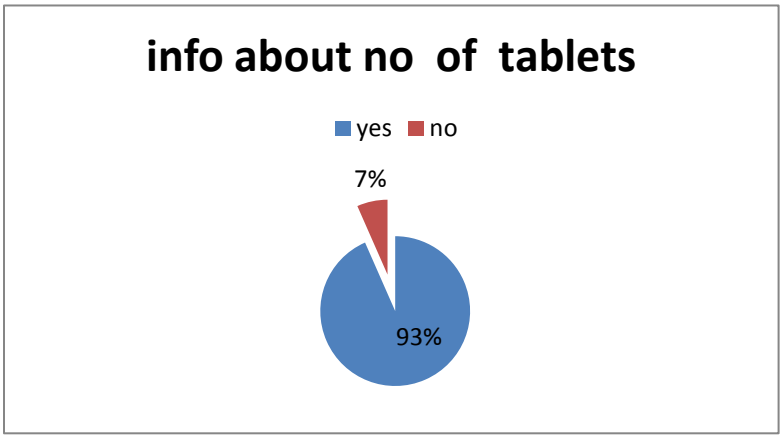


Out of the people who have info about misoprostol 80% had info about side effects of misoprostol and 18% don't know about the side effects of mesoprostol .

Figure 8: what side side effects were you told?

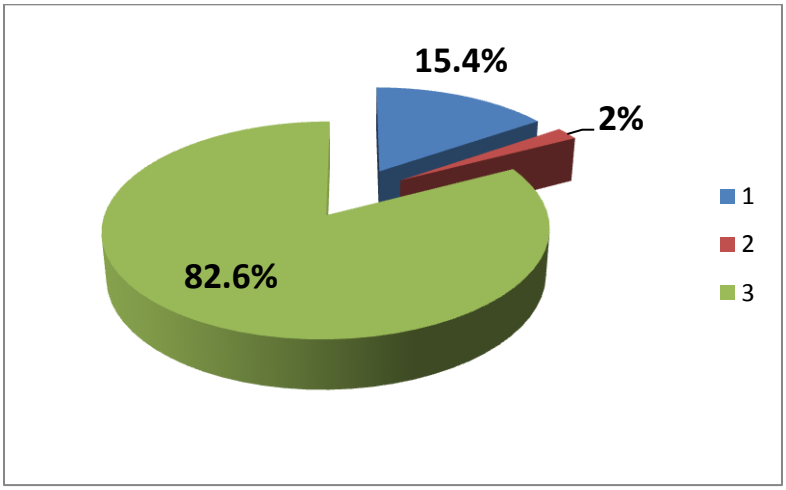
Column1	Column2
1-Shivering,2-Nausea,3-Abdominal Cramping,4-Vomiting,	39.5%
1-Shivering,2-Nausea,3-Abdominal Cramping,4-Vomiting,5-Diarrhea,6-RaiseOfTemperature,	28.4%
1-Shivering,4-Vomiting,	31.9%
6-RaiseOfTemperature,	0.1%
7-No Information About Side Effects,	0.1%

\Figure 9: No of tablet should be taken?



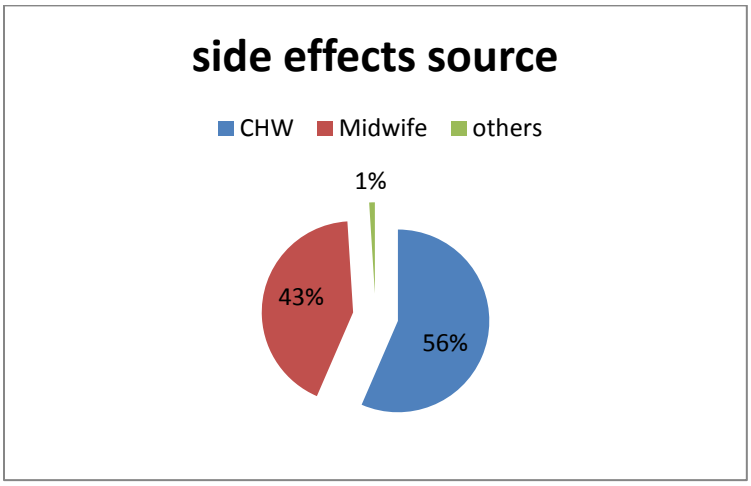
When asked about the knowledge regarding the no. of tablets to be taken 93% had info about the number of tablets to be taken and 7% did not have info regarding the no. of tablets to be taken .

Figure 10: How many tablets should be taken?



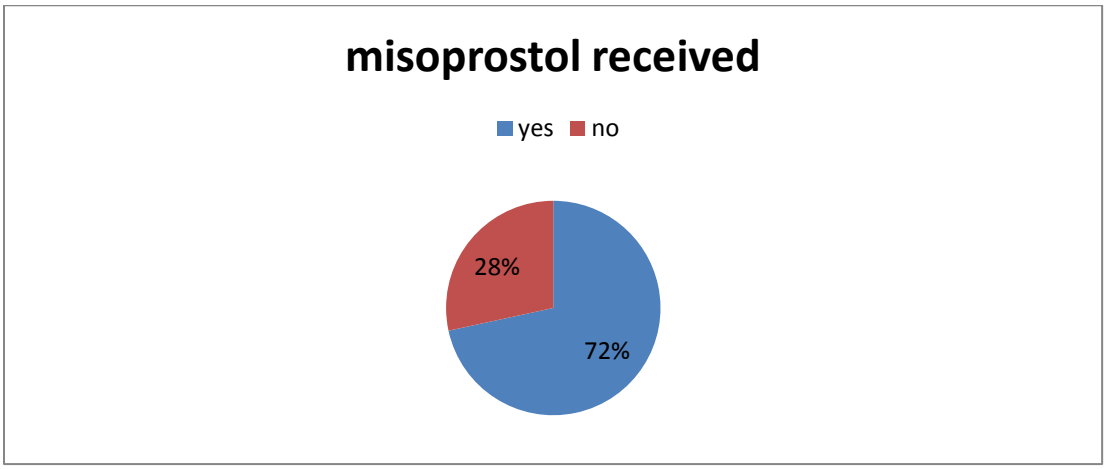
82.6% know that 3 tablets are to be taken ,15.4% people said that 1 tablet is to be taken and 2% said 2 tablets are to be taken

