



AGA KHAN FOUNDATION

The First Annual Report (2008-2009) for the:

Chitral Child Survival Program (CCSP)

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ACRONYMS

AKDN	Aga Khan Development Network
AKF USA	Aga-Khan Foundation, USA
AKF,P	Aga Khan Foundation, Pakistan
AKHS,P	Aga Khan Health Services, Pakistan
AKRSP	Aga Khan Rural Support Program
AKU	Aga Khan University
BCC	Behaviour Change Communication
BPCR	Birth Preparedness and Complications Readiness
CBSGs	Community Based Savings Groups
CCSP	Chitral Child Survival Program
CHD	Community Health Department
CHN	Community Health Nurse
CME	Community Midwifery Education
CMW	Community Midwife
DAC	District Advisory Committee
DHC	District Health Committee
DHDC	District Health Development Center
DHQ	District Headquarters
DIP	Detailed Implementation Plan
GOP's	Government of Pakistan's
LHS	Lady Health Supervisors
LHV	Lady Health Visitor
LHWs	Lady Health Workers
LoU	Letter of Understanding
M&E	Monitoring and Evaluation
MCHIP	Maternal and Child Health Integrated Program
MIS	Management Information System
NIPS	National Institute of Population Studies
NMNCHP	National Maternal, Neonatal, and Child Health Program
NWFP	North-West Frontier Province
OR	Operations Research
PNC	Pakistan Nursing Council
PPP	Public Private Partnership
SPC	Strategic Planning Committee
TBAs	Traditional Birth Attendants

A. MAIN ACCOMPLISHMENTS

The Chitral Child Survival Program (CCSP) had a successful first year, marked with major achievements including: development of a Public Private Partnership (PPP) with the National MNCH Program (NMNCHP), recruitment of key project staff, selection of intervention areas and community midwife (CMW) candidates, establishment of a midwifery school in Chitral, completion of the baseline survey, development of a strategy for behaviour change communication (BCC), development of formative research tools for BCC, and development of the strategy to reduce financial barriers to obstetric and neonatal care.

Overall

1. Relationship with the National Maternal, Neonatal, and Child Health Program (NMNCHP):

The relationship between CCSP and the NMNCHP has been a key element of success for the program to date. During the first month of CCSP, the implementing agencies (Aga Khan Foundation, Pakistan (AKF,P) and Aga Khan Health Services, Pakistan (AKHS,P)) initiated the process to develop a PPP between AKF,P and the NMNCHP in training and deploying CMWs in Chitral. After a series of discussions and negotiations with government entities and AKDN stakeholders, AKF,P signed a Letter of Understanding (LoU) with the NMNCHP on September 8, 2009 in the presence of Dr. Azam Saleem, Joint Secretary, Ministry of Health (see Annexes 3 and 4).

The LoU describes how AKF,P and NMNCHP will work together to establish a midwifery school in Chitral – one of the 22 midwifery schools which the government aims to establish in the North-West Frontier Province (NWFP) through the NMNCHP – and support CMWs following deployment. The District Health Development Center (DHDC) Midwifery School Chitral contains two batches of students – one recruited and trained through the NMNCHP and one through CCSP. AKF,P is to renovate the school and facilitate its accreditation by the Pakistan Nursing Council (PNC). In return, the NMNCHP plans to provide one year of financial support to CMWs once deployed (as per the national policy for CMWs) and take over supervision of CMWs once CCSP comes to a close. CCSP has made multiple contributions toward the PPP including: a) development of a skills lab and library for the DHDC Midwifery school; 2) training NMNCHP and CCSP tutors in teaching methodologies; and 3) establishing infection control measures and providing equipment for the labour room District Headquarters (DHQ) Hospital – which is the ‘training’ hospital for DHDC Midwifery School Chitral. It is anticipated that these measures will enable the DHDC Midwifery School to meet accreditation requirements; accreditation is expected in November 2009.

Members of the NMNCHP have expressed interest in replicating some aspects of CCSP at the national level – including the process of selecting CMW candidates, institutionalizing PPPs for MCH, and introducing quality assurance mechanisms for CMW training programs. AKF,P is in the process of developing a national-level working group with the NMNCHP and CCSP implementing agencies to explore opportunities to replicate elements CCSP in other districts.

2. Recruitment of Staff: Two key positions – the Monitoring and Evaluation (M&E) Manager and the Program Coordinator – were recruited through a panel comprised of the CEO, AKHS,P, the General Manager AKHS,P, the Local Technical Backstop (AKF,P) and a representative of district government of Chitral. Both were endorsed by AKF USA and AKF Geneva and joined the project in December 2008. All other management and advisory positions were already filled by existing Aga Khan Development Network (AKDN) staff members in Pakistan, the US, and Geneva.

3. Operations Research: AKF USA has maintained frequent contact with Maternal and Child Health Integrated Program (MCHIP) to revise and finalize the Operations Research (OR). MCHIP approved the general concept for the OR in October, 2009. The OR seeks to determine whether CMWs can be sustained as private providers in their communities while maintaining

high coverage of quality maternal and child health (MCH) services (see Section F). AKF USA plans to collaborate with the Aga Khan University (AKU) – a world-renowned research university based in Karachi, Pakistan that has extensive experience in MCH research – as a research partner for the OR. It is anticipated that the final design and research protocol for OR will be completed by the end of 2010.

4. Monitoring and Evaluation Plan: The CCSP team developed a quality assurance mechanism to monitor the quality of the CMW training program. The NMNCHP has not developed a monitoring mechanism to date, and has asked to use CCSP's tools in Chitral. Selected results from these tools are available in Annex 1 and indicate that the quality of CMW training has been steadily improving over the last 6 months. AKF USA met with the CORE M&E Working Group where it was determined that the tools developed for the Community Midwifery Education (CME) program in Afghanistan are some of the best examples of quality monitoring mechanism for CMW training programs.¹ As a result, the CCSP team is coordinating with AKHS, Afghanistan (currently implementing CME in two provinces in Afghanistan) to build up CCSP's quality assurance system using the experience and tools of CME-Afghanistan.

The M&E Plan submitted with the DIP defines key project indicators once CMWs are deployed in communities. CCSP will contract an external consultant to work alongside CCSP to develop the MIS (Management Information System) data base and tools to track these indicators (see Section D).

5. Baseline Survey

CCSP in collaboration with the National Institute of Population Studies (NIPS) completed the baseline survey, which included all relevant Rapid CATCH indicators, in March 2009. The CCSP team has reviewed the baseline and used the findings to influence the shape of the CCSP program. For example, the following findings will be further explored during formative research in November-December 2009:

- The baseline survey determined that skin-to-skin contact immediately following birth is quite uncommon (only 21% in intervention areas) when compared to other newborn care: practices, e.g. drying baby (94%), cleaning eyes (82%), wrapping baby in a cloth (89%). Formative research will explore underlying reasons for this behaviour.
- Provision of Vitamin A was relatively low: only 46% of children (6-23 months) were given Vitamin A in the previous 6 months – compared to 56% in NWFP and 60% in Pakistan as a whole. Formative research will look into some of the underlying issues for low Vitamin A coverage.
- The baseline showed that nearly all women knew of at least one type of modern contraception and where to obtain the method (87.7%), but only 24% of reproductive-age women currently use modern contraceptives. Further, the majority of women felt that the appropriate interval between births should be at least 2-3 years or more. Formative research will explore barriers to use of family planning methods, and the potential for increasing use.

Major Achievements by Outcome Area

Outcome Area A: *Increased awareness of obstetric and neonatal complications, increased utilization of birth preparedness and complications readiness (BPCR) plans, and an improved enabling environment for maternal, neonatal, and child health MNCH*

The BCC Strategy, developed and submitted with the Detailed Implementation Plan (DIP), will be revised and finalized following formative research and through continuous dialogues with

¹ For reference, see: Establishment of an accreditation system for midwifery education in Afghanistan: Maintaining quality during national expansion, Public Health, Volume 122, Issue 6, Pages 558-567, J. Smith, S. Currie, P. Azfar, A. Javed Rahmanzai

intervention communities. The BCC Strategy aims to improve the use of skilled birth attendants throughout the maternal – neonatal continuum of care by increasing awareness of obstetric and neonatal complications and creating demand for BPCR plans. The BPCR strategy will empower women to develop a plan for delivery that includes: a) knowledge of danger signs signalling the importance of accessing emergency care; b) the place to give birth; c) the skilled birth-attendant to access; d) the plan for transportation to facility (if needed); and e) the plan for saving and accessing funds needed to cover the cost of delivery. The remaining components of CCSP seek to provide services and resources (transportation mechanisms, savings plans, trained CMWs, etc.) which will meet these demands.

The CCSP team spent several months preparing and finalizing formative research tools and methodology. (Formative Research Tools and Protocols are available in Annex 5). Formative research builds upon the findings of the baseline survey and will address barriers to seeking skilled obstetric and neonatal care and identify opportunities for behaviour change. Research results will be used to develop key messages for CCSP and identify the platforms needed to disseminate messages and mobilize communities around MCH. The formative research protocol was approved by the Strategic Planning Committee (SPC) of AKHS,P in September, 2009, and researcher supervisors and data collectors have been trained. It is expected that data collection will be completed before the end of 2010.

Plans for community mobilization – including platforms, change agents, and delivery mechanisms -- are still under development. The Aga Khan Rural Support Program (AKRSP) has over 25 years of experience in community mobilization in the Northern Areas and Chitral, and will work alongside AKHS,P and AKF,P to build an enabling environment for MCH in Chitral. CCSP implementing agencies will undertake a workshop in early 2010 to define and establish the strategy and implementation plan for community mobilization.

Outcome Area B: Strengthened CMW referrals linkages for obstetric and neonatal services

Plans for developing referral systems in Chitral were revised toward the end of Year 1. Activities are on track to finalize and institutionalize referral protocols and guidelines by the time CMWs are deployed in their communities (expected for January 2011). Establishing reliable communication mechanisms between communities, CMWs, and referral facilities may be more challenging than originally envisioned as plans to establish mobile telephone links through communication towers have been disrupted due to the surge of violence in Pakistan.

Outcome Area C: Increased availability of skilled community midwives

1. Selection of community clusters and recruitment of CMW candidates: Twenty-five community clusters were selected based on criteria outlined in the DIP, i.e., a) further than a one-hour walk to any first level health care facilities; b) between a one to 3.5 hours drive to a secondary level health facility; c) no skilled health provider present within the cluster; d) not served by the National MNCH Program; and e) having a minimum population of 3000 within a one hour walking distance.² All intervention areas were reviewed and endorsed by the District Health Committee (DHC)³ of Chitral, which has commended AKHS,P's decision to work in some of the district's most remote areas.

An advertisement was sent out to Mosques, Jamat Khana (community houses), Union Council Nazims, Counsellors and other public places and representatives to recruit eligible candidates. Thirty CMW candidates (to account for five drop-outs) were recruited; all met the following

2 One very remote community, which is a six-hour drive to the nearest secondary facility, was included because the AKHS,P team and local authorities argued that the community was among the neediest in Chitral.

3 The meeting was chaired by District Nazim Chitral, and the participants consisted of District Coordination Officer District Chitral, EDO(H) Chitral, EDO Planning and Finance, Program Manager Health AKF,P, General Manager AKHS,P, Regional Manager AKHS,P Chitral, Program Coordinator CCSP and Manager M&E-CCSP.

criteria: a) female, preferably married; b) between 18 – 35 years of age; c) permanent resident of village from which she is applying; d) graduate of grade 10 with minimum score of 45% marks, preferably in science subjects; e) commitment to complete 18 month training and annual refresher course; and f) commitment to continue CMW profession for at least 5 years.

All short-listed candidates took a written test followed by an interview. There were 40 marks for the written test, 15 for the interview, and 5 marks for marital status. The interview panel was comprised of the EDO Health District Chitral, Chairman Chitral Health Board AKHS,P, Principal DHDC Midwifery School, Program Coordinator CCSP and M&E Manager CCSP. The interview panel focussed on the motivation skills, power of expression and commitment of the candidate. CMWs began their training on March 1, 2009 according to the proposed workplan.

2. Establishment of DHDC Midwifery School: The DHDC Midwifery School was established by CCSP and NMNCHP and contains two classrooms (one for each batch of midwifery students), a skills lab, a library, and the principal's office. CCSP furnished the school and provided teaching aids, books, furniture, carpet and other necessary materials for the library. The skills lab includes equipment such as delivery kits, scales, and mannequins. It is anticipated that the school will be accredited in November 2009 (see Section C).

3. Establishment of Student Hostel and CCSP Office: Two buildings were rented near the DHDC Midwifery School to accommodate for CCSP's thirty students. Furniture, kitchen items and other necessary materials were purchased and support staff (two female and three male) were recruited to run the hostel. A separate program office was established for CCSP's staff on the premises of the AKHS,P regional office in Chitral. It was furnished appropriately and essential office items including stationary and two laptops were purchased for the program staff.

Outcome Area D: Reduced financial barriers to accessing obstetric and neonatal continuum of care

AKF finalized the strategy to develop a community financing mechanism in Chitral – a key innovation for CCSP. The initial design of the community financing mechanism was based on the principle of 'risk pooling', which assumed that: a) 'normal deliveries' would subsidize the cost of complicated deliveries; and b) pregnant women would pay a one-time premium of 500-800 Rps during the first trimester and be reimbursed a portion of delivery costs. This plan was based on a series of assumptions that were proven incorrect through formative work. Formative studies, carried out in May and June of 2009, determined that a) the premium level required to make the fund sustainable would be too high for families to be able/willing to pay; b) adverse selection places the fund at risk – women who anticipate a complicated delivery would disproportionately participate in fund, lead to a strongly negative cash-flow; and c) the level of participation required to achieve sufficient pooling would be very hard, if not impossible, to achieve.

Based on these findings, and intense internal dialogue among CCSP implementing agencies and discussions with USAID, it was determined that Community-Based Savings Groups (CBSGs) could be an appropriate mechanism for improving financial access for women for obstetric and neonatal care. CBSGs are relatively low cost and financially sustainable and can contribute towards good health-seeking behaviours among women. CBSGs are groups of about 25 self-selected members who save regularly and make loans from the accrued savings. Groups are entirely self-managed and transactions occur in front of all members present at meetings. In addition to regular savings, members create a social fund that all members have equal access to, regardless of the amount saved. Groups will be encouraged – primarily through the BCC campaign – to utilize the social fund to cover the cost of obstetric and neonatal care.

According to recent data from the program area, it is realistic to assume that the social fund could cover the costs of the continuum of care by CMWs, but will not provide sufficient funds for transportation or complex deliveries. The CCSP team will develop detailed monitoring mechanisms to track how groups utilize the social fund and the percentage of births (normal and

complicated) within the groups that are covered by the fund. In addition, AKF is exploring possibilities to introduce a voucher or insurance product in Chitral to cover the costs of emergency obstetrical and neonatal care (EmONC) through non-USAID funding sources.

CCSP will work to establish 400 CBSGs in the program area, reaching approximately 10,000 women. AKRSP has recruited staff to facilitate the formation of CBSGs, i.e., CBSG Facilitators. A full description of the revised strategy for community financing through CBSGs is available in Annex 6.

B. ACTIVITY STATUS

The following table includes only activities planned for Year 1 (as set out in the DIP). The revised workplan (see Annex 2) includes detailed workplan for years 2-5.

It should be noted that BCC activities for Year 1 (formative research and data analysis) are behind schedule because delivery of the baseline survey was delayed and it took longer than planned to develop a strategy for community financing. However, it is anticipated that key messages and platforms will be identified and all personnel will be trained before CMWs are deployed (around January 2011).

Project Objectives/ Results	Related Key Activities	Status of Activities	Comments
Outcome Area A: Increased awareness of obstetric and neonatal complications, increased utilization of birth preparedness and complications readiness (BPCR) plans, and an improved enabling environment for MNCH	Development of formative research tools	Completed in Sep. 2009	Formative research developed based on baseline survey findings and consultation with involved CCSP implementing agencies and BCC technical experts at Community Health Department (CHD) – AKHS,P.
	Approval of tools and methodologies through AKHS,P – SPC	Approved in Sept. 2009	
	Translate research instruments in Urdu	Completed in Oct. 2009	
	Formative research data collection & data analysis	Planned for Nov.-Dec. 2009	Training of research supervisors and data collectors in use of formative research tools began in Nov. 2009. Tools and methodologies will be piloted in Nov. 2009. Data collection will begin before the end of 2009.
Outcome Area B: Strengthened CMW referral linkages for obstetric and neonatal	Formative work to develop referral protocol/guidelines	Planned for Nov.-Dec. 2009	Referral protocols and guidelines will be finalized and institutionalized by the time CMWs are deployed into their communities, as per the original workplan.
	Mapping of service availability at each referral facility and seasonal conditions on road that	Planned for Nov.-Dec. 2009	

services	connect communities to facilities		
	Workshop to develop protocols for each level of referral	Q1 of Year 2	
Outcome Area C: Increased availability of trained community midwives (CMWs)	Identification & selection of 30 CMWs	Completed in Mar. 2009	Based on the set criteria CMWs were selected from 30 different community clusters.
	Establishment of Library, Skills Lab, Lecture Hall and Hostel for CMWs and provision of supplies to DHDC Training Facility	Completed in Apr. 2009	Some of these activities were completed upon the recommendation of the PNC Registrar following her first accreditation visit in June 2009.
	Establishment of infection control measures and provision of equipment to DHQ labor room	Completed in Sept. 2009	Completed upon the recommendation of PNC Registrar during her first accreditation visit in June 2009. This activity was not originally envisioned in the workplan.
	Accreditation of AKHS,P CMW Training Program and initiation of licensure procedure	Anticipated for Nov. 2009	All requirements for accreditation have been fulfilled.
	Classroom training of CMW students	In progress and on target to graduate in Oct. 2010	In addition to classroom-based training, students spend 3 days per week for a clinical orientation at the DHQ Hospital, Chitral. This will not replace the 6 month practical training which CMWs will complete following the classroom training.
	Development of protocols and checklists for monitoring the quality of CMW classroom and practical training	Ongoing	Protocols and checklists to monitor the quality of CMW classroom training have been developed and are in use. These tools will be augmented by monitoring tools used in the CME program in Afghanistan.
	Internal examinations of CMW students	Ongoing	Internal examination was conducted after completion of Preliminary Training Session (PTS): 90% of the students scored 70% or above.
Outcome Area D: Reduced financial barriers to accessing obstetric and	Finalize design for community financing	Completed in Aug. 2009	CBSGs will be established to address financial barriers to accessing skilled obstetric and neonatal care.
	Develop TOR for key people	Completed	

neonatal continuum of care		in Oct. 2009	
	Finalise implementation plan and budget	Completed in Oct. 2009	Implementation plans are designed so that groups are formed by Q3 of Year 2.
	Develop implementation plan and budget for transportation plan	Rescheduled for Q1 and Q2 of Year 2	This activity was delayed as it was necessary to first establish the community financing mechanism. However, implementation plans are designed so that community-transportation plans will be in place before CMWs are deployed (Jan. 2011).

C. CONTEXTUAL FACTORS THAT HAVE IMPEDED AND FACILITATED PROGRESS TOWARDS ACHIEVEMENTS OF OBJECTIVES

Limiting Factors

1. Delay in baseline survey report: The final report from the baseline survey was delayed for reasons outside of the control of CCSP. NIPS is a reputable national institution and conducted the 2007-2008 Demographic and Health Survey in collaboration with Macro International, Inc. through contributions from USAID. However, senior staff members of NIPS were transferred to other departments and new staff arrived during the last 6 months; these personnel changes delayed the process of analysis and report writing. While data were collected in March 2009, the final report was not provided until November 12th, 2009 after repeated conversations and negotiations between AKF,P and NIPS. This delay postponed several elements of CCSP, most notably formative research for the BCC and the community mobilization campaigns. The CCSP team has accounted for this delay in the revised workplan and has rescheduled activities so that the BCC campaign is in place before CMWs are deployed in January 2011.

2. Accreditation of CMW School: Pakistan Nursing Council (PNC) is responsible for accreditation, curriculum approval, and maintaining quality standards in nursing and midwifery education in Pakistan. All institutions involved in nursing or midwifery education must be registered and accredited by PNC, and accredited schools must use PNC approved curriculum, maintain quality education, and provide high-quality living conditions for students. Further, an affiliated hospital must have quality assurance standards and maintain a good learning environment for students.

The DHDC Midwifery School, Chitral applied for registration in May 2009. A delegation consisting of the PNC Registrar, a nursing advisor from Ministry of Health, and the Principal of the Midwifery School-Lahore visited the CMW School Chitral in June 2009. While the delegation approved many aspects of the DHDC Midwifery School, the PNC team identified some areas within the NMNCHP batch which required improvements. The CCSP team, the NMNCHP, and the district government of Chitral have worked together to meet the remaining accreditation measures. The following are actions taken by CCSP and NMNCHP to meet PCN accreditation requirements:

- 1. Principal for DHDC Midwifery School, Chitral:** Ms. Jaffaryad Begum, a female Principal, was appointed to the DHDC Midwifery School, Chitral. She completed her nursing diploma at AKU Karachi, holds a Masters degree in Public Health from the University of Peshawar, and has worked as a Lady Health Volunteer (LHV) and Community Health Nurse (CHN) with AKHS,P for 12 years. Ms. Jaffaryad's nursing background enables her to understand the technical requirements of a rigorous CMW

training program. The previous principal was a male; it is expected that a female principal will be able to better engage with and support a cadre of female students.

2. **Teaching aids and materials:** Both batches of CMWs are using the Skills Lab and library established by CCSP. NMNCHP provided additional mannequins for the Skills Lab.
3. **Teaching planner:** Tutors of both the batches prepare daily lesson plans according to the weekly planner prepared for the academic year. Tutors provide feedback to the Principal on the students' progress on a monthly basis.
4. **Improvements for DHQ Hospital labour room:** The following measures were taken to ensure that the labor room at the DHQ meets PNC requirements:
 - a. Infection Control Practices: AKHS, P arranged a three-day workshop on Infection Control Practices for the nursing staff of DHQ. Other supportive staff also participated in the workshop. This has improved the working conditions in the labor room and reduced the chances of cross infection.
 - b. AKHS, P replaced essential equipment in the labor room. This improves the quality of the practical training of CMWs.
 - c. NMNCHP plans to provide refresher training to labor room staff to improve their clinical and teaching capacity.
5. **Accommodations for CMWs:** A new, spacious, building was rented for the NMNCHP hostel. The CCSP hostel menu has been modified to provide a well balanced diet to the CMW students.

The DHDC Midwifery School, Chitral now meets all PNC requirements. PNC will visit the school in November, 2009 when it is anticipated that the school will qualify for accreditation.

Facilitating Factors

1. Relationship with the NMNCHP: As discussed earlier, the relationship between CCSP and the NMNCHP through a PPP is a key element for success of the program. The CCSP team meets regularly with National and Provincial level staff of the NMNCHP to review the progress of CCSP and to develop plans going forward. A strong relationship with the NMNCHP is essential to the sustainability of CCSP, as CMWs will eventually be absorbed under the national program. It is anticipated that CCSP will provide lessons that the national program can adopt to improve the training, deployment, and supervision of CMWs, both current and future batches. The relationship between the two entities is described in the LoU (see Annex 3).

2. Relationship with the district government: The involvement of the district government during program planning and implementation has greatly facilitated progress to date. A District Advisory Committee (DAC) was formed at the beginning of the program and is comprised of members from Government Health Department, District Government, representatives of the NMNCHP and community representatives. The DAC was involved in identifying community clusters for program operations and selecting CMWs. The DAC meets with the CCSP on a monthly basis to discuss progress and develop future plans.

3. Linkage with other USAID partners: AKF(P) routinely meets with other USAID funded projects like TACMIL and PAIMAN to learn from their experiences and practices in the field. AKF, P coordinated an exposure visit to PAIMAN from October 5-7, 2009. The CCSP team, district government officials, and clinical staff of the DHQ Chitral visited PAIMAN in Rawalpindi and Jehlum, Punjab. It was a productive trip and highlighted issues for CCSP to address during monthly and annual planning processes.

D. AREAS WHERE TECHNICAL ASSISTANCE IS REQUIRED

The CCSP team identified the following two areas where technical assistance will be required:

1) Development of MIS system for Phase II (following deployment of CMWs): AKF USA plans to contract an external consultant with expertise in MIS for community health programs to

work alongside the M&E Manager of CCSP to develop the tools and database for the CCSP MIS. The MIS will integrate, at minimum, data collected by CMWs, facility-based data, and data from the CBSGs and field teams to prepare routine reports on key project indicators. It is anticipated that the external consultant will travel to Chitral in Q2 of Year 2 so that the MIS is established and personnel are trained well before CMWs are deployed (January 2011).

2) Training the CCSP team and facilitators to establish CBSGs: While AKRSP has extensive experience in mobilizing communities for savings and loans, CBSGs have never before been introduced to Chitral. The implementation plan for the CBSG has been developed but the CCSP team requires external assistance from an expert in CBSG. S/he will train the community-level facilitators who will be responsible for establishing 400 CBSGs in Chitral. It is anticipated that the trainings will be conducted in January 2010.

E. SUBSTANTIAL CHANGES

The budget was revised to accommodate the following changes: a) revised strategy for community financing (the establishment of CBSGs); b) the addition of an AKHS,P BCC Officer to oversee implementation of all BCC activities; and c) reallocation of costs due to savings from Year 1. The revised budget and budget notes are attached in Annexes 7 and 8.

F. PROGRAM SUSTAINABILITY

The sustainability of CCSP hinges on several factors, including a clear strategy for community-engagement, linkages with the NMNCHP, and a plan to sustain financial remuneration of CMWs over time.

Community-engagement strategy

Following the submission of the DIP and the establishment of the DHDC Midwifery School, the CCSP team reviewed its strategy for community-engagement to identify gaps and challenges and to establish detailed future plans. The community-engagement strategy was identified as a priority need during the Annual Planning Workshop, held in Islamabad in October 2009. Due to the diversity of each community cluster and the unique challenges that each cluster will face, it was determined to develop individualized engagement strategies for each community cluster. The strategy will include, at minimum: sensitizing communities to CCSP and the importance of the new role of CMW; setting fee structures for CMW services at the community-level; establishing transportation plans; and establishing Safe Maternity Homes within the community cluster. This plan will require, at minimum, a set of focused workshops requiring participation from AKHS,P, AKF,P and AKRSP to develop implementation plans, assign responsibilities, assess budget implications, and develop plans for M&E and process documentation.

Linkages with the NMNCHP

The LoU between NMNCHP and CCSP ensures that CMWs will be supported by the national program following the close-out of CCSP. NMNCHP will become responsible for supervising CMWs through support from government Lady Health Supervisors (LHS) and for providing frequent refresher trainings. AKHS,P and NMNCHP have discussed the possibility of training CMWs from CCSP community-clusters in future batches in the event that CMWs drop out of the program following deployment.

Operations Research

The OR will address the sustainability of CMWs and determine whether CMW services can be sustained – while maintaining a high level of quality and coverage – by payments for services. The study sets out to fill in some of the gaps of the NMNCHP policy regarding deploying and remunerating CMWs. While the policy pledges to provide CMWs with a monthly stipend of Rps 2000 for one year following deployment, the policy does not indicate how long – years, months,

etc., – the stipend will be provided to sustain the services of the CMWs.⁴ In addition, the policy does not indicate the process by which CMWs will be transitioned out of a flat-monthly stipend provided by the Government of Pakistan (GoP) to being remunerated on a fee-for service basis, or whether this transition is envisioned at all. The study will take into account the cost of CMW services, communities' willingness and ability to pay for services, acceptable levels of earnings by CMWs, and the impact – if any – on the quality and coverage of care provided by CMWs after a transition plan. The findings of the research have direct relevance to the GOP's plan to sustain the services of CMWs.

F. SPECIFIC INFORMATION REQUESTED FOR RESPONSE DURING THE DIP CONSULTATION

USAID requested CCSP to provide the final baseline report and the final implementation plan and strategy for developing the community financing strategy, once completed. These are attached in Annexes 9 and 6 respectively. The plan for establishing CBSGs are incorporated in the overall CCSP workplan (see Annex 2). All other concerns raised by USAID were addressed in the revised DIP, submitted on August 10th, 2009.

H. BASELINE REPORT

Please see Annex 9.

I. PROJECT MANAGEMENT SYSTEM CHANGES

Senior level management and leadership has not changed since the submission of the DIP. However, the management and structure for the community financing element was revised after the CBSG strategy was finalized. Please see Annex 10 for the revised organigram.

J. LOCAL PARTNER ORGANIZATION COLLABORATION AND CAPACITY BUILDING

CCSP coordinates closely with other USAID-funded MCH programs, including PAIMAN and TACMIL. AKF,P facilitated an exposure visit to PAIMAN in October, 2009 for the CCSP team, the district health department of Chitral, and clinical staff from the DHQ hospital, Chitral.

As mentioned earlier, the CCSP team routinely meets with several district government entities – including the EDO-Health Chitral, staff at the DHQ hospital, and NMNCHP staff – to discuss the development of CCSP and to develop a common understanding of priorities and responsibilities for MCH in Chitral. AKHS,P/AKF,P efforts within the PPP has improved the capacity of the NMNCHP on several accounts – improved capacity of DHQ hospital staff in infection prevention, improved teaching skills of CMW tutors through AKHS,P trainings, development of skills lab and library, and improved ability to meet accreditation standards.

K. MISSION COLLABORATION

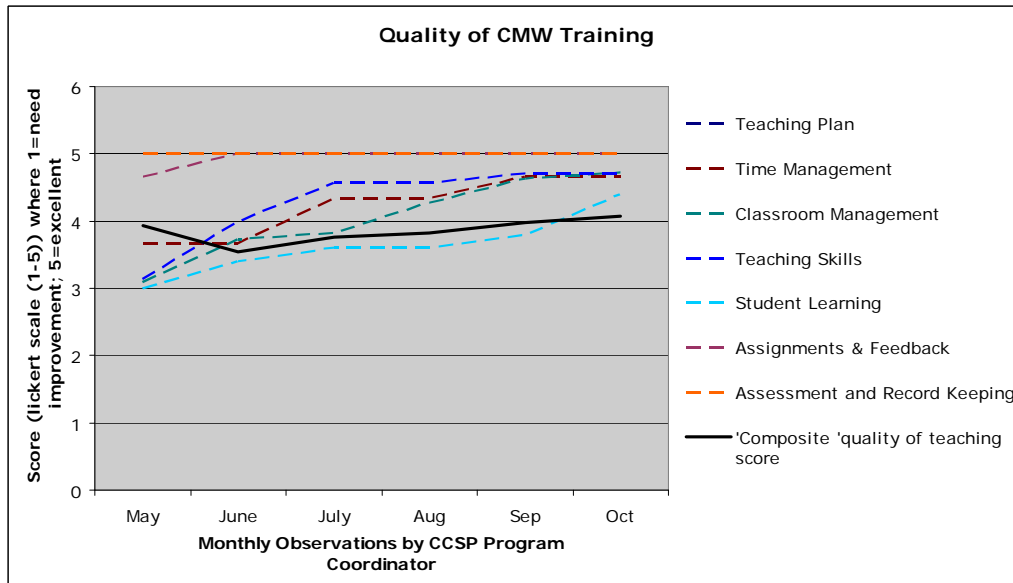
AKF,P has participated in three partner meetings organized by USAID. All were held to maintain coordination among the USAID funded projects in Pakistan, promote synergies and experience sharing, and avoid duplication of efforts and resources. Meetings also assess the security situation in Pakistan and provide technical and financial support to improve security, where necessary. CCSP has adopted a 'low-profile' approach and to date has not faced major security challenges. AKF,P regularly communicates with the Pakistan Mission to keep them informed of major achievements and challenges of CCSP. AKF,P routinely invites members of the Mission to attend national-level stakeholder meetings – including meetings with the NMNCHP and the Oversight Committee Meeting – but security concerns have limited participation to date.

⁴ National Maternal Newborn and Child Health (MNCH) Program; 2006-2012; Government of Pakistan; Ministry of Health

Annex 1. Monitoring Data

The M&E Plan submitted with the DIP defines indicators once CMWs are deployed (which has been deemed Phase II of the CCSP program). The CCSP developed an observation checklist for Phase I (training of CMWs) based on other tools used to monitor other midwifery and nursing courses in Pakistan and qualities specific to the CCSP program. Data is collected on a monthly basis by the Program Coordinator through observing classroom activities. The checklist is divided into seven major domains: 1) teaching plan; 2) time management; 3) classroom management; 4) teaching skills; 5) student learning; 6) assignments and feedback; and 7) assessment and record keeping (see Annex 1a). Each domain contains a series of questions, which the Program Coordinator scores on a scale of 1 to 5 – with 1 denoting ‘needs improvement’ and 5 ‘excellent.’ The Program Coordinator provides immediate feedback to the tutors to enable them to improve their teaching over time.

Data from the first 6 months of the training program indicates a gradual improvement in the quality of teaching and student learning. Trends per domain, as well as composite score combining all 7 domains, are depicted in Figure 1.



CCSP also records daily attendance as a proxy indicator of students' interest in the program. Figure 2 shows that average monthly attendance ranged from 88% to 97%.

CCSP conducted an internal examination at the completion of a three month

Figure 1. Quality of CCSP CMW training over 6 months

Preliminary Training Session (PTS) in the month of June 2009. This is a prescribed course by the PNC and builds the foundation of knowledge required for the students to take on further rigorous topics in midwifery. More than 90% of the students scored 70% or above in the PTS exam, which also indicates quality teaching. The CCSP team also maintains detailed records of each student including: education details, progress reports, and examination records. As discussed in the Annual Report narrative, Phase I monitoring tools will be augmented by tools developed for the Community Midwifery Education (CME) program, Afghanistan.

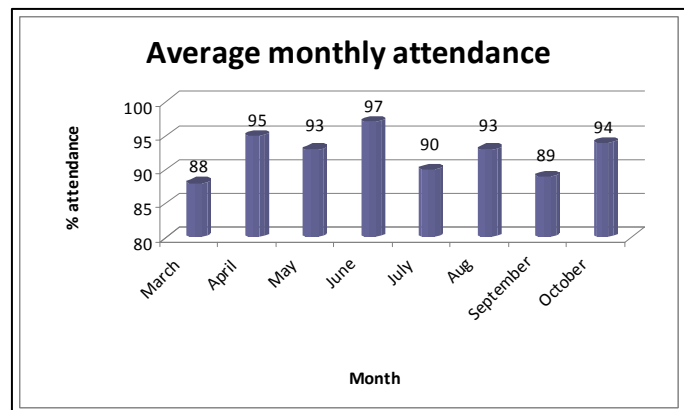


Figure 2. Average monthly attendance for CCSP batch

Annex 1a: CMW Classroom Observation Checklist

CHITRAL CHILD SURVIVAL PROGRAM MONITORING OF CMW CLASSROOM TRAINING (To be filled in by the Program Coordinator)
Please mark 1 - 5 unless mentioned otherwise (1=needs improvement; 2=unsatisfactory; 3=satisfactory; 4=good; 5=excellent) write NA if not applicable.

S.No.	Performance Standards	Score
A	Teaching plan	
1	Teaching was according to the lesson planned?	
2	Objectives set for the class were achievable in the given time?	
3	Objectives set for the class were appropriate for the level of understanding of the students.	
4	Activities planned were appropriate according to the objectives set for the class.	
	Average score	
B	Time Management	
1	Tutor arrived in time for the lesson? (5=yes, 1=no)	
2	Class time was utilized wisely and to maximum benefit.	
3	Students completed the tasks in the assigned time.	
	Average score	
C	Classroom Management	
1	Tutor showed enthusiasm and interest for teaching the class.	
2	Tutor was clear in her instructions and her voice was audible to all students.	
3	Tutor appropriately maintained eye contact with the students.	
4	Blackboard maintained properly and is visible to all students.	
5	Appropriate discipline was maintained in the class e.g. raising hands etc.	
6	Tutor ensured that students have understood the instructions by asking questions to explain a task.	
7	Tutor monitored the individual and group work.	
8	Every student was provided with equal opportunities to participate during the class.	
9	Students were appreciated for their good work and behavior.	
10	Sitting arrangement of the students was appropriate.	
11	Class room was well maintained and student work was displayed.	
	Average score	
D	Teaching Skills	
1	Work on the blackboard was neat and well organized.	
2	Tutor was familiar with the course content.	
3	Appropriate time was allowed for weaker students to consider the questions.	
4	Tutor introduced the lesson through an introductory activity.	
5	Activities planned were interlinked to each other and complimented the understanding of the students.	
6	Appropriate teaching aids were used by the tutor.	
7	Tutor supplemented the text/course material with additional information.	
	Average score	

E	Student Learning	
1	Students were eager to learn and respond enthusiastically to the questions.	
2	Students followed instructions given by the tutor.	
3	Students were given the opportunity to apply their knowledge to a task.	
4	Students worked co-operatively in the groups.	
5	Students showed satisfaction that the objectives of the lesson were achieved.	
	Average score	
F	Assignments & Feedback	
1	Tutor checked the class work in students' copy books.	
2	Appropriate homework was set at the end of the class.	
3	Homework was checked and feedback was given to students	
	Average score	
G	Assessment and Record Keeping	
1	Students were evaluated through weekly/fortnightly/monthly tests. (5=yes, 1=no)	
2	Tutors properly maintained the results of the tests conducted.(5=yes, 1=no)	
3	Personal files containing important information about students, their emergency contact details, educational records, leave applications were properly maintained. (5=yes, 1=no)	
	Average score	
	Composite 'quality of teaching' score	

Date _____

Signature of Tutor _____

Signature of Observer _____

Annex 2. Project Workplan Years 2-5			Year 2												Year 3-5												Person responsible
			Q1			Q2			Q3			Q4			Year 3				Year 4				Year 5				
			Month			Month			Month			Month			Quarter				Quarter				Quarter				
ACTIVITIES			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	1	2	3	4	1	2	3	4	
Overall Program Activities																											
1.01	District Advisory Committee Meetings (Quarterly)																										PM
1.02	National Advisory Committee Meetings (Bi-Annually)																										PM
1.03	Oversight Group Meeting (quarterly for 1 st year and biannually for 2 nd year)																										PM
1.04	Supervision visits of management to monitor progress across program areas																										PM
1.05	Developing MIS Phase I (CMW training)																										MEM
1.06	Developing MIS Phase II																										MEM
1.07	Finalize Operations Research protocols and receive approval from ethical research committee of AKU																										MEM & PM
1.08	Conduct Operations Research																										MEM
1.09	Midline evaluation																										MEM
1.10	Annual review workshop																										PM
1.11	Final evaluation																										MEM
1.12	End of project national dissemination workshop																										PM
Outcome Area A: Increased awareness of obstetric and neonatal complications, increased utilization of birth preparedness and complications readiness (BPCR) plans, and an improved enabling environment for MNCH																											
2.01	Conducting Formative Research & data analysis																										BA
2.02	Prepare Formative Research Report (which identifies channels, target groups, and messages for BCC)																										BA
2.03	Drafting Key Messages, IEC Tools/Materials																										BA
2.04	Planning workshop using the BEHAVE framework with advisory group																										BA
2.05	BCC advisory group meetings (1 st meeting in June 2010 for BEHAVE framework; bi-annually thereafter)																										BA

Program Manager – PM, M&E Manager – MEM, Program Coordinator – PC, BCC Advisor – BA, Local Technical Backstop- LTB, Aga Khan Rural Support Program – AKRSP, CBSG Manager – CBSG MG

[illegible]

[illegible]

Explanation of changes to original workplan:

The following activities were added to the original workplan:

- 1.03: Oversight Group Meeting (quarterly for 1st year and biannually for 2nd year)
 - The Oversight Group was established following the submission of the DIP and is a biannually forum for senior leadership of CCSP implementing agencies to review progress and address challenges
- 1.05 – 1.06: Developing MIS for Phases I Phase II
 - MIS development was broken into two phases because of the unique technical inputs each phase requires
- 1.07 – 1.08: Operations Research activities are broken down into greater detail
- 3.01 – 3.06: Activities for the development of referral protocols/guidelines are broken down into greater detail
- 4.07: One month at practical training sites for MIS, referral, and BCC message training and to prepare for PNC
 - The final PNC examination was rescheduled for December, 2010 – three months later than earlier anticipated. Consequently, if CCSP leadership cannot convince PNC to hold the exam as per the original schedule, the CCSP team will bring students back to practical training sites one month prior to examination for pre-examination studies and training on project MIS, referrals, and BCC messages.

Activities for CCSP are being carried out in accordance with the workplan. The delay in the baseline survey postponed several project activities, namely the BCC campaign. Activities under Outcome Area D were delayed due to the intensive process to finalize the community-based financing strategy. The Annual Report narrative describes these changes in greater detail.

Program Manager – PM, M&E Manager – MEM, Program Coordinator – PC, BCC Advisor – BA, Local Technical Backstop- LTB, Aga Khan Rural Support Program – AKRSP, CBSG Manager – CBSG MG



AGA KHAN FOUNDATION (PAKISTAN)

PRESS RELEASE

FOR IMMEDIATE RELEASE

Subject: Agreement Reached between AKF, P and MoH for Midwives' Training in Chitral

Islamabad, Tuesday, 8 September 2009: The Aga Khan Foundation, Pakistan (AKF, P) has reached an agreement with the National Maternal, Neonatal and Child Health Programme (MNCH), Ministry of Health to provide training and financial support to Community Midwives (CMWs) in district Chitral.

A 'Letter of Understanding' (LoU) signing ceremony was held today at the Federal Ministry of Health, Islamabad. Dr Zahid Larik, National Programme Manager, MNCH and Dr Qayyum Noorani, Programme Manager Health, AKF (P) signed the LoU in the presence of Dr. Azam Saleem, Joint Secretary, Planning and Development, Ministry of Health.

Speaking on the occasion, Dr Azam Saleem said that CMWs can play an important role in decreasing maternal and infant mortality rate at the grassroots level. He said that innovative approaches are needed to enhance community participation in immunization campaigns, running across the country. He appreciated the efforts of AKDN agencies for establishing effective models of community and public partnerships in remote regions to improve health conditions.

Dr Qayyum Noorani said that through this Public-Private Partnership initiative, the AKF (P), in collaboration with the District MNCH programme and Aga Khan Health Service, Pakistan (AKHS, P), will train thirty CMWs under the USAID funded Chitral Child Survival Programme, to provide quality healthcare to the women of Chitral residing in remote villages during pregnancy, childbirth and post-partum period. The Foundation will also facilitate the district government to renovate, furnish and equip Community Midwifery School in the district; and facilitate its accreditation with the Pakistan Nursing Council (PNC).

According to the agreement, AKF (P) will also support CMWs to establish thirty midwifery homes after successful completion of training, at their respective Union Council of residence; whereas the government will take over the responsibility of providing them with technical, logistic and financial support and benefits.



AGA KHAN FOUNDATION (PAKISTAN)

Those who also participated in the ceremony included Dr. Salar Khan, Provincial Coordinator – NWFP MNCH, Dr. Sher Qayyum, EDO Health – Chitral, Dr. Aziz Bangash, Deputy National Manager - MNCH, Dr. Zia Dawar, Deputy Programme Coordinator - MNCH, Dr. Muzaffar Ali Jakhrani, Deputy Programme Coordinator - MNCH, Dr. Zafar Ahmed, General Manager – Punjab & NWFP, AKHS, P, Dr. Saadia Shabbir, Program Officer – Health AKF (P), Naveed Zafar Sethi, Grants Finance Officer, AKF (P), Dr. Shazia Shehzad Abbas, Assistant Program Officer- Health AKF (P), Hamid Sohail, Program Assistant – Health, AKF (P).

[End]

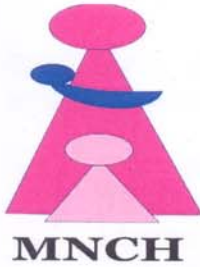
Note:

The Aga Khan Foundation, an institution of the Aga Khan Development Network (AKDN), is a non-denominational, international development agency established in 1967 by His Highness the Aga Khan. Its mission is to develop and promote creative solutions to problems that impede social development, primarily in Asia and East Africa. Created as a private, non-profit foundation under Swiss law, it has branches and independent affiliates in 15 countries.

The Aga Khan Development Network (AKDN) was founded by His Highness the Aga Khan, 49th Hereditary Imam (spiritual leader) of the Ismaili Muslims. It is a group of private, non-denominational development agencies working to empower communities and individuals to improve living conditions and opportunities, especially in sub-Saharan Africa, Central and South Asia, and the Middle East. The Network's nine development agencies focus on social, cultural and economic development for all citizens, regardless of gender, origin or religion. The AKDN's underlying ethic is compassion for the vulnerable in society.

For more information, please contact:

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Aga Khan Foundation
(Pakistan)

Letter of Understanding

Between

The National Maternal, Neonatal and Child Health Program (MNCH)
Ministry of Health, Government of Pakistan

And

Aga Khan Foundation (Pakistan)

For

A Public Private Partnership to Implement
The 'Skilled Birth Attendants at Community Level'

A Component Of The

Chitral Child Survival Program, Chitral, NWFP

Letter of Understanding

THIS Letter OF UNDERSTANDING ("hereinafter referred to as "the LoU") is entered into this 8th day of September 2009 between:

1. **The National Maternal, Neonatal and Child Health Program** (hereinafter referred to as "MNCH" which expression shall, where the context so permit, be deemed to include its successors-in-interest and assigns and all persons claiming through, under or in trust of it) of the first part;

and

2. **The Aga Khan Foundation (Pakistan)** (hereinafter referred to as "AKF(P)" which expression shall, where the context so permit, be deemed to include its successors-in-interest and assigns and all persons claiming through, under or in trust of it) of the second part;

for the management of the '**The Skilled Birth Attendants at Community Level' component of the Chitral Child Survival Program**, Chitral District (hereinafter referred to as "CMWs").

The above-mentioned organizations are hereinafter also referred to individually as a "Party" and collectively as the "Parties".

PREAMBLE

WHEREAS, the Government of Pakistan's (GoP) Maternal and Child Health (MCH) strategy is designed to ensure equitable access to high quality services, especially for the poor and disadvantaged. This strategy is designed to help Pakistan address the huge burden of preventable deaths and morbidity among women and children and to make real progress towards Millennium Development Goals (MDGs) 4 and 5 which are related to child and maternal mortality.

WHEREAS, the National Maternal, Neonatal and Child Health (MNCH) Program within the Ministry of Health will support the national Community Midwifery Initiative that aims to train and deploy 12,000 skilled birth attendants at the community level around the country.

WHEREAS, '**CMWs**,' a component of the Chitral Child Survival Programme (CCSP) is in line with the Government of Pakistan's Community Midwifery Initiative and will be implemented through a public-private partnership between

the MNCH and AKF(P), and is expected to produce evidence and to provide lessons learned on how to replicate and scale up such a project in other, difficult rural areas of Pakistan.

AND WHEREAS, the objectives of the partnership are to develop an approach that is locally feasible and financially sustainable and ensures quality in training and avoids duplication of resources by combining the expertise and experience of the MNCH and AKF(P)/AKHS,P and the local community.

AND WHEREAS, 'CMWs' aims to reduce maternal and neonatal mortality and morbidity by ensuring the availability of skilled birth attendants at the community level, appropriate referrals for obstetric and neonatal complications, a sustainable quality of care, awareness of obstetric and neonatal complications and to create an informed demand for skilled birth attendance.

NOW THEREFORE, the Parties agree to the following:

A. ADVISORY COMMITTEE

An advisory committee will be formed to review periodically the progress of the programme and provide support when required.. The Deputy Coordinator, National MNCH program, in consultation with the National Manager of the MNCH Programme, and Programme Manager, Health of AKF(P) will organize the meeting every six month, prepare the agenda, record the minutes and follow-up decisions for implementation. The committee will be comprised of:

1. National Program Manager, MNCH
2. Dy. Program Coordinator, MNCH (Planning and Monitoring)
3. Provincial Coordinator, MNCH
4. Registrar, Pakistan Nursing Council
5. Director, Provincial Health Services Academy
6. EDO Health, Chitral
7. Principal, CMW School/Dy. Director PHSA, Chitral
8. GM and Key Project Staff, AKHSP, Chitral
9. CEO/Director Community Program, AKHSP Central Office, Karachi
10. Programme Manager, Health, AKF(P)
11. District Nazim or his representative, Chitral
12. MS. DHQ Hospital, Chitral

B. RESPECTIVE OBLIGATIONS

1. By this LoU, MNCH agrees to:

- a) Provide resources through provincial/District MNCH program to establish and support the midwifery school.
- b) Involve the Provincial Health Services Academy (PHSA)/District Health Department (DHD) to support the use of the existing District Health Development Centre (DHDC) building to conduct classroom training during a one-year period.
- c) Involve Pakistan Nursing Council (PNC) in the accreditation of the Midwifery school, the enrolment of 30 CMWs, selected by AKF(P) through AKHSP, the examination of the students/trainees, and their licensing as private providers.
- d) Involve DHD in ensuring arrangements for hands-on-learning and support of referrals by the 30 CMWs for provision of BASIC and Comprehensive EMOnc services at DOH Facilities, including DHQ Hospital, Chitral; Rural Health Centre (RHC) Shagram-Torkhow; Extended Family Health Centre (EFHC) Shoghor and Booni Medical Centre.
- e) Provide financial incentives from September 2010 to October 2013 to the 30 CMWs according to the approved PC-1 budget once they are posted at their respective Union Council of residence.
- f) Establish an Advisory Committee, as referred to in Section A (Advisory Committee), with representation by stakeholders, to coordinate regular meetings to review the progress of the project and to provide support.
- g) Coordinate with AKF(P) to involve project staff in the important national meetings and seminars.

2. By this LoU, AKF(P) agrees, with the active participation of AKHS,P, to:

- a) Arrange for 30 CMWs to receive one-year classroom training by supporting the existing CMW School and providing the teaching staff (two tutors), teaching aids, reading materials for the library, hostel and transport to the 30 CMWs.
- b) Organize six months of hands-on learning at practical training sites at the AKHS,P Medical Center Booni and EFHC Shoghor
- c) Ensure that each CMW receives a set of essential equipment to start her community based practice with field teams of AKHS,P/DOH on

completion of 18 months training and posting at her Union Council of residence to establish midwifery homes. The fees charged will be set in consultation with the Advisory Committee and local community. The CMW will have frequent and continuous on-the-job supervision and monitoring visits by the district MNCH team/AKHSP field team. Each CMW will receive annual refresher trainings at the midwifery school arranged by AKHSP for the project period.

- d) Ensure presence of AKF(P) and AKHSP officials at the Advisory Committee meetings.

C. IMPLEMENTATION TIMELINES:

The implementation period shall be five years, commencing from March 01, 2009 and concluding on December 31, 2013, unless extended by mutual consent of the parties.

	Activity	Timeline
1.	Study of 30 CMWs	March 01, 2009 to February 28, 2010
2.	Hospital based training of 30 CMWs	March 01 to August 31, 2010
3.	CMWs deployed in their respective community and on the job support and supervision to be provided.	September 01, 2010 to December 31, 2013

D. PERFORMANCE AND AMENDMENTS OF TERMS:

AKF(P) shall use reasonable efforts to complete the Project in accordance with the terms and conditions of this LOU. The Parties may at any time amend the LOU in writing by mutual consent.

E. FINANCING OBLIGATIONS:

There are no direct financial obligations, however, the National MNCH program will meet its financial obligations as per clause B(1) of this LOU through provincial and district MNCH program.

AKF(P) will meet its respective financial obligations as outlined in Section B (2).

F. EFFECTIVE DATE:

This LOU shall be deemed to be in effect from March 01, 2009 and shall continue in effect through December 31, 2013, unless terminated earlier. The Parties recognize that each has commenced work under this LOU in good faith as from March 01, 2009 and the parties agree that the terms of this LOU may be extended in writing for such additional periods as desired by the parties on terms and conditions which are mutually agreeable. The Parties hereto may, however, extend the term of the LOU in writing for additional periods as desired on mutually agreeable terms and conditions.

G. TERMINATION:

1. Either Party may terminate this LOU by giving ninety (90) days prior written notice to the other party.
2. In the event of early termination caused due to the default of MNCH, it is hereby agreed that MNCH shall pay all costs incurred by the AKF(P), including but not restricted to staffing commitments, purchased supplies, training costs and other expenses as determined reasonable by the Parties.

H. NON-REPRESENTATION BY THE PARTIES:

The Parties agree that they shall exercise all reasonable skill, care, and diligence in the discharge of their obligations under this LOU, and that neither Party shall be liable to the other Party for loss or damage caused to the other unless the same arises through the negligence or willful default on the part of the other or from a negligent act or omission of their officers, servants, agents, or personnel engaged by them or through their failure to provide the standards of care, skill and diligence aforementioned.

I. NOTICES:

All notices or other communications to be given under this LOU to a Party shall be made in writing and sent by letter or facsimile transmission or electronic mail to the address specified below and duly acknowledged with written records. In the case of a notice given to MNCH, the address below applies:

Telephone number:	051- 9255719
Facsimile number:	051-09255742
Electronic mail address:	Zahid_larik@hotmail.com
Mailing address:	PNC Building, MNCH Office, NIH, Chak Shahzad, Islamabad
Attention:	Dr. Zahid Larik, National Program Manager, National MNCH

In the case of a notice given to AKF(P), the address below applies::

Telephone number:	051-111 253 254
Facsimile number:	051-2276815
Electronic mail address:	Qayyum.noorani@akfp.org
Mailing address:	H # 1, St # 61, F-6/3, Islamabad
Attention:	Dr. Qayyum Noorani, Programme Manager AKF(P)

A notice or other communication received on a day other than a business day, or after business hours, in the place of receipt shall be deemed to be given on the next following business day in such place.

J. DISPUTE RESOLUTION:

1. The Parties shall endeavor to settle amicably all differences and disputes arising out of this LOU. Any differences or disputes arising from or pursuant to any of the provisions of this LOU or the construction thereof or any matter incidental thereto, which cannot be amicably settled as aforesaid, shall in all cases be submitted to arbitration;
2. Any Party to a dispute may refer the dispute to arbitration. Arbitration proceedings will be conducted in the English language in accordance with the provisions of the Arbitration Act, 1940 or any re-enactment or modification thereof for the time being in force;
3. The Parties hereby agree that the unanimous decision of the Arbitrators shall be binding upon them and, in the case of a difference between the Arbitrators, the decision of the Umpire shall be final and binding;
4. The Parties hereby agree that this LOU represents their complete understanding in respect of the Project and that any award rendered by the Arbitrators or the Umpire shall be based on the terms of this LOU and shall be final and binding upon the Parties.

K. GOVERNING LAW AND JURISDICTION:

This LOU shall be governed by the laws of Pakistan, and the Courts of Pakistan shall have exclusive jurisdiction in respect of any actions or claims arising here from.

L. ENTIRE UNDERSTANDING:

This LOU constitutes the entire mutual understanding and agreement of the Parties with respect to the subject matter hereof and supersedes any prior agreement, understanding, or discussion with regard hereto. In the event of any

inconsistency between any of the annexure hereto and the LOU, the provisions of this LOU shall prevail.

The individuals signing below represent that they have been authorized to execute this LOU on behalf of their respective Parties and that they have been granted the authority to bind the Parties to the terms and conditions of this LOU.

Agreed and accepted at on this 8th day of September, 2009 with the agreement that the effective date of this MOU is March 01, 2009.

For and on behalf of MNCH

For and on behalf of AKF(P)



Authorized Signatory

Title: National Program
Manager - MNCH



Authorized Signatory

Title: Program Manager -
Health, AKF(P)

Witnessed by (1):

Witnessed by (1):

Signature:



Title: Provincial Coordinator
MNCH, NWFP

Signature:

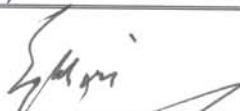


Title: General Manager,
Chitral District,
AKHSP

Witnessed by (2):

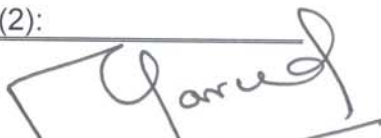
Witnessed by (2):

Signature:



Title: EDO Health, Chitral

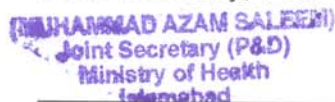
Signature:



Title: Grant Finance Officer,
AKF(P)

 8.9.2009
Seen and signed for approval:

Joint Secretary, P&D Ministry of Health, Islamabad


Joint Secretary (P&D)
Ministry of Health
Islamabad

Behaviour Change Communication (BCC) Formative Research Protocols and Tools

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Title

“Community behaviours towards birth preparedness in Chitral, Pakistan”

Introduction

Low levels of awareness of obstetric and neonatal danger signs and the potential risk of an obstetric emergency are key barriers to accessing delivery care in Chitral, a remote and isolated district of NWFP - Pakistan. This directly impacts maternal and neonatal health outcomes in this area because people generally do not know the importance of using a skilled birth attendant, the actual risk of having an obstetric emergency and the consequences of not attending to it quickly, the necessity of developing birth preparedness and complication readiness (BPCR), including planning for the transportation and financing aspects and the danger signs associated with obstetric and neonatal complications in the postpartum. Therefore, the BCC interventions were proposed in CCSP project to promote MNH amiable behaviours.

“Qualitative research can describe and elaborate the concepts, understandings, themes and apparent patterns that are meaningful to a group as expressed by themselves, from the ‘inside’”¹. Therefore before developing BCC materials and formulating approaches it is necessary to conduct this formative research.

Moreover, qualitative research is especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations.²

Aims and objectives of study

The study aims to enable AKHS,P for BCC intervention to promote birth preparedness and complication readiness in villages covered by CCSP project in Chitral. Objectives include:

1. To get relevant information that helps in designing and developing gender sensitized, culturally appropriate and effective BCC strategies for project intervention
2. To conduct in-depth assessment for comparing behaviours and experience of following target groups on birth preparedness and complication readiness
 1. Women of reproductive age who have delivered in last 6 months
 2. Elderly Family Female Influentials (EFFI)
 3. Family Male Influentials (FMI)
 4. Religious leaders
 5. Community/Tanzeem leaders
 6. Union Council Heads
 7. Formal Health Care Providers
 8. Informal Health Care Providers
 9. Women who have complications
 10. Attendants of women who have complications

Methodology

Study design

This research is qualitative in nature and will include focus groups, key informant interviews and relevant demographic variables.

Methodological approach/theoretical perspective

Focus groups as a data collection method will utilise a semi-structured approach and an open-ended structure in which study subjects can speak for themselves, discuss their basic concerns and describe the needs they see in their communities. As literature says, “Focus group can provide a rich and meaningful context for assessing the strengths and weaknesses of a focus issue”³. It is a way that participants’ responses can be explored in a real-time milieu, dynamics of within group behaviours can be observed and put into perspective and responses can be clarified.⁴

The advantages of key informants’ (KI’s) interviews will be an opportunity to establish rapport/trust and get an insiders’ view that can provide in-depth information about causes of the

problem and allow clarifying the ideas and information on a continual basis. Interviews will allow obtaining information from many different people, including minority or “silent majority” viewpoints.

Study Settings

This study will be undertaken in the population of 30 villages of CCSP around the four secondary care facilities that offer comprehensive EmONC: DOH’s District Headquarter Hospital in Chitral town, AKHS, P’s Booni Medical Centre, AKHS, P’s EFHC (Extended Family Health Centre) Shagore and the DOH’s Rural Health Centre in Shagram, Torkhow.

Sample

Purposive sampling will be used in this study as “Purposeful sampling is the dominant strategy in qualitative research. Purposeful sampling seeks information-rich cases that can be studied in depth”⁵. As the sampling technique is non-probability sampling method it is not intended to result in a representative sample⁶

Five clusters of six villages each will be developed based on the geographic proximity (Annexure I).

FOCUS GROUP DISCUSSION

There will be 15 focus group discussions (FGDs). Six to eight participants will be invited for FGDs. The following approach will be adopted

Distribution of the types of FGDs:

- Five FGDs with the women of reproductive age who have delivered in the last 6 months.
- Five FGDs with Elderly Family Female Influentials
- Five FGDs with Family Male Influentials.

From each cluster, one village will be randomly selected for each of these FGDs i.e three FGDs on different themes will be conducted in one randomly selected village from each cluster.

KEY INFORMANT INTERVIEW (KII)

Total 60 in-depth interviews of women of reproductive age who delivered in last 6 months, elderly female influentials, family male influentials, religious leaders, community/tanzeem leaders, union council heads, health care providers, traditional birth attendants (TBAs), women who have complications and attendants of women who have complications will be carried out through trained interviewers as follows:

After selecting one village for FGDs, another village will be randomly selected from remaining villages of each cluster. Initially field team will approach for following subjects each in that village. If subject does not exist in that village then field team will approach the next village. This will be done until the team approached to that subject in the same cluster. It would also be ensured that all these individuals do not belong to the same family too.

1. Women of age <25 years who have delivered in last 6 months at home
2. Women of age 25-34 years who have delivered in last 6 months at home
3. Women of age >35 years who have delivered in last 6 months at home
4. Women of age <25 years who have delivered in last 6 months at health facility
5. Women of age 25-34 years who have delivered in last 6 months at health facility
6. Elderly Family Female Influentials ,
7. Family Male Influentials,
8. Religious leaders,
9. UC Heads (Preferably) or Community volunteers or Tanzeem leaders,
10. Formal Health Care Providers,
11. Informal Health Care Providers,

12. Women who have complications or Attendants of women who have complications

Inclusion criteria

- Women of reproductive age who have delivered in the last 6 months
- Women who have experienced complications
- Elder family female influentials
- Family male influentials
- Attendants of women who had complications
- Community volunteers/Tanzeem leaders
- Religious Leaders
- Formal health care providers
- Informal health care providers, example. TBAs
- Union Council Heads (Councillor / Nazim)
- Eligible subjects who will give written consent
- Those living within the selected study setting.

Exclusion Criteria

- Eligible subjects who will refuse to give the written consent.
- Any subject who is not resident of the selected villages of Chitral Subjects residing in area where AKHS, P' health facility exists.

The categories under the theme of women of reproductive age have been selected according to age groups & place of delivery. This has been decided after reviewing NIPS Baseline Survey findings for various indicators. As elderly females, male members of family, religious leaders, UC Leads or community volunteer or Tanzeem leaders, formal or informal health care providers are influentials to decision making in the communities and can provide required information related to BPCR behaviours hence these were selected and devised according to their position in community. In addition to this, it is very important to know the experience of women with obstetric complications or attendants of women who had obstetric complications.

Recruiting sample

With the help of LHWs / local community leader / religious leader / LHV's / CHNs /TBAs, the research supervisor will identify study subjects. The eligible subjects will be contacted by FGD moderators / interviewers at home two days prior to the FGD. On the day of the FGDs or interviews, the interviewer will explain the purpose of the focus group and then request verbal and written consent for their participation as discussed under ethical approval. A limitation that we may experience during recruiting is a high refusal rate that may affect our study results. To minimise this, LHWs / community leaders / religious leaders, LHV's, CHNs and TBAs will be approached to facilitate in arranging a meeting with the participants. However, no one will be forced or coerced into participation. The presence of influential community members is important as they will be more trusted by the participants than the interviewers/researchers. However, to maintain privacy and confidentiality, it is important to note that the influentials will only help researchers meet the participant and will not accompany during the interview.

Ethical considerations

Ethical approval will be obtained from Strategic Planning Committee at Aga Khan Health service' Pakistan. All the participants of this study will be given an information sheet prior to the FGD or interview (Annexure II - III) that will explain the aims, objectives, and content of the study and, if they agree to participate, will be asked to sign a consent form (Annexure II - III). This will ensure the willingness of study subjects for voluntary participation. To make consent form culturally appropriate it will be developed in Urdu language which can be understood and read by the participants. However, the trained moderator/interviewer will read out the information sheet and the consent form, in case participants are illiterate. Participants will be asked to give their thumb impression on the consent form instead of signature.

All participants will be informed that they have the right to withdraw from the study at any time. They will be ensured that their views will be kept anonymous and the interview recordings will be safely stored in lockers.

Data collection instrument

Focus Group Discussions:

The instrument has two sections: (Annexure II)

- a) General information section (age, gender, ethnicity, educational status, occupation and family income etc).
- b) Topic guide for focus group (Selected questions with probes): Instrument adopted from “CHANGE maternal survival toolkit birth preparedness” will be customized, translated in Urdu and back validated.

Key Informants Interviews:

The instrument has two sections: (Annexure III)

- a) General information section (age, gender, ethnicity, educational status, occupation and family income etc).
- b) Closed and open ended questions related to BPCR: Instrument adopted from “CHANGE maternal survival toolkit birth preparedness” will be customized, translated in Urdu and back validated.

Pilot Focus Group and Interviews

The purpose of the pilot focus group and interviews is to determine whether responses to the FGDs guide and in-depth interviews provide necessary information for interventions. It will verify the appropriateness of the questions and identified areas that needed to be modified, deleted, or added. The pilot focus group / interviews will also provide an approximation of how much time each focus group or interview will entail. Modifications will be made based on the outcome of this pilot phase.

Data Collection Process

Focus Group Discussions:

Each FGD will take place in a private room in order to maintain privacy. As all conversations will be tape-recorded, it is important to have a quiet place. Each group will be led by a moderator and a note taker and the discussions will be conducted in the native language of the group participants. The Research Supervisor will act as a translator in the case of language barrier between moderator/interpreter and subjects. The focus group will last for 45 – 60 minutes. Participants will be provided with refreshments after the discussion as an incentive.

At the end of each day, focus group observations will be discussed with the co-investigator who is the note taker and the person who uploads all the notes onto the computer. This will be done to shape the next steps in the data collection process accordingly if needed. We intend that data collection and analysis proceed in tandem, repeatedly referring back to each other. After recording all the focus groups, cassettes will be given to transcriptionist, who will translate the conversations from Urdu to English and record the discussions in detail.

Reflection after each group discussion: Immediately after each focus group session, moderators, note takers and the field officer will debrief the session. The notes will be compared and key topics that arise from the conversation will be discussed.

Key Informant Interview:

Trained interviewers will interview eligible subjects in the native or Urdu language and record responses in their respective recording instruments. The Key Informant Interview will last for approximately 30-45 minutes. Privacy and confidentiality will be ensured to them. As all conversations will be tape-recorded, it is important that the interview takes place in a quiet location. At the end of each day, responses will be discussed with the co-investigator and the person (the co-investigator?) will upload all the notes onto the computer. This will be done to make any alterations to the key informant questionnaire/interview guide. After recording all the interviews, cassettes will be given to the transcriptionist, who will translate the conversations from Urdu to English and record the responses in detail.

Data Analysis

Data collected through each FGD will be compiled by note taker & moderator in the form of the report which will be edited by Research Supervisor on the same day after reviewing the notes, tape-recording / transcriptions and records. In-depth interviews with KIs will be encoded into themes and key messages by Research Supervisor. Reports of all 6 major categories for KIs 15 FGDs will be compiled & reviewed after reviewing the notes, tape-recording / transcriptions and records by Lead Research Coordinator

The data will be subsequently coded and pattern coding will be employed to identify emergent themes and explanations. We intend to quantify our data through counting of emergent themes or activities to identify the presence and occurrence of an activity and themes. This will allow us to look into the overall activity trends and trends in responses to highlight the important issues and develop interventions according to the needs of the population. This will make the analysis robust as Miles and Huberman also suggest, "Doing qualitative analysis with the aid of numbers is a good way of seeing how robust our insights are"⁷.

Recommendations and Dissemination

At the end of the analysis, a report will be compiled with recommendations to be disseminated among stakeholders.

Development of Key Message

Based on study findings and recommendations, Community Health Directorate at AKHS, P will draft key messages that are gender sensitized and culturally appropriate.

Study Timeline (Revised)

Activities	Year 2009												Year 2010		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Approval of Study from SPC															
Revisiting study instrument															
Development of Guide for Moderators/Interviewers															
Recruitment															
Training															
Pilot															
Data Collection															
Data Analysis															
Report Compilation															
Drafting key messages															

Community behaviours towards birth preparedness in
Chitral, Pakistan

UPDATED LIST OF VILLAGES FOR BPCR – FORMATIVE RESEARCH

Chitral Child Survival Project – CCSP (2009-2013)

Cluster	Village	Tehsil	Union Council
1	Awi	Mastuj	Charoon
	Pashk	Mastuj	Yarkhoon
	Raman	Mastuj	Laspoor
	Khuz	Mastuj	Yarkhoon
	Sor Laspoor	Mastuj	Laspoor
	Yarkhoon Lasht	Mastuj	Yarkhoon
2	Terich payeen	Mulkhaw	Terich
	Terich Warimun Bala	Mulkhaw	Terich
	Terich	Mulkhaw	Terich
	Istaru	Torkhow	Shagram
	Melp	Torkhow	Shagram
	Yakhdez	Torkhow	Khot
3	Gohkir	Mulkhaw	Kosht
	Gohkir Shingur Aan	Mulkhaw	Kosht
	Kushum	Mulkhaw	Mulhow
	Lot Oweer Bala	Mulkhaw	Oweer
	Lot Oweer payeen	Mulkhaw	Oweer
	Morder	Mulkhaw	Mulhow
4	Gobor irjiak	Lotkuh	Garam Chasham
	Hert Karim Abad	Lotkuh	Karimabad
	Parsan	Lotkuh	Karimabad
	Arkari Oweer	Lotkuh	Shogore
	Besti	Lotkuh	Shogore
	Shali Arkari	Lotkuh	Shogore
5	Meragram 1	Mastuj	Charoon
	Barenis	Chitral	Chitral
	Ginjerta Kuh	Drosh	Ashurat
	Morilasht	Chitral	Chitral
	Orgoch	Chitral	Chitral
	Bomborat	Chitral	Ayun

ANNEXURE - II
Community Health Directorate
Aga Khan Health Service, Pakistan

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Focus Group Discussion)

Chitral Child Survival Project (CCSP) (2009-2013)

Focus Group Discussion

(Please mark ✓ to appropriate)

(1) Women of reproductive age who have delivered in the last 6 months

Cluster #: 1 2 3 4 5

(2) Elderly Family Female Influentials

Cluster #: 1 2 3 4 5

(3) Family Male Influentials

Cluster #: 1 2 3 4 5

Participant -ID: _____ (e.g W-# or EFFI-#, FMI-#)

A: Information Sheet and Consent Form

Purpose of the project:

The purpose of this study is for us to gain a better understanding of your knowledge, attitude and practices regarding birth preparedness. The information collected will be compiled and used to develop programs in this area that improve the health of mothers and infants.

Procedure

We will the first ask some background information, and will then ask a few questions regarding your behaviours. You should answer these questions based on your knowledge and experience. This process will take approximately 45 to 60 minutes. There are no physical examinations or invasive procedures involved in this study.

Risks and discomfort:

As there will be no physical examination or invasive/non-invasive diagnostic procedure involved in this study and, therefore, there should be no physical risks /discomfort as a result of participating in this study.

Benefits:

The information collected from this study will be compiled and used to develop a birth preparedness promotion program that will aim to improve the health of mothers and children in this area.

Participant's rights

Your participation is voluntary and you can withdraw from the study at any time. Your refusal to participate will have no impact on the health services that you currently receive.

Our request

Your participation is very valuable and we request that the information you provide will be truthful and based upon your past experiences and knowledge.

Privacy and confidentiality:

The interview will take place in a private room only with women/men like you and two researchers. We also assure you that the information you provide will be kept confidential and only used for research purposes.

Questions:

If you have questions about the research or research outcomes, Dr. Rozina Mistry and Dr. Ranomal Lohano will be happy to respond. You can contact Dr. Rozina Mistry and Dr. Ranomal Lohano at the Community Health Directorate of AKHS, P. The phone numbers are 021-5361196, 021-5361197 and 021-5361198.

Legal rights:

You are not giving up any of your legal rights by signing this form.

Signature:

I have read the consent form or consent form has been read out to me, I understand the consent and the signature below or thumb print suggests that I agree to participate in this study. (The participant will receive a copy of this form).

Signature/Thumb impression of participant:

Date:

Name of person obtaining consent:

Signature of person obtaining consent:

Date:

B: Demographic Information Questionnaire for Participants of FGDs

Participant -ID: _____ (e.g W-# or EFFI-#, FMI-#)

Name of participant (optional): _____

Location of participant: _____

Variables	Key	Answer	Comment if any
Age	Write age in years completed		
Relationship with women who delivered in last 6 months	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = (specify)		
Family Structure	0 = Nuclear 1 = Extended <u>Write code number</u>		
Total Household members	Write number		
Total number of children	Write the number of children male and female		
Marital status	Married =1 Divorced =2 Widowed =3 No response = 9 <u>Write code number</u>		
Years since Married (only to be asked from mothers)	Write in completed years		
Educational status	Years of education		
Occupational status	House wife =1 Working from home =2 Working as a farmer =3 Working as a officer level =4 Working as a managerial level =5 Working as a teacher =6 Shop Keeper = 7 Others = 8 <u>Write code number</u>		
Educational status of husband	Years of education		
Husband's occupation (Ask from mothers and EFFI)	Unemployed =0 Student =1 Govt job =2 Private job =3 Business =4		

	Retired =5 Farmer =6 Shop Keeper =7 Other = 8 <u>Write code number</u>		
Siblings	M = # F= #		
Head of family	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = (specify)		
Earning members(who)	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Approximate family income per month/per year?	Write in Rupees		
Distance to closest BEmONC facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Location of birth of youngest child	Facility =1 Home =2		
Closest CEmONC referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance of TBA's home to closest referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance of TBA's home to woman's home	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Deaths in family due to birth complications (If any) during last 2 years.			

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions about birth preparedness.”

C: FOCUS GROUP DISCUSSION (Details)

<i>Focus Group – ID</i> (Please mark ✓ to appropriate)	(1) Women of reproductive age who have delivered in the last 6 months (2) Elderly Family Female Influentials (3) Family Male Influentials
<i>Focus Group / Cluster #</i>	1 2 3 4 5
<i>Date</i>	
<i>Venue</i>	
<i>Number of Participants</i>	
<i>Moderator</i>	
<i>Note taker</i>	
<i>Research Supervisor</i>	
<i>Primary Investigator</i>	

Basic Line of Questioning	Probes
Birth Preparedness	
1. What kind of preparation families typically do to prepare for childbirth (including traditional preparations)?	When do they begin this preparation? Explore importance of arranging blood/ blood donors, money & transportation? Why? Why not?
2. Who usually decides where women will give birth?	- Who else contributes to this decision? - Who makes the final decision?
3. Which place is generally considered to be the preferred place of birth by the decision maker?	Why?
4. Where most expectant women prefer to give birth?	Why?
5. Where do you prefer expectant women should give birth?	Why? Explore advantages & disadvantages

6. Who usually accompany women for delivery/access to hospital?	Why? Explore role of husband.
7. Do women in your area seek ANC or care during pregnancy? (Ask from Mothers and EFFI)	If yes? What care is provided to her during Ante natal care period
8. Do women of your community get any record or a card during pregnancy?	If yes, what information is included in that card?
SKILLED ATTENDANCE AT BIRTH	
1. What qualities do women/family seek in a provider before selecting for delivery?	Explore the qualities
2. What are some reasons why women/family prefers to deliver with TBA instead of a skilled attendant? (Define skilled attendant for them)	Explore when there are problems/ no problems?
3. If skilled attendants are available in their area, what would be the response of the mothers in terms of uptake of the service	Explore reasons behind the response. Explore motivating factors, if yes would community/family support this
4. Who could be the best motivators to influence the community for promoting skilled birth delivery?	Which platform to be used for promoting SBA? What factors would motivate community towards SBA. What factors would hinder the adoption of SBA?
5. What is the level of independence given to the women in making decision about where to have delivery and opt for skilled care provider if she so prefers it?	Why/Why not .what might be difficult about this?
6. What is the general opinion of the	

community about the quality of care available in the nearby health facilities?	
7. What in your opinion are benefits or harmful effects of delivery by a skilled attendant?	Explore cost, distance, transport as well as other factors: family decision making?
8. What could be the barriers for women in seeking delivery by skilled attendants?	
CARE FOR OBSTETRIC EMERGENCIES	
1. Can you name some of the danger signs or complications of delivery and post partum period?	Ask them from where did they learn about these danger signs
2. What does the community do if these danger signs appear?	Explore if they take the women to the referral facility in that case- If not why not?
3. Do women/family of your community make any advance preparation specifically for the possibility of complications?	Explore with reference to cost, distance, transport issues as well as other factors: family decision making? If none then why and how do they manage at that time?
4. During these types of emergencies, what kind of treatment is usually given to a woman when she gets to the referral hospital (use the word used by the community for the referral hospital) that may save her life?	Explore the understanding about blood transfusion, caesarian section, assisted vaginal delivery etc?
5. Why some women fail to seek referral hospital care when facing obstetric emergencies?	Explore the barriers to reaching the facility: <ul style="list-style-type: none"> • Quality of care • Availability of female providers

	<ul style="list-style-type: none"> • Cost of care • Transport • Are these delays in the household or in the community or both? <p>Explore cost, distance, transport as well as other factors: family decision making? Fears?</p>
<p>FOLLOWING QUESTIONS WILL NEED TO BE EXPLORED ONLY WITH EFFI AND FMI</p> <ol style="list-style-type: none"> 1. What role do you (EFFI and FMI) play during emergencies? 2. How much time would it take to mobilize the financial resources to go to the referral facilities? 3. From where would you arrange transport in order to access the service? 	
<p>EARLY POSTPARTUM CARE</p> <p>We talked a bit about preparing for birth, and about giving birth. Now I would like to ask you a few more questions about the time right after birth.</p>	
<ol style="list-style-type: none"> 1. When do you think delivered women in your community should get a check-up after birth? 2. What kind of additional support does a mother need during the first two weeks of child birth 	<p>Reasons behind the timings? Who provides that care? What is included in that checkup? Do healthy women and baby should also seek that care? What would the benefits of this be?</p> <p>If yes, what kind of support does a pregnant woman need during two weeks after childbirth? Do husbands or male family members support this? Would this be easy or difficult?</p>

<p>3 How could we encourage the idea that all mothers and babies should be seen by a skilled attendant in the time right after delivery?</p> <p>4. What in your opinion would be the response of a mother if she was given her baby immediately after birth to hold and put to her breast and body (To be asked from Mothers, TBAs and EFFI)</p>	<p>From whom should this care be sought? (If the response is about going to a TBA for check up, enquire about CMW)</p> <p>What could husbands and other family members do to help? Why would this be good? What could other community members do?</p> <p>Explore her response to find out if this would be culturally acceptable and the myths and conceptions behind such a practice.</p>
<p>ONLY ASK FROM MOTHER, OR EFFI</p> <p>1. When can a woman take a bath after delivery?</p>	<p>Reasons behind the timings?</p>
<p>CONCEPT TESTING: TBA OR TRADITIONAL ATTENDANT AS LINK CARE PROVIDER</p> <p>We have talked about care for mothers and babies after birth, about why women and families do/do not seek or expect health care during that time. Now I would like to ask a few questions about some ideas we have to try and improve the availability, access and use of skilled care here during birth and the period right after birth.</p>	
<p>1. Do you think family/community would allow a CMW or LHV to visit mother during weeks 1 and 2 after birth? (Provide an explanation of CMWs and LHVs)</p> <p>2. What do you think about TBAs now adopting the role of a link provider (someone who can help pregnant women to get to a place where skilled birth delivery takes place)</p> <p>1. Would husbands allow their wives to go out to seek care in the days and weeks following birth by a CMW, if</p>	<p>Explore reasons behind this</p> <p>Why/ why not? Who? Where? If there were problems? Why/ why not? Who? Where?</p> <p>If not. Why?</p>

there were no health problems for your wife/baby for a routine check?	
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SOCIAL SUPPORT/SOCIAL NETWORKS/COMMUNICATION CHANNELS

1. What kind of support would community women expect to give to an expectant mother during birth and in the first 2 weeks after birth?	When does this support start? Do some women give more support than others? Who are they? Why/why not? If yes, what topics are included?
2. How does the community feel about discussing birth-related topics in group setting?	Explore how males feel about such discussion. From where do they get such information? Explore how would young married women feel about such discussion
3. What is the best way to quickly educate the community about doing advance preparation for pregnancy and childbirth?	Explore what kind of forums is available for such discussion for male and females. Explore how can such discussions be encouraged? How often are these forums organized?
4. Although women know so much about family planning they do not practice it. Why? (To be asked from Mothers and EFFI)	Explore if there are unanswered myths or misconceptions behind this delay in adoption of the practice. Myths, advantages/Disadvantages
Additional Questions	
1. What does the community views are about child vaccination?	Explore if there are myths or misconceptions behind this behaviour.
2. What are the reasons for a woman who seeks ANC, but do not seek skilled attendants for birth? (Ask from Mothers and EFFI)	Explain as many reasons as you can. What? Why?
3. Which illnesses often result in the death of the young babies and children in your area	How do you manage these diseases? Esp. Diarrhoea? Pneumonia? Where do you seek care for these diseases? What do they do?

4. What have you heard about Vit- A supplementation for children of 6-23 months of age?	How frequently should children receive Vit-A supplementation\
MOTIVATIONS	
1. What are responsibilities of a mother/ Mother-in-law/ husband/ father in law in caring for the babies?	Explore responsibilities particularly related to care-giving of the babies Why?
2. Since we are talking about birth, what would EFFI/FMI do to provide emotional support to her daughter or daughter-in-law or wife?	

Thank you.

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Consent - KIs)

Chitral Child Survival Project (CCSP) (2009-2013)

CONSENT – KIIIs

Key Informant Interview

(Please mark ✓ to appropriate)

(1) Woman of age <25 years who have delivered in last 6 months at home

Cluster #: 1 2 3 4 5

(2) Woman of age 25-34 years who have delivered in last 6 months at home

Cluster #: 1 2 3 4 5

(3) Woman of age >35 years who have delivered in last 6 months at home

Cluster #: 1 2 3 4 5

(4) Woman of age <25 years who have delivered in last 6 months at health facility

Cluster #: 1 2 3 4 5

(5) Woman of age 25-34 years who have delivered in last 6 months at health facility

Cluster #: 1 2 3 4 5

(6) Elderly Family Female Influential

Cluster #: 1 2 3 4 5

(7) Family Male Influentials

Cluster #: 1 2 3 4 5

(8) Religious leader

Cluster #: 1 2 3 4 5

(9) UC Heads (Preferably) or Community volunteer or Tanzeem leader

Cluster #: 1 2 3 4 5

(10) Formal Health Care Provider

Cluster #: 1 2 3 4 5

(11) Informal Health Care Provider

Cluster #: 1 2 3 4 5

(12) Women who have complications or Attendant of woman who have complications

Cluster #: 1 2 3 4 5

Participant -ID: _____ (e.g W-# or EFFI-#, FMI-#)

A: Information Sheet and Consent Form

Purpose of the project:

The purpose of this study is for us to gain a better understanding of your knowledge, attitude and practices regarding birth preparedness. The information collected will be compiled and used to develop programs in this area that improve the health of mothers and infants.

Procedure

We will first ask some background information, and will then ask a few questions regarding your behaviours. You should answer these questions based on your knowledge and experience. This process will take approximately 30 to 45 minutes. There are no physical examinations or invasive procedures involved in this study.

Risks and discomfort:

As there will be no physical examination or invasive/non-invasive diagnostic procedure involved in this study and, therefore, there should be no physical risks /discomfort as a result of participating in this study.

Benefits:

The information collected from this study will be compiled and used to develop a birth preparedness promotion program that will aim to improve the health of mothers and children in this area.

Participant's rights

Your participation is voluntary and you can withdraw from the study at any time. Your refusal to participate will have no impact on the health services that you currently receive.

Our request

Your participation is very valuable and we request that the information you provide will be truthful and based upon your past experiences and knowledge.

Privacy and confidentiality:

The interview will take place in a private room with two researchers. We also assure you that the information you provide will be kept confidential and only used for research purposes.

Questions:

If you have questions about the research or research outcomes, Dr. Rozina Mistry and Dr. Ranomal Lohano will be happy to respond. You can contact Dr. Rozina Mistry and Dr. Ranomal Lohano at the Community Health Directorate of AKHS, P. The phone numbers are 021-5361196, 021-5361197 and 021-5361198.

Legal rights:

You are not giving up any of your legal rights by signing this form.

Signature:

I have read the consent form or consent form has been read out to me, I understand the consent form and the signature below or thumb print suggests that I agree to participate in this study. (The participant will receive a copy of this form).