Figur11: From whom did you get info about Misoprostol side effects



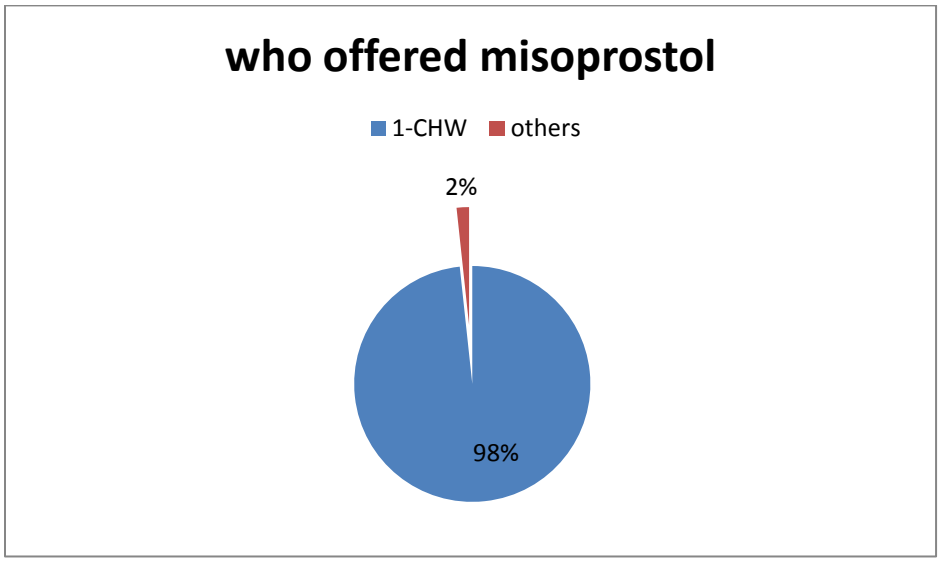
56% of the people got info about mesoprostol from chw, 43% of people got info midwife and 1% got info from some other source

Figure 12: Did anyone offer you Misoprostol at any time during this last pregnancy or delivery ?



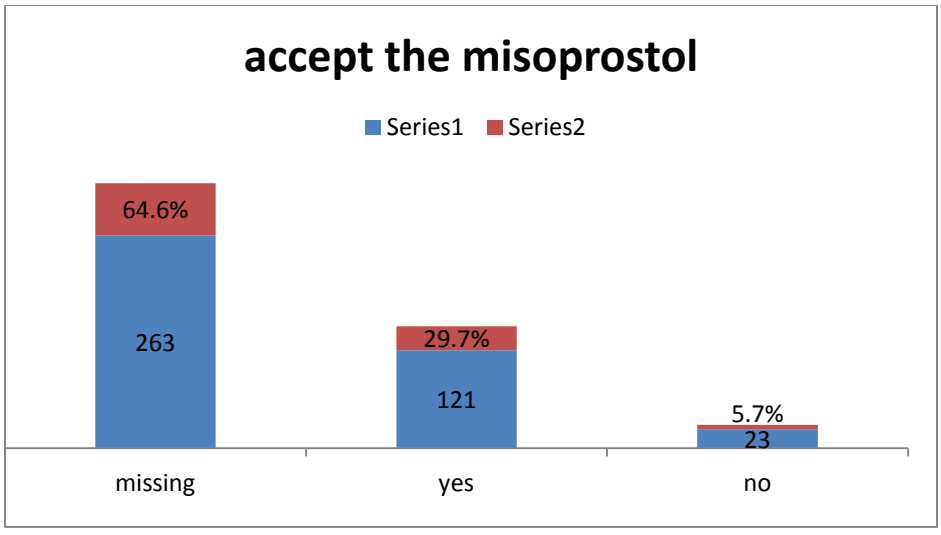
72% of the respondents told that they received misoprostol during their last pregnancy and 28% did not receive misoprostol .

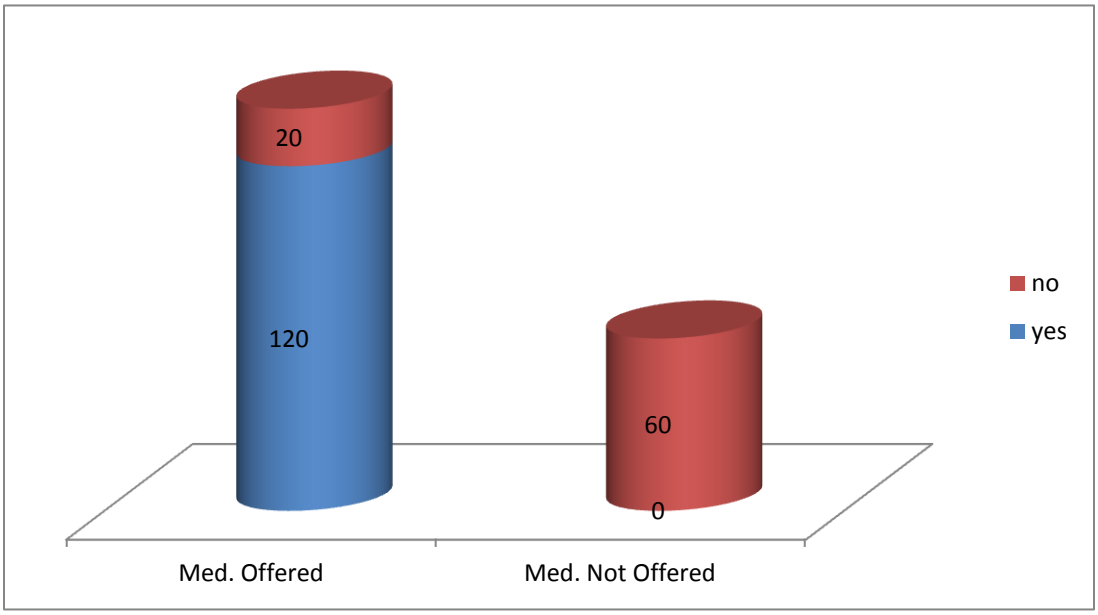
Figure13: who offered you Misoprostol ?



98% of the respondents were offered misoprostol by the chw and 2% by the other source .

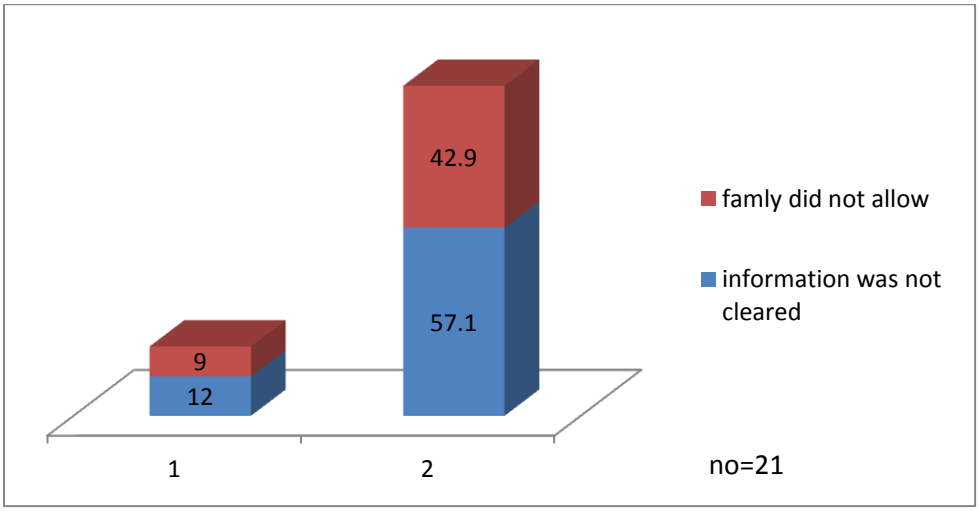
Figure 14: Did you accept the Misoprostol when it was offered to you?





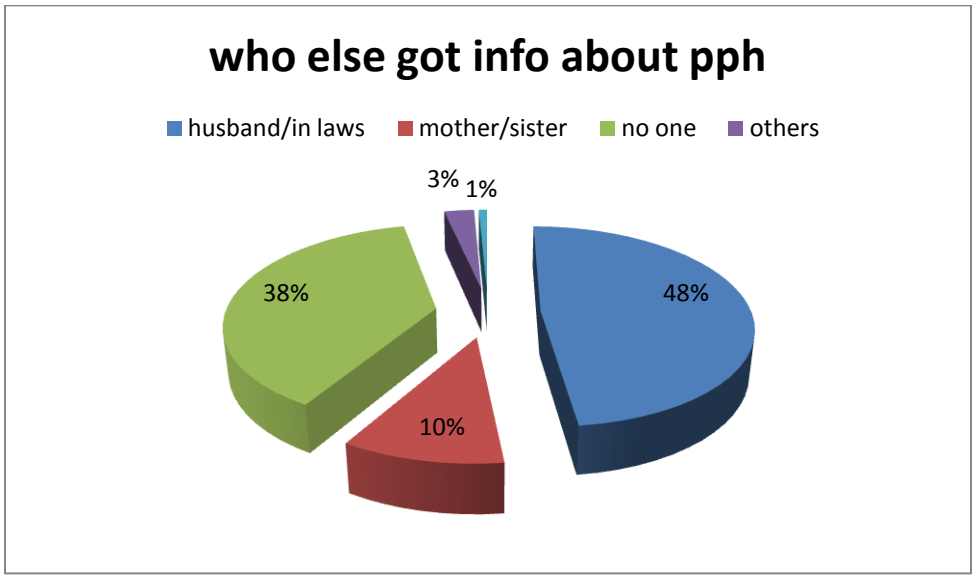
Crosstab of 12 *14

Figure 15: why did you not accept the Misoprostol?



Out of the 21 respondents who did not accept the medicine 42.9 % did not accept because the family did not allow them to take the medicine and 57.1 said that the info was not clear that is why they did not accept the medicine

Figure 16: who else in your family besides you received info about bleeding after child birth ?



When asked about that who else got info about PPH 48% said that their husband and in laws got the info , 10% said that mother and sister also got info , 38% said no one other than them .

Figure 17: info about sings of excessive bleeding?

Did you receive any information about the signs of excessive bleeding?		
	Frequency	Percent
yes	282	69.0
no	126	31.0
Total	408	100

Figure 18: what sings of excessive bleeding were you told?

What signs of excessive bleeding were you told?		
1-The bleeding soaks 2 sarongs or more,2-Feel weak and faint,3-Woman bleed and turn unconscious,4-Blood clots are passed,	192	68.6
2-Feel weak and faint,3-Woman bleed and turn unconscious,	73	26.1
3-Woman bleed and turn unconscious,	10	3.6
3-Woman bleed and turn unconscious,4-Blood clots are passed,	1	0.4
4-Blood clots are passed,	4	1.4

	280	100.0

Figure 19:Did you receive any information about the cause of excessive bleeding?

Did you receive any information about the causes of excessive bleeding?		
	Frequency	Percentage
Yes	267	65.6
No	140	34.4
Total	407	100.0

Figure 20: what cause of excessive bleeding were you told?

what cause of excessive bleeding were you told?		
	Frequency	%
1-Womb does not get firm after placenta comes out,	75	27.6
2-Placenta or part of placenta is left in the womb,	150	55.1
2-Placenta or part of placenta is left in the womb,3-There is an injury or cut on the womb or the opening of the womb or birth canal,	21	7.7
2-Placenta or part of placenta is left in the womb,96,	26	9.6
Total	272	100.0

Figure 21: no of ANC Visits?

How many times did you attend antenatal clinic in this pregnancy					
	1	39	10.7		
	2	80	21.9		
	3	72	19.7		
	4	175	47.8		
	Total	366	100.0		

Figure 22: baby dead or alive:

Out of all the women interviewed 99% said that their baby is alive and 1% said that that their baby is dead .

Delivery information

Figure 22: where was she/he born?

	Frequency	%
1-AT HOME	157	38.6
3-MIDWIFES HOUSE	3	0.7
4-BHC	21	5.2
5-MATERNITY CLINIC	17	4.2
6-CHC / HOSPITAL	209	51.4
Total	407	100.0

Figure 23 : who delivered him/her

Who delivered him/her?			
		Frequency	%
	Dai	137	33.7
	1-Doctor-OBGYN specialist	9	2.2
	2-Doctor-general practitioner	14	3.4
	3- Midwife	225	55.3
	4-TBA	14	3.4
	5-Friend/Relative	8	2.0
	Total	407	100.0

Figure 24: At what point in your labor and child birth did you go to this facility ?

At what point in your labor and child birth did you go to this facility?		
	Frequency	Percent
Did not go	157	38.6
1-Before the baby was born	242	59.5
1-Before the baby was born96	1	0.2
2-After the baby was born	3	0.7
3-After the baby and placenta were delivered	4	1.0
Total	407	100

Q. How many clothes did you use to absorb the blood during the first 24 hours after your baby

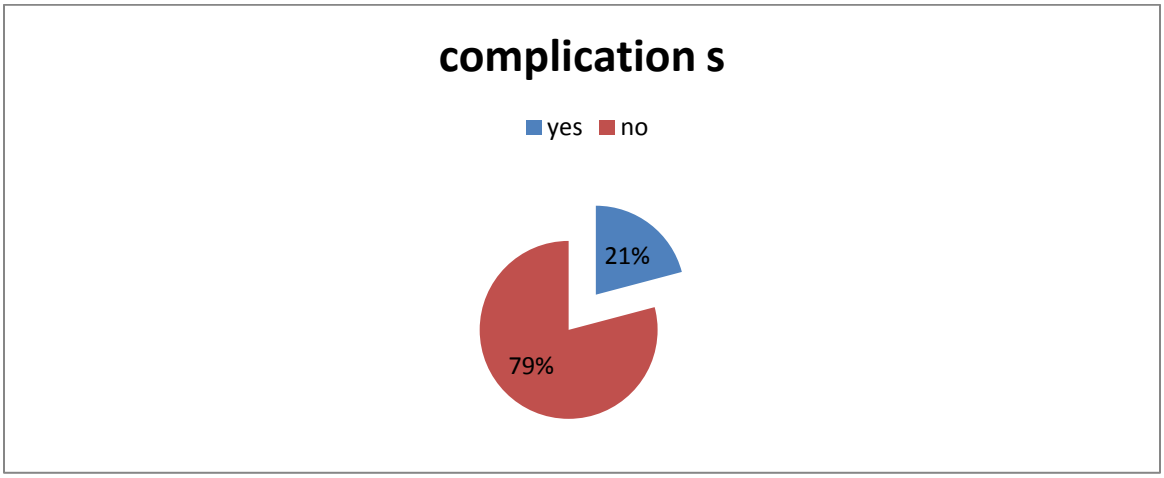
How many cloths did you use to absorb the blood during the first 24 hours after your baby was born?			
		Frequency	%
	up to 3 clothes	360	88.5
	more than 3	91	22.4
	Total	407	100

was born?