Signature/Thumb impression of the participant:

Date:

Name of person obtaining consent:

Signature of person obtaining consent:

Date:

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Questionnaire – Women/Mothers)

Chitral Child Survival Project (CCSP) (2009-2013)

B: Demographic Information Questionnaire for Key Informants

Participant -ID: _____ (e.g W-#)

Name of participant (optional): _____

Address / Location: _____

Variables	Key	Answer	Comment if any
Age	Write age in years completed		
Relationship with women who delivered in last 6 months	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = (specify) <u>Write code number</u>		
Family Structure	0 = Nuclear 1 = Extended <u>Write code number</u>		
Total House hold members	Write number		
Total number of children	Write the number of children male and female		
Marital status	single = 1 Married =2 Divorced =3 Widowed =4 No response = 9 <u>Write code number</u>		
Years since Married (only to be asked from mothers)	Write in completed years		
Educational status	Years of education		
Occupational status	House wife =1 working from home =2 working as a farmer =3 working as a officer level =4 working as a managerial level =5 working as a teacher =6 Shop Keeper = 7		

	Others = 8 <u>Write code number</u>		
Educational status of husband	Years of education		
Husband's occupation	Unemployed =0 Student =1 Govt job =2 Private job =3 Business =4 Retired =5 Farmer =6 Shop Keeper =7 Other = 8 <u>Write code number</u>		
Siblings	M= # F= #		
Head of family	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Earning members(who)	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Approximate monthly family income	Write in Rupees		
Distance to closest BEmONC facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Location of prior births	Facility =1 Home =2 <u>Write code number</u>		
Closest CEmONC referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		

Distance of TBA's home to closest referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance of TBA's home to woman's home	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Deaths in immediate family due to birth complications (If any) during last 2 years.			

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions about birth preparedness.”

Question	Probes
BIRTH PREPAREDNESS	
1. Did you go for antenatal check up during your last pregnancy?	If yes, ask where did she get the service. What was checked during that Ante natal care period. If not then why? Reasons? Do you think women should go for ANC?
2 Some women go to ANC, but then do not use skilled attendants for birth?	
3 Did you receive TT (Tetanus Toxoid) vaccine during your last pregnancy?	
4. What kind of preparations did your family do to prepare for childbirth (including traditional preparations)?	Explore if they also identified blood/ blood donors, money & transportation? Why? Why not?
5. Who decided in your case, about the place where you will give birth?	Who else contributed to this decision? Who made the final decision?
6. Where did you want to give birth to your baby?	Explore advantages & disadvantages.
7. Which was the preferred place of birth by your decision maker?	Explore the reasons behind her preference?
8. Who was with you at the time of delivery?	If husband was not there, ask for the reasons
9. With whom would you have liked to be accompanied with at the place of birth?	

10. Were you given any card or record of your health during pregnancy?	If yes then do you know what information was included?
SKILLED CHILDBIRTH ATTENDANCE	
1. Who delivered your last baby: Doctor / CHN/ LHV/ FWW/ LHW/TBA/other?	In case of skilled attendant ask advantage and in case of TBA explore reasons behind not preferring skill attendant. What was the duration of your pregnancy?
2.Are you happy with the care you received during delivery	Explore the reasons for her satisfaction?
3. Where would you like to deliver your next baby and by whom?	Explore the reasons behind her decision? Explore her willingness to be delivered by a skilled provider (Define skill attendance for them) If yes ask her the good things that happen when women deliver with skilled attendants? Explore the barriers that come to this woman's mind for seeking delivery by a skilled attendant?
SKILLED CARE FOR OBSTETRIC EMERGENCIES	
1. What do you know about danger signs during pregnancy?	Ask her to list those danger signs Explore from where did she get the information about these danger signs Explore if she thinks that such complications are common
2. What do you know about danger signs during delivery/child birth?	Ask her to list those danger signs Explore from where did she get the information about these danger signs Explore if she thinks that such complications are common
3. What do you know about danger signs during postpartum period?	Ask her to list those danger signs Explore from where did she get the information about these danger signs

4. In this area, if a woman develops any of the above complication and needs to be taken to a hospital, who takes that decision?	If husbands do not take that decision then ask why? Also ask why others take the decision? Explore what are the reasons behind this role?
EARLY POSTPARTUM CARE 1. When did you first go out of your house after the birth of the baby? 2. What kind of support did you need in the days following the birth of your baby? 3. What kind of checkup did you and your baby need during the first two weeks of the birth of the baby? 5. If we want to encourage mothers like you to see a skilled provider like CMW, how should we disseminate the message so that it reaches every mother in that area?	Explore the reason for that trip. Also ask if this is a normal duration for her to stay inside? Explore who provided what support to her in those days. Explore what were the things for which she would have liked to receive some support? Explore particularly the role of husband. Explore, who told her that all post partum women need check up during the first two weeks of childbirth even when the mother and baby are fine. Would this be easy or difficult to get? Who provided that service (Skilled provider, Traditional?) (If she respond that she went to a TBA for check up inquire if she would prefer to go to a CMW if available in that area) Who should be targeted for that message dissemination? How could her husband and other family members be accessed so that they receive the message? Whom would your husbands listen more? Who would be a good motivator for your mother in law?
CONCEPT TESTING: TBA OR TRADITIONAL ATTENDANT AS LINK CARE PROVIDER We have talked about care for mothers and new born babies, about why women and families do/do not seek or expect health care	

<p>during that time. Now I would like to ask a few questions about some ideas we have to try and improve the availability, access and use of skilled care here during birth and during the period right after birth.</p> <ol style="list-style-type: none"> 1. Do you think family would allow a CMW or LHV during weeks 1 and 2 after birth to visit your home for check up in future pregnancies? 2. We would like to propose that TBAs could be useful to help all women to reach a place where skilled childbirth care is available, instead of actually helping the women in child birth. What this idea work and accepted in the community? 	<p>Why/Why not?</p> <p>If she says “No”, EXPLORE Why do you then not want that? Would this be easy or difficult? Do you think you would seek that support from TBA? Why/why not?</p>
<p>SOCIAL SUPPORT/SOCIAL NETWORKS/COMMUNICATION CHANNELS</p> <ol style="list-style-type: none"> 1. Where did you get information about women’s health issues like pregnancy, childbirth and complications during labour ? 2. Did you or are you using a family planning method? 	<p>Explore who gave that information? When? Where? How?</p> <p>If yes, how soon after the delivery did you adopt a family planning method If not, why? If yes ask what the advantages are?</p>
<p>Additional questions Now I am going to ask you a few questions about your baby’s first days of life.</p> <ol style="list-style-type: none"> 1. How soon after birth were you able to hold your baby close to body (skin to skin contact)? 2. What did you do to take care of the cord of 	<p>Explore why did they do that?</p> <p>Explore if she applied anything on the cord</p>

the new born baby?	etc.
3. What other actions did you take to keep your baby in good health?	Why?Who advised you for that?
4. Have you vaccinated your baby?	If yes, which vaccines? If No: What barriers did you face in vaccinating your baby Explore the myths and reasons if the answer is in negoting. If answer is positive, inquire about advantages of vaccination?
5. Which common disease are you concerned about and try to protect your baby?	How do you protect your baby against such illnesses? How do you manage these diseases at home? Explore preventive measures of Diarrhoea? Pneumonia? Where do you seek care for these diseases? What do they do?
6. What is your opinion on Vit- A supplementation for children of 6-23 months of age?	How frequently should children receive Vit-A supplementation?
7. Is your child who is around 6-23 months old receiving Vit A?	If children are not receiving supplementation then why? What are some of the barriers? How can the use of Vit A be promoted?
8. What are the perceptions about the use of family planning methods in your community?	
9. How often women in your community adopt family planning methods?	
10. Why do some women in your community not use family planning methods?	
11. What kind of family planning method, if any, is most acceptable to women you know?	What will women need to be able to access this type of family planning method?
12. What family planning method you/husband know or use?	If yes explore advantages. If no explore reasons.
13. Have you heard about Tuberculosis?	Who told you?

14. What do you know about spread of Hepatitis B?	Where did you hear about this?
	Who told you?

This is the end of the survey. Thank you for your participation.

ANNEXURE - III-C
Community Health Directorate
Aga Khan Health Service, Pakistan

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Questionnaire – EFFI / FMI)

Chitral Child Survival Project (CCSP) (2009-2013)

B: Demographic Information Questionnaire for Key Informants

Participant -ID: _____ (e.g EFFI-#, FMI-#)

Name of participant (optional): _____

Address / Location: _____

Variables	Key	Answer	Comment if any
Age	Write age in years completed		
Relationship with women who delivered in last 6 months	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = (specify) <u>Write code number</u>		
Family Structure	0 = Nuclear 1 = Extended <u>Write code number</u>		
Total House hold members	Write number		
Total number of children	Write the number of children male and female		
Marital status	single = 1 Married =2 Divorced =3 Widowed =4 No response = 9 <u>Write code number</u>		
Years since Married	Write in completed years		
Educational status	Years of education		
Occupational status	House wife =1 working from home =2 working as a farmer =3 working as a officer level =4 working as a managerial level =5 working as a teacher =6 Shop Keeper = 7 Others = 8 <u>Write code number</u>		

Educational status of husband	Years of education		
Husband's occupation (Ask from EFFI)	Unemployed =0 Student =1 Govt job =2 Private job =3 Business =4 Retired =5 Farmer =6 Shop Keeper =7 Other = 8 <u>Write code number</u>		
Siblings	M= # F= #		
Head of family	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Earning members(who)	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Approximate monthly family income	Write in Rupees		
Distance to closest BEmONC facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Location of birth of youngest child	Facility =1 Home =2 <u>Write code number</u>		
Closest CEmONC referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		

Distance of TBA's home to closest referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance of TBA's home to woman's home	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Deaths in immediate family due to birth complications (If any) during last 2 years.			

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions about birth preparedness.”

Question	Probes
<p>Who in your family gave birth to a baby in the last two years?</p> <p>BIRTH PREPAREDNESS</p> <p>1. What kind of preparations did you do to prepare for that childbirth in your family (including traditional preparations)?</p> <p>2. Who decides where women should give birth in your household?</p> <p>3. Which is your preferred place for the delivery of a child?</p> <p>4. Whom would you prefer to accompany women for delivery/access to hospital?</p> <p>5. Did women of your family get any card or record of health during pregnancy?</p>	<p>Keep that woman as a reference for all the questions that are being asked in the following section</p> <p>Explore if they also identified blood/ blood donors, money & transportation? Why? Why not?</p> <p>Who else contributes to this decision? Who makes the final decision?</p> <p>Explore the reasons behind preference?</p> <p>Why? Explore the role of husband.</p> <p>If yes then do you know what information was included?</p>
<p>SKILLED CHILDBIRTH ATTENDANCE</p> <p>1. Who was last birth attendant during delivery of woman in your family? Doctor / CHN/ LHV/ FWW/ LHW/TBA/other?</p> <p>2.Are you happy with the care woman in your family received during delivery ?</p> <p>3. Where would you like to deliver the next baby of your family and by whom?</p>	<p>In case of skill attendant ask advantage and in case of TBA explore reasons behind not preferring skill attendant.</p> <p>Explore the reasons for satisfaction?</p> <p>Explore the reasons behind his/her decision? Explore his/her willingness for delivering woman by a skilled provider (Define skill attendance for them) If yes ask him/her the good things that happen when women deliver with skilled attendants? Explore the barriers that come to his/her mind for seeking delivery of woman by a skilled attendants?</p>

<p>SKILLED CARE FOR OBSTETRIC EMERGENCIES</p> <p>1. Can you name some of the danger signs or complications of delivery and post partum period?</p> <p>2. In case of emergency /complication what you usually do to handle such complications?</p> <p>3. Do you know, what treatment a woman gets at the referral hospital (use the word used by the community for the referral hospital) that may save her life?</p>	<p>Ask her/him from where did they learn about these danger signs</p> <p>Explore with reference to cost, distance, transport issues as well as other factors: What would be your suggestion for handling obstetric complication?</p> <p>What is your opinion about the care in facilities? If nothing then why?</p>
<p>EARLY POSTPARTUM CARE</p> <p>1. Do you allow women of your family to leave home for post partum care after delivery?</p> <p>2. Would you allow someone trained to visit your home in the days and weeks following birth if there were no health problems for the mother/baby?</p> <p>3. What kind of support does a delivered woman need after birth?</p> <p>4. What kind of check up should a mother and her baby get during the first two weeks of childbirth?</p> <p>5. If we want to make sure that all mothers and babies are seen by skilled</p>	<p>If yes explore why? If not explore the reasons for not allowing the women to leave home for seeking care</p> <p>If not, why not?</p> <p>Explore who is the best person to provide that support? Explore particularly the role of husband.</p> <p>Who is the best person to provide that care? (If the response about going to a TBA for check up enquire about CMW in that role) Would this be easy or difficult to get? Where? Explore, who told you that all post partum women need check up during the first two weeks of childbirth even when the mother and baby are fine?</p> <p>Who should be targeted for that message dissemination?</p>

<p>providers like CMW. How should we disseminate the message so that it reaches EFFI/FMI in that area?</p>	
<p>CONCEPT TESTING: TBA OR TRADITIONAL ATTENDANT AS LINK CARE PROVIDER</p> <p>We have talked about care for mothers and babies after birth, about why women and families do/do not seek or expect health care during that time. Now I would like to ask a few questions about some ideas we have to try and improve the availability, access and use of skilled care here during birth and the period right after birth.</p> <p>1. Do you allow a CMW or LHV during pregnancies or weeks 1 and 2 after birth to visit your home for women's check up?</p> <p>We would like to propose that TBAs could be useful to help all women to reach a place where skilled childbirth care is available, instead of actually helping the women give birth.</p> <p>2. What do you think about this?</p>	<p>Why/Why not? If "No", EXPLORE Why do they not want that?</p> <p>Would that work? Why/why not? Would this be easy or difficult? Do you think you would seek that support from TBA? Why/why not?</p>
<p>SOCIAL SUPPORT/SOCIAL NETWORKS/COMMUNICATION CHANNELS</p> <p>1. Where did you get information about</p>	<p>Explore who gave that information? When?</p>

women's health like pregnancy, childbirth and problems with delivery?	Where? How?
2. Would you support adoption of family planning method after the delivery?	Why/why not? If yes ask what are the advantages?
3. Are there forums for community education?	If yes Which one? If not Why? How often are these forums organized?
Additional Questions Now I am going to ask you a few questions about your baby's first days of life? <ul style="list-style-type: none"> • What are barriers in vaccinating a child? • Which common diseases are you concerned about and try to protect children? 1. What are your perceptions about the use of family planning methods? 2. Have you heard about Tuberculosis? 3. What do you know about spread of Hepatitis B?	Why/why not? How do you protect children against such illnesses? How do you manage these diseases at home? Explore preventive measures of Diarrhoea? Pneumonia? Where do you seek care for these diseases? What do they do? Who told you? Where did you hear about this? Who told you?

This is the end of the survey. Thank you for your participation.

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Questionnaire - Religious Leaders, Community Leaders, UC Heads/Councillor)

Chitral Child Survival Project (CCSP) (2009-2013)

B: Demographic Information Questionnaire for Key Informants

Participant -ID: _____ (e.g R-# or CL-#, UC-# etc)

Name of participant (optional): _____

Address / Location: _____

Variables	Key	Answer	Comment if any
Position in Community	Political =1 Religious=2 <u>Write code number</u>		
Age	Write age in years completed		
Gender	Male=1 Female=2 <u>Write code number</u>		
Marital status	single = 1 Married =2 Divorced =3 Widowed =4 No response = 9 <u>Write code number</u>		
Years since Married	Write in completed years		
Educational status	Years of education		
Occupational status	Retired =1 working from home =2 working as a farmer =3 working as a officer level =4 working as a managerial level =5 working as a teacher =6 Shop Keeper = 7 Others = 8 <u>Write code number</u>		

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions about birth preparedness.”

Question	Probes
<p>BIRTH PREPAREDNESS</p> <p>1. What kind of preparations your community do to prepare for childbirth (including traditional preparations)?</p> <p>2. Who usually decides where women should give birth?</p> <p>3. Which place will you recommend for the delivery of a baby?</p>	<p>Explore if they also identified blood/ blood donors, money & transportation? Why? Why not?</p> <p>Who else contributes to this decision? Who makes the final decision?</p> <p>Explore the reasons behind preference?</p> <p>Explore the role of husbands in particular?</p>
<p>SKILLED CHILDBIRTH ATTENDANCE</p> <p>1. What are your views about skilled birth attendant? (Define Skilled Birth Attendants)</p>	<p>Explore reasons</p> <p>If yes ask him/her the good things that happen when women deliver with skilled attendants?</p> <p>Explore the barriers that come to his/her mind for seeking delivery of woman by skilled attendants?</p>
<p>SKILLED CARE FOR OBSTETRIC EMERGENCIES</p> <p>1. What role do you play if any woman in your community develops complication /emergency during or after pregnancy?</p> <p>2. What type of treatment a woman can get at the referral hospital (use the word used by the community for the referral hospital) that may save her life?</p>	<p>What would be your suggestion for handling obstetric complication?</p> <p>What is your opinion about the quality of care in facilities? If nothing then why?</p>
<p>EARLY POSTPARTUM CARE</p> <p>1. Would you have any concern if a woman of your community steps out of the house during the week following delivery for seeking care?</p>	<p>Explore if there are myths associated with this action? What could other community members do?</p>

<p>2. What kind of support does a delivered woman need after birth?</p> <p>3. Do you think a mother and her baby needs check up during the first two weeks of childbirth?</p> <p>4. If we want to make sure that all mothers and babies are seen by a skilled provider like CMW, how should we disseminate the message so that it reaches every mother in that area?</p>	<p>Explore who is best person to provide her this care and support? Explore particularly the role of husband.</p> <p>Explore who is the best placed for providing that care (Skilled? Traditional?) (If the response is about going to a TBA for check up inquire about CMW in that role) Would this be easy or difficult to get?</p> <p>Explore, how and from where did they get the check up during the first two weeks of childbirth even when the mother and baby are fine? Who should be targeted for that message dissemination?</p>
<p>CONCEPT TESTING: TBA OR TRADITIONAL ATTENDANT AS LINK CARE PROVIDER</p> <p>We have talked about care for mothers and babies after birth, about why women and families do/do not seek or expect health care during that time. Now I would like to ask a few questions about some ideas we have to try and improve the availability, access and use of skilled care here during birth and the period right after birth.</p> <p>1. What do you think about home visit by CMW or LHV during pregnancies or delivered mothers during weeks 1 and 2 after birth?</p> <p>2. We would like to propose that TBAs could be useful to help all women to reach a place where skilled childbirth</p>	<p>Why/Why not? If "No", EXPLORE Why do you then not want that?</p> <p>Would that work? Why/why not?</p>

care is available, instead of actually helping the women give birth. What do you think about this?	Would this be easy or difficult? Do you think family would seek that support from TBA? Why/why not?
SOCIAL SUPPORT/SOCIAL NETWORKS/COMMUNICATION CHANNELS 1. Do you know from where does the community get information about woman's health like pregnancy, childbirth and problems with delivery? 2. Would you support adoption of family planning method after delivery? 3. Are there forums for community education that exists in the community? 4. How can you play a role in increasing skilled delivery in the area?	Yes/No If yes from whom? When? Where? How? If no. Why? Why/why not? If yes which one? If not why? How often are these forums organized? Explore if they have ever played such a role?
Additional questions <ul style="list-style-type: none"> What are the community's views about child vaccination? Which common diseases are you concerned about and want to protect your children with? 4. What are your perceptions about the use of family planning methods in your community?	Explore preventive measures of Diarrhoea? Pneumonia? Where do community seek care for these diseases? What do they do?

This is the end of the survey. Thank you for your participation.

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Questionnaire – Health Care Providers: Formal/Informal)

Chitral Child Survival Project (CCSP) (2009-2013)

B: Demographic Information Questionnaire for Key Informants

Participant -ID: _____ (e.g HCP #)

Name of participant (optional): _____

Location (optional): _____

For Formal Health Care Providers

Variables	Key	Answer	Comment if any
Type of Formal Occupation?	Gynaecologist/Obstetrician =1 Family Physician=2 Medical Officer=3 CHN=4 LHV=5 CMW=6 Other=7 Specify: _____ <u>Write code number</u>		
Age	Write age in years completed		
Gender	Male=1 Female=2 <u>Write code number</u>		
Hours Worked	Day Shift=1 Night Shift=2 24 Hours=3 Other=4 <u>Write code number</u>		
Number of Years in Practice:	Write the number of completed years.		
Distance of Provider Home to Facility:	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		

For Traditional Birth Attendants (Informal Health Care Providers)

Variables	Key	Answer	Comment if any
Type	Trained =1		

	Untrained =2 <u>Write code number</u>		
Age	Write age in years completed		
Date of last assisted birth	Approx		
Number of births assisted per year	Approx		
Distance to closest BEMOnC facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance to closest CEMOnC referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
TBA home/distance to closest referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions about birth preparedness.”

Questionnaire for Health Care Provider/TBA

Question	Probes
BIRTH PREPAREDNESS 1. What kind of preparations your community does to prepare for childbirth (including traditional preparations)? 2. Do you give women any card or record of health during pregnancy?	How do you know that? What kind of preparation you recommend them? If yes then explore what information is included?
SKILLED CHILDBIRTH ATTENDANCE 1. What type of skilled care provider would you recommend a woman should seek for child birth (Ask from informal HCP) 2. Do you think more women would be willing to use skilled attendance? 3. Do you think more women would like to give birth in a facility than do so now? Ask TBA?	Explore reasons for the response Why/Why not? Explore Motivating factors? What can be the barriers for women in seeking delivery by skilled attendants? If yes, would you support this?
SKILLED CARE FOR OBSTETRIC EMERGENCIES 1. Do you think many women and their families are able to recognize obstetric complications and emergencies at the right	Yes/No Do they understand the need for immediate access to skilled care?

time?	
2. Do you know, usually what treatment a woman gets at the referral hospital (use the word used by the community for the referral hospital) that may save her life?	<p>If nothing then why?</p> <p>What is the opinion about the care in facilities?</p>

<p>EARLY POSTPARTUM CARE</p> <p>1. Do women come to you for seeking care during 1 and 2 week after birth even when the mother and baby are fine?</p> <p>2. If we want to make sure that all mothers and babies are seen by skilled providers like CMW. How should we disseminate the message so that it reaches every mother, EFFI and FMI in that area?</p>	<p>If yes. Why? When? If. Not. Why?.Do you visit their homes during postpartum period?</p> <p>Who should be targeted for that message dissemination?</p>
<p>CONCEPT TESTING: TBA OR TRADITIONAL ATTENDANT AS LINK CARE PROVIDER</p> <p>We have talked about care for mothers and babies after birth, about why women and families do/do not seek or expect health care during that time. Now I would like to ask a few questions about some ideas we have to try and improve the availability, access and use of skilled care here during birth and the period right after birth.</p> <p>1. Do you think family/community would allow a CMW or LHV during weeks 1 and 2 after birth to visit their homes?</p> <p>We would like to propose that TBAs could be useful to help all women to reach a place where skilled childbirth care is available, instead of actually helping the women give birth.</p> <p>2. What do you think about this?</p>	<p>Why/Why not? If "No", EXPLORE Why do they then not want that?</p> <p>Would that work? Why/why not? Would this be easy or difficult? Do you think that staff at facilities would</p>

	<p>accept TBAs (or other traditional providers) as link care providers? Why/why not?</p> <p>Do you think family would seek that support from TBA? Why/why not?</p>
<p>SOCIAL SUPPORT/SOCIAL NETWORKS/COMMUNICATION CHANNELS</p> <p>1. Do you give information to women about the health issues like pregnancy, childbirth and problems with delivery?</p> <p>2. What is your opinion about adoption of family planning method after the delivery</p> <p>3. What information and advice do you give to expecting mothers about family planning?</p> <p>4. Are there forums for community education?</p>	<p>Yes/No</p> <p>When?</p> <p>Where?</p> <p>How?</p> <p>Explore the myths, perceptions behind their response? Why/why not?</p> <p>If yes which one? If not why?</p> <p>How often are these forums organised?</p>
<p>Additional Questions</p> <p>1. What is your opinion about child vaccination?</p> <p>2. Do you know? Some women go to ANC, but then do not use skilled attendants for birth?</p> <p>3. What are your perceptions about the use of family planning methods</p>	<p>Advantages of vaccines?</p> <p>Do you also provide vaccination?</p> <p>What barriers do you face in vaccination (ask from Formal HCP)</p> <p>If yes. Why</p>

<p>immediately after birth?</p> <p>4. In your opinion? Why do some women in your community not use family planning methods?</p> <p>5. Do you know about family planning method, if any. Which is the most acceptable method to women in your community ?</p> <p>6. Do you think TBAs are competent to recognize obstetric complications and emergencies? (Ask Formal HCP)?</p> <p>7. What happens when a woman without any obvious problems gets to a skilled provider for check up.</p> <p>8. What kind of care is generally available to a woman with obstetric complications or emergencies who goes to a skilled provider or arrives at the referral facility?</p> <p>9. What do you think about the quality of care given by skilled birth attendant now? Explore (Ask TBA)</p> <p>10. How can you play a role in increasing skilled delivery in the area?</p>	<p>If yes. What will women need to be able to access this type of family planning method? Why do you say that?</p> <p>Why/why not? Are they aware when should a woman be asked to seek referral care?</p> <p>Are there delays that keep her from getting skilled care? Why do you say that?</p> <p>Does anything keep her from getting care immediately? Why do you say that?</p>
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This is the end of the survey. Thank you for your participation.

Community behaviours towards birth preparedness in
Chitral, Pakistan

FORMATIVE RESEARCH INSTRUMENT

(Questionnaire – Women who had complication / Attendant of woman who had
complication)

Demographic Information

Participant -ID: _____ (W# / At#)

Name of participant (optional): _____

Location (optional): _____

Variables	Key	Answer	Comment if any
Age	Write age in years completed		
Relationship with women who delivered in last 6 months	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = (specify) <u>Write code number</u>		
Family Structure	0 = Nuclear 1 = Extended <u>Write code number</u>		
Total House hold members	Write number		
Total number of children	Write the number of children male and female		
Marital status	single = 1 Married =2 Divorced =3 Widowed =4 No response = 9 <u>Write code number</u>		
Years since Married (only to be asked from mothers)	Write in completed years		
Educational status	Years of education		
Occupational status	House wife =1 working from home =2 working as a farmer =3 working as a officer level =4 working as a managerial level =5 working as a teacher =6 Shop Keeper = 7		

	Others = 8 <u>Write code number</u>		
Educational status of husband	Years of education		
Husband's occupation (Ask from mother or female married attendant)	Unemployed =0 Student =1 Govt job =2 Private job =3 Business =4 Retired =5 Farmer =6 Shop Keeper =7 Other = 8 <u>Write code number</u>		
Siblings	M=# F=#		
Head of family	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Earning members(who)	Self = 1 Mother-in-law = 2 Father in law= 3 Husband = 4 Other = 5(specify) <u>Write code number</u>		
Approximate monthly family income	Write in Rupees		
Distance to closest BEmONC facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Location of birth of youngest child	Facility =1 Home =2 <u>Write code number</u>		
Closest CEmONC referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		

Distance of TBA's home to closest referral facility	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Distance of TBA's home to woman's home	0-1 hour travelling time= 1 1-3 hours travelling time= 2 more than 3 hours travelling time= 3 <u>Write code number</u>		
Deaths in immediate family due to birth complications (If any) during last 2 years.			

When completed, the interviewer will say: “Thank you for cooperation. I will now ask you some questions complications.”

Questionnaire for women who had complications and attendants of women who had complications

Question	Probes
<p>Recognition of Obstetric Complications</p> <p>1. Where did this birth (with complication) take place (before the complication started)?</p> <p>2. When were the signs of a complication of the birth first recognized?</p> <p>3. How long did it take for your family or helper that the problem was serious enough to recognize that and need additional help?</p>	<p>Who was there to help you at the start with the delivery of the baby? (TBA/skilled birth attendant)</p> <p>Explore what was the complication? Who recognized the problem first? Did everyone agree that you / woman needed help?</p> <p>What kind of help was immediately considered? Why?</p>
<p>Care-Seeking Decision Making</p> <p>1. Who decided you/woman needed help?</p> <p>2. Do you remember what happened first in the sequence of activity to provide you/woman the help?</p> <p>3. How long did it take to decide what to do?</p>	<p>What did the decision makers do to get you the help?</p> <p>What happened next?</p> <p>How did you reach to referral care facility? If response is that a transport was arranged, ask following questions:</p> <p>a) Who arranged the transport?</p> <p>b) What type of transport was arranged?</p> <p>c) How was the transporter contacted (if through telephone then who had the telephone).</p> <p>If not, what happened next?</p> <p>Ask the interviewee to recall and tell us how much time was spent at each step?</p>

<p>wrong with you?</p> <p>3. What advice were you given before you left to go home about what you should do when you get home?</p> <p>4. What information (if any) was given to you regarding follow up care?</p> <p>5. How did you get back home?</p> <p>6. How much did it cost?</p>	<p>Explore about: Timing of follow up care New born care Postpartum Care Vaccines etc</p> <p>Did you get any other advice? From whom?</p> <p>So altogether, about how much did it cost to get the help you/woman needed?</p> <p>And altogether, about how long did it take?</p>
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This is the end of the survey. Thank you for your participation.

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Community Based Savings Groups (CBSGs) for the Chitral Child Survival Program

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Preface: the Fundamental Promise of Financial Institutions

The purpose of the community financing mechanism for the Chitral Child Survival Program (CCSP) is to allow women to acquire lump sums to pay for health care around the time of delivery that would not otherwise be available to them. Any approach is necessarily going to involve asking poor women to trust financing mechanism to accept money in advance of need, and then make that money available when it is needed. This is true whether one envisions the financing mechanism as collecting deposits, making loans, or collecting insurance premiums. This fundamental promise, that funds deposited now will be available in the future, is at the core of all financial services, and must be at the core of the CCSP financing mechanism. The promise of security of funds is of primary importance. Otherwise, one could create a system or structure through which poor people could lose their money, and to do so would be ethically wrong and developmentally harmful, while incurring substantial reputational risk for AKF and AKRSP. Also, of course, risking the financial resources of poor women is inimical to maternal and child health.

It is a safe assumption that all failed financial institutions have somewhere in their wreckage spreadsheet projections showing a glowing prosperous future. In order to be in a position to keep this core promise, the financing mechanism must be sustainable, not only in the narrow sense of having projected revenues greater than its expenses, but in the broadest sense of being able to weather the myriad of threats to any financial scheme.

Increasing evidence suggests that the safety of deposits is best insured by very large and by very small institutions, and that the area of greatest risk is with middle-sized institutions. To understand why this is so, it is good to remember that any sustainable financial institution must operate in an orderly transparent way according to clear procedures, that good records must be kept, and that objective control and audit must assure that the records are accurate.

Large institutions do this by spending a great deal of money on qualified professional staff, management information systems, and external controls. These institutions –banks and insurance companies – must be of a certain minimum size so that they can spread their substantial expenses over a large base, without burdening any depositor with too large a share. As institutions become smaller, it becomes difficult, and then impossible, to pay professionals to fill those functions; small institutions simply cannot afford the expertise necessary.

However, when institutions get to be very small, a new possibility is available. Rather than hire professionals, they can rely on volunteers from among their members to carry out the functions of management, record keeping and control. Experience suggests that volunteer-run organizations can work very well when they have 15-30 well trained members with clear and simple procedures, and that they can survive with up to fifty or so members, before the burden on the volunteers becomes too great and the social cohesion too weak.

The sweet spots for financial intermediation therefore seem to be institutions of fewer than 30 members, or more than a few million dollars in capital. This analysis proposes Community-Based Savings Groups (CBSGs) as the structure for the community financing mechanism for CCSP. It draws on practices in community based savings groups in other countries, with important additions. It has been discussed with a number of different people from AKRSP, who contributed useful comments that have been incorporated.

Community Based Savings Groups

Community-Based Savings Groups (CBSGs) are based on designs that have had rapid growth in Africa and Asia, and are now beginning to spread to Latin America.

In a CBSG, a group of about 25 self-selected members agrees to a constitution, elects officers, saves regularly, makes loans from the accrued savings, and, at the end of a pre-determined period, usually about a year, the group distributes all its assets to its members in proportion to their savings. Then,

they elect new officers for the next cycle, and often decide to make a one time contribution to recapitalize their group so that lending can continue.

The CBSG is like the existing Village Organization (VO)/Womens' Organization (WO) methodology for savings and internal lending – which is already within the AKRSP system – with some important differences. These differences assure transparency and democracy, prevent elite capture, keep the money moving rapidly, and reduce loan losses to very nearly zero.

All transactions occur in front of all members at (usually) weekly meetings, and all records are kept on passbooks that are kept in a secure box with three locks, each key held by a different member, and only used at the meetings. These measures assure members that nothing has happened that they don't completely understand.

Members make all decisions, including lending decisions, democratically at the weekly meetings. The officers rotate every year. The group sets the interest rate on loans, and is encouraged to set it at an amount high enough to assure good earnings for the group.

Members carry out savings by buying shares at each meeting. The share value is set in the constitution, and remains constant for the year. A member can buy from one to five shares at a meeting, but no fractional shares, and not more than five. This restriction keeps the amount of savings transparent, and prevents vast disparities in ownership of the group among members. There are ingenious bookkeeping methods that provide even non-literate members with information on their savings.

The annual distribution of assets prevents loans from becoming long overdue. In fact, because distribution cannot occur if there are outstanding loans, any borrowers who owe money at the end of the cycle are under immensely strong social pressure to repay. In addition, two restrictions help keep debt from getting out of hand: loans are for a short period (set by the group, but usually three to six months maximum); also, loans cannot exceed three times the borrower's savings.

In addition to the savings and credit activities, groups frequently create a separate fund, called the social fund, or insurance, solidarity or provident fund. While there is immense variability in details, the social fund is usually used to give grants to members who face unpredictable major expenses, such as illness, death, incapacity, natural calamities, and, in many cases, childbirth. The fund is essentially a small group insurance scheme: members invest the same amount¹, but are paid back on the basis of their needs, not their contributions.

The group social fund has one large advantage over other means of financing deliveries attended by community-based midwives. It essentially eliminates adverse selection risk, because the members are all from a pre-existing group. It also has essential no administrative costs, so that all money contributed is available to be paid out.

Recent data from Chitral predicts 1066 annual pregnancies in the 25 villages, distributed as follows:

- 12% would be transferred to one of four secondary health care facilities (DHQ Chitral, Booni, Shogoor, Torkhow) for Caesarians or other medically demanding interventions. He argues that the group negotiating power of the fund plus a member contribution would drive the price of the payout for these interventions to R 8000 (although the quoted price for these services is Rs12,000)
- 20% would be delivered at one of seventeen AKHSP operated first level health centers, with an average payout of Rs 2000.
- The remaining 68% would be delivered by Community Midwives, paid out at Rs 800.

In the following table (Table 2) I have accepted the number of births and their distribution by type of facility, but I have assumed somewhat larger payouts, simply to err on the side of conservatism.

¹ Among the many variations, in some schemes, better off members are invited to contribute more money, and sometimes the payout is in the form of an interest-free loan, rather than a grant, to the recipient. In this discussion, we will assume the most common variant: same size contributions, and grants instead of loans.

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Table 2: Average cost of a birth, all facilities

Delivery facilitation	%	Number	Estimated unit cost of services	Total cost
Secondary care facility	12%	128	12000	1,535,040
FLHC facility	20%	213	2000	426,400
Community Midwives	68%	725	900	652,392
	100%	1,066		2,613,832
Average cost per birth		2,452		

Rough calculations (Table 3) indicate that a contribution large enough to cover the cost of Community Based Midwife deliveries is quite modest, if the entire group participates. Assume 25 women in the group. The latest figure for total fertility rate for Pakistan is a surprisingly low 3.6. For the potential client population, that should be adjusted up because they are from rural areas, but also adjusted down because of the relatively high level of women's education in the area. Call it 3.8. Therefore, a group of 25 women should expect to have a total of $25 \times 3.8 = 95$ children in their lifetimes. Assume that membership in the group more or less coincides with childbearing years, about 33 years from 18 to 51. Then, the group can expect to have $95/33 \approx 3$ births per year per group. Under the above scenario, the Community Midwives would carry out 68% of the births in the region; the cost of the Community Based Midwife services is Rs 900 so the costs of all those births would be $68\% \times 3 \times \text{Rs}900 \approx \text{Rs}1,836$. If all the members were to contribute Rs 10 per month, then monthly contributions would be Rs 250, and yearly contributions would be Rs 3000. That would leave additional Rs 1164 for other group emergencies and social needs.

Table 3: Estimate of cost of CBSG self-insurance for CMW deliveries of group members

Group size	25
Fertility rate (est.)	3.8
Births per group per year	≈ 3
% delivered by CMW	68%
Cost of each CMW delivery	900
Total cost of all group CMW deliveries	1,836
Projected monthly contribution to social fund/member	10
Annual contributions to social fund	3,000
Amount left for other social needs	1,164

Of course, while the average number of births per group would be about three per year, the distribution of those births would be such that some groups would have fewer, while others would have more, in any year. If a group finds it has extra money in the social fund at the annual pay-out, it will either carry it forward to the next year, or add it to the amount to be distributed. If the social fund runs dry, which can easily happen, the members will make a special contribution, either from their pockets or from the accumulated savings. Groups are easily able to deal with these variations, because the amount in the social fund is small relative to the total assets of the group. Typically, a group in Chitral might set its share value at Rs 10, and allow weekly purchases per member of Rs 10, 20, 30, 40 or 50. In light of those amounts, the *monthly* contribution of Rs 10 would not be socially difficult. A group might decide to contribute Rs 15 per month to the social fund, or Rs 5 per week, in which case the fund would be able to pay for projected birthing expenses plus a number of other social needs, to be decided by the members.

Groups should be completely free to define the workings of their social fund. However, it would be easy to imagine a way to urge women to include childbirth by Community Based Midwives in the coverage. Group trainers could say, during group formation, something like this:

“When you plan how you are going to use your social fund, please bear in mind that as women members of the community, you have a special responsibility to the children you may give birth to, and also the other children that are born to group members. During the group meetings, we’ll be telling you about some of the things that you can do to make sure that your births are safe, that the mothers are okay and that the children are healthy. One of the things that we will tell you about is using trained community based midwives instead of, or in addition to, traditional birth attendants. These ladies, from the village, will have had special schooling to help them give you a good modern birth at home, or they will recommend that you go to the hospital if they discover certain conditions during your pregnancy. Their services will cost about Rs 900, which will include equipment and visits during the pregnancy and after the birth as well. I recommend that you include payments to the community midwives in the social fund.”

Of the alternatives discussed in this document, probably the easiest one to get group members to accept is that of including community midwife services in the CBSG social fund. Such a plan would require women not of childbearing age and status to pay for the births of other women, but the social fund is in fact a way of redistributing assets so that group members can weather difficult periods. The social fund should never be limited to childbirth related expenses, but should cover various life cycle events, certainly including family deaths and funerals, and, very often, weddings.

Of course, the greatest gains in maternal and child and health will come not from the easy births, but rather from the smaller number of high-risk births that are referred to primary and secondary centers. Could the CBSGs also cover the cost of those births, and if so, how could that be arranged?

Self insurance at the CBSG level for CMW births makes excellent social and financial sense. The births are common enough that a typical group will have about two CMW births a year; while the women will want to share the risk inside the group, there is no reason to share the risk between groups, since the amount, Rs 900, is low enough that a CBSG can easily absorb and smooth year to year variability. Self-insurance has the clear advantages of responsiveness, no administrative costs, and total transparency.

However, high-risk and hospital births, estimated at Rs 12,000, are another matter. The typical group would only expect a hospital birth from one of its members about every four years. Smoothing its expenses over four years is much more difficult, and the random distribution of medical complications would mean that occasional groups might have two expensive hospital births in one year, a heavy burden. In the case of hospital births, a real insurance policy seems indicated so that groups can smooth the costs of the events over time and across groups.

One way of covering the higher cost births is as follows:

The average cost of a birth in the target population is Rs 2,452 (from Table 2). The average annual number of births in a typical CBSG is just under three. So, the total annual costs of delivery in an average group, using the weighted figures from Table 2, is Rs 7,356, arrived at as follows:

Table 4: Average annual costs of deliveries per CBSG

Delivery facilitation	%	Number per group per year	Estimated unit cost of services	Average cost per group per year
Secondary care facility	12%	0.4	12000	4,320
FLHC facility	20%	0.6	2000	1,200
Community Midwives	68%	2.0	900	1,836
	100%	3		7,356

Annex 6

In fact, it would probably be easier administratively and socially, and less costly, to have the groups continue to pay for the CMW births of their members directly from their social funds, and use the insurance only to top up the costs in case of referrals. It should be clearly stated to groups thinking of buying insurance that the insurance policy does not cover transportation, and that unless the woman arrives at the hospital, then the insurance is useless. The groups should think about how and whether they would play a role in providing transportation, and they may want to allow some provision for this in their social fund.

Average annual non-CMW births would require an average expenditure per group of Rs 5,520, arrived at as follows:

Table 5: Average annual cost of births per group, CMW births excluded

Delivery facilitation	%	Number per group per year	Estimated unit cost of services	Average cost per group per year
Secondary care facility	12%	0.4	12000	4,320
FLHC facility	20%	0.6	2000	1,200
Totals	32%	1		5,520

Therefore, a group that wanted to insure all its members against all three levels of delivery would have to find, over and above their social fund, an additional Rs 5,520, which would be increased by the amount that the insurance company would keep for its administrative and other expenses. If the insurance company retains 20%, the total amount needed would be Rs 6624.

The cost would have to be much higher if the plan was optional for individual members, because of adverse selection risk. It is my recommendation that the plan take the firm position that it is all or nothing in a group: the only way for any members to have insurance is for the group to decide that all members will be insured. It would be important to monitor the social reaction to this requirement. If the group compensates for some members not wanting to participate by informally raising the contribution of other members, that would be an acceptable cost. On the other hand, if the group forces out members who don't want to participate, then that is a high social cost to pay, and also will reintroduce the problem of adverse selection, since the group will end up with a higher density of members of childbearing age and status. This question should be addressed frankly with the group.

If the group wanted to cover this cost, it might raise its monthly contributions to Rs 25 (over and above its existing contribution to its social fund). A weekly contribution of Rs 5 would by itself almost raise the presumed cost of the insurance, and if the present estimate is high, then the insurance could be covered by such a small contribution. Both of these amounts would be within reach for many CBSGs.

Table 6: Two funding scenarios for CBSG purchase of insurance

	Monthly contributions of Rs 25	Weekly contributions of Rs 5
Members	25	25
Periods	12	52
Contribution	25	5
Total annual contribution	7500	6500

While groups usually have social funds and easily accept the principle of self-insurance, the prospect of selling them insurance from a third-party provider is a new challenge with very little or no precedent. The sort of marketing presentation that might lead to acceptance is imagined here:

“So far you have been using the social fund to protect yourselves against some of the events than can befall any one of us: births, fires, deaths. But, as you know, every once in a while, childbirth can lead to severe complications that can take the life of the mother, or of the child. Thanks to the Community Midwives, it is possible to know in advance, in many cases, when a mother is in danger of a birth that could kill her or her child, or leave either one very sick. These events are infrequent, but we all know of cases in which a mother or infant has died. To prevent these cases, when certain indications are present in the pregnant woman, it is necessary to transport the mother to the hospital or the health center for medical treatment that may include a Caesarian birth. This is much more expensive, of course, and it might be too expensive for your group to take on the responsibility of the health care for that mother and child. Therefore, we have worked with an insurance agent, FMIA, to offer a policy that will cover those hospital births, when they are necessary, and also other health care for women, other problems that you as women might have, especially as you get older....”

To bring about insurance for all births, including hospital births the following steps constitute one scenario:

1. Introduce the notion of self-insuring against CMW births in the groups. This would take place during group induction training, one of the first steps in group formation, even before a group begins to save, is to have the group members write a constitution defining, among many other things, how the social fund will function.
2. After the group is successfully and confidently managing its financial affairs, about two months after group formation, introduce the program of BCC, which presumably includes information on assessment of women during pregnancy and the necessity of identifying high-risk situations and taking them to the hospital.
3. Develop a woman's health insurance product to market to CBSGs. This would include primarily birth insurance, but could also include other OB/GYN services. This is important not only for health reasons, but also to make the product appealing to women who are not of childbearing age or status. The product would be developed with input from First Microinsurance Agency (FMIA, AKRSP, AKHS/P, and perhaps representatives of the Local Support Organizations (LSOs). The product would necessarily involve compromises among the different imperatives of health care, affordability, and sustainability.
4. Market the product to CBSGs, again with the requirement that the entire group would need to agree to take the product (which is essential to reduce adverse selection risk). In some cases, one or two women might refuse or be unable to pay the extra amount. In that case, other members of the group might choose to make a small extra contribution to cover the policies for the non-participating women, perhaps by paying Rs 11 every week instead of Rs 10.

Presumably, the product would be offered by New Jubilee Insurance, through its broker FMIA, which is not now present in Chitral. Either FMIA would need to open a physical office in Chitral, or delegate the marketing, collection and payment functions to the LSOs. Details and costs of this arrangement would be negotiated, but would not have a material effect on the analysis in this report.

While CBSGs are usually trouble free, problems can arise when the groups are asked to take on other functions for which they are not well adapted. To this consultant's knowledge, no CBSG program has had significant failures when the groups have been reasonably well trained and then left alone. The few programs that have experienced problems all suffered from external interventions that responded to a different agenda than that of the CBSGs².

While CBSGs could be expected to work well in the Northern Areas and Chitral, the separate health agenda creates some risks, which can be mitigated.

² Examples, all from Africa, follow. In Niger, the groups had a donor who had also invested heavily in struggling MFIs, and who urged the implementing agency to link the groups and the MFIs, to help the lending operations of the MFIs; the result after three years was that at least 15% of the linked groups ceased to function. In Rwanda, the government had promoted rural banks, and the savings groups were linked to the banks as part of national policy; the result, as in Mali, was stress on the groups, lost savings. In Uganda, some groups were consolidated into Savings and Loan Cooperatives, a form of financial institution favored by the government; the result was again stress on the groups and loss of membership.

The risks are of two sorts: Risks to the project, and risks to the group. First, there are the risks that CBSGs would not attain its desired outreach, because the groups would choose not to participate, or would drop out of the program; second, there is the risk that the groups would participate, but that their participation would be injurious to the group, or would impede the group from attaining its other objectives. These two sorts of risk are discussed below.

Project Level Risk: It is impossible to predict with certainty group behaviour, but in general one can be quite optimistic that the groups would agree to use their social fund to cover community midwife births. Doing so is perfectly consistent with group behaviour in other countries, and if the group were sensitized to the advantages of use of midwives, and aware of their availability, it seems likely that they would want midwife coverage for births within their group anyway.

On the other hand, asking the groups to participate in a third-party insurance scheme would have a less certain outcome. There is no known example of this being done elsewhere, and the third party insurance has the disadvantage of not having an immediate relationship between the payment and the payoff; that is, in many cases, groups will pay money into an external insurance scheme, the money will leave the group, and they will get nothing back, other than the unrealized coverage of theoretical risks. While women in Chitral can certainly understand the value of that coverage, the disconnect between payments and what policyholders receive makes any insurance scheme a difficult proposition to sell, and is the reason why in the US, insurance coverage must be mandated for homeowners - by their mortgage holders - and for drivers - by states.

The hard sell would also constitute a Group Level Risk. The risk is possible because of the inevitable power asymmetry between AKRSP and the group. AKRSP carries great credibility and respect, and is likely perceived as a future source of benefits, unknown and known. The wide range of services provided by AKRSP, and the familiarity of group members with the AKRSP staff, makes it unlikely that groups would easily refuse a request or turn their backs on a suggestion made by AKRSP; supposedly much or all of this receptivity would transfer to the LSOs.

There are various sorts of risks to the group.

First, groups may be persuaded to spend more than what they can or should spend on insurance. That is, many needs make claims on the small amount of disposable income available to poor women, and there is an amount of spending on insurance – an amount which will differ for each woman - that it would not be in her enlightened self interest to exceed, because beyond that point she would have to cut back on spending on education, housing, investments, or other social goods. If that happens, then women will start to feel poorer and worse off, rather than richer and better off.

The second Group Level Risk is that questions around purchasing insurance will put stress on the group, as members disagree about the wisdom of the investment, or as they have different degrees of difficulty in making contributions. It is worth stressing again that the strong feelings of solidarity in groups are such that the groups will be happy to subsidize the more needy women; it is, however, recommended that there be some potential direct benefit for all the women in the group through some sort of appropriate OB/GYN care.

Finally, groups may lose some autonomy if they are pressured to make investments that they would not make otherwise. The cost to the group of the loss of autonomy may be long term, but will be real.

Group level risks and project level risks can be mitigated in the same way: through project design, alignment of messages and objectives, by good monitoring and responsiveness, and by attention to incentives. These four risk mitigation actions are all simply part of good project management, and each is discussed below.

First, the insurance product, if offered, must be carefully designed to be as affordable as possible to CBSGs, while providing some benefits to women of all ages, even non-childbearing ages. Threading the needle of setting the coverage and cost at the optimum point will require careful listening to a variety of clients, and a sufficiently long conversation among the different interest groups: health providers, insurance professionals, and CBSG champions. A product which doesn't cover its costs, or which doesn't meet the needs of group members, is doomed.

Second, there must be broad understanding and buy-in among all the interest groups, so that everyone gives the same message. The insurance people must understand what a CBSG is, and the CBSG people must understand the value of insurance. Mixed messages will cause problems for all parties: insurance, health, groups.

Third, there must be monitoring and continual correction if things do not appear to be working. For instance, it is important to monitor the claims being made by those selling policies to make sure that they are accurate. In particular, while it is desirable that large numbers of women choose to buy a product that serves their needs, the choice must be free, and all parties must be alert to avoid any pressure or “hard sell”. The hard sell will produce an initial wave of sales, but will lead to high drop-outs at renewal time.

Fourth, the project management team must be aware and sensitive to the incentives and motivations it is sending. In particular, if the LSOs are put in charge of both CBSG creation and sales of insurance products, they may feel a conflict of interests and motivations, since their reputations and remunerations will in some ways be tied to their successes in both outputs. In these conditions, it is probably not wise to tie the remuneration of the LSO or of its agents directly to insurance sales. LSO agents could, for instance, be trained to lead presentations which would include the option of purchasing insurance, as well as other options, and bring the CBSGs to choice on the matter. Marrying the social objectives of NGOs and the commercial needs of for-profits is always difficult, but can be accomplished through careful, complete and on-going communication.

The following table presents CBSGs at a glance.

Key characteristics	
Affordability and Cost	Approximately Rs 10 monthly for coverage of CMW births. Option of additional Rs 25 for coverage of more complicated births.
Savings or insurance?	Payments are insurance, and so are not refunded. Payments cover entire cost of birth, however.
Outreach	Uptake for CMW births likely to be high; impossible to know uptake of insurance product. Provision that all group members buy in may be impediment. Outreach depends on enhancing financial service component of WOs with CBSG approaches; this is desirable anyway, hopefully in a way that covers a large area.
Coverage	No co-pay, some provision for travel assistance.
Sustainability	Sustainability of social fund payments for CMW is assured if group agrees to modest contribution. Sustainability of insurance product is much less certain; there is insufficient information now to assess cost to FMIA. Product could be a loss-leader to allow penetration into Chitra.
Replicability	Social fund is used to pay modest local health costs in many countries already. CBSGs are a natural pre-existing group to which to market insurance products; the question is are there available suitable products?

Implementation Considerations

LSOs, where they exist, would be trained to form the groups, and LSOs exist in all of the 25 villages in Chitral targeted for this project. Health care is only one of many pressing calls on their resources that poor people experience, and it is unknown how much of their resources they would, or should, commit to health, especially after a BCC campaign. There is some reason to be concerned that women might be encouraged to save or borrow for births at a higher rate than they would be willing to sustain, absent the encouragement of the BCC campaign.

Baseline Household Survey District Chitral

Chitral Child Survival Program (CCSP)

Final Draft

National Institute of Population Studies
November, Islamabad

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ACRONYMS

AKF-P	Aga Khan Foundation- Pakistan
AKHS-P	Aga Khan Health Services, Pakistan
AKRSP	Aga Khan Rural Support Programme
ANC	Ante Natal Care
BCC	Behavior Change Communications
BPCRs	Birth preparedness and complication readiness plans
CCSP	Chitral Child Survival Program
CMWs	Community Midwives
EmONC	Emergency Obstetric and Neonatal Care
FLCH	First level health care
IUD	Intra-Uterine Device
LHVs	Lady Health Visitors
NIPS	National Institute of Population Studies
NMNCHP	National Maternal and Child Health Program
NWFP	North-West Frontier Province
PDHS	Pakistan Demographic and Health Survey, 2006-07
PSLM	Pakistan Social and Living Standards Measurement Survey
TT	Tetanus Toxoid
USAID	United States Agency for International Development

Executive Summary

Chitral Child Survival Program (CCSP), a 5 year USAID funded project aims to reduce maternal and neonatal mortality and morbidity in the district of Chitral, North West Frontier Province, Pakistan. The objectives of the project are:

1. To increase awareness of obstetric and neonatal complications, increased utilization of birth preparedness and complications readiness (BPCR) plans, and an improved enabling environment for MNCH;
2. To strengthen CMW referral linkages for obstetric and neonatal services;
3. To increase availability of trained community midwives (CMWs);
4. To reduce financial barriers to accessing obstetric and neonatal continuum of care.

CCSP will benefit around 112,406 population including almost 30,350 women of reproductive age and 20,233 children less than five years of age.

The current survey was designed to provide baseline information for CCSP. The survey has collected information on household related indicators to assess the overall socioeconomic situation of the project area; availability, accessibility, affordability and acceptability of maternal and neonatal health services; health seeking behavior of the people especially with respect to women and children; and to determine the prevalence of health indicators to set the target for the CCSP and investigate factors that affect maternal, neonatal, infant and child health in the project area. The survey was carried out in 60 villages and information was successfully collected from 1317 ever married women of reproductive age having children less than two years of age. Out of 60 villages, interventions will be carried out in 30 villages while the remaining 30 villages will serve as comparison areas. The report presents the results of the survey by areas.

Main findings of the survey:

- Though Chitral is a rugged mountainous area, almost all households in the sample areas had electricity. Three-fourths of the households have water available on the premises but nearly all dwellings have rudimentary structures with roofing material of thatch and palm leaves and walls made up of mud and stones. A house is occupied, on average, by nearly 9 persons. Over one-third of the households have only one room for sleeping and an additional 42% have two rooms. Wood is commonly used for cooking. Septic tanks are used in toilets in 93% of households. Television has reached only 30% of households but radio is available in three-fourths of dwellings.
- Education is not yet common. One-third of the male and over half of the female population has never been to school. However, enrollment rates are higher for younger males and females.
- Seven out of ten women go for prenatal checkups at least once during pregnancy but only a quarter of these women visits a service provider four or more times before delivery. Education and wealth are found to be influencing factors in this respect. A majority of these women (66 %) are seen by doctors, LHVs and nurses. However, the cadre of midwives is not yet available. Out of those women who do not visit any source for antenatal checkups, 29% believe that they do not need to go to a caregiver because they are experiencing no problems, while 27% are reluctant due to the high fee of the service provider. Another 20% complains that the service provider is too far away.
- Of those women who visit a health professional, three-fourths are weighed, 94% are tested for blood pressure, three-fourths are tested for urine, 71% for blood and over half of the women reported that ultrasound was performed.
- Over 70% of mothers with children under 2 years of age reported to have received at least one Tetanus Toxoid shot, whereas two-thirds of women received 2 or more shots of Tetanus Toxoid during their last pregnancy.

- Over a quarter of the women (26%) reported to have received iron tablets or syrup for at least two months during their last pregnancy.
- Four out of ten women received calcium tablets, while 14% received calcium for at least 2 months.
- Most of the women had made preparations for their last delivery. A majority (87%) prepared clothes for the baby, while four out of ten (43%) arranged money for the event of an emergency and 57% arranged money for normal delivery.
- 76% of the women had delivered their last baby at home and only 24% delivered at a government or private hospital. Women who are more educated and more economically secure tend to deliver at a health facility. Overall, four out of ten (39%) women were assisted by a health professional during their last delivery.
- 23% of the women were aware of two danger signs during pregnancy while 38% were aware of two danger signs during childbirth/delivery. The most known danger sign during delivery was prolonged labour followed by delay in delivery of the placenta and mal-positioning of the fetus.
- Postnatal care is less common, compared with prenatal care. Only a quarter of mothers revealed that they visited a source for postnatal care, while only 17% reported that they had visited a health professional for postnatal checkup.
- Four out of ten (38%) women were aware of at least two danger signs during the postpartum period. The most known danger sign during postpartum was excessive vaginal bleeding, reported by 78%, followed by high fever (46%).
- With regard to continuum of care, which implies that a woman should have at least four antenatal visits, be assisted by a health professional at the time of delivery and should visit a health provider within 48 hours of the delivery, the survey finds that only one in 25 (4%) of the women was able to receive such care. 44% of the women had neither an ANC visit, nor were they assisted by a health provider during pregnancy. They were also not visited by a health provider within 48 hours after delivery.
- The survey finds that 93% of newborns were dried, 84% of babies' eyes were cleaned, 50% of babies had antiseptic applied to their cords, but only 19% were put to their mothers' chest for skin to skin contact.
- 23% of children were reported to be either larger than average or very large, while four out ten (40%) children were average. The remaining were reported as smaller than average or very small.
- 73% of children aged 12-23 months were fully vaccinated before their first birth day. 96% percent of children received DPT1 while 93% received DPT3. The dropout rate between DPT1 and DPT3 was around 3 percent.
- 84% of children aged 12-23 months were reported to have received a measles vaccination.
- 33% of mothers reported to have knowledge of at least 2 danger signs at the time of birth for which treatment was necessary. The proportion of mothers who could identify two danger signs in neonates within seven days of delivery is 21%. The most known danger sign reported by 73% of mothers was 'baby without cry or weak cry' at the time of birth. The most known danger sign during the period of seven days after delivery was 'unable to suck' reported by 73% of mothers.
- 12% of children under 2 years of age were reported to have had diarrhea during the two week period before the survey. Of those who had diarrhea, only 40% received increased fluids besides feeding.

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- 13% of children had symptoms of Acute Respiratory Illness or pneumonia. However, 68% of them received appropriate treatment.
- Breastfeeding is almost universal in Chitral. Feeding of colostrums is also common (94%). However, 20% of neonates are given many other liquids before the initiation of breast milk. The most common fluid given to a baby before breast milk is green tea.
- 62% of children aged less than 6 months were exclusively breastfed during 24 hours before the survey.
- 94% of children 6-23 months of age were still breastfed at the time of survey.
- 84% of children aged 6-23 months were given complementary foods in addition to breast milk.
- Two-thirds of children aged 6-23 months had ever received a dose of vitamin-A supplement whereas 51% of children of the same age had vitamin A supplement in the past six months.
- Knowledge about family planning methods is almost universal among women who had a child less than 2 years of age. The highest known method was the contraceptive pill (96%) followed by injection (95%) and IUD (92%).
- 36% of women with younger child aged 0-23 months reported to have ever used a contraceptive method. Ever use of contraceptives increases with age, parity, education and wealth quintiles.
- 24% of women of reproductive age having a youngest child less than 2 years of age reported to have been currently using a modern contraceptive method. Traditional methods are known among four out of ten women; however, none reported to be using a traditional method. Chitrali women either use injections (12.5%) or pills (9.4 percent). The use of other methods is minimal.
- Seventy-two percent of women reported that, in their opinion, children should be spaced by 2-3 years. While another quarter of women opined that spacing between two births should be four or more years. Those who thought that an appropriate space between two births would be less than 2 years were hardly one percent.
- Only one in eleven women had heard about AIDS, 44 percent had heard about Tuberculosis and 14 percent had heard about hepatitis B&C.

A list of Rapid Catch indicators, a requirement of the Child Health Survival Grants of USAID is given below:

Rapid CATCH Indicators

S.No	Indicators	Area	Numerator	Denominator	Percent	Confidence limits	
						Lower	Upper
1	Percentage of mothers with children 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child	Intervention	145	657	22.1	18.6	25.6
		Comparison	181	660	27.4	23.6	31.2
		All Areas	326	1317	24.8	22.2	27.4
2	Percentage of mothers with children 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	Intervention	411	657	62.6	58.5	66.7
		Comparison	454	660	68.8	64.8	72.8
		All Areas	865	1317	65.7	62.8	68.6
3	Percentage of children age 0-23 months whose births were attended by skilled health personnel	Intervention	217	657	33.0	29.0	37.0
		Comparison	298	660	45.2	41.0	49.4
		All Areas	515	1317	39.1	36.2	42.0
4	Percentage of mothers with children 0-23 months who received a postpartum visit within 2 days after birth by a health professional	Intervention	115	657	17.5	14.3	20.7
		Comparison	127	660	19.2	15.8	22.6
		All Areas	242	1317	18.4	16.3	20.5
5	Percentage of mothers of children 0-23 months who were using a modern method of contraception	Intervention	166	657	25.3	21.6	29.0
		Comparison	151	660	22.9	19.3	26.5
		All Areas	317	1317	24.1	21.5	26.7
6	Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours	Intervention	84	139	60.4	51.3	69.5
		Comparison	95	148	64.2	55.6	72.8
		All Areas	179	287	62.4	56.1	68.7
8	Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months	Intervention	240	518	46.3	41.5	51.1
		Comparison	283	512	55.3	50.5	60.1
		All Areas	523	1030	50.8	47.4	54.2
9	Percentage of children age 12-23 months who received a measles vaccination	Intervention	261	320	81.6	76.9	86.3
		Comparison	251	291	86.3	81.9	90.7
		All Areas	512	611	83.8	80.5	87.1
10	Percentage of children 12-23 months who received DPT1 according to the vaccination card or mother's recall	Intervention	304	320	95.0	92.3	97.7
		Comparison	281	291	96.6	94.3	98.9
		All Areas	585	611	95.7	93.9	97.5
11	Percentage of children 12-23 months who received DPT3 according to the vaccination card or mother's recall	Intervention	289	320	90.3	86.7	93.9
		Comparison	276	291	94.8	91.9	97.7
		All Areas	565	611	92.5	90.2	94.8
13	Percentage of children age 0-23 months with diarrhea in the last 2 weeks who received oral rehydration solution (ORS) and /or recommended home made fluids	Intervention	26	67	38.8	25.8	51.8
		Comparison	42	91	46.2	34.7	57.7
		All Areas	68	158	43.0	34.4	51.6
14	Percentage of children age 0-23 months with chest-related cough and fast and / or difficult breathing in the last 2 weeks who were taken to a health provider	Intervention	66	102	65.0	54.7	75.3
		Comparison	46	63	73.0	60.7	85.3
		All Areas	112	165	68.0	60.0	76.0
15	Percentage of households of children age 0-23 months that treat water effectively	Intervention	166	657	25.3	21.6	29.0
		Comparison	116	660	17.6	14.4	20.8
		All Areas	282	1317	21.4	18.9	23.9
16	Percentage of households where soap was available at hand washing designated place	Intervention	442	657	67.3	62.4	72.2
		Comparison	541	660	82.0	78.4	85.6
		All Areas	983	1317	74.6	71.6	77.6

Other Key MCH Indicators

S.No	Indicators	Area	Nume- rator	Denom- inator	Percent	Confidence limits	
						Lower	Upper
1	Percentage of mothers of children age 0-23 months who took calcium tablets or syrup for at least 2 months during last pregnancy	Intervention	94	657	14.3	11.3	17.3
		Comparison	94	660	14.2	11.2	17.2
		All Areas	188	1317	14.3	12.3	16.4
2	Percentage of mothers of children age 0-23 months who took Iron tablets or syrup for at least 2 months during last pregnancy	Intervention	167	657	25.4	21.7	29.1
		Comparison	172	660	26.1	22.4	29.8
		All Areas	339	1317	25.7	23.1	28.3
3	Percentage of children 6-9 months who received breast milk and complementary foods during the last 24 hours	Intervention	101	118	85.6	78.5	92.7
		Comparison	106	129	82.2	74.8	89.6
		All Areas	207	247	83.8	78.7	88.9
4	Percentage of children age 12-23 months who were fully vaccinated (before first birth day)	Intervention	218	320	68.1	62.4	73.8
		Comparison	230	291	79.0	73.8	84.2
		All Areas	448	611	73.3	69.4	77.2
5	Percentage of mothers of children age 0-23 months who know at least two danger signs in newborns soon after birth that indicate the need for treatment	Intervention	308	657	46.9	42.6	51.2
		Comparison	362	660	54.8	50.6	59.0
		All Areas	670	1317	50.9	47.9	53.9
6	Percentage of mothers of children age 0-23 months who know at least two danger signs in newborns within 7 days of birth that indicate the need for treatment	Intervention	415	657	63.2	59.1	67.3
		Comparison	440	660	66.7	62.7	70.7
		All Areas	855	1317	64.9	62.0	67.8
7	Percentage of mothers of children age 0-23 months who know at least two danger signs during pregnancy that indicate the need for treatment	Intervention	295	657	44.9	40.6	49.2
		Comparison	330	660	50.0	45.7	54.3
		All Areas	625	1317	47.5	44.5	50.5
8	Percentage of mothers of children age 0-23 months who know at least two danger signs during child birth/delivery that indicate the need for treatment	Intervention	434	657	66.1	62.1	70.1
		Comparison	429	660	65.0	60.9	69.1
		All Areas	863	1317	65.5	62.6	68.4
9	Percentage of mothers of children age 0-23 months who know at least two danger signs during postpartum that indicate the need for treatment	Intervention	436	657	64.4	62.4	70.4
		Comparison	449	660	68.0	64.0	72.0
		All Areas	885	1317	67.2	64.4	70.0
10	Percentage of households with designated place for hand washing	Intervention	424	657	64.6	59.6	69.6
		Comparison	527	660	79.9	76.1	83.7
		All Areas	951	1317	72.2	69.0	75.4

Chapter 1

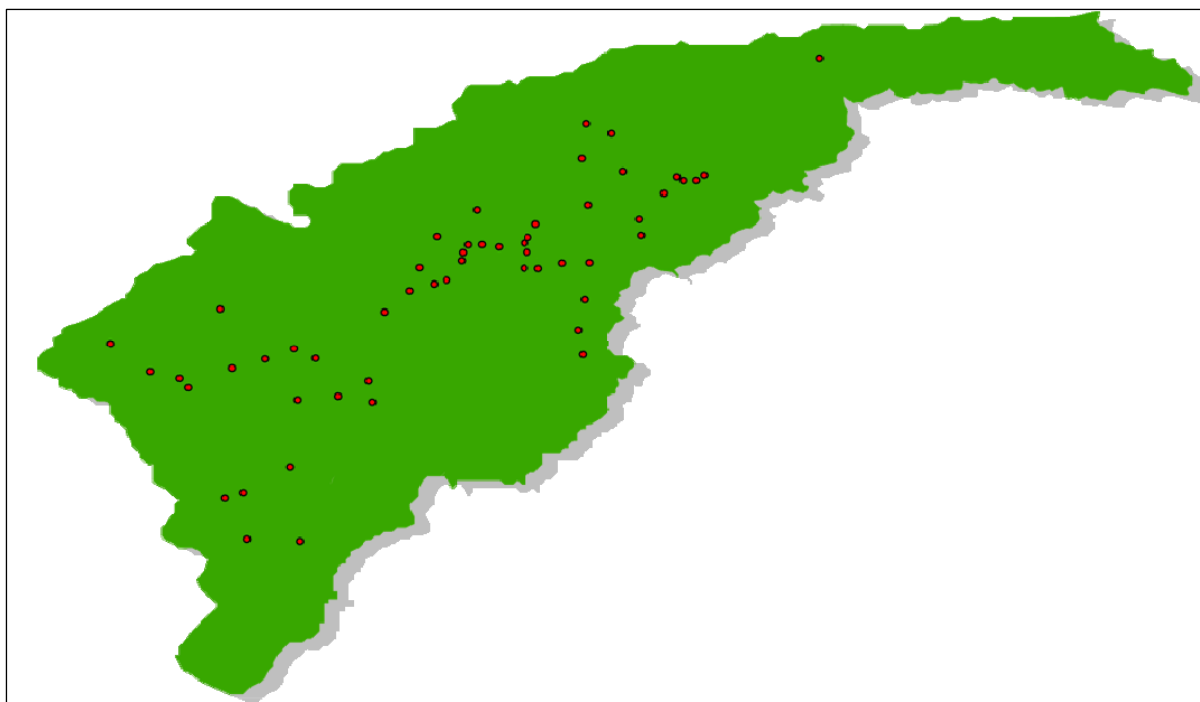
INTRODUCTION

CCSP is a five year project with funding from USAID and AKF USA. The project aims to reduce maternal and neonatal mortality and morbidity in selected geographic locations of Chitral district. The project envisages improving MCH through 1) implementing a BCC and community mobilization campaign; 2) training and deploying CMWs; 3) strengthening referrals; and 4) developing a community financing mechanism and a community transportation plan. Aga Khan Foundation, Pakistan (AKF,P), Aga Khan Health Services, Pakistan (AKHS-P) and Aga Khan Rural Support Programme (AKRSP) are the implementing agencies of this grant. The National Institute of Population Studies (NIPS) partnered with the AKF-P for implementation of the baseline survey for the project.

The target population in the CCSP Project area is estimated to be around 112,406 including almost 30,350 women of reproductive age (15-49) and about 20,233 children under age five years. Chitral district has some of the highest levels of maternal and infant mortality and morbidity in Pakistan (Midhet, 2004). It is a remote and isolated district covering 14,500 square kilometers. According to the 1998 census, Chitral district was inhabited by 318,689 people (Population Census Organization, 2000). The current population is estimated to be around 390,000 people. Chitral is the largest district in the North-West Frontier Province (NWFP) of Pakistan and borders Afghanistan to the north and west; Swat and Dir Districts to the south; and Gilgit and Baltistan to the East. Chitral Valley is located at an altitude of 1,128 meters above sea level.

In order to document the existing ground situation regarding maternal, neonatal and child health indicators in the CCSP areas and the corresponding comparison areas, a baseline survey was conducted during the month of March 2009 in 60 selected areas identified in Figure 1. This report illustrates the findings of the baseline survey.

Figure 1: Map of District Chitral indicating sample areas



1.1 Objectives of the baseline survey

Following are the specific objectives of the baseline survey:

- 1) Collect quality data on household related indicators to assess the overall socioeconomic situation in the project area;
- 2) Collect baseline information on health indicators, especially related to maternal, infant and child health;
- 3) Assess the overall situation about knowledge, attitude and practices in the project area on maternal and child health issues;
- 4) Determine the prevalence of health indicators, as to set the benchmark for the Chitral Child Survival Project; and
- 5) Investigate factors that affect maternal, neonatal, infant and child health including antenatal, delivery and postnatal care received by mothers with surviving children aged 0-23 months at the time of survey.

1.2 Methodology

1.2.1 Study population

The study population for the baseline survey includes ever married women of reproductive age (15-49 years) with a living child aged 0-23 months.

1.2.2 Sample design and coverage

A two-stage sample design was used for the baseline survey. In the first stage, villages were selected from the six sub-divisions of the Chitral district; 30 intervention and 30 comparison areas. The 30 intervention villages were selected based on the criteria developed in consultation with District Advisory Committee chaired by the district Nazim. It was decided that interventions villages should be further than a one-hour walk to any first level health care (FLCH) facilities; should be between a one to 3.5 hours drive to a secondary level health facility; do not have a skilled health provider within the village and are not served by the National MNCH Program (NMNCHP); and have a minimum population of 3,000 within a one hour walking distance. One very remote community, which is a six-hour drive to the nearest secondary facility, was included because the community is among the neediest in Chitral. 30 other villages with similar distance to FLCH and Secondary level health facilities were selected as comparison areas. In the second phase, 22 households were selected from each of the 60 villages using cluster sampling approach. The overall size of the sample was thus 1320 households. Since the project aimed at collecting information on knowledge, attitude and practice regarding maternal and neonatal health issues, only that house was included in the sample where ever married woman with a child under two years was residing. In all, 1374 women were identified as eligible in 1320 sampled households. However, in around 4 percent cases (53 out of 1374 women) women with younger child older than 23 months were also interviewed. These women have been dropped from the final analysis. In addition, 4 women (2 each from the intervention and comparison areas) could not be interviewed because of their non-availability at their residences during the team visit. At the household level, the response rate for household questionnaire was 100 percent. The response rate for women who were eligible as per laid down criteria was 99.7 percent (1317 out of 1321 women). Women were interviewed by administering a structured questionnaire designed in consultation with the AKF (P).

1.2.3 Questionnaire design

Three sets of questionnaires were designed to elicit information at the household level, eligible woman level and at the community level. These questionnaires were discussed threadbare in the Technical Advisory Committee of the National Institute of Population Studies (NIPS) and finalized in consultation with the AKF (P) and their partners and advisers. The questionnaires were prepared in English and then translated into Urdu which is the national language. The questionnaires were pre-tested in two locations and adopted after

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incorporating the pretest feedback. The three specific questionnaires covered following areas:

- 1) Household questionnaire: The household questionnaire was designed to collect information regarding household composition and related matters. Following areas were specifically included:
 - a. Listing of usual members of the household
 - b. Ages, marital status of members age 12 and above, and educational status of members age 5 and over
 - c. Illness of household members during last one month, treatment sought and expenditure incurred
 - d. Births and deaths in the past one year
 - e. Source of drinking water; sanitation facilities, household possessions; construction material used in dwellings; ownership of agricultural land; and animals etc.
- 2) Woman questionnaire: The woman questionnaire was designed to collect information from ever married women with a child less than 2 years of age, regarding her reproductive health and health of the last child. following area were specifically focused:
 - a. Background information about literacy and educational attainment
 - b. Number of children born and surviving
 - c. Knowledge of danger signs during pregnancy, child birth and after delivery
 - d. Antenatal, delivery and postnatal care
 - e. Child vaccination, health and nutrition
 - f. Knowledge, use and source of family planning methods
 - g. Knowledge of HIV/AIDS, hepatitis and Tuberculosis
- 3) Community questionnaire: Community questionnaire was developed and administered at the community level and information was sought from village elders including teachers and other knowledgeable persons. The questionnaire solicited information on following areas:

- a. Distance of the selected sample village from the district headquarters
- b. Type of road and availability of transport
- c. Identification of health facilities from where people seek advice/treatment for minor and serious illnesses especially during pregnancy
- d. Existence of any community organizations and the type of service provided by such organizations
- e. Availability of other general facilities and distance to such facilities

1.2.4 Selection of field staff

Considerable care was taken in selection of staff for project management, supervision, quality control, data collection and analysis. The survey was implemented by a team headed by the Director NIPS as the Project Director. An expert in the field of survey management with vast experience of conducting similar surveys was hired as Principal Investigator. A field coordinator with vast experience was engaged to provide assistance during training and monitoring of data collection. NIPS Data Analyst was instrumental in questionnaire design, training, data entry and management, data analysis and generation of tables for the report.

The data collection was carried out by six teams each consisting of a male supervisor and three female interviewers. All members of the data collection teams hailed from Chitral district who could speak and communicate with the interviewees in the local language. The AKF (P) made available the services of an Adviser who provided technical support during preparation of research instruments, training and preparation of report of the survey.

1.2.5 Training

The training of field staff was organized in Chitral Town. It started on the 25th of February and continued through March 5, 2009. The training was imparted by the Adviser who was assisted by the Survey Manager (NIPS), the Principal Investigator and the Field Coordinator. Guest speakers were also invited from the Agha Khan Health Services, Pakistan (AKHS-P). Training programme was conducted through general lectures, discussions, role-play, practice interviews, as well field practice. The training included instructions in interviewing techniques and survey field procedure. The quality of training received by interviewers is reflected in the quality of data they have recorded. Every effort was made to ensure that interviews were of high and uniform quality and that interviewers understood the definitions and concepts behind the language of the questions.

1.2.6 Quality control

A set of quality control check tables for critical indicators was produced periodically during the fieldwork using the computerized data at NIPS. Problems that appeared from review of these tables were discussed with the relevant teams and attempts made to ensure that the problems did not persist. Regular meetings of the core staff were held to exchange views on progress, performance, problems, solutions, and future strategies. These meetings were helpful in resolving field problems and improving the quality of data collected from the field. The field coordinator remained in the field throughout the data collection exercise, visiting the data collecting teams and providing on the spot guidance. The core team of the survey including the Principal Investigator and the Project Director also visited the data collecting teams periodically.

1.2.7 Fieldwork and data processing

Six teams were deployed to collect the data from the field. The fieldwork started on the 6th of March and completed on the 6th of April, 2009. The processing of data started shortly after commencement of the fieldwork. Completed questionnaires were received regularly at NIPS, where they were edited and keyed by the data entry staff. A double-entry system was adopted for data entry. The concurrent processing of the data was an advantage as it helped generation of field-check tables quickly; as a result, specific feedback was given to the teams to improve their performance.

1.3 Field problems

A number of problems were encountered during the fieldwork. More severely, the harsh winter weather together with heavy snow-fall and the resultant road-slides challenged the toughness of the data collection teams. They were compelled to travel for miles and seek protection in not so comfortable hotels and rest-houses. This however, did not deter their commitment and they were able to accomplish the task in the stipulated time. The often interrupted flight schedules due to bad weather were annoying at times but provided ample opportunities to the project core staff to enjoy the beautiful valley of Chitral and the warm hospitality of its people.

Chapter 2

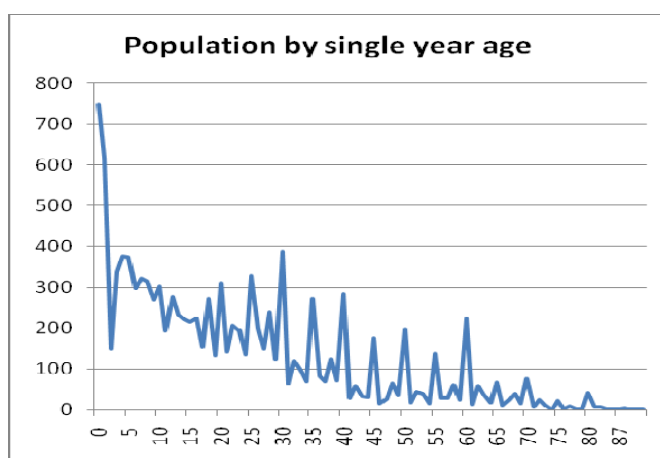
SOCIOECONOMIC AND DEMOGRAPHIC CHARACTERISTICS

This chapter presents socioeconomic and demographic characteristics of the household population surveyed in Chitral district. The objective is to provide an assessment of the environment in which men, women and children live and examine differentials and trends by comparing it with other surveys where possible. In the household questionnaire, information was collected on ages, sex, relationship with the head of the household, marital status, educational level, availability of drinking water, sanitation facilities, ownership of agricultural land, fuel used for cooking, ownership of houses and possession of household items and valuables. Such background information is important for better understanding the social and demographic and health related findings presented in this report. In the subsequent chapters, these background variables are related to the knowledge, attitude and practices expressed by women with reference to their reproductive and child health issues.

2.1 Age-sex distribution of the household population

Age misreporting and heaping on certain ages due to digit preference is common in Pakistan as in other developing countries and age reporting in the baseline survey in Chitral is not an exception. Though special efforts were made in this survey to minimize this deficiency, age misreporting and heaping is evident in the data. However, because of deliberate selection of households with children under 2 years of age, the higher number of children at age 0 and 1 were expected.

The distribution of the household population in the baseline survey is given in Table 2.1 by five-year age groups, according to intervention area, comparison area and total area and sex. The total population counted in the



survey was 11,538 out of which 50.3 percent were female and 49.7 percent were male. The size

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of the household population in the comparison area was slightly higher compared to intervention area. However, the overall sex ratio of household population is higher in intervention (103) compared to comparison area (95). The overall sex ratio of the entire Chitral district was 103 males to 100 females in the 1998 census (Population Census Organization, 1999). However, the age specific sex ratios present an erratic picture and could be attributed to under reporting of females together with out-migration for selected age groups of male population. The proportion of population in the broad age groups 0-14, 15-59 and 60 and above suggest that Chitral had a high fertility in the past (43.6 percent of the population is under 15 years of age), higher proportion in the older age group as compared to the 1998 census (6.5 % against 5.15 % in the 1998 Census), and that half of the population is dependent.

Table 2.1: Percent Distribution of Household Population by age groups, sex and Areas

Age groups	Intervention areas				Comparison areas				All AREAS			
	Male	Female	Total	Sex ratio	Male	Female	Total	Sex ratio	Male	Female	Total	Sex ratio
0 - 4	18.7	20.0	19.4	96	19.8	18.7	19.2	101	19.3	19.3	19.3	98
5 - 9	13.9	13.4	13.7	107	13.0	14.3	13.7	86	13.5	13.9	13.7	96
10 - 14	9.9	11.6	10.7	88	9.7	11.3	10.5	81	9.8	11.4	10.6	84
15 - 19	9.2	8.3	8.8	113	7.9	9.2	8.6	81	8.6	8.8	8.7	96
20 - 24	7.3	10.4	8.9	72	7.1	9.5	8.3	71	7.2	9.9	8.6	72
25 - 29	8.6	8.9	8.8	99	7.8	10.6	9.2	70	8.2	9.8	9.0	83
30 - 34	6.2	6.1	6.2	104	8.0	5.3	6.6	143	7.1	5.7	6.4	123
35 - 39	6.3	5.0	5.7	131	6.2	4.2	5.1	139	6.2	4.6	5.4	135
40 - 44	4.8	2.9	3.8	172	4.8	2.8	3.8	164	4.8	2.8	3.8	168
45 - 49	3.5	2.0	2.8	179	3.1	2.5	2.8	119	3.3	2.3	2.8	145
50 - 54	2.1	3.1	2.6	70	2.7	3.1	2.9	82	2.4	3.1	2.8	76
55 - 59	2.1	2.9	2.5	74	2.2	2.6	2.4	79	2.1	2.8	2.5	77
60 - 64	3.2	2.4	2.8	133	3.3	3.4	3.3	91	3.2	2.9	3.1	108
65 and More	4.0	2.9	3.4	143	4.5	2.5	3.5	175	4.3	2.7	3.4	158
Total	100.0	100.0	100.0	103	100.0	100.0	100.0	95	100.0	100.0	100.0	99
Number	2,902	2,828	5,730		2,829	2,979	5,808		5,731	5,807	11,538	

2.2 Household composition

Similar to the Pakistan Demographic and Health Survey, in the Chitral Child Survival Baseline Survey, a household was defined as a person or group of related and unrelated persons who live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as head of the household, and who have common arrangements for cooking and eating. The household is considered to be the basic social and economic unit of society as a whole. Table 2.2 shows the distribution of households in the survey by sex of the head of the household and by number of household members in the sampled areas of intervention and Comparison. Eighty percent of the households in the comparison areas are headed by male whereas a slightly higher (84 percent) headship of male is reported in intervention areas. Female headship reported by one in six (16 percent) households in the intervention and one in five (21 percent) in the comparison areas. Overall, 18 percent of the households reported female headship.

Average household size is almost similar in comparison and interventions areas (8.7 and 8.8 persons per household). In the 1998 Census, the average household size was reported as 7.9 persons. Overcrowding at household level is evident as almost six out of ten households are shared by eight or more members. The number of rooms available for sleeping purposes is another indicator of household congestion. Three out of ten households had only one room which could be used for sleeping purposes, while another four out of ten households had only two rooms. Overall, around 95 percent households have three or less number of rooms which could be used for sleeping.

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Table 2.2: Percent Distribution of all Households by Sex of Head of Household and Household Size, number of rooms for sleeping purposes and Mean household size, according to Areas

Characteristics		Intervention	Comparison	All areas
Household headship	Male	83.8	79.5	81.7
	Female	16.2	20.5	18.3
Household size	Upto 4	6.7	5.3	6.0
	5	7.4	10.0	8.7
	6	14.2	10.9	12.6
	7	11.4	15.6	13.5
	8+	60.3	58.1	59.2
Number of room for sleeping	1	30.9	27.0	29.0
Purposes	2	41.0	43.2	42.1
	3	16.7	18.6	17.7
	4+	5.3	4.2	4.8
Total	Percent	100.0	100.0	100.0
	Number	660	659	1319
Average Household size		8.7	8.8	8.8

2.3 Educational attainment

Information on educational attainment was collected about all household members aged 5 and above. Tables 2.3 and Table 2.4 provide information on attainment of educational level by age and areas for male and female respectively. Survey results show that one-third (32 percent) of males and over half of females (55 percent) in the sampled areas of Chitral, has no schooling. However, shift in this attitude is evident as younger population is more likely to be educated compared to the older population. This trend is visible both for male and female population, across age-groups, both in the intervention and comparison areas and at the aggregate level. Overall, 30 percent of the male population age 5 and above have secondary or above education compared to 15 percent female population of the same age group. The proportion of population with this level of education is slightly higher in the comparison areas (33 percent for male and 17 percent for female) compared with the intervention areas (27 percent for male and 12 percent for female). Both male and female aged 15-24 year old have higher levels of educational attainment across sample divide, but female are lagging behind compared to their male counterparts.