Q.complications			
	Yes%	No%	Total
Naausea	21	79	407
vominting	11.8	88.2	407
fever	32	68	407
Abdominal cramping	72.7	27.3	407
Watery stoll	4.7	95.1	407

Misoprostol side effects					
	nausea	vomiting	fever	Abdominal cramping	Watery stool
1-One half hour or less	29.4	38	20.3	6.8	
2-Between one half hour and one hour	21.2	30	25.0	10.2	
3-More than one hour to twohours	24.7	8	21.1	13.9	
4-More than 2 hours	24.7	24	33.6	69.0	
total	100	100	100	100	

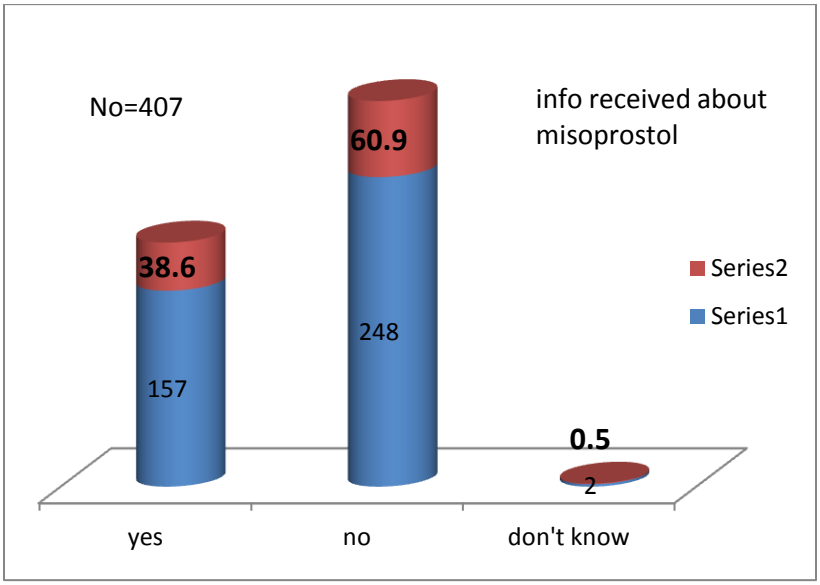
Complications :

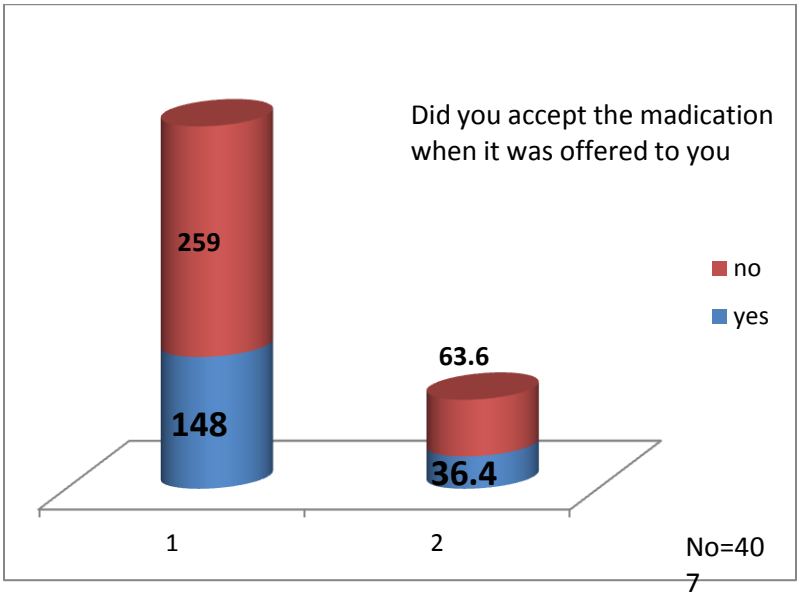


79% of the respondents experienced complications during and after child and 21% did not experience any complications .

1-Long labor	30.8
2-Bleeding	52.7
3-Placenta did not deliver soon enough	3.3
others	13.2

Utterotonic Protection Coverage(annex)