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Table 2.3: Percent Distribution of male household population age five and above by highest level of schooling

Characteristics		No education	Upto primary	Upto middle	Upto secondary	Above secondary	Total	
							Percent	Number
Intervention	5 - 9	43.1	56.4	5			100.0	404
	10 - 14	6.3	59.2	30.7	3.8		100.0	287
	15 - 19	7.9	11.2	28.1	41.9	10.9	100.0	267
	20 - 24	14.6	7.5	20.7	39.0	18.3	100.0	213
	25 - 29	16.3	10.0	17.5	43.0	13.1	100.0	251
	30 - 34	26.1	7.2	20.0	31.1	15.6	100.0	180
	35 - 39	37.0	7.6	19.6	22.3	13.6	100.0	184
	40 - 44	49.6	10.8	9.4	17.3	12.9	100.0	139
	45 - 49	57.8	5.9	14.7	11.8	9.8	100.0	102
	50 - 54	72.6	16.1	1.6	6.5	3.2	100.0	62
	55 - 59	82.0	8.2	4.9	3.3	1.6	100.0	61
	60 - 64	81.5	5.4	8.7	3.3	1.1	100.0	92
	65 and More	91.4	5.2	9	1.7	9	100.0	116
	Total	34.1	23.0	15.5	19.4	7.9	100.0	2358
Comparison	5 - 9	41.8	57.9	3			100.0	368
	10 - 14	4.8	59.0	32.6	3.7		100.0	273
	15 - 19	6.3	7.6	30.4	41.1	14.7	100.0	224
	20 - 24	15.5	4.5	11.0	47.0	22.0	100.0	200
	25 - 29	14.0	5.9	19.5	40.3	20.4	100.0	221
	30 - 34	16.3	2.2	17.6	38.3	25.6	100.0	227
	35 - 39	20.1	6.9	21.3	23.0	28.7	100.0	174
	40 - 44	36.8	15.4	16.9	13.2	17.6	100.0	136
	45 - 49	43.2	8.0	17.0	12.5	19.3	100.0	88
	50 - 54	68.4	7.9	9.2	9.2	5.3	100.0	76
	55 - 59	67.7	16.1	3.2	6.5	6.5	100.0	62
	60 - 64	76.1	6.5	8.7	5.4	3.3	100.0	92
	65 and More	85.2	5.5	4.7	3.1	1.6	100.0	128
	Total	29.8	21.5	15.9	20.3	12.5	100.0	2269
All areas	5 - 9	42.5	57.1	.4			100.0	772
	10 - 14	5.5	59.1	31.6	3.8		100.0	560
	15 - 19	7.1	9.6	29.1	41.5	12.6	100.0	491
	20 - 24	15.0	6.1	16.0	42.9	20.1	100.0	413
	25 - 29	15.3	8.1	18.4	41.7	16.5	100.0	472
	30 - 34	20.6	4.4	18.7	35.1	21.1	100.0	407
	35 - 39	28.8	7.3	20.4	22.6	20.9	100.0	358
	40 - 44	43.3	13.1	13.1	15.3	15.3	100.0	275
	45 - 49	51.1	6.8	15.8	12.1	14.2	100.0	190
	50 - 54	70.3	11.6	5.8	8.0	4.3	100.0	138
	55 - 59	74.8	12.2	4.1	4.9	4.1	100.0	123
	60 - 64	78.8	6.0	8.7	4.3	2.2	100.0	184
	65 and More	88.1	5.3	2.9	2.5	1.2	100.0	244
	Total	32.0	22.3	15.7	19.9	10.2	100.0	4627

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Table 2.4: Percent Distribution of Female household population age five and above by highest level of schooling

Characteristics		No education	Upto primary	Upto middle	Upto secondary	Above secondary	Total	
							Percent	Number
Intervention	5 – 9	48.8	50.4	8	--	--	100.0	379
	10 – 14	16.2	51.4	28.1	4.3	--	100.0	327
	15 – 19	38.6	8.5	20.3	23.7	8.9	100.0	236
	20 – 24	50.5	7.1	10.8	15.3	16.3	100.0	295
	25 – 29	63.6	8.7	4.0	13.4	10.3	100.0	253
	30 – 34	71.1	9.8	7.5	5.2	6.4	100.0	173
	35 – 39	88.6	5.7	1.4	1.4	2.9	100.0	140
	40 – 44	92.6	4.9	1.2	1.2	--	100.0	81
	45 – 49	98.2	1.8	--	--	--	100.0	57
	50 – 54	98.9	1.1	--	--	--	100.0	88
	55 – 59	97.6	2.4	--	--	--	100.0	82
	60 – 64	100.0	--	--	--	--	100.0	69
	65 and More	100.0	--	--	--	--	100.0	81
	Total	59.0	20.1	8.9	7.1	4.9	100.0	2261
Comparison	5 – 9	40.0	59.7	--	.2	--	100.0	427
	10 – 14	8.3	48.7	38.3	4.5	.3	100.0	337
	15 – 19	26.9	5.5	20.0	36.7	10.9	100.0	275
	20 – 24	38.7	8.5	9.6	19.5	23.8	100.0	282
	25 – 29	51.9	8.5	6.0	15.5	18.0	100.0	316
	30 – 34	67.3	6.3	3.8	6.9	15.7	100.0	159
	35 – 39	87.2	2.4	6.4	2.4	1.6	100.0	125
	40 – 44	91.6	4.8	2.4	1.2	--	100.0	83
	45 – 49	94.6	2.7	2.7	--	--	100.0	74
	50 – 54	98.9	1.1	--	--	--	100.0	93
	55 – 59	100.0	--	--	--	--	100.0	78
	60 – 64	100.0	--	--	--	--	100.0	101
	65 and More	100.0	--	--	--	--	100.0	73
	Total	51.7	20.8	10.2	9.7	7.5	100.0	2423
All areas	5 – 9	44.2	55.3	.4	.1		100.0	806
	10 – 14	12.2	50.0	33.3	4.4	.2	100.0	664
	15 – 19	32.3	6.8	20.2	30.7	10.0	100.0	511
	20 – 24	44.7	7.8	10.2	17.3	19.9	100.0	577
	25 – 29	57.1	8.6	5.1	14.6	14.6	100.0	569
	30 – 34	69.3	8.1	5.7	6.0	10.8	100.0	332
	35 – 39	87.9	4.2	3.8	1.9	2.3	100.0	265
	40 – 44	92.1	4.9	1.8	1.2	--	100.0	164
	45 – 49	96.2	2.3	1.5	--	--	100.0	131
	50 – 54	98.9	1.1	--	--	--	100.0	181
	55 – 59	98.8	1.3	--	--	--	100.0	160
	60 – 64	100.0	--	--	--	--	100.0	170
	65 and More	100.0	--	--	--	--	100.0	154
	Total	55.2	20.5	9.6	8.5	6.2	100.0	4684

2.4 Housing characteristics

To assess the economic and environmental conditions in which household members live, the household questionnaire included questions about housing structure, toilet facility, and ownership of house, availability of electricity/gas facilities and source of energy used for cooking. Information on these characteristics is useful from public health point of view, as well as indirectly reflecting household socio-economic status.

Table 2.5(a) shows that 95 percent of the houses in the sample areas are Katcha (muddy), while 4 percent are semi pacca (semi cemented) and less than 2 percent of the households are pacca (cemented). The construction of houses is almost similar in both the intervention and the comparison areas. The availability of electricity is universal in the sample areas (99.7 percent). The roofing material is composed of thatch and palm/palm leaves (94 percent) and only 2 percent of the housing units had iron sheets. Majority of housing units had muddy walls (82 percent) but in 15 percent cases bamboo/sticks/mud was used for construction of walls. One-third of the housing units had only one room that could be used for sleeping purposes. However, four out of ten houses had two sleeping rooms and another 24 percent housing units had three or more bed rooms. Solid fuel (wood) is used universally for cooking purposes (99.8 percent). Table 2.5(b) shows the percentage/percent distribution of population sharing the same housing infrastructure and living environment.

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Table 2.5: Percent Distribution of Households by Housing characteristics and percentage using solid fuel for cooking, according to Areas

Housing Characteristics		Intervention	Comparison	All areas
Electricity		99.7	99.7	99.7
Housing structure	Katcha	95.1	93.8	94.5
	Semi-pacca	3.6	4.2	3.9
	Pacca	1.2	2.0	1.6
Main roof material	Thatch / palm leaf	95.9	93.0	94.4
	Cardboard/ plastic	6	1.5	1.1
	Iron sheets	2.1	2.1	2.1
	T-iron/wood/brick	1.2	2.4	1.8
	Reinforced brick cement	2	.9	.5
Main wall material	Mud/stones	82.6	80.6	81.6
	Bamboo/sticks/mud	15.0	15.6	15.3
	Unbaked bricks/mud	3	6	5
	Stone blocks	6	5	5
	Baked bricks	--	.2	1
	Cement blocks/cement	1.5	2.6	2.0
Rooms used for sleeping	One	36.8	33.2	35.0
	Two	40.5	42.5	41.5
	Three or more	22.0	23.7	22.8
	DK/missing	.8	6	7
Cooking fuel	Wood	99.7	99.7	99.7
	Cow dung	--	2	1
	DK	3	2	2
Total	Percent	100.0	100.0	100.0
	Number	660	659	1319
Percentage using solid fuel for cooking		99.7	99.8	99.8

2.5 Availability of drinking water

Majority of the households (74 percent) have piped water available at their premises which is used for drinking purposes (Table 2.6). About 9 percent of the households are using rain-water for drinking, whereas about 13 percent of the households receive drinking water by ‘tanker truck’. Water availability at premises was reported by three-fourths households. Fifteen percent of the households spend less than 30 minutes to fetch drinking water. However, 5 percent of the households spend longer than 30 minutes for going to the source and bringing water.

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Table 2.6: Percent distribution of households by Source and timing to collect drinking water according to areas

Drinking water		Intervention	Comparison	Total
Source of drinking water	Piped - into dwelling	11.5	10.0	10.8
	Piped - into yard/plot	56.8	70.4	63.6
	Piped - public tap / standpipe	1.5	1.2	1.4
	Dug well – protected	2	9	5
	Dug well – unprotected	--	2	1
	Spring – protected	--	3	2
	Spring – unprotected	--	2	1
	Rainwater	13.0	4.6	8.8
	Tanker truck	13.3	11.7	12.5
	Cart with small tank	2	--	1
	Bottled water	3.5	6	2.0
Time to obtain drinking water (round trip)	Water on premises	68.8	81.0	74.9
	Less than 30 minutes	18.6	11.7	15.2
	30 minutes or longer	7.7	3.2	5.5
	Don't know or missing	4.8	4.1	4.5
Total	Percent	100.0	100.0	100.0
	Number	660	659	1319

Overall, one in five women (21 percent) reported that they treat water to make it drinkable. The proportion of such women is higher in the intervention (25 percent) compared with the comparison areas (18 percent). However, boiling or filtration methods, which are more effective, are reported by 9 percent women only (Table 2.7).

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Table 2.7: Percentage of mothers with 0-23 months children who treat water for drinking

Method of treatments	Intervention	Comparison	Total	
			Percent	Number
Water treated	25.3	17.6	21.4	282
Let it stand and settle/sedimentation	15.4	8.5	11.9	157
Strain it through cloth	.6	--	.3	4
Boil	9.0	8.5	8.7	115
Water filter (ceramic, sand, composite)	.2	.2	.2	2
Don't know	.2	--	.1	1

2.6 Sanitation facilities

Majority of the households (93 percent) have toilet facilities using septic-tanks while 3 percent have no facility at all. A minority of the households (1 percent) reported that they are connected with the piped sewerage system. The conditions are relatively better in the comparison areas compared with the intervention areas (Table 2.8).

With regard to appropriate hand washing practices, it was observed that 65 percent households had a designated place inside or near toilet. The availability of such a place was higher (74 percent) in the comparison than in the intervention areas (56 percent). In addition, hand washing place was observed elsewhere in yard, outside yard and inside or near cooking place in 19 percent households. The facility of designated hand-washing place was however, not available in 16 percent households at the aggregate level, 20 percent in intervention and 12 percent in the comparison areas.

Soap was found to be available at the hand-washing place in 74 percent households in all sample areas. The availability of soap was higher (82 percent) in the comparison than in the intervention areas (67 percent).

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Table 2.8: Percent distribution of households by type of toilet facilities according to areas

Type of toilet/latrine facility		Intervention	Comparison	Total
Flush - to piped sewer system		1.2	1.7	1.4
Flush - to septic tank		91.0	93.9	92.5
Flush - to somewhere else		2.6	5	1.5
Flush - don't know where		2	--	1
No facility/bush/field		4.2	2.0	3.1
Other		8	2.0	1.4
Total	Percent	100.0	100.0	100.0
	Number	659	657	1,316

Table 2.9: Availability of Designated Place for Hand Washing and Soap

Place of washing hand/type of soap		Intervention	Comparison	Total
Place of hand wash	Inside/ near toilet	56.2	73.8	65.0
	Inside near kitchen/ cooking place	8.4	6.1	7.2
	Elsewhere in yard	4.3	2.0	3.1
	Out side yard	11.4	5.9	8.7
	No specific Place	19.8	11.8	15.8
	No permission to see	--	.5	.2
Any soap, detergent or cleaning agent exist	Soap	67.0	81.8	74.4
	Detergent	.3	.2	.2
	Mud/ Sand	.2	.2	.2
	None	32.6	17.9	25.2
Total	Percent	100.0	100.0	100.0
	Number	657	660	1317

2.7 Ownership of consumer durables

It is often difficult to estimate income and expenditure levels of households in cross-sectional surveys. The availability of durable goods is considered to be a proxy indicator of socioeconomic status of the household. Table 2.10 provides information regarding the ownership of consumer durables.

The survey shows that in Chitral sample areas, three-fourths of the households own radio sets, while television ownership is limited to 30 percent of the households. Refrigerators are not common (6 percent) but availability of telephone including cell phone are available in one-

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quarter of the households. Wall clocks were available in eight out of ten (78 percent) households, while wrist-watches were more common (92 percent). Four out of ten (39 percent) households had chairs/almirahs while nearly half (48 percent) households had sewing machines. Nine out of ten households possess some agriculture land as source of their livelihood. Animals like bulls, cows etc are owned by 32 and 37 percent of the households respectively.

Table 2.10: Percentage of households possessing various household effects, means of transportation, agriculture land and livestock/farm animals, according to areas

Household possessions	Intervention	Comparison	Total
Radio	73.8	74.5	74.1
Television	28.6	32.3	30.5
Refrigerator	4.4	8.5	6.4
Telephone (non-mobile/mobile)	22.0	27.3	24.6
Room cooler, Air conditioner	8.0	16.7	12.4
Washing machine	7.4	14.7	11.1
Water pump	1.2	3.0	2.1
Bed	23.5	32.0	27.7
Chairs	35.0	43.7	39.3
Almirah/Cabinet	31.8	40.8	36.3
Clock	73.3	81.6	77.5
Sofa	8.9	11.2	10.1
Sewing machine	44.1	52.4	48.2
Camera	12.4	19.4	15.9
Personal computer	5.0	5.6	5.3
Watch	91.1	92.6	91.8
Bicycle	2.3	2.1	2.2
Motorcycle or Scooter	2.7	3.6	3.2
Car or Truck	2.7	3.6	3.2
Agriculture land	92.0	92.4	92.2
Bulls	35.6	28.1	31.8
Cows	38.2	36.1	37.1
Camels	--	2	1
Donkeys/horses etc	9.8	6.7	8.3
Goats	4.8	6.4	5.6
Chickens	3.9	6.4	5.2
Number	660	659	1,319

2.8 Socioeconomic status index

One of the background characteristics used throughout this report is an index of socioeconomic status. The index used here was recently developed and tested in a large number of countries in relation to inequalities in household income, use of health services, and health outcomes (Rutstein et al., 2000). The economic index was constructed using household asset data including ownership of a number of consumer items ranging from a television to a bicycle or a car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of material used for flooring.

Each asset was assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardized in relation to a normal distribution with a mean of zero and standard deviation of one (Gwatkin et al., 2000). Each household was then assigned a score for each asset, and the scores summed for each household; individuals were ranked according to the score of the household in which they resided. The same index was divided into quintiles from one (lowest) to five (highest). A single asset index was developed for the whole sample; separate indices were prepared for intervention and comparison areas and for the whole population.

Table 2.11 present data on wealth quintiles by intervention and comparison areas. Overall, by definition, equal proportions of the sample population fall in each quintile (20 percent each).

Table 2.11: Percent distribution of households by Wealth Quintile according to areas

Areas		wealth index quintiles					Total
		Poorest	Second	Middle	Fourth	Richest	
Intervention		22.9	21.4	21.5	18.3	15.9	100.0
Comparison		17.0	18.5	18.7	21.7	24.1	100.0
Total	Percent	19.9	19.9	20.1	20.0	20.0	100.0
	Number	263	263	265	264	264	1319

2.9 Distance to educational, general and health facilities

Table 2.10 shows distance to educational and general facilities in the intervention and comparison areas. It is encouraging to note that primary schools are available to almost all male and female children within the community. However, secondary schools are available in only 17

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percent communities for boys and in 10 percent communities for girls. In rest of the communities children have to travel from less than five kilometers to more than 10 kilometers. The general shops and public/private transport facilities are available in 70-80 percent communities while other facilities like medical stores, post offices, banks and ambulances are available at varying distances.

Health related facilities like BHUs, RHCs, MCH centres, THQ Hospitals, DHQs and private male and female doctors are further off from the communities and involve longer travels. However, Dais, TBAs and Lady health workers are mostly available within the communities or at a shorter distance (Table 2.11).

2.10 Illness and treatment

Nearly 10 percent household members had fallen ill during one month preceding the survey but only 6.4 percent had sought treatment. Majority of those who fell ill went to AKHS hospitals (28 percent) for treatment. DHQs hospitals were visited by 22 percent patients and THQs and BHUs by 12 percent and 10 percent of patients respectively.

Table 2.12 provides information on expenditure incurred on treatment. Majority of the patients had spent little on transportation and consultation but higher proportion of patients had spent more money on medicines.

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Table 2.10: Availability of education and general facilities in the sampled Areas

Type of facility	Intervention areas				Comparison areas				All areas			
	Within community	<5km	5-10 Km	11+ Km	Within community	<5km	5-10 Km	11+ Km	Within community	<5km	5-10 Km	11+ Km
1	2	3	4	5	6	7	8	9	10	11	12	13
Education facilities												
Primary school for boys	100.0	0	0	0	100.0	0	0	0	100.0	0	0	0
Primary school for girls	93.3	0	3.3	3.3	86.7	6.7	6.7	0	90	3.3	5	1.7
Secondary school for boys	20.0	26.7	13.3	40.0	13.3	26.7	40.0	20.0	16.7	26.7	26.7	30.0
Secondary school for girls	13.3	16.7	16.7	53.3	6.7	30.0	40.0	23.3	10.0	23.3	28.3	38.3
General facilities												
Medical store	26.7	16.7	13.3	43.3	34.5	13.8	37.9	13.8	30.5	15.3	25.4	28.8
General store/shop	80.0	10.0	3.3	6.7	86.7	0.0	0.0	13.3	83.0	5.0	1.0	10.0
Public/private transport	80.0	6.7	3.3	10.0	60.0	16.7	20.0	3.3	70.0	11.0	11.0	6.0
Post office	40.0	10.0	16.7	33.3	13.3	26.7	36.7	23.3				
Bank	0.0	3.3	10.0	86.7	0.0	13.3	30.0	56.7	0.0	8.0	20.0	71.0
Ambulance service	0.0	3.3	6.7	90.0	0.0	10.0	13.3	76.7	0.0	6.7	10.0	83.3

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Table 2.11: Percentage of communities by distance to health facilities/service providers

Facility	Distance	Area		Total
		Intervention area	Comparison area	
Distance to BHU	Within community	10.0	6.7	8.3
	1-5 km	16.7	23.3	20.0
	6-10 km	16.7	43.3	30.0
	11+	50.0	23.3	36.7
	98	6.7	3.3	5.0
	Total	100.0	100.0	100.0
Distance to Dai	Within community	60.0	66.7	63.3
	1-5 km	10.0	16.7	13.3
	6-10km	13.3	6.7	10.0
	11+ km	10.0	0.0	5.0
	98	6.7	10.0	8.3
	Total	100.0	100.0	100.0
Distance to RHC	Within community	0.0	3.3	1.7
	Up to 10 Km	3.3	16.7	10.0
	11-20	16.7	3.3	10.0
	21-30	16.7	0.0	8.3
	31+km	26.7	30.0	28.3
	98	36.7	46.7	41.7
	Total	100.0	100.0	100.0
Distance to dispensary	within community	20.0	13.3	16.7
	1-5 km	13.3	6.7	10.0
	6-10 km	16.7	33.3	25.0
	11+	40.0	23.3	31.7
	98	10.0	23.3	16.7
	Total	100.0	100.0	100.0
Distance to MCH	1-5 km	0.0	10.0	5.0
	6-10 km	3.3	13.3	8.3
	11+	73.3	70.0	71.7
	98	23.3	6.7	15.0
	Total	100.0	100.0	100.0
Distance to Private doctor (male)	1-20 km	16.7	23.3	20.0
	21-50km	16.7	20.0	18.3
	51-90km	33.3	23.3	28.3
	91+km	26.7	26.7	26.7
	DK	6.7	6.7	6.7
	Total	100.0	100.0	100.0
Private medical doctor (Female)	Up to 20 Km	13.3	13.3	13.3
	21-50km	10.0	16.7	13.3
	51-90km	36.7	26.7	31.7
	91-95km	30.0	36.7	33.3
	DK	10.0	6.7	8.3
	Total	100.0	100.0	100.0
Distance to FWC	up to 20 km	23.3	33.3	28.3
	21-50 km	23.3	10.0	16.7
	51-90 km	6.7	0.0	3.3

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	91+km	10.0	16.7	13.3
	DK	36.7	40.0	38.3
	Total	100.0	100.0	100.0
Distance to Tehsil Headquarters Hospital	1-20km	20.0	56.7	38.3
	21-50km	26.7	30.0	28.3
	51-90km	26.7	3.3	15.0
	91+km	16.7	10.0	13.3
	DK	10.0	0.0	5.0
	Total	100.0	100.0	100.0
Distance to Distt. Headquarters Hospitals	1-20km	0.0	6.9	3.4
	21-50km	10.3	20.7	15.5
	51-90km	44.8	34.5	39.7
	91+km	37.9	37.9	37.9
	DK	6.9	0.0	3.4
	Total	100.0	100.0	100.0
Distance to laboratory	upto 20km	16.7	40.0	28.3
	21-50km	33.3	33.3	33.3
	51-90km	26.7	10.0	18.3
	91+km	13.3	16.7	15.0
	DK	10.0	0.0	5.0
	Total	100.0	100.0	100.0
Distance to Lady Health Worker	within community	76.7	73.3	75.0
	1-5 km	10.0	20.0	15.0
	6-10km	6.7	0.0	3.3
	11+	6.7	3.3	5.0
	DK	0.0	3.3	1.7
	Total	100.0	100.0	100.0
Distance to midwife	within community	10.0	10.0	10.0
	1-5 km	0.0	3.3	1.7
	6-10km	13.3	10.0	11.7
	11+km	20.0	13.3	16.7
	98	56.7	63.3	60.0
	Total	100.0	100.0	100.0
Distance to TBA	within community	26.7	13.3	20.0
	1-5 km	3.3	16.7	10.0
	6-10km	20.0	13.3	16.7
	11+km	16.7	16.7	16.7
	DK	33.3	40.0	36.7
	Total	100.0	100.0	100.0

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Table 2.12: Percentage of household members who fell ill during a month before the survey and sought treatment by expenditure on treatment

Head of expenditure	Area	Expenditure in Rupees						Total
		None/Free	Up to Rs 20	21-50	51-100	101-200	Above 200	
Transportation	Intervention	47.4	2.7	4.0	9.	17.0	20.0	100.0
	Comparison	35.5	0.6	6.6	8.7	10.1	38.4	100.0
Doctor's Fee	Intervention	42.9	16.2	8.2	12.7	9.5	10.5	100.0
	Comparison	39.6	8.7	9.2	9.5	11.8	21.1	100.0
Medicine	Intervention	1.5	1.0	7.2	12.2	16.5	61.6	100.0
	Comparison	0.9	0.3	0.9	10.1	15.6	72.3	100.0
Laboratory Tests	Intervention	66.3	0.0	1.5	6.0	8.7	17.5	100.0
	Comparison	59.8	0.3	2.6	3.8	10.1	23.4	100.0
Misc.	Intervention	69.9	0.3	1.4	8.1	11.8	8.4	100.0
	Comparison	73.8	0.3	1.7	7.8	8.7	7.7	100.0

Chapter 3

REPRODUCTIVE HEALTH

The National Health Policy of Pakistan provides an overall national vision for the health sector based on “Health for all” approach. The policy identifies a series of measures, programmes and projects as the means for enhancing equity, efficiency and effectiveness in the health sector through focused interventions. Promotion of maternal and child health has been one of the most important objectives of the health programme (Ministry of Health, 2001). Under the programme, prenatal care includes at least three antenatal care visits, iron supplements for pregnant and lactating women, two doses of tetanus toxoid (TT) vaccine, detection and treatment of anemia in mothers, encouragement of institutional deliveries by trained health personnel, postnatal care and identification and treatment of reproductive tract and sexually transmitted infections. In addition to static health services, the primary health care services are also extended through the lady health workers programme at doorsteps especially in rural areas.

The CCSP envisages improving reproductive health of women through specific interventions. The Chitral baseline survey has gathered information on various aspects of reproductive health including prenatal care during pregnancy, number of visits to a health provider, reasons for seeking health care during pregnancy, prevalence of health care during pregnancy from a skilled health provider, administration of Tetanus Toxoid injections, use of calcium and iron tablets, preparedness for delivery, place of delivery and person attending delivery, postnatal care and problems encountered during pregnancy, delivery and postpartum period. This chapter illustrates issues related to reproductive health of women aged 15-49 years who had a living child less than 2 years of age. Data are presented for intervention, comparison and all areas separately.

3.1 Prenatal care

Prenatal care is important for the health of mother and child. It refers to pregnancy related health care provided by a doctor or a paramedic at a medical facility or at home. The prenatal checkups include monitoring a pregnancy for signs of complications, detection and treatment of pre-existing and concurrent problems of pregnancy, provision of advice and counseling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues. It is

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recommended that as part of the prenatal care, a woman must receive two doses of tetanus toxoid vaccine, adequate amounts of iron and folic acid to prevent or treat anemia, monitoring of blood pressure etc.

The baseline survey collected information from ever married women of reproductive age with a living child less than two years of age regarding specific problems they may have had during their last pregnancy and whether they received any prenatal checkups. Women who did not receive prenatal checkups were asked why they did not get prenatal service. Women who received prenatal checkups were asked about the care provider, the timing of the first prenatal check-up, the total number of checkups and whether they received any tetanus toxoid injections. Table 3.1 presents information on prenatal care by service provider and selected background characteristics of respondents of the survey. The information was collected for the last birth only. The respondents were asked whom did they consult for prenatal checkups.

Table 3.1 reveals that overall seven out of ten women (70 percent) visited a service provider at least once during their last pregnancy. However, only a quarter of women (25 percent) visited a service provider four or more times during the prenatal period. The percentage of such women is slightly higher in Comparison Areas (73 percent at least one visit and 27 percent four or more visits) compared with Intervention Areas (68 percent and 22 percent respectively).

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Table 3.1: Percentage of mothers with last (youngest) living child age 0-23 months who got antenatal checkups during pregnancy

Background characteristics		Intervention		Comparison		All areas		Number of mothers
		Atleast one antenatal check up	Four or more antenatal check ups	Atleast one antenatal check up	Four or more antenatal check ups	Atleast one antenatal check up	Four or more antenatal check ups	
Age of mother	< 25	73.4	27.5	78.1	32.9	75.8	30.2	417
	25-34	70.6	21.9	74.5	27.6	72.6	24.8	632
	35 +	52.8	14.6	58.9	17.7	55.6	16.0	268
Birth Order	1	69.8	26.2	75.0	33.3	72.4	29.7	293
	2 - 3	72.2	24.3	77.9	25.8	75.3	25.2	497
	4 - 5	69.8	20.9	66.0	28.5	68.0	24.4	316
	6 +	50.9	13.2	65.7	21.9	58.3	17.5	211
Level of education	None	57.4	14.5	62.1	21.0	59.5	17.5	833
	Upto Primary	81.5	31.5	86.0	28.1	83.8	29.7	111
	Middle	88.4	34.9	80.0	34.5	83.7	34.7	98
	Upto Secondary	90.6	37.5	91.9	33.7	91.3	35.3	150
	Secondary +	97.9	50.0	89.6	46.8	92.8	48.0	125
Wealth quintiles	Poorest	52.7	14.4	61.9	19.0	56.6	16.3	251
	Second	55.5	16.1	54.5	19.8	55.0	17.8	258
	Middle	65.3	20.1	78.4	28.8	71.4	24.2	269
	Fourth	79.3	25.6	84.2	35.6	82.0	31.1	267
	Richest	92.7	38.5	78.5	30.1	84.2	33.5	272
Total		67.6	22.1	72.7	27.4	70.2	24.8	1317

Antenatal care appears to be positively associated with mother's education and wealth quintile. Over 90 percent women with secondary or above schooling visited a health provider at least once during their pregnancy in both intervention and comparison areas compared with around six out of ten women with no schooling. Similarly, younger and low parity women are more likely to visit a service provider during pregnancy. Similar pattern but varying values of prenatal checkups are observed in the intervention and comparison areas. The proportion of those who visited a health provider four or more times during the antenatal period drops to almost half yet maintaining the trend when compared on the basis of education, wealth, age and parity. A need for focusing women of all ages and parity and those who are poor and uneducated is evident from the findings of the baseline survey.

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The quality of prenatal care can be assessed by the type of provider, the number of prenatal visits, and the timing of the first visit. Prenatal care can also be monitored through the content of services received and the kind of information mothers are given during their visit. Table 3.2a shows distribution of mothers who visited at least once, a skilled health provider which includes a doctor, a nurse, a lady health visitor or a midwife. It appears that women in the ‘comparison areas’ are more likely to visit a skilled health professional (71 percent) compared with the intervention area (65 percent). Also, a clearer pattern of visiting a skilled health professional is evident when visitors are classified according to age, parity, and educational level and wealth quintiles. Those who are wealthier, educated, younger in age and low parity are more likely to visit skilled health professionals for prenatal checkups compared with their counterparts who are poor, uneducated, aged and already having large families.

Table 3.2a: Percentage of mothers with 0-23 month children who visited a skilled health provider during last pregnancy

Background characteristics		Intervention		Comparison		All areas	
		Percentage receiving antenatal from skilled providers		Percentage receiving antenatal from skilled providers		Percentage receiving antenatal from skilled providers	
		Percentage	# Mothers	Percentage	# Mothers	Percentage	# Mothers
Age of mother	< 25	72.5	207	76.2	210	74.3	417
	25-34	67.0	306	72.7	326	69.9	632
	35 +	50.0	144	56.5	124	53.0	268
Birth Order	1	69.8	149	73.6	144	71.7	293
	2 - 3	68.7	230	76.0	267	72.6	497
	4 - 5	66.3	172	63.9	144	65.2	316
	6 +	48.1	106	62.9	105	55.5	211
Level of education	None	54.2	448	59.2	385	56.5	833
	Upto Primary	81.5	54	86.0	57	83.8	111
	Middle	86.0	43	78.2	55	81.6	98
	Upto Secondary	87.5	64	91.9	86	90.0	150
	Secondary +	97.9	48	88.3	77	92.0	125
Wealth quintiles	Poorest	49.3	146	61.0	105	54.2	251
	Second	53.3	137	52.1	121	52.7	258
	Middle	62.5	144	77.6	125	69.5	269
	Fourth	76.9	121	82.2	146	79.8	267
	Richest	90.8	109	75.5	163	81.6	272
Total		65.0	657	70.8	660	67.9	1317

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Table 3.2b also exhibits a similar pattern with breakup by the type of health service provider. It may be clarified that women were asked to report on all persons they saw for prenatal care for their last birth. However, for presenting the results, if a woman saw more than one provider, only the provider with the highest qualification is considered. The results show that one-third women visited a doctor and another one-third visited a nurse/LHV or a midwife for prenatal checkups. The proportion of prenatal checkups in the Chitral baseline survey is slightly higher than the national level (61 percent) reported in the Pakistan Demographic and Health Survey, 2006-07 and the Pakistan Social and Living Standards Measurement Survey 2006-07 which shows prenatal consultations at 67 percent (Federal Bureau of Statistics, 2008).

Table 3.2b: Percent Distribution of Mothers with 0-23 months of children by antenatal care providers

Background characteristics		Person who assisted in antenatal check-ups						Total	Percentage receiving antenatal from skilled providers	All areas
		Doctor	Nurse/L HV	Midwife	Dai-TBA	Lady Health Worker	No one			
Age of mother	< 25	35.7	35.5	3.1	1.2	.2	24.2	100.0	74.3	417
	25-34	35.0	34.2	.8	2.5	.2	27.4	100.0	69.9	632
	35 +	25.4	26.9	.7	2.2	--	44.8	100.0	53.0	268
Birth Order	1	35.5	32.4	3.8	.7	--	27.6	100.0	71.7	293
	2 - 3	33.4	38.4	.8	2.2	.4	24.7	100.0	72.6	497
	4 - 5	34.5	30.1	.6	2.5	--	32.3	100.0	65.2	316
	6 +	28.0	26.1	1.4	2.8	--	41.7	100.0	55.5	211
Level of education	None	26.8	28.3	1.4	2.6	.2	40.6	100.0	56.5	833
	Upto Primary	36.9	44.1	2.7	--	--	16.2	100.0	83.8	111
	Middle(a)	41.8	36.7	3.1	2.0	--	16.3	100.0	81.6	98
	Upto Secondary	38.7	51.3	--	1.3	--	8.7	100.0	90.0	150
	Secondary +	60.0	30.4	1.6	.8	--	7.2	100.0	92.0	125
Wealth quintiles	Poorest	20.7	32.7	.8	2.0	.4	43.4	100.0	54.2	251
	Second	19.0	31.0	2.7	2.3	--	45.0	100.0	52.7	258
	Middle	26.0	41.3	2.2	1.9	--	28.6	100.0	69.5	269
	Fourth	41.2	36.7	1.9	1.9	--	18.4	100.0	79.8	267
	Richest	57.7	23.9	--	2.2	.4	15.8	100.0	81.6	272
Total		33.3	33.1	1.5	2.1	.2	29.9	100.0	67.9	1317
a) If more than one source of Prenatal care was mentioned, ONLY the providers with the highest qualifications is considered in this tabulations										

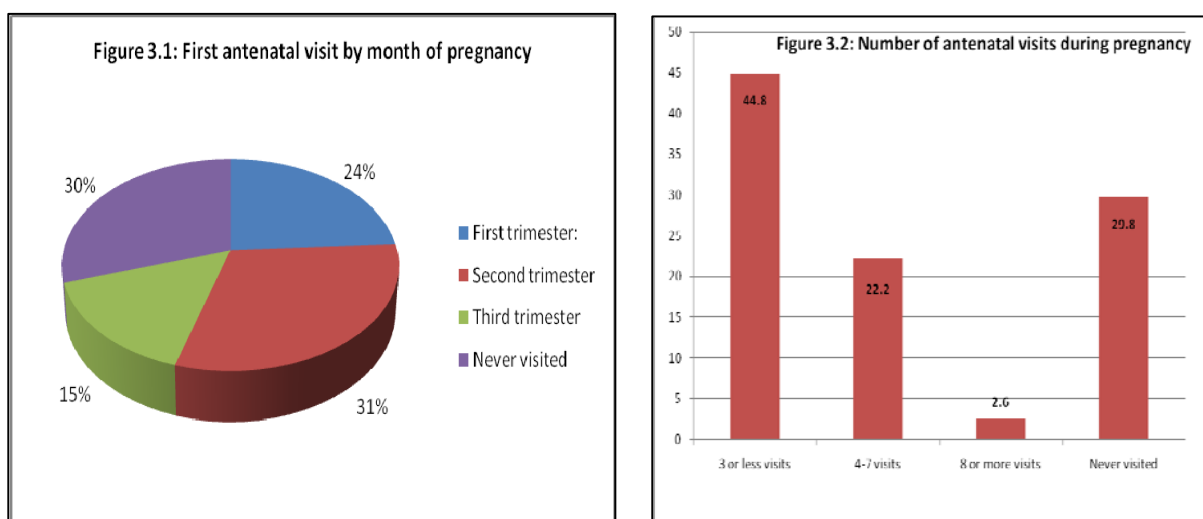
It is also worth mentioning that 30 percent women, irrespective of their socioeconomic status, did not visit any kind of a service provider for antenatal checkup. Majority of such women

are poor, uneducated, higher parity and higher age but a significant proportion of such women were also educated and financially better off.

3.2 Number and timing of prenatal checkups

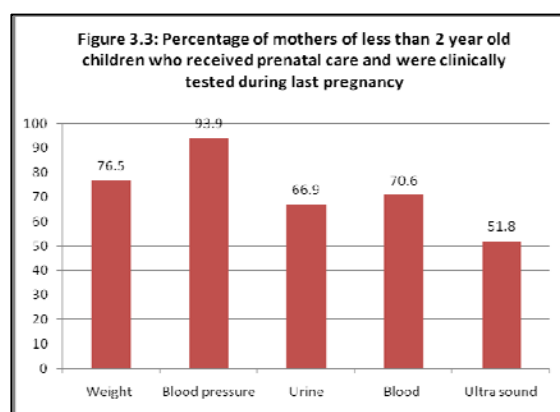
The number of prenatal checkups and the timing of the first check-up are important for the health of mother and the outcome of the pregnancy. The conventional recommendation for normal pregnancies is that once pregnancy is confirmed, prenatal checkups should be scheduled at four week intervals during the first seven months, then two weeks until the last month, and weekly thereafter. Four antenatal checkups –one each during the third, sixth, eighth and ninth month of pregnancy-have been recommended as the minimum necessary. The conventional recommendation is to schedule the first check-up within six weeks of a woman's menstruation period; however, even if the initial check-up is initiated as late as the third trimester, chances of peri-natal mortality are substantially reduced (Ramachandran, 1992).

Figure 3.1 shows the percent distribution of women seeking prenatal care for their last pregnancy. It is alarming to note that around 30 percent women did not visit a prenatal care-provider even once throughout their last pregnancy. It is noted that 24 percent women had their first antenatal check-up in the first trimester, 31 percent in the second trimester and 15 percent in the third trimester. Overall, 45 percent women had visited a health provider 1-3 times, 22 percent 4-7 times and less than three percent had visited 8 or more times (Figure 3.2).



3.3 Tests done / services received during pregnancy

Women who had visited a health provider for prenatal check up were asked whether any test was performed during any of their visits and what other services they had received. Table 3.3 and Figure 3.3 show the proportion of women who had undergone specific tests or received specific services during their visits.



Those who had visited a source for prenatal

checkups, majority of them (94 percent) reported that their blood pressure was taken while ultrasound was done for only half of the visitors (52 percent). Also three-fourths (77 percent) of women were weighed and urine was tested for two-thirds (67 percent) of care seekers. Blood was also tested for seven out of ten women (71 percent) who visited a source for prenatal care during pregnancy. Women who visited a source more than once were also likely to undergo such test a number of times. Table 3.3 also shows multiplicity of such tests over the pregnancy period for many women.

Table 3.3: Percentage of mothers who visited a source for prenatal checkups and received selected services

Selected services	Percentage of women received prenatal care and selected services	Percent distribution of women with children under 2 years of age who received selected services during last pregnancy					# of women
		Once	Twice	thrice	Four or more times	total	
Weight	76.5	40.3	26.3	16.5	16.8	100	707
Blood pressure	93.9	29.5	26.8	22.6	21.1	100	868
Urine test	66.9	69.1	19.7	6.3	4.9	100	618
Blood test	70.6	73.2	16.7	5.5	4.6	100	652
Ultra sound	51.8	54.1	25.7	10.9	9.4	100	479

3.4 Tetanus toxoid vaccination

Tetanus Toxoid Vaccination is given during pregnancy for the prevention of neonatal tetanus which is one of the principal causes of death among infants in many developing countries. To achieve protection for herself and her newborn baby, a pregnant woman should typically receive at least two doses of tetanus toxoid.

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Table 3.4 shows the percentage of women who had a living child less than two years of age and who received at least one TT shot and percentage of women who received two or more TT shots according to area and background characteristics. The baseline survey shows that overall 71 percent women in the sample areas received at least one shot of TT injection and two-thirds (66 percent) received 2 or more TT shots during their last pregnancy. The proportion of such women was higher (74 percent received at least one TT shot and 69 percent received 2 or more TT shots) in the comparison areas compared with the intervention areas where 67 percent women received one TT shot and 63 percent received 2 or more shots. Compared with national average of 53 percent (PDHS, 2008) the situation with regard to TT injection is better in the Chitral valley. As expected, women who are younger in age, low parity, have some secondary or more education and economically better off are more likely to have TT shots during pregnancy compared to their counterparts who are poor, have no education, and are older in age and have more children. Almost similar trend was observed in the intervention and comparison areas.