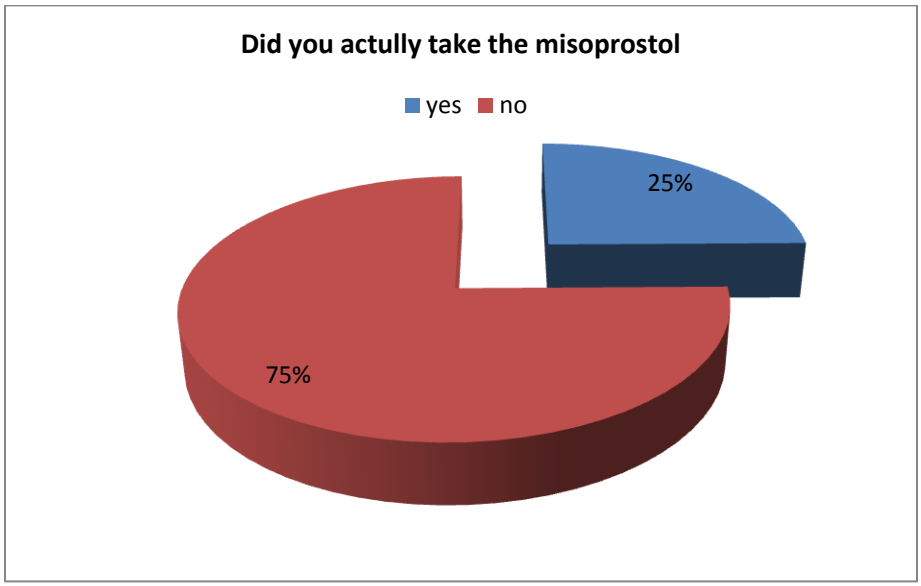

Did you actully take the misoprostol
yes
no
25%
75%

Figure :1

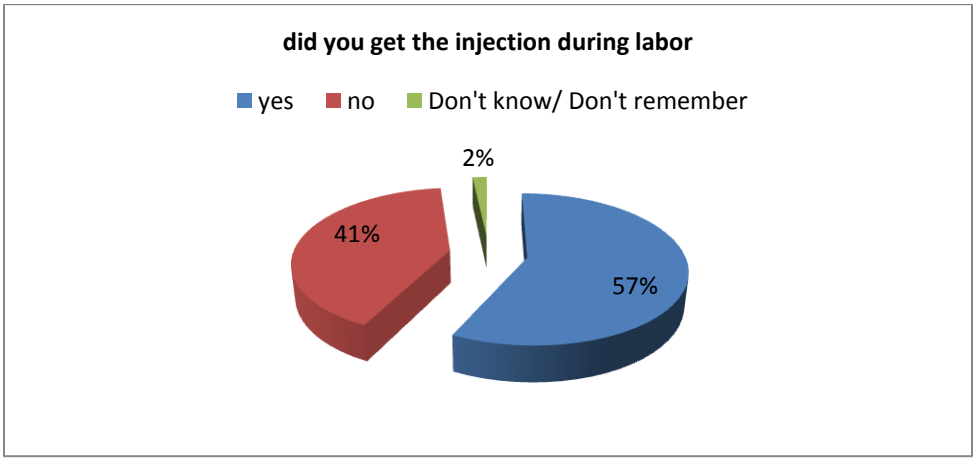

did you get the injection during labor
yes
no
Don't know/ Don't remember
2%
41%
57%

Figure2:

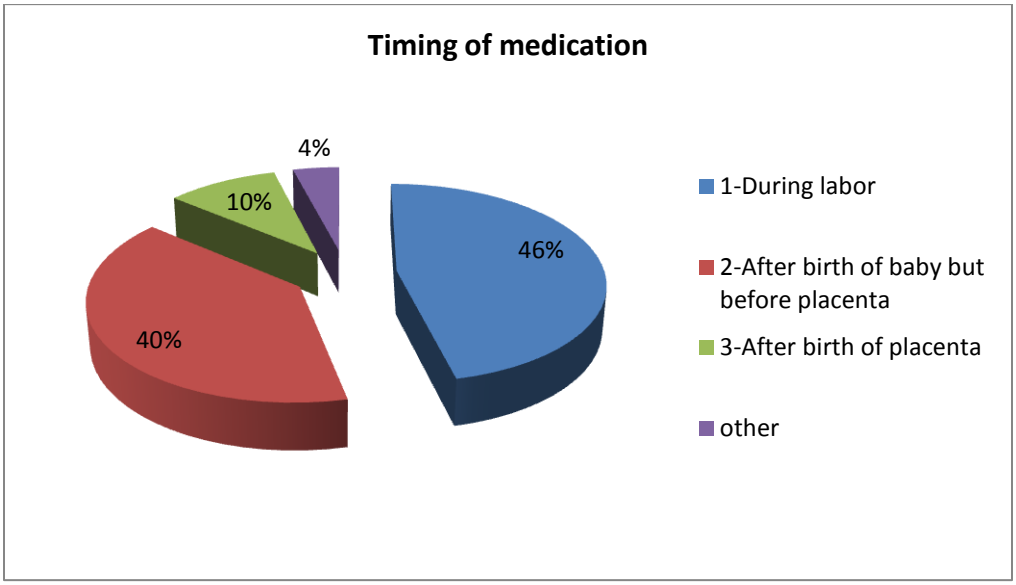
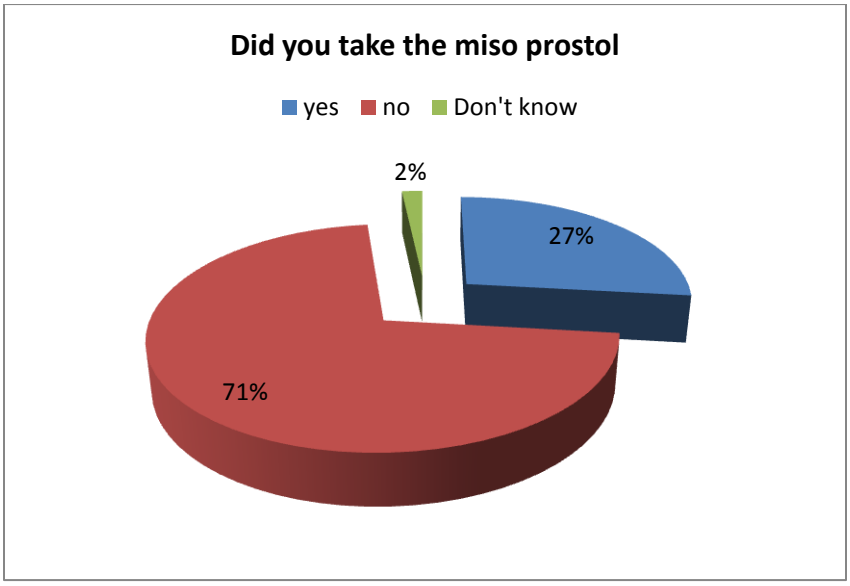


Figure3: did you take the misoprostol



1-My Midwife Gave Me The Injection (Oxytocin) Instead,	102	33.8
7-I DidnT Have Any Information About It,	99	32.8
7-I DidnT Have Any Information About It,9-Did Not Have The Medication,	51	16.9
my family did allow me	40	13.2

The 71 % who gave the no they received the injection from the midwife and others answer that their family did not want me to take misoprostol

Figure 4: when did you take the Misoprostol tablet?

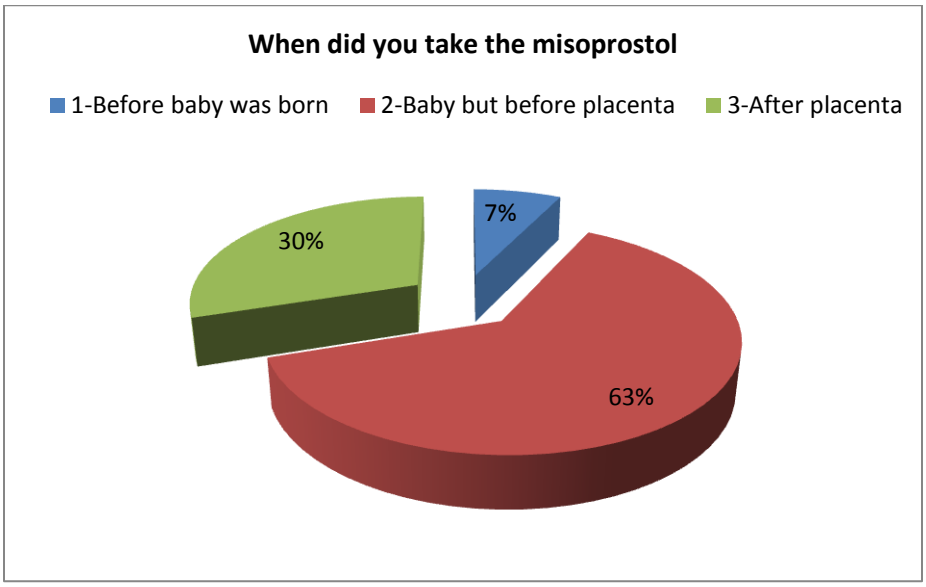
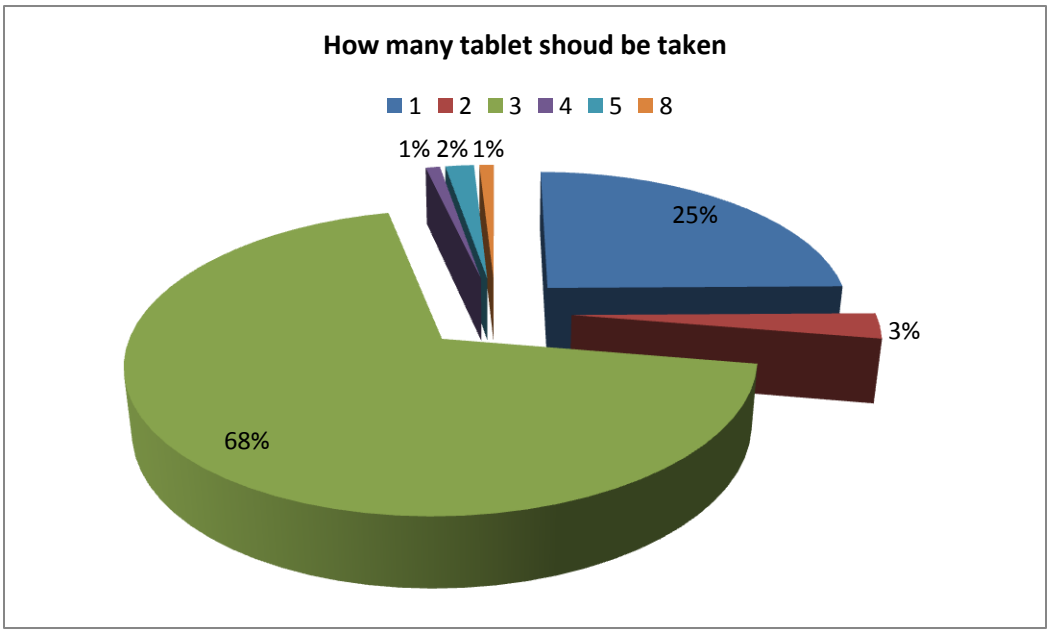
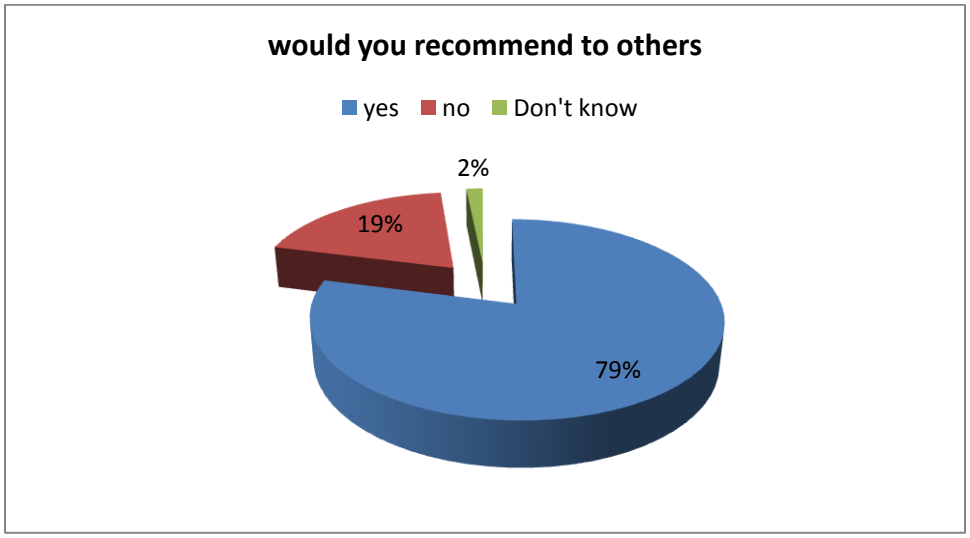


Figure5: How many tablet should be taken?



Acceptability of Misoprostol



In the above chart we can say that 79% gave the answer yest that means they would recommend this others.

Figure2: would you use it again?

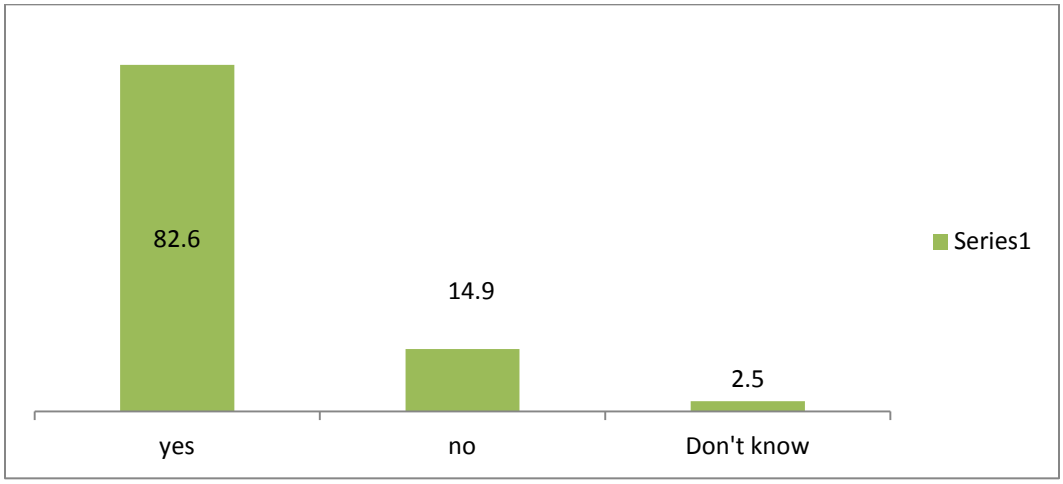


Figure3: would you purchase it?