Table 3.4: Percentage of mothers with a child 0-23 months who received Tetanus Toxoid injections during last pregnancy

Background characteristics		Intervention		Comparison		All areas		Number of mothers
		Received at least one TT shot	Received 2 or more TT shots	Received at least one TT shot	Received 2 or more TT shots	Received at least one TT shot	Received 2 or more TT shots	
Age of mother	< 25	77.3	73.9	81.0	77.1	79.1	75.5	417
	25-34	66.7	62.1	77.3	70.2	72.2	66.3	632
	35 +	54.2	47.2	54.0	50.8	54.1	48.9	268
Birth Order	1	73.8	70.5	82.6	77.1	78.2	73.7	293
	2 - 3	74.8	70.4	76.4	70.8	75.7	70.6	497
	4 - 5	65.7	59.9	69.4	66.0	67.4	62.7	316
	6 +	44.3	38.7	62.9	56.2	53.6	47.4	211
Level of education	None	59.8	54.5	64.9	59.5	62.2	56.8	833
	Upto Primary	72.2	68.5	73.7	66.7	73.0	67.6	111
	Middle	83.7	79.1	78.2	76.4	80.6	77.6	98
	Upto Secondary	81.3	79.7	94.2	87.2	88.7	84.0	150
	Secondary +	97.9	93.8	94.8	90.9	96.0	92.0	125
Wealth quintiles	Poorest	58.2	52.1	63.8	56.2	60.6	53.8	251
	Second	60.6	51.8	64.5	62.0	62.4	56.6	258
	Middle	66.7	64.6	80.0	73.6	72.9	68.8	269
	Fourth	73.6	69.4	82.9	76.7	78.7	73.4	267
	Richest	81.7	79.8	75.5	71.2	77.9	74.6	272
Total		67.3	62.6	74.1	68.8	70.7	65.7	1317

3.5 Reasons for not seeking prenatal care

Women who had not visited a skilled or any other health provider for antenatal care were asked about the reasons for such behavior. Twenty-nine percent women in the intervention area reported economic/poverty reasons, while 26 percent identified lack of access as a barrier and 19 percent reported non-availability of transport as a cause of not seeking prenatal care during pregnancy (Table 3.5). Similar responses but by relatively smaller proportions of women were reported in the comparison areas. However, majority of women (29 percent) in all areas and also in the comparison areas (37 percent) responded that since they had not encountered any problem, they did not think it necessary to visit a health professional for checking on their pregnancy. This kind of attitude can also be potentially dangerous and need to be focused through communication and awareness programmes.

Table 3.5: Percentage of women with 0-23 month children who did not seek antenatal care during their youngest living child by reasons

Reasons for not seeking antenatal care	Intervention	Comparison	Total	
			Percent	Number
Not necessary/No problem	22.0	37.2	28.9	114
Costs too much	29.4	24.4	27.2	107
Too far	25.7	13.9	20.3	80
No transport	19.2	12.2	16.0	63
No one to go with	1.4	1.1	1.3	5
Service not good	.9	--	.5	2

3.6 Use of iron tablets or syrup and calcium tablets

The content of prenatal care is important in assessing the quality of prenatal care services. Pregnancy complications are an important source of maternal and child morbidity and mortality. Table 3.6 presents information on the percentage of women who took iron tablets or syrup and calcium tablets during their last pregnancy. Among women with a child less than 2 years of age, 59 percent took iron tablets during their last pregnancy while 26 percent continued the use of iron tablets for at least two months. The use of iron tablets was shorter by six percentage points in the intervention area (56 percent) compared with the comparison areas (63 percent). Those who continued the use of iron tablets for two or more months were almost similar in the intervention (25 months) and comparison areas (26 percent). The quality of prenatal care is particularly related to mother's education, mother's health, parity and age.

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As seen for all other indicators of reproductive health, women who were younger in age, low parity, more educated and economically better off were more likely to be health cognizant and taking micro-nutrients during their last pregnancy. This attitude was found to be equally prevalent in both the areas and at the aggregate level in a district like Chitral which is predominantly rural and topographically mountainous thus lacking access to health facilities as well.

The use of Calcium tablets during pregnancy is found to be relatively less common in both the areas (Table 3.7). Only four out of ten women used Calcium tablets in both the areas and 14 percent continued its use for two or more months. However, the pattern of its use is similar and age, birth order, level of education and wealth status are found to be important determinants.

Table 3.6: Percentage of mothers with a child 0-23 months who took Iron tablets or iron syrup during last pregnancy

Background characteristics		Intervention		Comparison		All areas		Number of mothers
		Percentage who took Iron tablets	Percentage who received Iron for at least two months	Percentage who took Iron tablets	Percentage who received Iron for at least two months	Percentage who took Iron tablets	Percentage who received Iron for at least two months	
Age of mother	< 25	63.8	28.0	73.3	31.0	68.6	29.5	417
	25-34	59.2	27.5	63.2	27.3	61.2	27.4	632
	35 +	38.9	17.4	42.7	14.5	40.7	16.0	268
Birth Order	1	62.4	28.9	70.1	31.9	66.2	30.4	293
	2 - 3	57.8	23.9	69.3	25.8	64.0	24.9	497
	4 - 5	59.3	29.7	50.0	20.8	55.1	25.6	316
	6 +	38.7	17.0	52.4	25.7	45.5	21.3	211
Level of education	None	46.7	19.2	51.4	18.2	48.9	18.7	833
	Upto Primary	70.4	37.0	66.7	33.3	68.5	35.1	111
	Middle	74.4	37.2	65.5	32.7	69.4	34.7	98
	Upto Secondary	75.0	32.8	83.7	39.5	80.0	36.7	150
	Secondary +	87.5	50.0	89.6	40.3	88.8	44.0	125
Wealth quintiles	Poorest	39.7	18.5	51.4	19.0	44.6	18.7	251
	Second	46.0	18.2	49.6	23.1	47.7	20.5	258
	Middle	55.6	22.2	64.0	24.8	59.5	23.4	269
	Fourth	66.9	32.2	70.5	31.5	68.9	31.8	267
	Richest	79.8	40.4	71.2	28.8	74.6	33.5	272
Total		56.2	25.4	62.6	26.1	59.4	25.7	1317

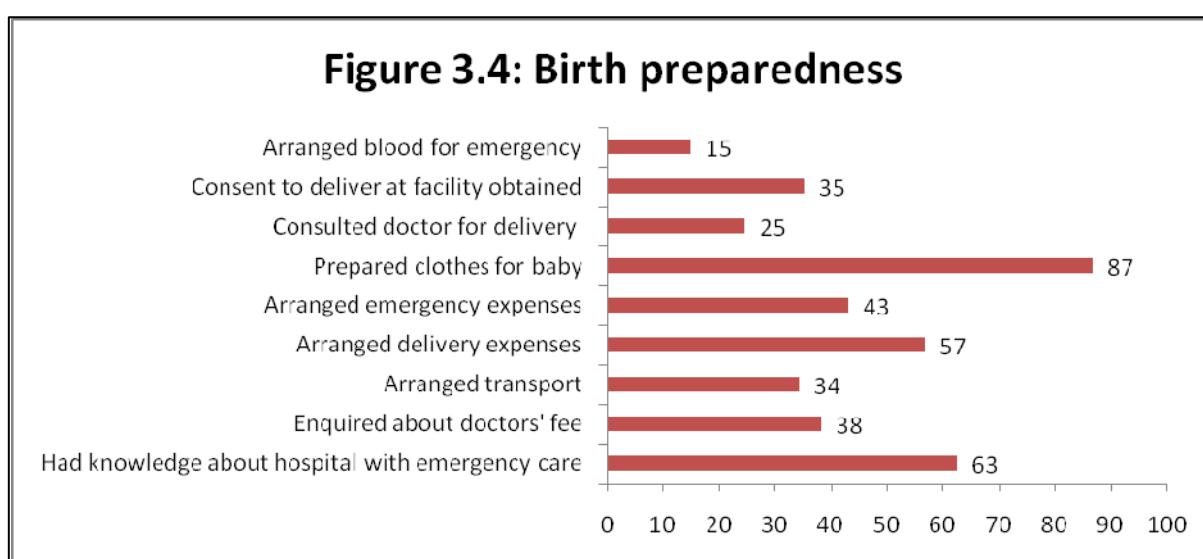
Table 3.7: Percentage of mothers with a child 0-23 months who took Calcium tablets or Calcium syrup during last pregnancy

Background characteristics		Intervention		Comparison		All areas		Number of mothers
		Percentage who took Calcium	Percentage who received Calcium for at least two months	Percentage who took Calcium	Percentage who received Calcium for at least two months	Percentage who took Calcium	Percentage who received Calcium for at least two months	
Age of mother	< 25	42.5	12.6	46.7	18.1	44.6	15.3	417
	25-34	42.2	16.7	44.2	14.7	43.2	15.7	632
	35 +	29.2	11.8	30.6	6.5	29.9	9.3	268
Birth Order	1	36.9	13.4	48.6	19.4	42.7	16.4	293
	2 - 3	41.3	13.5	45.3	14.6	43.5	14.1	497
	4 - 5	43.6	17.4	35.4	10.4	39.9	14.2	316
	6 +	32.1	12.3	36.2	11.4	34.1	11.8	211
Level of education	None	32.8	11.6	36.1	9.9	34.3	10.8	833
	Upto Primary	46.3	18.5	40.4	14.0	43.2	16.2	111
	Middle	48.8	11.6	40.0	21.8	43.9	17.3	98
	Upto Secondary	56.3	21.9	54.7	23.3	55.3	22.7	150
	Secondary +	62.5	27.1	63.6	20.8	63.2	23.2	125
Wealth quintiles	Poorest	26.7	13.0	34.3	7.6	29.9	10.8	251
	Second	26.3	5.8	32.2	8.3	29.1	7.0	258
	Middle	31.9	9.7	43.2	16.8	37.2	13.0	269
	Fourth	54.5	20.7	50.0	15.8	52.1	18.0	267
	Richest	66.1	25.7	47.9	19.6	55.1	22.1	272
Total		39.4	14.3	42.4	14.2	40.9	14.3	1317

3.7 Preparedness for delivery

Birth preparedness refers to advance planning and preparation for delivery by setting aside personal funds to cover the costs of travel and knowing what transport can be used to get to the hospital. Delivering with a skilled provider who has the required supplies can do much to improve maternal health outcomes. Birth preparedness helps ensure that women can reach professional delivery care when labour begins. In addition, birth preparedness can help reduce the delays that occur when women experience obstetric complications, such as recognizing the complications and deciding to seek care, reaching a facility where skilled care is available, and receiving care from qualified providers at the facility.

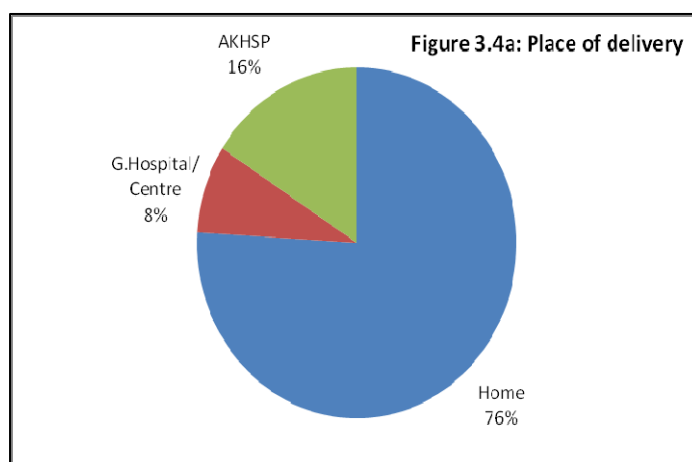
Figure 3.4 shows that in all sampled areas, preparation of clothes for the baby is the most exciting activity that mothers care about during their pregnancy. It ranks higher than care for the delivery itself. It transpired that almost nine out of ten (87 percent) women prepared clothes for the baby whereas only 15 percent arranged for blood to meet any emergency during their last pregnancy. Only four out of ten women (43 percent) made arrangement of money for any kind of emergency during delivery. One third women (35 percent) reported having taken consent of their husbands/in-laws to deliver at a health facility. However, 63 percent women did gather knowledge about the nearest health facility with emergency obstetric care facility. Though, arrangement of transport is very vital especially in a hilly



place like Chitral, only one-third (34 percent) women reported having made such arrangement in advance for their last pregnancy.

3.8 Place of delivery

Another important thrust of the reproductive and child health programmes is to encourage deliveries under proper hygienic conditions under the supervision of trained health professionals. Mothers in their reproductive ages having a child less than 2 years of age were asked about the place of delivery and the person attending the delivery. For the safe health of mother and child, it is imperative that



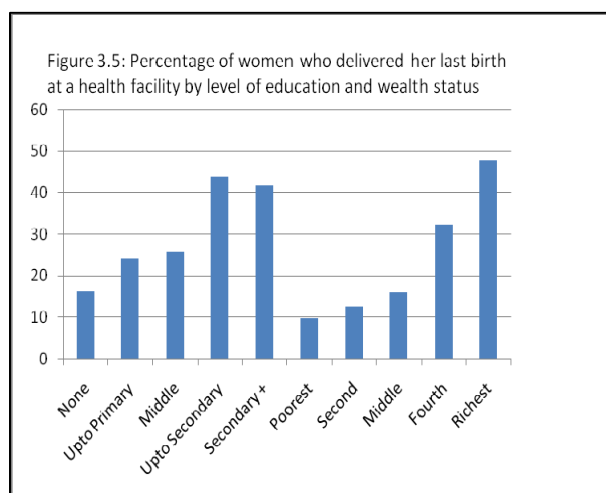
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all deliveries are assisted by qualified health professionals. However, it is noted that 76 percent women had delivered their last babies at home and the remaining one-fourth (24 percent) had either delivered at AKHS-P (16 percent) or at the government hospitals/centers (Figure 3.4a).

Women, who are educated, economically richer, low on parity and younger in age, are more likely to be assisted by skilled health providers. The trend is similar both in the comparison as well intervention areas (Table 3.8 and Figure 3.5). This is also supported by Table 3.9, which shows data for all women assisted by the type of birth assistant during their delivery. Majority of women of all categories were primarily

assisted by traditional birth attendants - TBAs (31 percent), and 'others' category (26 percent), which includes family members and other unskilled persons. Only 39 percent women were assisted by a skilled health professional during their last pregnancy.

The proportion of mothers who were assisted by a health professional (45 percent) was higher in the comparison areas compared to the women in intervention areas (33 percent).



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Table 3.8: Percentage of mothers with 0-23 months children whose delivery was attended by a Skilled health provider

Background characteristics		Intervention		Comparison		All areas	
		Delivery attended by health professional		Delivery attended by health professional		Delivery attended by health professional	
		Percentage	# Mothers	Percentage	# Mothers	Percentage	# Mothers
Age of mother	< 25	37.2	207	48.1	210	42.7	417
	25-34	34.0	306	46.6	326	40.5	632
	35 +	25.0	144	36.3	124	30.2	268
Birth Order	1	40.9	149	52.8	144	46.8	293
	2 - 3	31.7	230	44.9	267	38.8	497
	4 - 5	29.7	172	37.5	144	33.2	316
	6 +	30.2	106	45.7	105	37.9	211
Level of education	None	27.0	448	36.6	385	31.5	833
	Upto Primary	33.3	54	50.9	57	42.3	111
	Middle	39.5	43	43.6	55	41.8	98
	Upto Secondary	54.7	64	61.6	86	58.7	150
	Secondary +	54.2	48	66.2	77	61.6	125
Wealth quintiles	Poorest	18.5	146	35.2	105	25.5	251
	Second	24.1	137	32.2	121	27.9	258
	Middle	28.5	144	41.6	125	34.6	269
	Fourth	43.0	121	56.2	146	50.2	267
	Richest	58.7	109	54.0	163	55.9	272
Total		33.0	657	45.2	660	39.1	1317

Table 3.9: Percent distribution of mothers 0-23 months of children by person who assisted in the delivery

Background characteristics		Person who assisted delivery								Total	Delivery attended by health professional	All areas
		Doctor	Nurse/L HV	Midwife	Dai-TBA	Lady Health Worker	FWW	Others	Missing			
Age of mother	< 25	17.0	17.0	8.6	32.4	1.2	3.1	20.6		100.0	42.7	417
	25-34	14.2	14.4	11.9	30.7	.5	2.4	25.8	.2	100.0	40.5	632
	35 +	11.2	13.4	5.6	28.7	1.1	2.6	36.9	.4	100.0	30.2	268
Birth Order	1	20.8	18.1	7.8	30.4	1.0	2.7	19.1		100.0	46.8	293
	2 - 3	13.3	15.5	10.1	33.0	.4	2.6	24.9	.2	100.0	38.8	497
	4 - 5	10.8	12.0	10.4	33.2	1.3	3.2	29.1		100.0	33.2	316
	6 +	14.2	14.2	9.5	22.7	.9	1.9	36.0	.5	100.0	37.9	211
Level of education	None	10.9	12.5	8.0	30.0	1.1	3.5	33.9	.1	100.0	31.5	833
	Upto Primary	17.1	13.5	11.7	35.1	.9	.9	19.8	.9	100.0	42.3	111
	Middle	17.3	12.2	12.2	31.6	1.0	2.0	23.5		100.0	41.8	98
	Upto Secondary	19.3	23.3	16.0	32.0		.7	8.7		100.0	58.7	150
	Secondary +	28.0	25.6	8.0	30.4		1.6	6.4		100.0	61.6	125
Wealth quintiles	Poorest(a)	8.0	9.2	8.4	37.8	.8	3.2	32.7		100.0	25.5	251
	Second	6.2	10.9	10.9	31.4	1.6	4.3	34.9		100.0	27.9	258
	Middle	10.8	13.4	10.4	37.9	.4	2.6	24.2	.4	100.0	34.6	269
	Fourth	17.6	19.9	12.7	26.2	1.1	.7	21.7		100.0	50.2	267
	Richest	29.0	21.3	5.5	21.3	.4	2.6	19.5	.4	100.0	55.9	272
Total		14.5	15.0	9.6	30.8	.8	2.7	26.4	.2	100.0	39.1	1317

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Cost of delivery varies depending on the place where the delivery takes place. Deliveries at home are less expensive compared with facility-based deliveries thereby justifying three-fourths deliveries taking place at home in Chitral as well as elsewhere in the country. Poverty appears to be an important determinant when place of delivery is decided. Nearly one-third (31 percent) deliveries at home were without any cost and the average cost per delivery at home works out at Rs 306 only (Table 3.9a).

Facility-based deliveries in the public sector are reported to be more expensive (Rs 4434 per delivery) compared with the deliveries at AKHSP facility (Rs 3107). Overall, 76 percent deliveries take place at home while 8 percent take place at public health facilities and 16 percent at the AKHSP facilities.

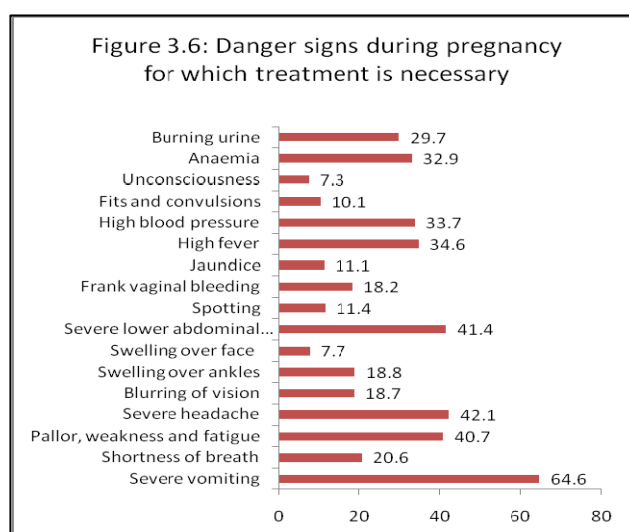
Table 3.9a: Cost of birth by place of delivery

Expenditure		Home	Public sector	AKHSP	Total
None		31.4	.9	.5	23.9
Upto 100		9.0	--	.5	6.9
101 - 300		34.3	1.9	1.0	26.3
301 - 500		10.5	.9	.5	8.1
501 - 1000		8.8	3.7	12.0	8.9
1001 - 2000		4.0	12.1	30.6	8.9
2001 - 5000		.8	48.6	39.2	11.0
5001 +		.2	28.0	13.9	4.6
Don't know/missing		1.0	3.7	1.9	1.4
Total	Percent	100.0	100.0	100.0	100.0
	Number	998	107	209	1314
Mean expenditure incurred		306.2	4434.8	3107.3	1085.7

3.9 Knowledge of danger signs

3.9.1 Danger signs during pregnancy

In the Chitral baseline survey women were asked whether they were aware of any danger signs during pregnancy and childbirth. Those who did not spontaneously indicate any knowledge regarding different illnesses or complications were prompted by naming the illness or complication. The danger signs during pregnancy listed in the



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questionnaire are: severe vomiting; shortness of breath; pallor, weakness or fatigue; severe headache; blurring of vision; swelling over ankles; swelling over face; severe lower abdominal pain; spotting; frank vaginal bleeding; jaundice; high fever with or without rigors; diagnosed high blood pressure; fits or convulsions; unconsciousness; anemia; and burning of urine. A spontaneous response of women may be based on her own experience or someone in the neighborhood or relations who experienced the problem. Although documenting the knowledge of the symptoms of pregnancy is vital for increasing awareness and planning services to reduce maternal morbidity and mortality, the information presented here is on women's self reports and should be interpreted with care.

Figure 3.6 shows that the most known complication among women with children less than 2 years is severe vomiting (65 percent) followed by severe headache (42 percent) and lower abdominal pain (41 percent). Other danger signs reported by almost one-third women were high fever (35 percent), high blood pressure (34 percent), anemia (33 percent) and burning urine (30 percent).

Table 3.10 presents spontaneous knowledge about one, two, three or four or more danger signs or complications during pregnancy documented separately for Intervention and Comparison areas. One-fourth of women in the intervention areas (25 percent) and close to one-sixth (18 percent) women in the comparison areas did not know any danger sign during pregnancy. Majority of such women were young, low parity and poorer women. However, reporting of women with schooling was not consistent. The reporting of knowledge of one danger sign was almost similar in the comparison (32 percent) and the intervention areas (30 percent). The knowledge level about four or more danger signs was also low in both the areas (8 percent in the intervention areas and 10 percent in the comparison areas). No specific pattern of knowledge has emerged on various background characteristics of the respondents.

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Table 3.10: Percent Distribution of Mothers with 0-23 months of children who know danger signs during pregnancy by Background characteristics

Background characteristics		Intervention						Comparison						All areas					
		No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother
Age of mother	< 25	28.0	30.9	22.7	11.1	7.2	207	23.8	30.0	19.0	16.7	10.5	210	25.9	30.5	20.9	13.9	8.9	417
	25-34	22.9	32.4	20.3	17.3	7.2	306	15.3	32.2	27.9	15.0	9.5	326	19.0	32.3	24.2	16.1	8.4	632
	35 +	23.6	25.7	22.2	17.4	11.1	144	16.9	33.1	21.0	18.5	10.5	124	20.5	29.1	21.6	17.9	10.8	268
Birth Order	1	26.8	32.2	22.1	12.8	6.0	149	18.1	28.5	25.7	18.8	9.0	144	22.5	30.4	23.9	15.7	7.5	293
	2 - 3	24.3	33.0	20.9	14.8	7.0	230	20.2	29.6	24.0	15.4	10.9	267	22.1	31.2	22.5	15.1	9.1	497
	4 - 5	22.7	28.5	20.3	18.0	10.5	172	15.3	34.7	25.0	13.9	11.1	144	19.3	31.3	22.5	16.1	10.8	316
	6 +	25.5	25.5	23.6	16.0	9.4	106	18.1	37.1	19.0	18.1	7.6	105	21.8	31.3	21.3	17.1	8.5	211
Level of education	None	25.7	31.5	20.1	15.2	7.6	448	20.3	32.7	23.9	14.8	8.3	385	23.2	32.1	21.8	15.0	7.9	833
	Upto Primary	27.8	27.8	25.9	9.3	9.3	54	14.0	31.6	26.3	15.8	12.3	57	20.7	29.7	26.1	12.6	10.8	111
	Middle	30.2	20.9	30.2	9.3	9.3	43	20.0	30.9	20.0	14.5	14.5	55	24.5	26.5	24.5	12.2	12.2	98
	Upto Secondary	18.8	35.9	21.9	17.2	6.3	64	5.8	31.4	29.1	23.3	10.5	86	11.3	33.3	26.0	20.7	8.7	150
	Secondary +	14.6	25.0	20.8	27.1	12.5	48	24.7	27.3	18.2	16.9	13.0	77	20.8	26.4	19.2	20.8	12.8	125
Wealth quintiles	Poorest	35.6	30.1	15.1	12.3	6.8	146	18.1	27.6	26.7	15.2	12.4	105	28.3	29.1	19.9	13.5	9.2	251
	Second	25.5	33.6	23.4	10.2	7.3	137	25.6	33.1	22.3	15.7	3.3	121	25.6	33.3	22.9	12.8	5.4	258
	Middle	20.1	36.1	22.9	18.1	2.8	144	14.4	30.4	28.0	17.6	9.6	125	17.5	33.5	25.3	17.8	5.9	269
	Fourth	24.8	27.3	24.0	14.9	9.1	121	15.1	39.0	22.6	11.6	11.6	146	19.5	33.7	23.2	13.1	10.5	267
	Richest	14.7	22.9	22.9	22.9	16.5	109	19.0	27.6	20.9	20.2	12.3	163	17.3	25.7	21.7	21.3	14.0	272
Total		24.7	30.4	21.5	15.4	8.1	657	18.3	31.7	23.8	16.2	10.0	660	21.5	31.1	22.6	15.8	9.0	1317

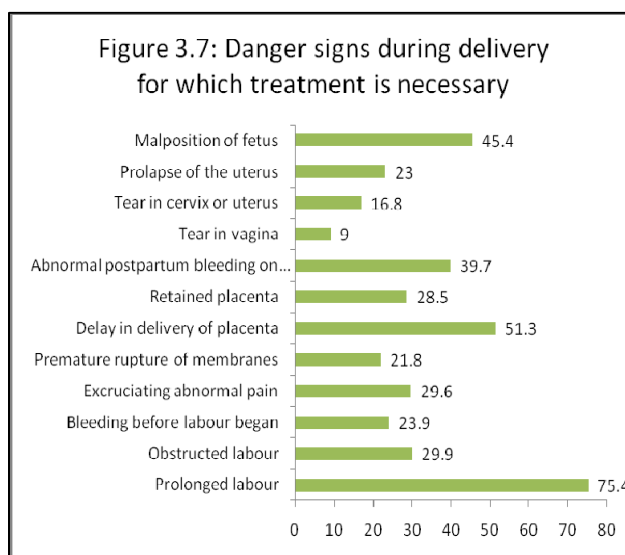
Danger signs Index includes: Blurring of vision, Swelling over ankles, Swelling over face, Severe lower abdominal pain, High fever with or without rigors, Fits or convulsions, and Anemia.

3.9.2 Danger signs during delivery

The most common danger sign during child birth/ delivery was identified as prolonged labour reported by three-fourths of women. Figure 3.7 depicts the level of the respondents' understanding of complications during delivery. The second and third most dangerous signs were delay in delivery of placenta (51 percent) and mal-positioning of fetus (45 percent). Excessive abnormal bleeding as a danger

sign was reported by four out of ten women. Almost thirty percent women reported that obstructed labour, excruciating pain and retained placenta were also serious complications requiring urgent attention.

Compared with danger signs during pregnancy, danger signs during delivery are more commonly known both in the intervention and in the comparison areas. The most known danger sign during pregnancy was prolonged labour, which was reported by three-fourths women (Figure 3.7). Table 3.11 shows that nine out ten women knew at least one danger sign during delivery. More women were aware of three danger signs in both the intervention (40 percent) and the comparison areas (36 percent). The knowledge of four and above danger signs was however, limited to only one in ten women in the intervention and the comparison areas. Knowledge of four or more danger signs during pregnancy was higher (12.1 and 12.5 percent respectively) among younger and older women compared to women aged 25-34; among high parity, educated and economically well off women compared with women having low or no education and women of lesser means.



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Table 3.11: Percent Distribution of Mothers with 0-23 months of children who know danger signs during child birth/delivery by Background characteristics

Background characteristics		Intervention						Comparison						All areas					
		No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother
Age of mother	< 25	7.7	30.9	35.7	13.5	12.1	207	12.4	23.3	34.8	18.1	11.4	210	10.1	27.1	35.3	15.8	11.8	417
	25-34	9.5	23.5	41.5	17.0	8.5	306	5.8	30.4	36.8	18.1	8.9	326	7.6	27.1	39.1	17.6	8.7	632
	35 +	7.6	21.5	44.4	13.9	12.5	144	8.1	22.6	37.1	21.0	11.3	124	7.8	22.0	41.0	17.2	11.9	268
Birth Order	1	8.1	28.2	39.6	14.8	9.4	149	10.4	24.3	38.9	16.0	10.4	144	9.2	26.3	39.2	15.4	9.9	293
	2 - 3	9.6	23.5	40.9	17.8	8.3	230	8.2	25.8	38.6	18.7	8.6	267	8.9	24.7	39.6	18.3	8.5	497
	4 - 5	7.0	28.5	41.9	12.2	10.5	172	6.3	30.6	28.5	24.3	10.4	144	6.6	29.4	35.8	17.7	10.4	316
	6 +	9.4	20.8	37.7	15.1	17.0	106	8.6	26.7	37.1	14.3	13.3	105	9.0	23.7	37.4	14.7	15.2	211
Level of education	None	9.6	27.5	39.7	12.9	10.3	448	7.8	29.4	38.7	15.8	8.3	385	8.8	28.3	39.3	14.3	9.4	833
	Upto Primary	9.3	25.9	42.6	14.8	7.4	54	10.5	22.8	29.8	17.5	19.3	57	9.9	24.3	36.0	16.2	13.5	111
	Middle	7.0	30.2	37.2	18.6	7.0	43	10.9	30.9	29.1	20.0	9.1	55	9.2	30.6	32.7	19.4	8.2	98
	Upto Secondary	4.7	17.2	43.8	23.4	10.9	64	5.8	23.3	39.5	20.9	10.5	86	5.3	20.7	41.3	22.0	10.7	150
	Secondary +	4.2	12.5	41.7	22.9	18.8	48	10.4	16.9	29.9	29.9	13.0	77	8.0	15.2	34.4	27.2	15.2	125
Wealth quintiles	Poorest	12.3	27.4	44.5	9.6	6.2	146	4.8	34.3	33.3	20.0	7.6	105	9.2	30.3	39.8	13.9	6.8	251
	Second	10.9	27.0	48.2	6.6	7.3	137	10.7	28.1	33.9	20.7	6.6	121	10.9	27.5	41.5	13.2	7.0	258
	Middle	6.9	28.5	35.4	18.8	10.4	144	8.0	19.2	37.6	20.8	14.4	125	7.4	24.2	36.4	19.7	12.3	269
	Fourth	5.8	24.8	35.5	20.7	13.2	121	8.9	33.6	30.1	14.4	13.0	146	7.5	29.6	32.6	17.2	13.1	267
	Richest	5.5	17.4	36.7	22.9	17.4	109	8.6	20.2	44.2	18.4	8.6	163	7.4	19.1	41.2	20.2	12.1	272
Total		8.5	25.4	40.3	15.2	10.5	657	8.3	26.7	36.2	18.6	10.2	660	8.4	26.0	38.3	16.9	10.3	1317

Danger signs Index include: Prolonged labor, Bleeding before labor began, Retained placenta, and Excessively abnormal postpartum bleeding on day of delivery/abortion.

3.10 Postnatal care

The health of mother and her newborn child depends not only on the health care she receives during her pregnancy and delivery, but also on the care she and the infant receive during the post-partum period. Checkups within two days after the delivery are particularly important for births that take place at home.

Table 3.12 shows the percentage of women who received any postnatal care and those who received postnatal care from a health professional (including doctor, nurse/LHV or a midwife) by type of area. The table indicates that postnatal care is less common compared with antenatal care seen earlier in the chapter. Only one in four women reported that she went for any postnatal checkups. The proportion of younger women seeking postnatal check up was slightly higher compared with middle age women. However, it was higher by 7 percentage points from women older than 35 years. Also, women who had some education, and were economically better were seeking postnatal care more often than those who had no schooling or were poor. Overall, postnatal care seeking behavior was about similar in both the intervention and comparison areas. Women who reported to have acquired any postnatal care were also asked about the source from which they received such care. However, seeking postnatal care from a health professional is considerably low in both the areas as only 17 percent women get postnatal checkups from a doctor, nurse/LHV or a midwife (Table 3.12).

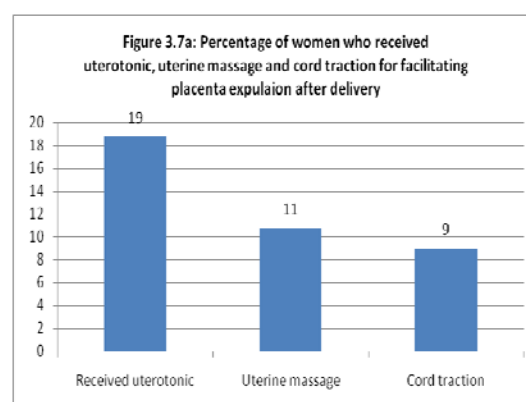
Table 3.12: Percentage of women who received postnatal care by area and background characteristics

Background characteristics		Intervention		Comparison		All areas		Number of mothers
		Received postnatal care	Received postnatal care from health professional *	Received postnatal care	Received postnatal care from health professional *	Received postnatal care	Received postnatal care from health professional *	
Age of mother	< 25	29.0	19.0	27.2	17.9	28.1	18.5	417
	25-34	27.6	17.4	26.7	17.6	27.1	17.5	632
	35 +	21.7	12.9	25.7	15.4	23.6	14.1	268
Birth Order	1	26.3	18.4	27.2	18.3	26.8	18.4	293
	2 - 3	27.6	16.5	28.8	20.0	28.2	18.4	497
	4 - 5	29.3	19.7	25.1	12.9	27.4	16.6	316
	6 +	21.4	11.2	22.5	15.1	22.0	13.1	211
Level of education	None	22.6	12.5	22.9	13.7	22.7	13.1	833
	Upto Primary	38.3	29.2	34.7	24.4	36.4	26.7	111
	Middle	31.6	20.2	21.6	12.7	26.0	16.0	98
	Upto Secondary	35.7	21.9	38.5	30.5	37.3	26.8	150
	Secondary +	36.7	34.7	30.0	18.5	32.6	24.7	125
Wealth quintiles	Poorest	24.8	13.4	18.8	15.1	22.3	14.1	251
	Second	20.6	11.3	23.1	16.6	21.8	13.8	258
	Middle	29.2	19.7	27.9	14.5	28.6	17.3	269
	Fourth	27.1	16.6	33.5	21.5	30.6	19.3	267
	Richest	33.5	25.4	27.3	17.6	29.7	20.7	272
Total		26.8	16.9	26.6	17.3	26.7	17.1	1317

* Health professional include doctor, nurse/LHV or midwife

Women in all sampled areas who went for postpartum checkups, majority (39 percent) went to nurses or LHVs. In addition, 23 percent sought postnatal care from doctors or midwives. However, TBAs are also popular as 28 percent of women visited them for checkups in the postpartum period (Table 3.13).

Retention of placenta after birth is a sign of danger which leads to complications and may also be fatal if not treated in time. Administration of uterotonic and uterine massage are important for expulsion of placenta. Overall, one in five women (19 percent) received uterotonic, 11 percent had uterine massage and 9 percent cord contraction to facilitate expulsion of placenta at delivery of their youngest child (Figure 3.7a).



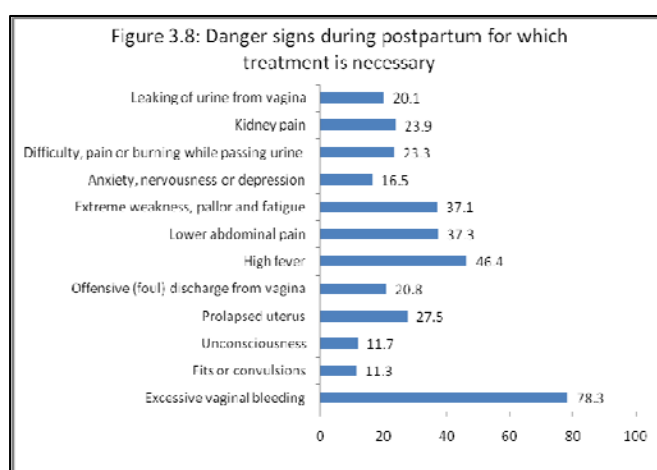
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Table 3.13: Percent distribution of mothers of 0-23 months children who received postnatal care by type care provider

Background characteristics		Person whom sought in the Postnatal							Total	Received Postnatal care from Health professional	All areas
		Doctor	Midwife	Nurse, LHV	DAI/TBA	Lady health worker	FWW	Other			
Age of mother	< 25	14.4	8.1	40.5	27.9	7.2	.9	.9	100.0	18.5	417
	25-34	13.8	13.8	35.0	26.9	8.8	1.9	--	100.0	17.5	632
	35 +	6.8	3.4	45.8	28.8	13.6	1.7	--	100.0	14.1	268
Birth Order	1	18.9	9.5	37.8	25.7	4.1	2.7	1.4	100.0	18.4	293
	2 - 3	13.0	9.9	40.5	25.2	9.9	1.5	--	100.0	18.4	497
	4 - 5	8.5	8.5	40.2	34.1	8.5	--	--	100.0	16.6	316
	6 +	9.3	14.0	32.6	25.6	16.3	2.3	--	100.0	13.1	211
Level of education	None	9.8	8.6	35.6	32.2	10.9	2.9	--	100.0	13.1	833
	Upto Primary	17.9	10.3	43.6	15.4	12.8	--	--	100.0	26.7	111
	Middle	12.5	16.7	29.2	29.2	12.5	--	--	100.0	16.0	98
	Upto Secondary	14.8	13.0	42.6	25.9	3.7	--	--	100.0	26.8	150
	Secondary +	17.9	7.7	48.7	20.5	2.6	--	2.6	100.0	24.7	125
Wealth quintiles	Poorest	13.5	13.5	32.7	26.9	13.5	--	--	100.0	14.1	251
	Second	9.8	13.7	37.3	25.5	11.8	2.0	--	100.0	13.8	258
	Middle	4.1	8.2	45.2	34.2	6.8	1.4	--	100.0	17.3	269
	Fourth	14.1	9.0	37.2	28.2	10.3	1.3	--	100.0	19.3	267
	Richest	21.1	7.9	39.5	22.4	5.3	2.6	1.3	100.0	20.7	272
Total		12.7	10.0	38.8	27.6	9.1	1.5	.3	100.0	17.1	1317

3.11 Knowledge of danger signs during postpartum

Women were asked whether they knew about danger signs during the postpartum period for which it is necessary to seek medical advice and or treatment. Both spontaneous and prompted information regarding complications like: excessive bleeding; fits or convulsions; unconsciousness; prolapsed uterus; offensive discharge;



high fever; lower abdominal pain; extreme weakness, pallor and fatigue; anxiety, nervousness

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or depression; difficulty, pain or burning while passing urine; kidney pain and conditions of fistula, was collected.

The Pakistan Demographic and Health Survey 2006-07 attributed 85 percent maternal deaths at national level to direct causes and 13 percent to indirect maternal causes. The survey identifies that postpartum hemorrhage is the leading cause of maternal deaths followed by puerperal sepsis and eclampsia. Obstetric bleeding (postpartum and ante-partum hemorrhage) is responsible for one-third of all maternal deaths. The availability and quality of emergency obstetric care appears to be a matter of great concern in Pakistan. The PDHS also indicates that nearly three-fourths of maternal deaths occurred during delivery and the postpartum period. The study recommends that high quality care during these periods- is crucial to prevent and manage postpartum hemorrhage and to prevent deaths.

Figure 3.8 show that three-fourths women in Chitral district were aware that excessive vaginal bleeding in the postpartum period is a complication which requires to be treated urgently to avoid serious consequences. Women also knew that high fever which is indicative of infection is dangerous. However, they still need to be made aware of the consequences of leaking urine, anemia, burning of urine, and other complications that may follow if deliveries are not attended by skilled health professionals and postpartum treatment is not provided in case of emergencies.

Table 3.14 shows data on knowledge about danger signs during postpartum period. About one in ten women had no knowledge about any sign of danger during pregnancy in both the intervention and the comparison area. Majority of the women in the intervention (39 percent) and in the comparison areas (37 percent) knew about two danger signs during postpartum period, for which medical advice is necessary. About 22 percent in the intervention and a quarter of the women (25 percent) in the comparison area had knowledge about three danger signs. However, 1 in 15 women in the comparison and 1 in 18 women in the intervention area had knowledge about four or more danger signs. No specific pattern has emerged regarding knowledge about danger signs by age, parity, education or economic well being of the Chitrali women.

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Table 3.14: Percentage distribution of mothers with 0-23 months of children by knowledge of danger signs during postpartum according to background characteristics

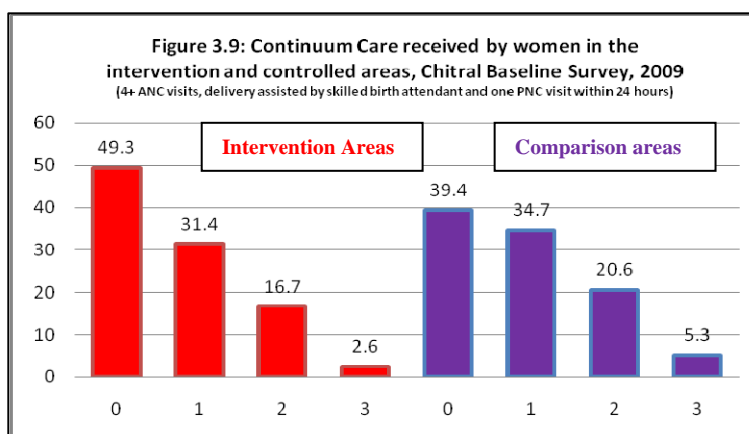
Background characteristics		Intervention						Comparison						All areas					
		No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother
Age of mother	< 25	7.7	30.9	35.7	13.5	12.1	207	12.4	23.3	34.8	18.1	11.4	210	10.1	27.1	35.3	15.8	11.8	417
	25-34	9.5	23.5	41.5	17.0	8.5	306	5.8	30.4	36.8	18.1	8.9	326	7.6	27.1	39.1	17.6	8.7	632
	35 +	7.6	21.5	44.4	13.9	12.5	144	8.1	22.6	37.1	21.0	11.3	124	7.8	22.0	41.0	17.2	11.9	268
Birth Order	1	8.1	28.2	39.6	14.8	9.4	149	10.4	24.3	38.9	16.0	10.4	144	9.2	26.3	39.2	15.4	9.9	293
	2 - 3	9.6	23.5	40.9	17.8	8.3	230	8.2	25.8	38.6	18.7	8.6	267	8.9	24.7	39.6	18.3	8.5	497
	4 - 5	7.0	28.5	41.9	12.2	10.5	172	6.3	30.6	28.5	24.3	10.4	144	6.6	29.4	35.8	17.7	10.4	316
	6 +	9.4	20.8	37.7	15.1	17.0	106	8.6	26.7	37.1	14.3	13.3	105	9.0	23.7	37.4	14.7	15.2	211
Level of education	None	9.6	27.5	39.7	12.9	10.3	448	7.8	29.4	38.7	15.8	8.3	385	8.8	28.3	39.3	14.3	9.4	833
	Upto Primary	9.3	25.9	42.6	14.8	7.4	54	10.5	22.8	29.8	17.5	19.3	57	9.9	24.3	36.0	16.2	13.5	111
	Middle	7.0	30.2	37.2	18.6	7.0	43	10.9	30.9	29.1	20.0	9.1	55	9.2	30.6	32.7	19.4	8.2	98
	Upto Secondary	4.7	17.2	43.8	23.4	10.9	64	5.8	23.3	39.5	20.9	10.5	86	5.3	20.7	41.3	22.0	10.7	150
	Secondary +	4.2	12.5	41.7	22.9	18.8	48	10.4	16.9	29.9	29.9	13.0	77	8.0	15.2	34.4	27.2	15.2	125
Wealth quintiles	Poorest	12.3	27.4	44.5	9.6	6.2	146	4.8	34.3	33.3	20.0	7.6	105	9.2	30.3	39.8	13.9	6.8	251
	Second	10.9	27.0	48.2	6.6	7.3	137	10.7	28.1	33.9	20.7	6.6	121	10.9	27.5	41.5	13.2	7.0	258
	Middle	6.9	28.5	35.4	18.8	10.4	144	8.0	19.2	37.6	20.8	14.4	125	7.4	24.2	36.4	19.7	12.3	269
	Fourth	5.8	24.8	35.5	20.7	13.2	121	8.9	33.6	30.1	14.4	13.0	146	7.5	29.6	32.6	17.2	13.1	267
	Richest	5.5	17.4	36.7	22.9	17.4	109	8.6	20.2	44.2	18.4	8.6	163	7.4	19.1	41.2	20.2	12.1	272
Total		8.5	25.4	40.3	15.2	10.5	657	8.3	26.7	36.2	18.6	10.2	660	8.4	26.0	38.3	16.9	10.3	1317

Danger signs Index include: Excessive vaginal bleeding, Fits or convulsions, Offensive (foul) discharge from vagina, High fever with or without rigors, and lower abdominal pain.

3.12 Continuum care

The State of the World's Children 2009 outlines 'the essential services required to support a continuum of maternal and neonatal care, including enhanced nutrition; safe water, sanitation and hygiene facilities and practices; disease prevention and treatment; quality reproductive health services; adequate antenatal care; skilled assistance at delivery; basic and comprehensive emergency obstetric and newborn care; postnatal care; neonatal care; and Integrated Management of Neonatal and Childhood Illness' (UNICEF, 2009). The CCSP seeks to improve the health of mothers and children in secluded areas of the district where levels of poverty and female illiteracy are high; cultural practices favor childbirth at home; women's mobility outside of the home is limited, and access to health facilities is hampered because of sheer distances and harsh climates, especially in winter. The project is expected to improve the continuum of care both for mothers and children by the interventions it envisages during the coming years.

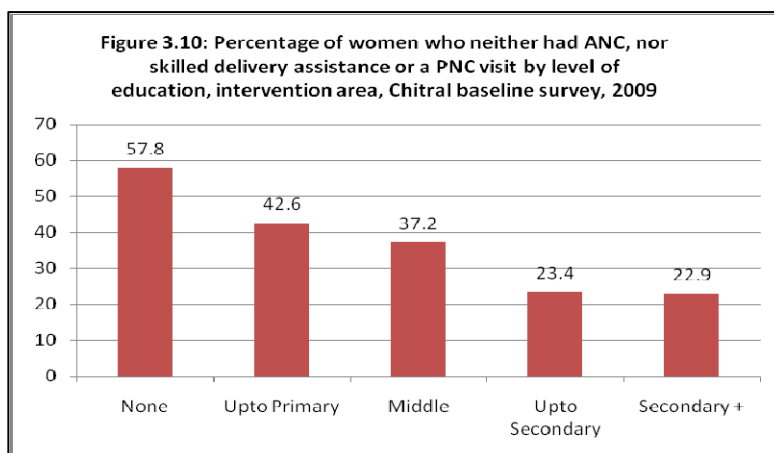
The baseline survey conducted as part of the project has collected reproductive health information some of which has been discussed in the preceding paragraphs. Based on the available information, a Continuum Care Index has been developed and presented



in Table 3.15. The Index ranges from 0 through 3. The 0 means that the woman has neither visited a health professional nor sought assistance of a health professional during child birth and has also not visited a health professional for postnatal care within 48 hours of the delivery. The score 1 means that she has either visited a health professional for antenatal care or has delivered with the assistance of a health professional or has visited a health professional within 48 hours after delivery. Those with score 2 have availed any two of the three services and the score 3 means that the woman had at least 4 antenatal visits, she had delivered at a hospital or has sought assistance of a health professional for delivery and also had visited a health professional within 48 hours of the delivery. The table shows that women who visited a health professional at least 4 times during pregnancy, who was also assisted by a health professional during child birth and also visited a doctor or a nurse/ LHV or a

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midwife within 48 hours after delivery were hardly 4 percent in the total sample. However, the proportion of women who availed none of the three services was 44 percent in the total sampled areas, almost half (49 percent) in the intervention areas and about four in ten (39 percent) in the comparison



areas. An overall comparison in the intervention and comparison areas is also visible in Figure 3.9. The situation in the intervention area is relatively more precarious compared with the comparison areas. In the intervention areas less than three percent has scored 3 on the continuum care scale compared to 5 percent in the comparison areas. Women who are older, with higher parity, with no schooling and wealth are the ones who have a '0' score on the continuum scale identifying as the group which needs to be focused during the interventions of the project. Lack of education seems to be a major hurdle in availing reproductive health services during pregnancy, delivery and in the postnatal period (Figure 3.10).

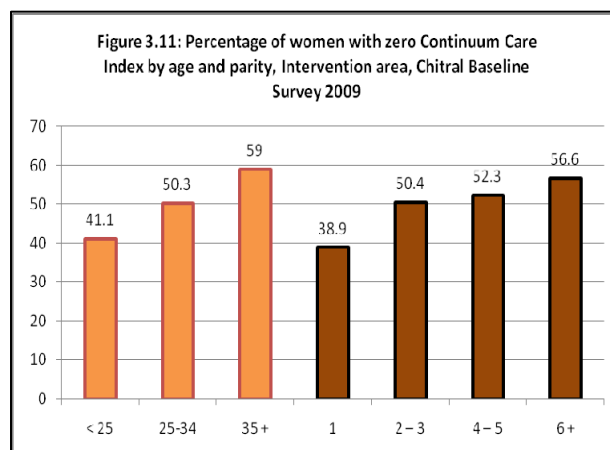
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Table 3.15: Percent Distribution of Mothers with 0-23 months of children by Continuum of Care according to background characteristics

Background characteristics		Intervention					Comparison					Total				
		0	1	2	3	# Mother	0	1	2	3	# Mother	0	1	2	3	# Mother
Age of mother	< 25	41.1	35.3	21.3	2.4	207	34.3	37.1	24.8	3.8	210	37.6	36.2	23.0	3.1	417
	25-34	50.3	30.1	16.3	3.3	306	40.2	32.5	19.9	7.4	326	45.1	31.3	18.2	5.4	632
	35 +	59.0	28.5	11.1	1.4	144	46.0	36.3	15.3	2.4	124	53.0	32.1	13.1	1.9	268
Birth Order	1	38.9	37.6	22.1	1.3	149	33.3	35.4	25.7	5.6	144	36.2	36.5	23.9	3.4	293
	2 – 3	50.4	30.4	15.2	3.9	230	41.2	32.6	20.6	5.6	267	45.5	31.6	18.1	4.8	497
	4 – 5	52.3	28.5	16.3	2.9	172	43.1	32.6	18.1	6.3	144	48.1	30.4	17.1	4.4	316
	6 +	56.6	29.2	13.2	.9	106	38.1	41.9	17.1	2.9	105	47.4	35.5	15.2	1.9	211
Level of education	None	57.8	28.8	11.6	1.8	448	49.6	31.2	15.6	3.6	385	54.0	29.9	13.4	2.6	833
	Upto Primary	42.6	33.3	16.7	7.4	54	31.6	38.6	19.3	10.5	57	36.9	36.0	18.0	9.0	111
	Middle	37.2	37.2	23.3	2.3	43	34.5	38.2	23.6	3.6	55	35.7	37.8	23.5	3.1	98
	Upto Secondary	23.4	43.8	29.7	3.1	64	23.3	41.9	24.4	10.5	86	23.3	42.7	26.7	7.3	150
	Secondary +	22.9	31.3	41.7	4.2	48	15.6	39.0	40.3	5.2	77	18.4	36.0	40.8	4.8	125
Wealth quintiles	Poorest	61.6	28.1	7.5	2.7	146	55.2	25.7	15.2	3.8	105	59.0	27.1	10.8	3.2	251
	Second	63.5	22.6	10.2	3.6	137	53.7	28.9	13.2	4.1	121	58.9	25.6	11.6	3.9	258
	Middle	51.4	32.6	13.2	2.8	144	36.8	38.4	18.4	6.4	125	44.6	35.3	15.6	4.5	269
	Fourth	40.5	34.7	23.1	1.7	121	26.0	38.4	28.8	6.8	146	32.6	36.7	26.2	4.5	267
	Richest	22.0	41.3	34.9	1.8	109	32.5	38.7	23.9	4.9	163	28.3	39.7	28.3	3.7	272
Total		49.3	31.4	16.7	2.6	657	39.4	34.7	20.6	5.3	660	44.3	33.0	18.7	3.9	1317
Continuum Care Index (Range from 0 – 3) defined as Women with at least <u>Four ANC visit</u> , <u>Skilled Attendance</u> (Doctor, Midwife, Nurse/LHV) at birth and <u>at least one Postpartum visit within 48-hours</u> of birth during her last pregnancy																

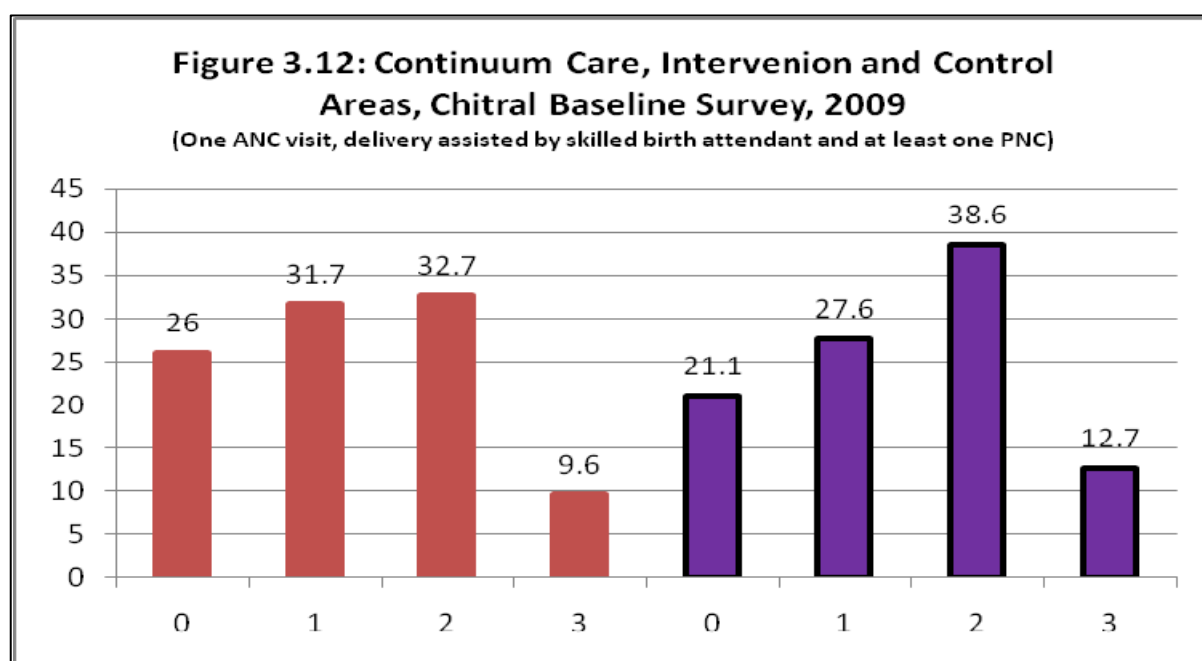
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More attention is also required to motivate and facilitate older women and those with higher parity to use reproductive health facilities during pregnancy and postpartum (Figure 3.11). Women who are in the age group 25-34 years, half of them, had not visited a health professional the recommended four times during their last pregnancy; were not attended by a health



professional during their last birth and they also did not visit a health professional for check up within 48 hours of their last delivery. Similarly, six out of ten women (57 percent) with 6 or more children, also fall in the same category as they also did not visit the health professional the required number of times during pregnancy, neither did they seek assistance of a health professional during pregnancy nor did they visit a health professional within 24 hours of their child birth.

The baseline survey also shows that a quarter of women (26 percent) in the intervention area had not visited a health professional even a single time during their last pregnancy and neither was their last birth attended by a health professional nor did they visit a health professional any time during their postpartum (Figure 3.12). The proportion of such women was slightly lower in the comparison areas (21 percent).



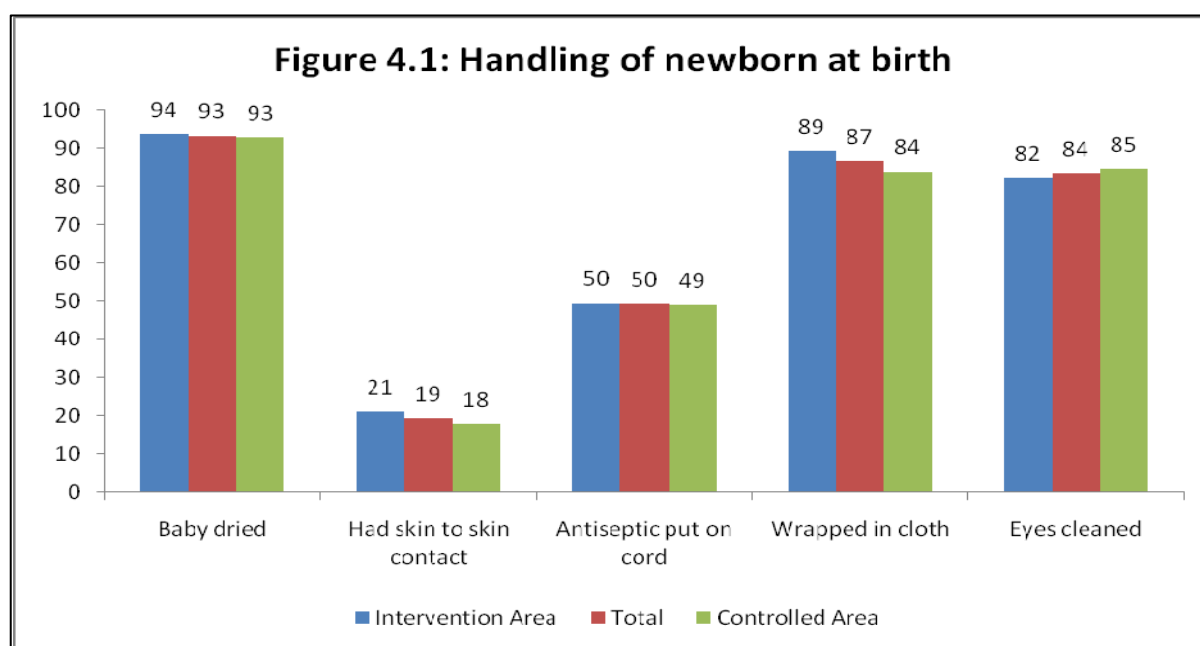
Chapter 4

CHILD HEALTH AND NUTRITION

This chapter examines information on the health status of living children less than two years of age. The analysis is based on the responses of mothers regarding birth weights, recorded and reported immunization status, prevalence of common childhood illnesses like diarrhea, acute respiratory infection and fever. In addition, data on breastfeeding, complimentary feeding and use of feeding bottles, intake of vitamin A and iron supplements are also provided.

4.1 Initial handling of the child

Mishandling of newborns at birth often lead to dangerous consequences and some of them could even be fatal. In the Chitral baseline survey, mothers were asked what they did with the child immediately after birth: whether the child was dried; put on the breast of mother to have skin to skin contact; was antiseptic put on the cord; were eyes cleaned and the baby wrapped in cloth? Answers to these questions are given in Figure 4.1. The results show that not all but a big majority of children (93 percent) were dried after birth; 86 percent were wrapped in cloth; and the eyes of 83 percent newborns were cleaned. However, only around half (49 percent) of the babies were put antiseptic on their cords and only one out of five babies (19 percent) had a skin contact with their mother after birth. No striking differentials



were found between intervention and comparison areas except that ‘wrapping the baby in cloth’ was five percentage points higher in the intervention compared with the comparison areas.

4.2 Birth weight

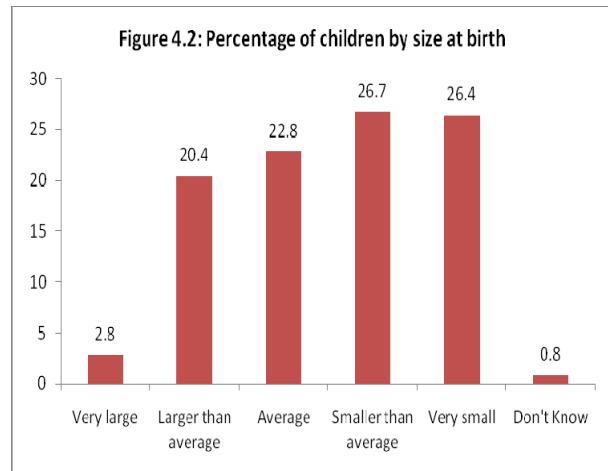
Birth weight has long been used as an important health indicator of children. Children with low birth weight are more susceptible to infant and childhood diseases and thus have a high incidence of mortality. As mentioned in the previous chapter, majority of women in Chitral deliver at home in an unhealthy environment. Besides, birth weight is also not available for children who were not born in health facilities. At the national level, only one in ten women could report on the birth weight of their young children less than 5 years of age (NIPS, 2008). The condition hardly improved by 2 percentage points since the first PDHS conducted in 1990-91. In the Chitral baseline survey, like the PDHS, women were also asked about the size of the child at birth; responses were categorized as ‘very small,’ ‘smaller than average’, and ‘average’ or ‘larger’.

Table 4.1 shows differentials in reporting the birth weight and size of child at birth by type of area, age of mother, parity, education of mother and wealth status. Overall, only 21 percent women could report on the weight of child at birth. Those who reported on birth weight, nearly 44 percent said that the child was less than 2.5 kilogram which is considered to be underweight. Significant differentials exist in reporting the birth weight by mother’s background characteristics. It shows that 40 percent of mothers with above secondary education reported birth weight, compared with 15 percent of women with no education. Similarly, the wealthier women were nearly three times (31 percent) more likely to report the birth weight of a child compared with poor women (11 percent). Younger women and those with parity 1 were also more likely to report the birth weight of the child compared with older or women with 6 or more children.

The proportion of underweight children at the aggregate level who were reported to be very small or smaller than average is 53 percent (Figure 4.2) which is much higher than the national (31 percent) or the NWFP average (33 percent) as reported in the 2006-07 PDHS. The low birth weight is also associated with age of the mother and birth order. Though the differentials are not larger, the analysis show that a higher proportion of very small and smaller than average babies are born to mothers younger than 25 years and those older than 35 years than to mothers aged 25-34 years. First birth and births of six and higher birth order

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are also reported to have higher proportions with low birth weights compared with second to fifth births. Mother's education and wealth quintile are also associated with low birth weight babies. Table 4.1 shows that 34 percent babies born to poorest mothers were 'very small' compared with 26 percent born to the richest mothers. Overall, 63 percent babies born to poorest women were either very small or smaller than average which can be categorized as low birth weight babies.



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Table 4.1: Percent distribution of living children 0-23 months with reported birth weight. Percent distribution of all births 0-23 months by size of child at birth according to background characteristics.

Background characteristics		Percent distribution of births with a reported birth weights		Total	Number of births	Percentage of all births with a reported birth weight	Percent distribution of all live births by size of child at birth						Number
		Less than 2.5 kg	2.5 kg or more				Very Large	Large than average	Average	Smaller than average	Very Small	DK	
Age of mother	< 25	42.9	57.1	100.0	28	28.9	3.2	22.1	38.9	10.5	24.2	1.1	97
	25-34	50.0	50.0	100.0	32	25.0	4.8	18.4	39.2	12.8	20.0	4.8	128
	35 +	28.6	71.4	100.0	14	21.1		17.9	42.9	16.1	19.6	3.6	57
Birth Order	1	45.0	55.0	100.0	20	28.6	2.9	17.4	43.5	10.1	24.6	1.4	70
	2 - 3	44.0	56.0	100.0	25	25.0	5.2	28.9	34.0	8.2	20.6	3.1	100
	4 - 5	43.8	56.3	100.0	16	21.2	3.1	14.1	43.8	15.6	17.2	6.3	66
	6 +	38.5	61.5	100.0	13	28.3		10.9	41.3	21.7	23.9	2.2	46
Level of education	None	37.8	62.2	100.0	37	19.3	3.4	17.7	40.0	14.9	21.7	2.3	181
	Upto Primary	71.4	28.6	100.0	7	38.9	--	5.6	50.0	16.7	27.8	--	18
	Middle	42.9	57.1	100.0	7	41.2	--	17.6	52.9	5.9	11.8	11.8	17
	Upto Secondary	46.2	53.8	100.0	13	33.3	--	30.8	38.5	5.1	20.5	5.1	39
	Secondary +	40.0	60.0	100.0	10	37.0	11.1	25.9	25.9	11.1	22.2	3.7	27
Wealth quintiles	Poorest	55.6	44.4	100.0	9	14.1	1.6	12.7	34.9	14.3	34.9	1.6	64
	Second	33.3	66.7	100.0	12	23.4	4.4	13.3	53.3	15.6	13.3	--	47
	Middle	30.8	69.2	100.0	13	27.7	2.1	23.4	46.8	14.9	12.8	--	47
	Fourth	55.6	44.4	100.0	18	24.3	3.0	25.4	34.3	11.9	19.4	6.0	70
	Richest	40.9	59.1	100.0	22	40.7	5.6	22.2	35.2	7.4	22.2	7.4	54
Total		43.2	56.8	100.0	74	25.5	3.3	19.6	39.9	12.7	21.4	3.3	282

4.3 Child immunization

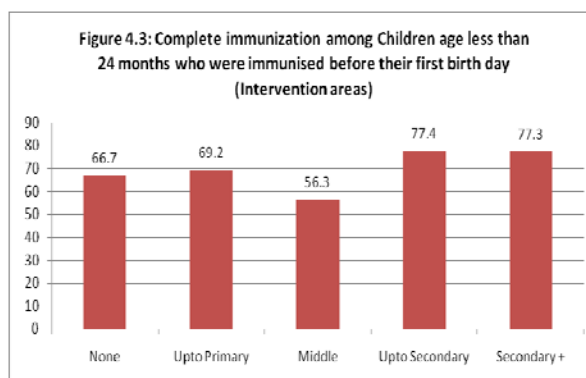
The Pakistan Expanded Programme on Immunization (EPI) follows the international guidelines recommended by the World Health Organization. According to these guidelines all children receive a BCG vaccination against tuberculosis; three doses of DPT vaccine for the prevention of diphtheria, pertussis (whooping cough) and tetanus; three doses of polio vaccine; and a vaccination against measles during the first year of the child's life. These vaccinations are recorded on a health card provided for each child. In addition, the EPI programme also recommends three doses of hepatitis vaccine. In addition to regular vaccines, polio vaccines are also given as part of the polio eradication programme started in 1994.

The Chitral baseline survey adopted the PDHS-2006-07 modules for child immunization and health. Mothers were asked to show the immunization cards for the children less than two years of age. If the vaccination card was available with the mother, the interviewers copied the dates of vaccinations from the card. If a child never received a vaccination card or the card was not readily available with the mother, the mother was asked to recall whether the child had received the required doses of BCG, DPT, polio and measles vaccinations.

4.4 Vaccination coverage

Table 4.2 shows the percentage of children age 12-23 month who were fully vaccinated before their first birth day. It is encouraging to note that the vaccination coverage in Chitral district is relatively high (73 percent) compared with the national average (39 percent) and provincial (NWFP) average (34 percent). It may be clarified that the provincial average is based on children immunized at any time before the age of 24 months.

Immunization coverage varies substantially across intervention, comparison and all areas included in the sample. The coverage is higher in the comparison areas (79 percent) compared with the intervention areas (68 percent). The coverage is higher among children born to mothers younger than 35 years (75 percent) compared with children born to older mothers (66 percent). Low parity women were also more likely to get their children vaccinated compared with women with higher parity. Though education of women is traditionally playing an important role for child vaccination, women with less or no



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education have also felt the need and have a higher coverage of immunization of their children (71 percent) compared with the PDHS, 2008 national average of children born to more educated women (32 percent). In the intervention areas, two-thirds (67 percent) children of the uneducated women were also fully immunized (Figure 4.3).

Though immunization coverage is better in the comparison areas (79 percent) compared with the intervention areas (68 percent), the overall pattern remains the same. Younger, low parity, educated and richer women are more likely to get their children vaccinated compared with their counterpart who are older, higher parity, uneducated and poor.

Table 4.2: Percentage of children age 12-23 months who were fully vaccinated (before the first birth day)

Background characteristics		Intervention		Comparison		All areas	
		Percentage of children fully vaccinated		Percentage of children fully vaccinated		Percentage of children fully vaccinated	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	70.5	95	81.9	83	75.8	178
	25-34	72.7	150	78.3	143	75.4	293
	35 +	56.0	75	76.9	65	65.7	140
Birth Order	1	68.9	74	90.7	54	78.1	128
	2 - 3	68.6	118	77.0	126	73.0	244
	4 - 5	75.3	73	69.8	63	72.8	136
	6 +	56.4	55	83.3	48	68.9	103
Level of education	None	66.7	225	77.2	167	71.2	392
	Upto Primary	69.2	26	77.8	27	73.6	53
	Middle	56.3	16	72.0	25	65.9	41
	Upto Secondary	77.4	31	92.5	40	85.9	71
	Secondary +	77.3	22	78.1	32	77.8	54
Wealth quintiles	Poorest	58.4	77	71.1	45	63.1	122
	Second	63.2	68	73.9	46	67.5	114
	Middle	75.0	72	83.0	53	78.4	125
	Fourth	75.4	57	82.4	68	79.2	125
	Richest	71.7	46	81.0	79	77.6	125
Total		68.1	320	79.0	291	73.3	611

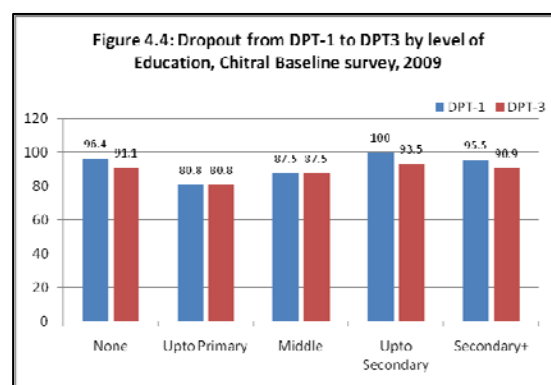
4.5 Dropout in DPT vaccine

Not all children who receive the first dose of a particular vaccine continue to receive the second and third dose (in case of DPT and polio) of it. In the PDHS, 2006-07, the drop out rate was particularly high for DPT and polio vaccines (22 percent for DPT and 11 percent for

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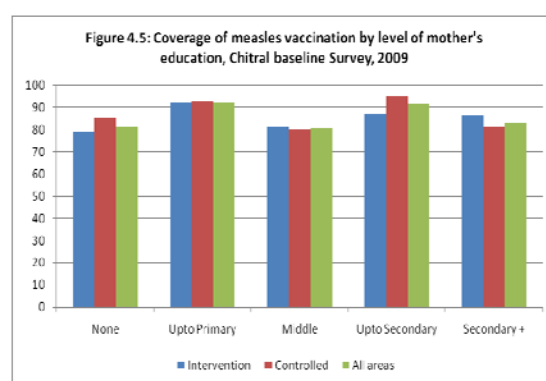
polio). Table 4.3 shows the percentage of children 12-23 months who received DPT-1 and also DPT-3. In the Chitral baseline survey, though not all children completed their vaccinations, the dropout rate was relatively low. For example, the dropout rate was less than 5 percent in the intervention areas, less than 2 percent in the comparison areas and a little over 3 percent in all sample areas. Over all, the lowest dropout rate (1.6 percent) was noted among children of presumably younger mothers with one child and a high of 6.3 percent among children in third wealth quintile. The dropout rate is the difference between proportion of those children who received the first dose of DPT and also received the second and third dose of the DPT vaccine expressed in percentage terms (figures not shown in the table).

Surprisingly, children of the richest women in the intervention areas had over 9 percent dropout. Figure 4.4 shows differentials in dropouts among children by various levels of mother's education. The overall level of DPT coverage appears to be appreciably high especially in an area where access to health facilities has always been a problem.



4.6 Coverage of measles vaccine

Table 4.4 shows the coverage of measles vaccines by various background characteristics in the intervention, comparison and all sample areas. Overall, 84 percent children aged 12-23 months received measles vaccination in the sampled areas. The coverage was higher by a little over 5 percentage points in the comparison areas compared to intervention areas. However, no specific pattern emerges on the basis of background characteristics including education of mother (Figure 4.5). This probably suggests that in Chitral parents are almost equally conscious for the health of their children and immunization is especially considered to be the key for preventing childhood illnesses.



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Table 4.3: Percentage of Children age 12-23 months who received DPT-1 and DPT-3 vaccines

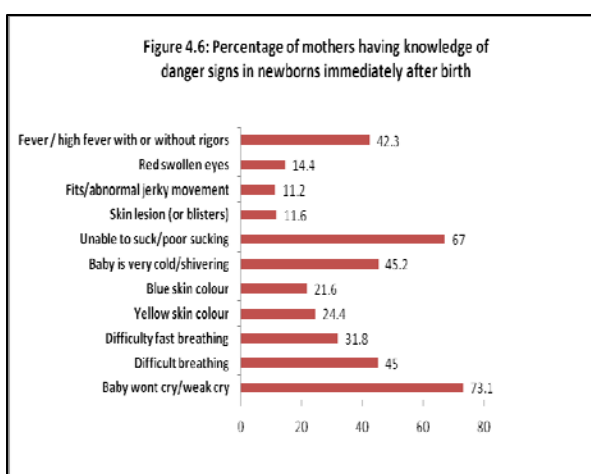
Background characteristics		Intervention areas			Comparison areas			All areas		
		Percentage of children who received a DPT-1 vaccination	Percentage of children who received a DPT-3 vaccination	Number of children	Percentage of children who received a DPT-1 vaccination	Percentage of children who received a DPT-3 vaccination	# of Children	Percentage of children who received a DPT-1 vaccination	Percentage of children who received a DPT-3 vaccination	# of children
Age of mother	< 25	95.8	90.5	95	98.8	97.6	83	97.2	93.8	178
	25-34	97.3	93.3	150	96.5	95.1	143	96.9	94.2	293
	35 +	89.3	84.0	75	93.8	90.8	65	91.4	87.1	140
Birth Order	1	97.3	94.6	74	98.1	98.1	54	97.7	96.1	128
	2 - 3	94.1	89.0	118	96.8	95.2	126	95.5	92.2	244
	4 - 5	97.3	91.8	73	95.2	95.2	63	96.3	93.4	136
	6 +	90.9	85.5	55	95.8	89.6	48	93.2	87.4	103
Level of education	None	96.4	91.1	225	94.6	93.4	167	95.7	92.1	392
	Upto Primary	80.8	80.8	26	100.0	96.3	27	90.6	88.7	53
	Middle	87.5	87.5	16	100.0	92.0	25	95.1	92.2	41
	Upto Secondary	100.0	93.5	31	100.0	100.0	40	100.0	97.2	71
	Secondary+	95.5	90.9	22	96.9	96.9	32	96.3	94.4	54
Wealth quintiles	Poorest	89.6	84.4	77	95.6	93.3	45	91.8	87.7	122
	Second	98.5	97.1	68	91.3	89.1	46	95.6	93.9	114
	Middle	98.6	95.8	72	98.1	94.3	53	98.4	92.2	125
	Fourth	94.7	87.7	57	97.1	97.1	68	96.0	92.8	125
	Richest	93.5	84.8	46	98.7	97.5	79	96.8	92.8	125
Total		95.0	90.3	320	96.6	94.8	291	95.7	92.5	611

Table 4.4: Percentage of Children age 12-23 months who received measles vaccination

Background characteristics		Intervention		Comparison		All areas	
		Percentage of children received a Measles vaccination		Percentage of children received a Measles vaccination		Percentage of children received a Measles vaccination	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	83.2	95	85.5	83	84.3	178
	25-34	84.7	150	86.7	143	85.7	293
	35 +	73.3	75	86.2	65	79.3	140
Birth Order	1	77.0	74	94.4	54	84.4	128
	2 - 3	83.9	118	84.1	126	84.0	244
	4 - 5	89.0	73	77.8	63	83.8	136
	6 +	72.7	55	93.8	48	82.5	103
Level of education	None	79.1	225	85.0	167	81.6	392
	Upto Primary	92.3	26	92.6	27	92.5	53
	Middle	81.3	16	80.0	25	80.5	41
	Upto Secondary	87.1	31	95.0	40	91.5	71
	Secondary +	86.4	22	81.3	32	83.3	54
Wealth quintiles	Poorest	80.5	77	82.2	45	81.1	122
	Second	73.5	68	82.6	46	77.2	114
	Middle	87.5	72	90.6	53	88.8	125
	Fourth	80.7	57	88.2	68	84.8	125
	Richest	87.0	46	86.1	79	86.4	125
Total		81.6	320	86.3	291	83.8	611

4.7 Knowledge of danger signs in neonates

In the Chitral baseline survey, women with less than 2 year children were asked whether they knew about danger signs in newborns for which medical advice or treatment would be necessary. The danger signs in neonates just after birth most of which are birth asphyxia conditions, included: weak or no cry after birth, difficult breathing, difficult fast breathing, yellow skin color, blue skin



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color, baby cold or shivering, unable to suck or poor sucking, skin lesion (blisters), fits/abnormal/jerky movements, red swollen eyes and high fever with or without rigors. Spontaneous replies of the respondents are presented in Table 4.5 and Figure 4.6. Similar question was also asked to know if the women were aware about the danger signs within seven days of birth for which medical advice or treatment was necessary. The danger signs during the first week of birth included: difficult fast breathing, yellow skin color, blue skin color, baby cold or shivering, unable to suck or poor sucking, skin lesion (blisters), fits/abnormal/jerky movements, red swollen eyes, high fever with or without rigors, failure to pass urine, /stool, frequent watery stools/stools with blood or mucus, rigidity and high fever with or without rigors.

Figures 4.6 and Figure 4.7 show spontaneous knowledge of mothers regarding danger signs immediately after birth of a child and within seven days of birth in the total sample areas. The four most known danger signs in neonates immediately after birth of the child are “No or weak cry” (73.1 percent) followed by ‘unable to suck or weak sucking’ (67 percent), ‘baby is cold or shivering’ (45.2 percent) and ‘difficult breathing’ (45 percent). Other important danger signs like blue skin color, yellow skin color, fit and abnormal jerky movements were not considered too dangerous by majority of mothers which could warrant seeking advice or treatment from a health professional.

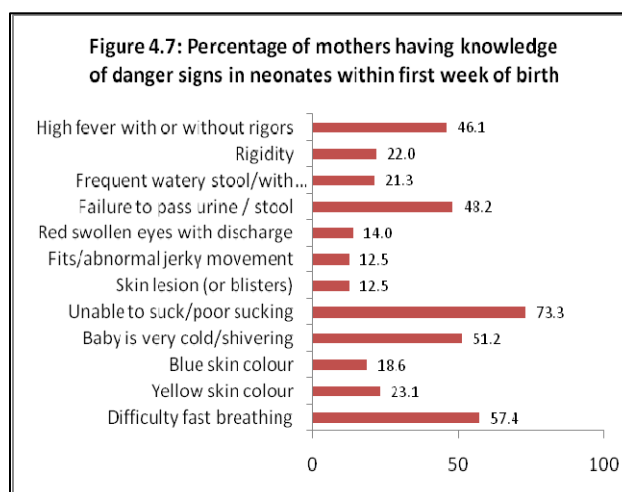
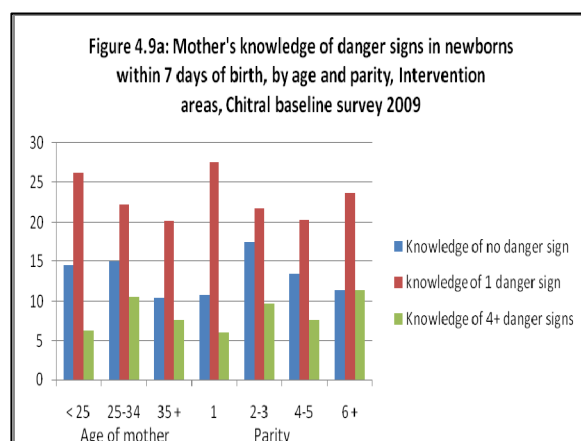
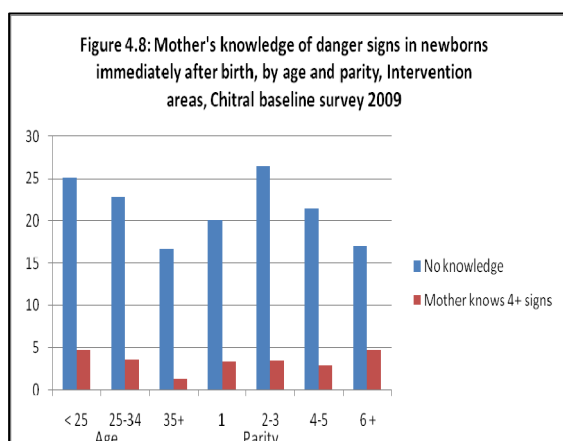


Figure 4.7 shows that during the first week of life after birth, the danger signs identified by



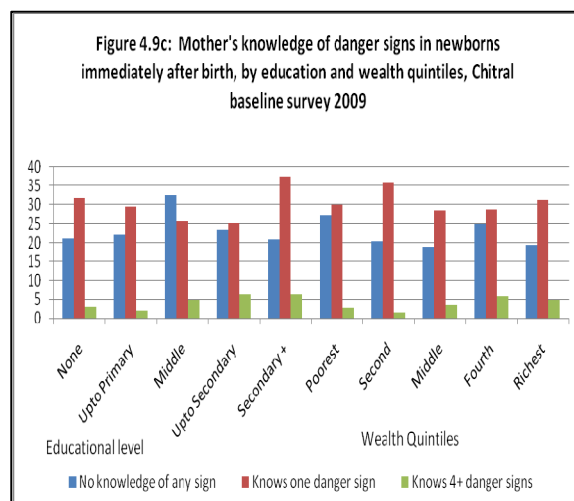
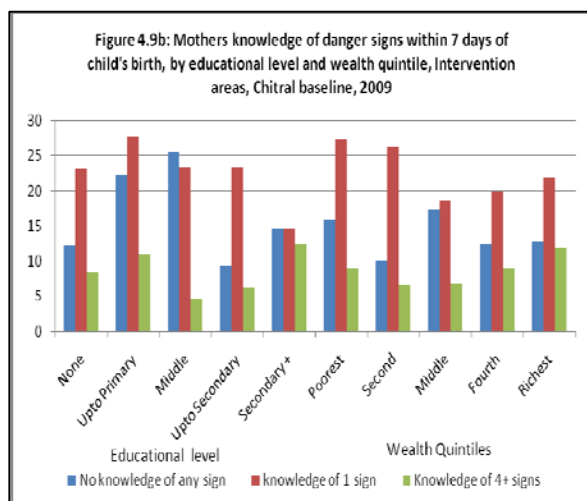
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mothers for which treatment was considered essential are ‘unable to suck or poor sucking’ (73 percent), ‘difficult fast breathing’ (57 percent), ‘baby is cold and shivering’ 51 percent and ‘failure to pass urine or stool’ (48 percent). Other important danger signs like rigidity, frequent watery stool, red swollen eyes with discharge of water, fits and abnormal movements, skin lesion, blue skin and yellow color were not considered dangerous by 80 or higher percentage of mothers.

Table 4.5 shows percent of mothers identifying number of danger signs in newborns immediately after birth. Slightly over one-in-five women (22 percent) in the intervention areas could not identify any danger sign at birth of child which could necessitate immediate referral to a health professional. However, nearly one third (31 percent) identified at least one or two danger signs in newborns which could require medical advice or treatment. The proportion of women who could not identify any sign in the comparison areas was relatively lower in the comparison (16 percent) as well as total sample areas (19 percent). The proportion of mothers who could name 4 or more danger signs was much lower in all areas (3.5 percent in intervention areas, 6.5 percent in comparison areas and 5 percent in all areas). The proportion of mothers in the intervention areas who were not aware of a single danger sign within 7 days of birth of a child (14 percent) was even higher than the one who did not know a danger sign immediately after birth. The position was similar in the comparison as well as all sample areas. The proportion of mothers who could identify 4 or more danger signs was higher (11.4 percent) in the comparison compared with the intervention areas (8.5 percent).

The proportion of such women at the aggregate level was around 10 percent. No specific pattern of knowledge was observed on the basis of background characteristics (Figures 4.8-4.9c).