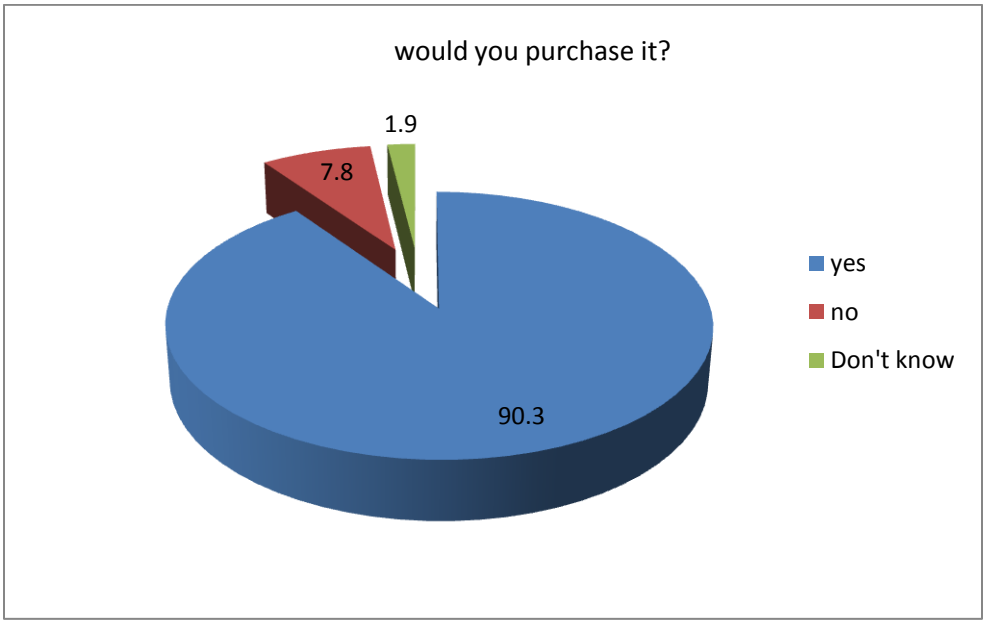
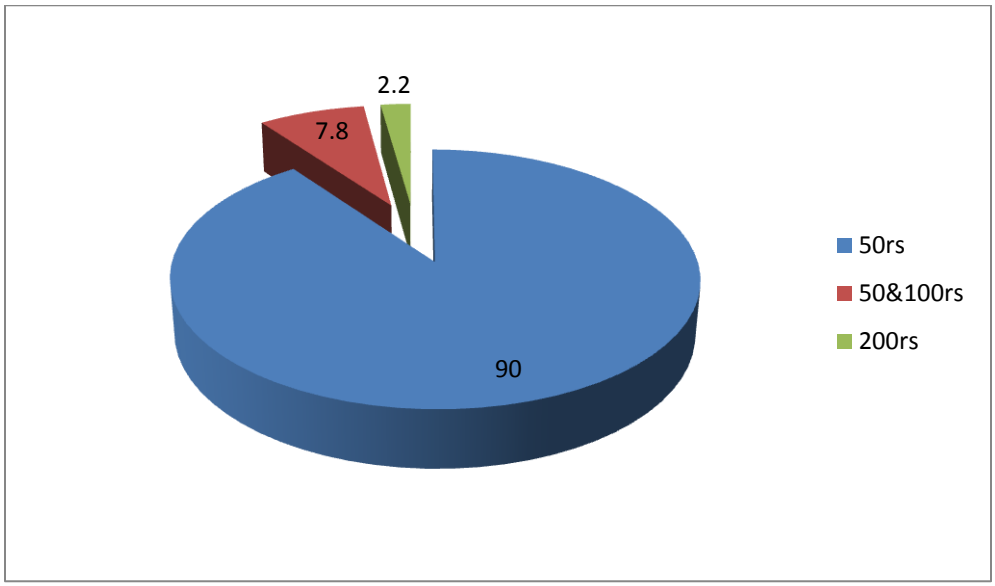


Figure 4: how much you will pay for it?



Wealth Index

Figure1:

source of income		
	Frequency	Percent
self employee	127	31.2
employee	280	68.8
Total	407	100.0

Figure2: Source of Lighting

source of lighting		
	Frequency	Percent
Non electrical source	174	42.8
electrical	1	0.2
others	232	57.0
Total	407	100

Fiigure3:

drinking water		
	Frequency	Percent
unsafe	166	40.8
safe	241	59.2
Total	407	100

Figure4 : Fuel for cooking:

Fuel for cooking		
	Frequency	Percent
wood	287	70.5
Benzonoid	116	28.5
Electrical means	4	1.0
Total	407	100

Figure5: Wealth index overall

wealth index overall		
	Frequency	Percent
low income	102	25.1
middle income	288	70.8
fair income	17	4.2
Total	407	100

Distance from the health facility

What is the mean of transportation you usually use for going to the health facility		
	Frequency	Percent
1-Vehicle,	126	31.0
1-Vehicle,2-Donkey/horse,	54	13.3
4-Go by foot,	166	40.8
others	65	16.0
Total	407	

Figure2:

health facility location		
	Frequency	Percent
near by	362	88.9
far away	15	3.7
very far away	30	7.4
Total	407	100

Etthenic Background

Ethenic Background		
	Frequency	Percent
1-PASHTOON,	72	17.4
2-TAJIK,	141	34.6
3-UZBIK,	134	32.9
6-ARAB,	15	3.7
96,	45	11.1
Total	407	100

Discussion

This study has shown that it is feasible to achieve high population coverage of misoprostol through distribution by trained community health worker. The approach was especially effective in extending such protection to the disadvantaged—women who were poorer, illiterate, or living in more remote areas.

Furthermore, we showed that expanding access to uterotonic protection through community-based distribution of misoprostol and self-administration can complement efforts to increase institutional deliveries. According to study findings, of all the districts in the target area, jawzanhad one of the biggest in institutional deliveries

The work described here was implemented largely with the resources of the district public health system and with only modest external support, much of which was for initial training, monitoring, and documentation. While the misoprostol was donated, the expense (about US $0.30 per woman for all 3 tablets) can be managed even with the government's resource constraints.

An important determinant of treatment acceptability is toleration of side effects. Several investigators have expressed concern that frequency of side effects, notably shivering, may limit the utility of misoprostol . Although we documented shivering in 1 in every 5–6 women using misoprostol, this did not undermine willingness to use it; this is consistent with findings by Caliskan et al.

To be successful at scale, an intervention also needs to be acceptable to those providing the service. With the new maternal-neonatal death.their average number of hours per week may have increased, although we did not document this. One could imagine that for some this may limit their willingness to take on further such duties. Afghanistan has periodically conducted surveys of PPHs. In 2005, following' assumption of misoprostol-related and other new duties, the same question was asked. Of 100 respondents, 69% said more, 25% said the same, and 6% said fewer hours.

Misoprostol is an abortifacient and is also used in labor induction; if used inappropriately intrapartum or while a woman is pregnant, it can cause complications for the woman and fetus.

The community volunteers dispensing misoprostol were trained to advise women to take the medication only after delivery. We documented that this information was universally given and understood and almost universally complied with. We believe it is important that misoprostol be dispensed with clear instruction on not taking it in pregnancy or during labor; with this information given, based on our experience in Banke we believe it can be used safely at scale in community programs.

In this study, for safety monitoring, we also tracked maternal mortality. We feel that although this was not done through household level registration and demographic surveillance, measures taken to ensure completeness were robust (including special follow-up efforts in low-performance areas). Cause of death was determined by verbal autopsy. The numbers of deaths by specific causes are too small to draw any conclusions about any specific protective or risk-enhancing effect of misoprostol. Nevertheless, the total number of deaths documented, particularly among those using misoprostol, was lower than expected given Nepal's national maternal mortality ratio. Although this suggests there may have been impact, in the absence of pre-intervention mortality documentation, we cannot determine the impact on maternal mortality. Furthermore, any reduction in mortality that occurred could not be attributed solely to increased uterotonic coverage. The intervention included elements intended to improve utilization of other maternal health services and encourage appropriate household practices.

There are several limitations to this study. Our objective was to explore the feasibility of a large-scale approach in a difficult setting where few women deliver in health facilities with trained workers. This is an inherently weak design for making causal inference although for the main measure used in this study—uterotonic protection—the lack of comparison area does not weaken our conclusions. For other observed changes it is important to note that the misoprostol intervention was not implemented in isolation. Other policy and program initiatives occurred over this period and undoubtedly affected Banke. Notably, the government introduced a new program in which service providers were given an incentive to attend deliveries and women delivering in health facilities were given a payment to partially offset transport and other costs. This probably contributed to increasing the proportion of deliveries occurring in health facilities.

The main measure of program performance we used was uterotonic protection, which included use of misoprostol or receipt of an injection, presumed to be oxytocin, after delivery. It is

possible that we have overestimated the coverage estimate for oxytocin provided for PPH prevention because the information was collected through household surveys and it was therefore not possible to confirm that reported injections were oxytocin. Furthermore, some respondents may have misreportedoxytocin given for labor augmentation as immediate postpartum oxytocin for PPH prevention.

Nevertheless, lessons from this study can help direct public health practice in Afghanistan and elsewhere. First, we suggest that uterotonic coverage—the proportion of all deliveries protected through use of oxytocin, misoprostol or other uterotonics—would be a useful indicator for monitoring progress in extending safe-motherhood services.

We believe the next logical step in Afghanistan, before making decisions on country-wide implementation, would be a limited scale-up of community-based distribution of misoprostol .validating that adequate program performance (including safe use) can be maintained using a more streamlined approach within the district public health system, minimizing the need for external resources.

There has been a sometimes unhelpful tension in safe-motherhood efforts between advocates of institutional delivery services and those promoting community-based approaches. Unlike child health, which benefits from several highly effective community-based interventions, maternal health is inherently more challenging. To achieve substantial reductions in maternal risk, there is no substitute for wide use of skilled care at delivery, including a full range of clinical support services and ready access to full emergency obstetric care. But the excellent need not be the enemy of the good. Substantially increasing skilled care at delivery will be difficult in Afghanistan and elsewhere. As we continue efforts to improve coverage and quality of delivery services, interim measures can contribute to driving down the burden of maternal deaths. This study has demonstrated that high coverage with a preventive dose of uterotonic can be achieved with modest means. Much wider use of misoprostol, focusing on those not yet reachable with more definitive care, targets the principal cause of maternal death in low-resource countries and has the potential to significantly reduce PPH deaths due to atone.

5. CONCLUSIONS:

High coverage is possible even in difficult areas where less than 25% of births are attended by a skilled provide the majority of CHWs believed that misoprostol was easily accepted by women, use correctly, and effective in preventing PPH. CHWs also noted that the project underscored the role of midwives in pregnancy and the importance of delivering with a skilled provider in a health facility. Many CHWs stated that community recognition was a primary impetus that motivated them fulfill their responsibilities related to the project, and their communities devised creative and innovative methods of providing recognition for their work. CHWs trained for this project were considered to be the main source for information about birth preparedness, complication readiness, PPH, and misoprostol. CHWshave time to spend with the women and their families and are able to convey the simple educational messages. These educational messages were also effective; women were able to recall key information regarding PPH. Contrary to popular belief, the concept of prevention is understood by rural women in Afghanistan. Providing educational messages to the women's support persons works. Involving the mother-in-law, sister-in-law, husband, and mother in the educational process reinforced the messages and ensured that at nearly all births there was at least one support person who was knowledgeable about PPH and misoprostol.the intervention was highly acceptable to women and their families, and many women said they would be willing to pay for misoprostol in the future or recommend it to a friend ,the intervention is feasible. Trained CHWs are an acceptable source of educational messages andmisoprostol distribution, and they were able to reach many women

Afghanistan faces a huge burden of maternal mortality. The health care system in Afghanistan is undergoing a period of massive reconstruction and reform following more than 20 years of civil war and destruction. Although maternal and neonatal health is regarded as a priority publichealth concern for the Government of Afghanistan, and interventions such as the nationalprogram for training and deploying of skilled midwives is receiving substantial attention, it will take many years before there are sufficient midwives, particularly in the rural areas. Simplesolutions that can take health care to the place where most women deliver are therefore needed toa most disheartening abuse of a fundamental human right—the right of a woman tosafely pass through childbirth.PPH, the most common cause of maternal death in Afghanistan, cannot be predicted,

and once itoccurs, rapid and complex therapy is needed to save the woman's life. The key to preventingmaternal death is universal coverage with effective interventions. Misoprostol has been shown tobe effective in preventing PPH, but the real question is how to achieve high coverage safely. Acceptably, and equitably, even for the most rural and remote populations. This study has demonstrated that a community-based distribution system of misoprostol, founded on simple educational messages provided by CHWs, can indeed achieve near universal coverage of ineffective method of preventing maternal deaths due to PPH.

RECOMMENDATIONS:

- we suggest that uterotonic coverage—the proportion of all deliveries protected through use of oxytocin, misoprostol or other uterotonics—would be a useful indicator for monitoring progress in extending safe-motherhood services.
- Misoprostol info should be provided by CHW, and there should be a proper monitoring.
- Misoprostol should be easily available..
- Before making decisions on country-wide implementation, would be a limited scale-up of community-based distribution of misoprostol. Validating that adequate program performance (including safe use) can be maintained using a more streamlined approach within the district public health system, minimizing the need for external resources.
- To achieve substantial reductions in maternal risk, there is no substitute for wide use of skilled care at delivery, including a full range of clinical support services and ready access to full emergency obstetric care, continue efforts to improve coverage and quality of delivery services, interim measures can contribute to driving down the burden of maternal deaths.
- study has demonstrated that high coverage with a preventive dose of uterotonic can be achieved with modest means. Much wider use of Misoprostol, focusing on those not yet reachable with more definitive care, targets the principal cause of maternal death in low-resource countries and has the potential to significantly reduce PPH deaths due to atone.

- Providing incentives to the chw's can help in getting an extra effort from them to reach the community since they are volunteering for this task and not paid anything

- Involvement of midwifes and emphasizing on their role in providing assisted deliveries and providing knowledge about pph can also help in taking the reach of this community based programme to another level .

- A proper monitoring system has to be in place to keep a check whether the chw's are doing their role properly or not .

- A systemic reporting syatem has to be in place to whom all the chw's has to report to eliminate the chances of malpractice .

- Opening up of more health posts in far flung villages from where people have to travel for hrs to reach a health facility can be another method of increasing the reach of the programme .

- In addition to going house to house some common sessions in the middle of the village can be conducted to increase the info .

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