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Table 4.5: Percent distribution of mothers with 0-23 months of children who know danger signs in newborns soon after birth for which treatment is necessary by Background characteristics

Background characteristics		Intervention						Comparison						All areas					
		No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother
Age of mother	< 25	25.1	30.9	25.6	13.5	4.8	207	21.9	25.2	28.6	15.2	9.0	210	23.5	28.1	27.1	14.4	7.0	417
	25-34	22.9	28.4	33.0	12.1	3.6	306	12.6	30.4	41.1	9.8	6.1	326	17.6	29.4	37.2	10.9	4.9	632
	35 +	16.7	36.1	34.0	11.8	1.4	144	16.1	31.5	33.1	16.1	3.2	124	16.4	34.0	33.6	13.8	2.2	268
Birth Order	1	20.1	36.9	28.9	10.7	3.4	149	15.3	29.9	36.1	13.9	4.9	144	17.7	33.4	32.4	12.3	4.1	293
	2 - 3	26.5	31.3	27.8	10.9	3.5	230	18.4	26.6	36.3	12.0	6.7	267	22.1	28.8	32.4	11.5	5.2	497
	4 - 5	21.5	29.7	28.5	17.4	2.9	172	11.1	31.9	38.2	9.0	9.7	144	16.8	30.7	32.9	13.6	6.0	316
	6 +	17.0	23.6	44.3	10.4	4.7	106	19.0	29.5	29.5	18.1	3.8	105	18.0	26.5	37.0	14.2	4.3	211
Level of education	None	21.2	31.7	30.8	13.4	2.9	448	18.7	30.9	33.2	11.4	5.7	385	20.0	31.3	31.9	12.5	4.2	833
	Upto Primary	22.2	29.6	38.9	7.4	1.9	54	5.3	29.8	42.1	14.0	8.8	57	13.5	29.7	40.5	10.8	5.4	111
	Middle	32.6	25.6	27.9	9.3	4.7	43	20.0	25.5	34.5	14.5	5.5	55	25.5	25.5	31.6	12.2	5.1	98
	Upto Secondary	23.4	25.0	31.3	14.1	6.3	64	10.5	23.3	46.5	12.8	7.0	86	16.0	24.0	40.0	13.3	6.7	150
	Secondary +	20.8	37.5	25.0	10.4	6.3	48	15.6	27.3	31.2	16.9	9.1	77	17.6	31.2	28.8	14.4	8.0	125
Wealth quintiles	Poorest	27.4	30.1	25.3	14.4	2.7	146	19.0	30.5	34.3	7.6	8.6	105	23.9	30.3	29.1	11.6	5.2	251
	Second	20.4	35.8	32.1	10.2	1.5	137	19.0	35.5	30.6	12.4	2.5	121	19.8	35.7	31.4	11.2	1.9	258
	Middle	18.8	28.5	34.7	14.6	3.5	144	12.0	24.8	37.6	17.6	8.0	125	15.6	26.8	36.1	16.0	5.6	269
	Fourth	24.8	28.9	28.1	12.4	5.8	121	16.4	24.0	41.1	13.7	4.8	146	20.2	26.2	35.2	13.1	5.2	267
	Richest	19.3	31.2	34.9	10.1	4.6	109	15.3	30.7	33.7	11.7	8.6	163	16.9	30.9	34.2	11.0	7.0	272
Total		22.2	30.9	30.9	12.5	3.5	657	16.2	28.9	35.6	12.7	6.5	660	19.2	29.9	33.3	12.6	5.0	1317

Danger signs Index include: Difficult breathing, Difficult fast breathing, Blue skin color, Baby is very cold/shivering (hypothermia), and Fits/abnormal/jerky movement.

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Table 4.6: Percent distribution of mothers with 0-23 months of children who know danger signs in newborns within seven days of birth for which treatment is necessary by background characteristics

Background characteristics		Intervention						Comparison						All areas					
		No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother	No sign	1-sign	2-signs	3-signs	4+ signs	# Mother
Age of mother	< 25	14.5	26.1	27.1	26.1	6.3	207	16.7	21.9	28.6	25.7	7.1	210	15.6	24.0	27.8	25.9	6.7	417
	25-34	15.0	22.2	28.8	23.5	10.5	306	12.0	18.7	23.9	29.8	15.6	326	13.4	20.4	26.3	26.7	13.1	632
	35 +	10.4	20.1	30.6	31.3	7.6	144	12.1	19.4	27.4	33.9	7.3	124	11.2	19.8	29.1	32.5	7.5	268
Birth Order	1	10.7	27.5	28.9	26.8	6.0	149	15.3	19.4	28.5	27.8	9.0	144	13.0	23.5	28.7	27.3	7.5	293
	2 - 3	17.4	21.7	27.0	24.3	9.6	230	13.5	19.9	25.5	27.7	13.5	267	15.3	20.7	26.2	26.2	11.7	497
	4 - 5	13.4	20.3	31.4	27.3	7.6	172	11.1	19.4	26.4	29.9	13.2	144	12.3	19.9	29.1	28.5	10.1	316
	6 +	11.3	23.6	27.4	26.4	11.3	106	14.3	21.0	23.8	34.3	6.7	105	12.8	22.3	25.6	30.3	9.0	211
Level of education	None	12.3	23.2	30.8	25.2	8.5	448	13.5	21.3	26.0	28.1	11.2	385	12.8	22.3	28.6	26.5	9.7	833
	Upto Primary	22.2	27.8	18.5	20.4	11.1	54	12.3	22.8	22.8	26.3	15.8	57	17.1	25.2	20.7	23.4	13.5	111
	Middle	25.6	23.3	20.9	25.6	4.7	43	18.2	12.7	27.3	36.4	5.5	55	21.4	17.3	24.5	31.6	5.1	98
	Upto Secondary	9.4	23.4	32.8	28.1	6.3	64	8.1	19.8	26.7	36.0	9.3	86	8.7	21.3	29.3	32.7	8.0	150
	Secondary +	14.6	14.6	20.8	37.5	12.5	48	16.9	15.6	27.3	24.7	15.6	77	16.0	15.2	24.8	29.6	14.4	125
Wealth quintiles	Poorest	15.8	27.4	23.3	24.7	8.9	146	12.4	14.3	27.6	31.4	14.3	105	14.3	21.9	25.1	27.5	11.2	251
	Second	10.2	26.3	30.7	26.3	6.6	137	13.2	28.1	19.8	30.6	8.3	121	11.6	27.1	25.6	28.3	7.4	258
	Middle	17.4	18.8	35.4	21.5	6.9	144	17.6	14.4	27.2	29.6	11.2	125	17.5	16.7	31.6	25.3	8.9	269
	Fourth	12.4	19.8	28.9	29.8	9.1	121	10.3	17.1	32.2	28.8	11.6	146	11.2	18.4	30.7	29.2	10.5	267
	Richest	12.8	22.0	23.9	29.4	11.9	109	14.1	23.9	23.3	27.0	11.7	163	13.6	23.2	23.5	27.9	11.8	272
Total		13.9	23.0	28.6	26.0	8.5	657	13.5	19.8	26.1	29.2	11.4	660	13.7	21.4	27.3	27.6	9.9	1317

Danger signs Index include: Difficult fast breathing, Yellow skin color (Jaundice), Baby is very cold/shivering (hypothermia), Frequent watery stools/stools with blood or mucus rigidly, and High fever with or without rigors.

4.8 Childhood diseases

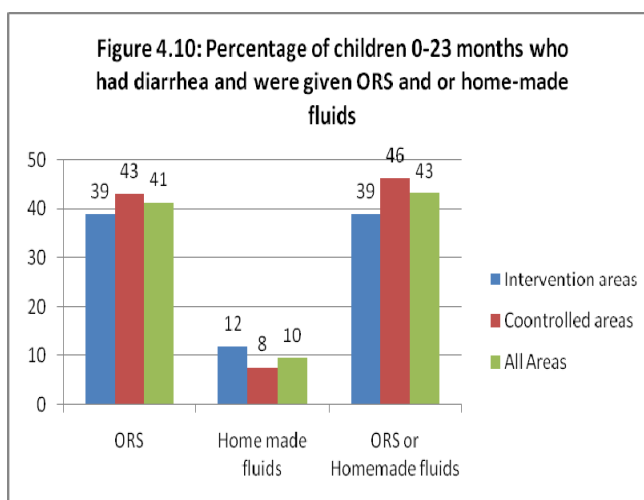
Worldwide, diarrhea, pneumonia and malaria are the major causes of morbidity and mortality of children under five years of age. The proportion of neonatal death is almost one-third of infant deaths and around 57 percent of under-five mortality (NIPS, 1992, 2008). Among those most vulnerable are children with low birth weight or those whose immune systems have been weakened by malnutrition or other diseases.

4.8.1 Prevalence of diarrhea

Dehydration caused by severe diarrhea is a major cause of morbidity among young children and an important cause of infant and child death. In Pakistan, over one-fourth (27 percent) of infant deaths are caused by diarrhea in the post-neonatal period. Overall 11 percent children under five year of age die because of diarrhea (NIPS, 2008).

A simple and effective response to dehydration is a prompt increase of fluids intake by the child through some form of oral rehydration therapy (ORT). This may include the use of a solution prepared from commercially-produced packets of oral-rehydration salts (ORS) or a homemade mixture of sugar, salt and clean drinking water. In addition, increased intake of liquids during the diarrheal episode also prevents dehydration. In the Chitral baseline survey, mothers were asked whether any of their children under two years of age had had diarrhea during the two weeks preceding the survey. If the child had diarrhea, the mother was asked about any actions that were taken to treat the diarrhea and about feeding practices during the diarrheal episode.

Table 4.7 shows the percentage of children less than two years of age having diarrhea in the two weeks prior to survey. It appears that the prevalence of diarrhea (12 percent) is less common in Chitral compared with the provincial (25 percent) and national estimates (22 percent).known through the latest PDHS-2006-07. The prevalence of diarrhea was slightly less in the intervention (10 percent) than in the comparison areas (12 percent). Small differentials but identifying no specific diarrheal patterns were observed among children by background characteristics.



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The prevalence of diarrhea was however, low among children of mother with some secondary or higher education and those having only one child.

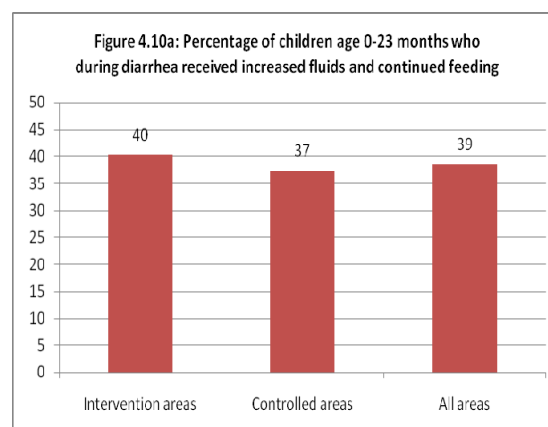
The baseline survey obtained information on the actions that were taken when a child had diarrhea during the two weeks before the survey. Mothers were asked when their children had diarrhea whether they were given Oral Rehydration Solutions (ORS) or home made fluids to make up for loss of water and minerals. Figure 4.10 shows that only four out of ten children were given ORS and one in ten children were given home-made fluids. Overall, 39 percent children were given ORS or home-made fluids in the Intervention areas, 46 percent in the comparison areas and 43 percent at the aggregate level. The rest (57 percent) were not treated at all.

Table 4.7: Percentage of children age 0-23 months who had diarrhea in the last two weeks

Background characteristics		Percentage of children who had diarrhea in the past two weeks before the survey					
		Intervention areas		Comparison areas		All areas	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	10.1	207	14.8	210	12.5	417
	25-34	10.1	306	13.2	326	11.7	632
	35 +	10.4	144	13.7	124	11.9	268
Birth Order	1	6.7	149	11.8	144	9.2	293
	2 - 3	10.9	230	13.5	267	12.3	497
	4 - 5	12.8	172	16.7	144	14.6	316
	6 +	9.4	106	13.3	105	11.4	211
Level of education	None	11.2	448	14.8	385	12.8	833
	Upto Primary	14.8	54	7.0	57	10.8	111
	Middle	7.0	43	16.4	55	12.2	98
	Upto Secondary	4.7	64	15.1	86	10.7	150
	Secondary +	6.3	48	10.4	77	8.8	125
Wealth quintiles	Poorest	11.0	146	16.2	105	13.1	251
	Second	10.9	137	14.0	121	12.4	258
	Middle	10.4	144	14.4	125	12.3	269
	Fourth	10.7	121	13.0	146	12.0	267
	Richest	7.3	109	12.3	163	10.3	272
Total		10.2	657	13.8	660	12.0	1317

4.8.2 Feeding practices during diarrhea

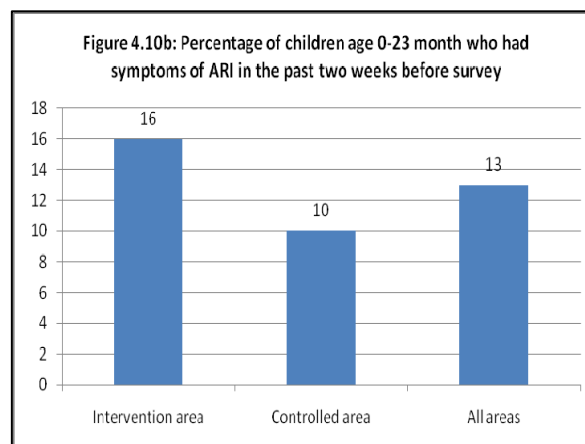
Figure 4.10a shows that four out of ten children (39 percent) who had had diarrhea in the two weeks before the survey were given increased fluids and continued feeding during the episode. The percentage of those given increased fluids and continued feeding was slightly higher (40 percent) in the intervention compared with the comparison areas (37 percent).



4.8.3 Prevalence of pneumonia

Acute Respiratory Illness (ARI) or pneumonia is a common cause of mortality in the post-neonatal or childhood period. The PDHS 2006-07 shows that 26 percent of infants die because of pneumonia in the postnatal infancy. This illness causes deaths to 17 percent children while they are between 1-4 years of age. Overall, 13 percent of children under age five die because of pneumonia in Pakistan. This is the third highest killer of children after birth asphyxia and sepsis. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI.

In the Chitral baseline survey, the prevalence of ARI was estimated by asking mothers whether their children under age 2 had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These symptoms are consistent with



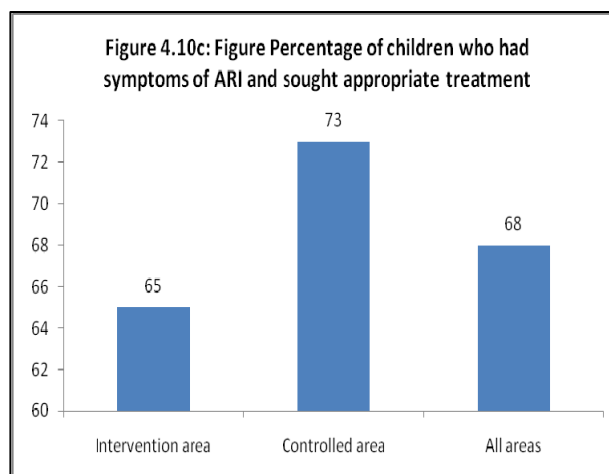
ARI. It should be noted that the morbidity data collected are subjective in the sense that they are based on mother's perception of illness without validation by medical personnel. Furthermore, prevalence of ARI is subject to seasonality; the fieldwork of the Chitral baseline survey was undertaken in March when the entire area was still covered with snow and cases tend to be high in such conditions.

Table 4.8 and Figure 4.10b show that around 13 percent children under age 2 years had had the symptoms of ARI in all sampled areas. The incidence of pneumonia was six percentage points higher in the intervention (16 percent) compared with comparison areas (10 percent). Using similar definition, the PDHS (2006-07) which was done during September through

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February, found that the suspected cases of ARI were 14 percent at the national level and about 17 percent in the NWFP among children under age five. Differences by background characteristics are not large and do not show any specific pattern.

Figure 4.10c shows that among those children who experienced symptoms of ARI, appropriate treatment was sought



from health care provider for two-thirds (68 percents) of patients. The percentage of treatment seekers was higher in the comparison (73 percent) compared with the intervention areas (65 percent). Since the number of children who were treated by background characteristics is less than 25 in majority of the cases, both in the intervention and comparison areas, these have been suppressed (Table 4.8).

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Table 4.8: Percentage of children age 0-23 months having symptoms of pneumonia and sought appropriate treatment

Background characteristics		Intervention				Comparison				All areas			
		Proportion of children with symptom of pneumonia		Appropriate care seeking for pneumonia		Proportion of children with symptom of pneumonia		Appropriate care seeking for pneumonia		Proportion of children with symptom of pneumonia		Appropriate care seeking for pneumonia	
		Percentage	# Children	Percentage	# Children	Percentage	# Children	Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	16.9	207	(62.9)	35	7.1	210	--	15	12.0	417	66.0	50
	25-34	14.7	306	(64.4)	45	12.0	326	(74.4)	39	13.3	632	69.0	84
	35 +	15.3	144	--	22	7.3	124	--	9	11.6	268	(67.7)	31
Birth Order	1	16.1	149	--	24	8.3	144	--	12	12.3	293	(66.7)	36
	2 - 3	13.5	230	(64.5)	31	10.9	267	(72.4)	29	12.1	497	68.3	60
	4 - 5	18.0	172	(71.0)	31	6.9	144	--	10	13.0	316	(70.7)	41
	6 +	15.1	106	--	16	11.4	105	--	12	13.3	211	(64.3)	28
Level of education	None	15.6	448	60.0	70	8.6	385	(72.7)	33	12.4	833	64.1	103
	Upto Primary	24.1	54	--	13	7.0	57	--	4	15.3	111	--	17
	Middle	(20.9)	43	--	9	16.4	55	--	9	18.4	98	--	18
	Upto Secondary	6.3	64	--	4	14.0	86	--	12	10.7	150	--	16
	Secondary +	(12.5)	48	--	6	6.5	77	--	5	8.8	125	--	11
Wealth quintiles	Poorest	24.0	146	(57.1)	35	12.4	105	--	13	19.1	251	(62.5)	48
	Second	16.8	137	--	23	8.3	121	--	10	12.8	258	(57.6)	33
	Middle	13.2	144	--	19	8.8	125	--	11	11.2	269	(66.7)	30
	Fourth	9.1	121	--	11	8.9	146	--	13	9.0	267	--	24
	Richest	12.8	109	--	14	9.8	163	--	16	11.0	272	(83.3)	30
Total		15.5	657	64.7	102	9.5	660	73.0	63	12.5	1317	67.9	165
Figures in parenthesis are based on 25-49 cases, and an asterisk denotes a figure based on fewer than 25 cases that have been suppressed.													

4.9 Nutrition

The poor nutritional status of children and women has been considered a serious problem in all developing countries and Pakistan is not an exception. The most common forms of malnutrition are protein energy malnutrition, iodine deficiency disorders in selected areas, vitamin A deficiency (VAD), and iron deficiency anemia (IDA). The prevalence of malnutrition is the result of inadequate food intake, poor health status, feeding practices and family size. Special programmes have been under implementation in Pakistan which aim at improving the health of mother and children. Some of these programmes are: Control of Iodine Deficiency Disorder; Control of Iron Deficiency Anemia; Control of Vitamin A Deficiency; Nutrition in Primary Health Care etc.

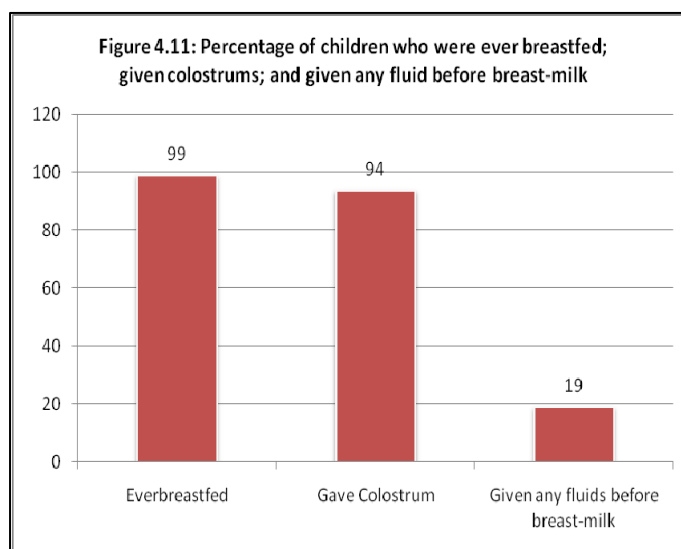
In the Chitral baseline survey mothers of children less than 2 years of age were asked about use of iron tablets/syrup, and calcium tablets during pregnancy and the duration of their use; breastfeeding practices; supplementary food initiation; bottle feeding practices, and intake of vitamin A by children. This section presents the findings on nutritional status of children less than two years of age.

4.9.1 Breastfeeding Patterns

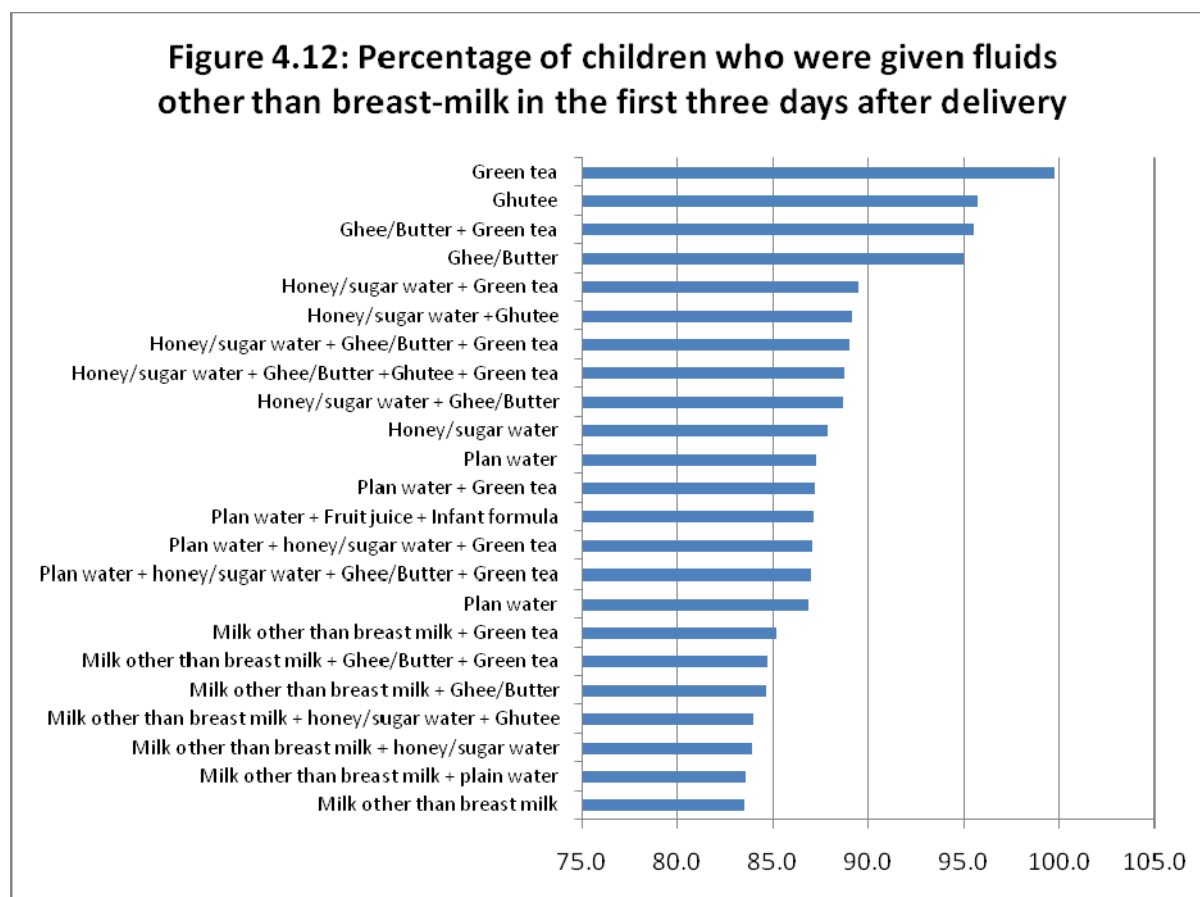
Poor breastfeeding and infant feeding practices have adverse consequences for the health and nutritional status of children, which in turn have consequences on the mental and physical development of the child. In Pakistan, breastfeeding is almost universal and generally of fairly long duration. Over 94 percent Pakistani women reported in the last PDHS, to have been breastfeeding and on average the duration of breastfeeding was about 19 months.

However, breastfeeding practices including initiation of breastfeeding, feeding of colostrums, and exclusive breastfeeding during the six months after birth and food supplementation vary across regions and among sub-groups of population.

Figure 4.11 shows that nearly all Chitrali women (99 percent) breastfeed their children and feeding of colostrums is also common (94 percent).



However, one of the oldest but dangerous traditions of giving other liquids before initiation of breastfeeding is still prevalent among one-fifth of women. These liquids include green tea, ghutee (herbal syrup), ghee/butter, honey/sugar water, plain water, milk (other than breast-milk) and a combination of such liquids (Figure 4.12). However, green tea (99 percent) appears to be the most favorite followed by ghutee, and ghee and butter are the most preferred forms of fluids given to a child on arrival. Some of these liquids can choke the



newborn while others could cause stomach disorders and diarrhea. However, the tradition of giving prelacteal feed is less common (19 percent) in Chitral district compared to the national practice (65 percent). In the province of NWFP this tradition is even stronger where on average 7 out of 10 mothers (71 percent) give other fluids to the newborns before starting breastfeeding (PDHS, 2008).

4.9.2 Exclusive breastfeeding

For optimal growth, it is recommended that newborns should be exclusively breastfed for the first six months of life. Exclusive breastfeeding in the early months of life is correlated strongly with increased child survival and reduced risk of morbidity, particularly from diarrheal diseases. Figure 4.13 shows that nearly two-thirds (62 percent) of children less than 6 months of age were exclusively breastfed in the past 24 hours. The proportion of such

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infants was higher in the comparison (64 percent) than in the intervention areas (60 percent). Though differentials are small, older women (65 percent) were more likely to exclusively breastfeed their children compared to younger women (61 percent). Similarly higher proportion of women with 2-3 children (71 percent) were found to be exclusively breastfeeding their children under 6 months compared to women with higher or lower parity.

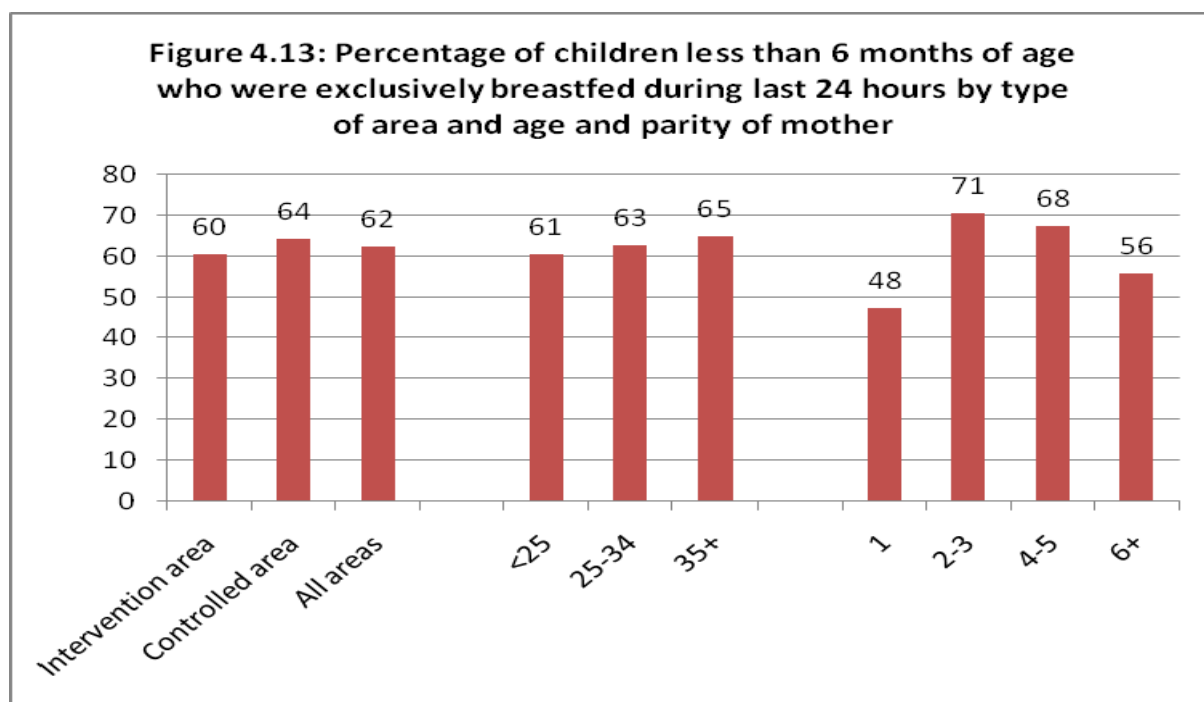


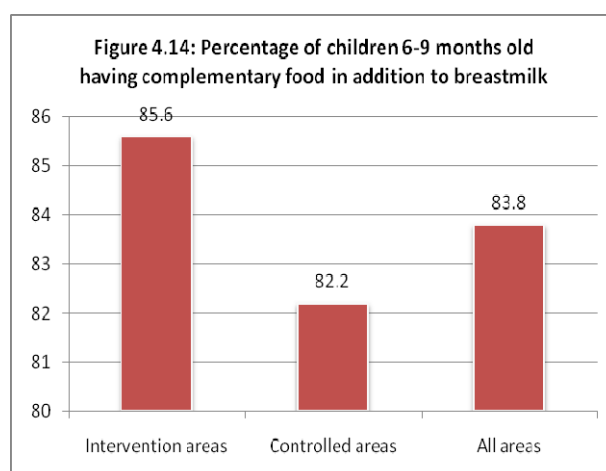
Table 4.9 shows the percentage of children 6-23 months of age who were still breastfed at the time of survey. Overall, 94 percent of children were breastfed at the time of survey. The proportion of such children was slightly higher in the intervention (95 percent) compared with the comparison areas (93 percent). Differentials on the basis of background characteristics are also small.

Table 4.9: Percentage of children age 6-23 months who are still breastfed

Background characteristics		Percentage of children 6-23 months who are still breastfed					
		Intervention areas		Comparison areas		All areas	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	92.8	153	92.7	165	92.8	318
	25-34	95.2	248	94.8	250	95.0	498
	35 +	95.7	117	89.7	97	93.0	214
Birth Order	1	93.2	117	92.2	115	92.7	232
	2 - 3	96.8	185	93.8	210	95.2	395
	4 - 5	94.8	134	96.3	108	95.5	242
	6 +	91.5	82	88.6	79	90.1	161
Level of education	None	93.6	360	93.8	292	93.7	652
	Upto Primary	(95.3)	43	(91.3)	46	93.3	89
	Middle	(96.7)	30	(100.0)	42	98.6	72
	Upto Secondary	100.0	50	94.3	70	96.7	120
	Secondary +	(94.3)	35	85.5	62	88.7	97
Wealth quintiles	Poorest	97.6	124	92.8	83	95.7	207
	Second	93.9	115	94.7	95	94.3	210
	Middle	94.7	113	95.1	102	94.9	215
	Fourth	90.8	87	96.3	107	93.8	194
	Richest	94.9	79	88.0	125	90.7	204
Total		94.6	518	93.2	512	93.9	1,030

4.9.3 Complementary feeding

Infants need nutritious food in addition to breast milk after the age of six months. It is recommended that children should begin receiving complementary foods at this age. To obtain full information on weaning practices, the Chitral baseline survey collected data on breastfeeding and complementary feeding for children less than 24 months old. Figure 4.14 presents



information on the feeding practices of children 6-9 months of age. Overall, 84 percent of children were given food in addition to breast-milk. The percentage of such children was

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slightly higher in the intervention areas (86 percent) compared with the comparison areas (82 percent).

Children reaching age 6 months start additional food with or without breast milk as appropriate for their age. Table 4.10 shows that practices of appropriate feeding improves with the age of children.

Table 4.10: Appropriate Feeding Practices for age 6-23 months old

Age of child	Intervention		Comparison		All areas	
	Percentage	# Children	Percentage	# Children	Percentage	# Children
06 - 11	26.8	198	30.8	221	28.9	419
12 - 17	38.2	178	40.8	152	39.4	330
18 - 23	61.3	142	66.9	139	64.1	281
Total	40.2	518	43.6	512	41.8	1,030

4.9.4 Micronutrient Intake

Vitamin A is an essential micronutrient for the immune system and plays an important role in maintaining the epithelial tissues in the body. Severe vitamin-A deficiency can cause eye damage leading to blindness and can increase the severity of infections such as measles and diarrheal diseases in children. Ensuring that children between 6 months to five years of age receive enough vitamin A may be singly most effective child survival intervention. Additionally, adequate intake of the vitamin A may reduce maternal deaths.

Table 4.11 shows that two-thirds (67 percent) of children 6-23 months ever had a dose of vitamin-A supplement whereas about half of the children (51 percent) of the same age had vitamin-A supplement in the past six months. The proportion of such children is higher in the comparison areas (71 percent ever had a vitamin-A dose and 55 percent had it in six months prior to survey) compared with the intervention areas (64 percent ever and 46 percent).

Interestingly, the proportion of children receiving vitamin-A supplement during 6 months prior to survey was higher among female (53 percent) as against male children (49 percent) at aggregate level. Also a similar pattern was observed in the Intervention areas where 51 percent female children received vitamin-A supplements against 41 percent by male children. However, the position in the comparison areas was a little different where slightly higher percentage of male children (56 percent) received vitamin-A dose compared with female (54 percent).

Overall, women aged 25-34 years; those with 2-5 children; those having up to Secondary or above Secondary education; and are in higher wealth quintiles are more likely to give vitamin

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supplements to their children compared with those who are younger (<25 years) or older (35+ years); having single or six and above children, who are poor and have no or only up to Primary level education. Almost similar trend is visible in both the intervention as well in the comparison areas.

Table 4.11: Percentage of children 6-23 months who were ever given vitamin-A supplements and those who were given the supplement in the past six months

Background characteristics		Intervention			Comparison			All areas		
		Ever Vitamin - A dose	Vitamin - A dose within 6-months		Ever Vitamin - A dose	Vitamin - A dose within 6-months		Ever Vitamin - A dose	Vitamin - A dose within 6-months	
		Percentage	Percentage	# Children	Percentage	Percentage	# Children	Percentage	Percentage	# Children
Age of mother	< 25	60.1	43.8	153	63.0	50.3	165	61.6	47.2	318
	25-34	66.5	48.0	248	74.8	57.6	250	70.7	52.8	498
	35 +	65.0	46.2	117	72.2	57.7	97	68.2	51.4	214
Gender	Male	61.1	41.3	252	73.6	56.4	250	67.3	48.8	502
	Female	67.3	51.1	266	67.6	54.2	262	67.4	52.7	528
Age of child	06 - 11	62.6	46.0	198	63.3	48.4	221	63.0	47.3	419
	12 - 17	62.4	45.5	178	74.3	55.3	152	67.9	50.0	330
	18 - 23	69.0	47.9	142	77.7	66.2	139	73.3	56.9	281
Birth order	1	56.4	41.0	117	60.0	47.8	115	58.2	44.4	232
	2 - 3	68.6	50.3	185	74.3	59.0	210	71.6	54.9	395
	4 - 5	67.2	43.3	134	75.0	59.3	108	70.7	50.4	242
	6 +	61.0	50.0	82	69.6	50.6	79	65.2	50.3	161
Level of education	None	61.9	44.4	360	70.9	56.2	292	66.0	49.7	652
	Up to Primary	60.5	44.2	43	80.4	54.3	46	70.8	49.4	89
	Middle	66.7	53.3	30	66.7	50.0	42	66.7	51.4	72
	Up to Secondary	78.0	54.0	50	68.6	52.9	70	72.5	53.3	120
	Secondary +	71.4	51.4	35	66.1	58.1	62	68.0	55.7	97
Wealth quintiles	Poorest	56.5	42.7	124	71.1	57.8	83	62.3	48.8	207
	Second	60.9	50.4	115	66.3	45.3	95	63.3	48.1	210
	Middle	69.0	46.0	113	75.5	65.7	102	72.1	55.3	215
	Fourth	72.4	51.7	87	70.1	53.3	107	71.1	52.6	194
	Richest	65.8	40.5	79	69.6	54.4	125	68.1	49.0	204
Total		64.3	46.3	518	70.5	55.3	512	67.4	50.8	1,030

4.9.5 Child Weight

The nutritional status of young children is reflective of development at household, community and national level. In developing countries young children are most vulnerable to malnutrition because of low dietary intake, infectious diseases, lack of appropriate health care, and inadequate distribution of food within the household.

The Chitral baseline survey included information on the nutritional status of children less than 24 months of age. Height and arm circumference of the children was not taken. Hence it was only possible to measure their nutritional status using weight-for-age indicator only. Children were weighed using special child weighing scales. The weight of age indicator is

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expressed in standard deviation units (z-scores) from the median of the reference population. The children whose weight-for-age is below minus two standard deviation (-2 SD) from the median of the reference population are classified as underweight. Children whose weight-for-age is below minus three standard deviation (-3 SD) from the median of the reference population are considered severely underweight. In the Chitral Baseline survey, the weight of only 1010 children could be measured. The weight-for-age indicator shows that 17 percent of children less than two years of age were underweight while nine percent children were severely underweight. A higher proportion of children between age 12-23 were underweight (17.5 percent) compared to younger children. Similarly, 9 percent children of the same age were severely underweight. The proportion of underweight and severely underweight children was higher in the intervention areas (17.9 percent and 10.1 percent respectively) compared with the comparison area (15.8 percent and 6.9 percent respectively). Higher proportion of male children was underweight and severely underweight compared to female children. Similarly, higher proportion of children was underweight and severely underweight among poorest segments of the society both in intervention as well as comparison areas.

Table 4.12: Percentage of Children under Two-years (0-23 months) of age undernourished according to Weight

Demographic characteristics		Intervention		Comparison		Total	
		Weight for age: % below -3 SD	Weight for age: % below -2 SD ¹	Weight for age: % below -3 SD	Weight for age: % below -2 SD ¹	Weight for age: % below -3 SD	Weight for age: % below -2 SD ¹
Age group	< 6- months	3.7	13.4	4.6	13.8	4.1	13.6
	06 - 11 months	10.5	19.8	8.7	15.3	9.6	17.4
	12- 23 months	12.0	18.1	6.3	16.9	9.3	17.5
Sex of child	Male	10.5	18.6	7.1	17.0	8.8	17.8
	Female	9.8	17.2	6.7	14.6	8.2	15.9
Wealth quintiles	Poorest	12.0	22.2	9.9	22.2	11.1	22.2
	Second	10.0	18.2	4.4	12.1	7.5	15.4
	Middle	8.7	16.3	6.9	16.8	7.8	16.6
	Fourth	9.2	14.9	7.6	18.5	8.3	17.0
	Richest	10.6	16.5	6.1	10.4	8.0	13.0
Total		10.1	17.9	6.9	15.8	8.5	16.8

1 includes children who are below -3 SD

Chapter 5

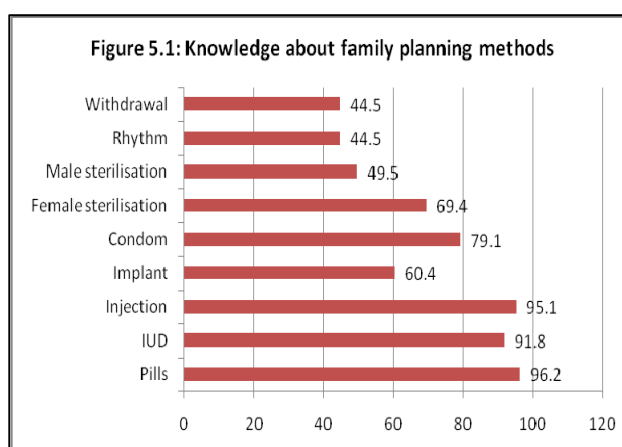
CONTRACEPTION

Contraception is an important proximate determinant of fertility. The family planning programme was started in the district of Chitral almost simultaneously with other districts in the country. As part of the overall reproductive health package, the survey also collected information on knowledge, ever use of family planning methods, current use of methods by age and parity, sources of family planning methods, and women's perception of reasonable spacing time between two births. This chapter illustrates findings of the survey on these aspects.

5.1 Knowledge of family planning methods

Knowledge of family planning methods is a prerequisite for its use. Typical family planning surveys ask knowledge and ever use of family planning methods from ever-married women of reproductive age. Whereas information on current use and related topics is asked of currently married women of age 15-49 years. Similar procedure was adopted in this survey as well.

In this survey, information on knowledge about contraceptive methods was collected by asking ever married women a traditional question typical of all DHS surveys 'Now I would like to talk about family planning-the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? Methods not mentioned spontaneously were described by the interviewer and the respondents were asked again whether or not they had heard about the methods. The survey provides both prompted and unprompted knowledge about family planning methods. The respondents were then asked whether they were currently using any method. If they were not currently using



any method, they were asked, if they ever used a method in the past. Based on responses to these questions, Table 5.1 shows that almost all women (97 percent) had heard about at least

one method of contraception. The knowledge of family planning methods is almost similar in the intervention and the comparison areas. Since knowledge about contraceptive methods is almost universal, the differentials on the basis of background characteristics are minimal.

Figure 5.1 shows knowledge about contraceptives by method. The survey shows that Contraceptive pill is the most known (96 percent) method in Chitral followed by injection (95 percent), IUD (92 percent) and condom (79 percent). Traditional methods of contraception are the least known methods.

5.2 Ever-use of contraception

Table 5.1 also shows ever use of contraception by background characteristics. On the average, 36 percent currently married women with children 0-23 months of age reported to have ever-used a contraceptive method. Ever use is slightly higher (37 percent) in the intervention areas compared with the comparison areas (35 percent). Ever use increases with age, parity, education and wealth quintiles. Ever use of contraception, however, falls short of the national average (48 percent).

5.3 Knowledge of sources of contraceptives

Knowledge of a source of contraceptive methods is important for its use and continuation. Table 5.2 shows that an overwhelming majority of Chitrali women not only knows about contraceptive methods, they are also aware where they can get them. On the whole, nine out of ten Chitrali women know the source of contraceptive methods. Differentials on the basis of age, parity, education and wealth quintiles are minimal.

5.4 Current use of contraception

Fertility decline occurs when women start using contraceptives. It appears that though Chitrali women are aware of family planning methods and their sources, the use rate of contraceptives has not yet picked up. Table 5.3 shows that current use of contraceptives is limited to 24 percent of currently married women. The baseline survey reveals an interesting finding that though over four out of ten women know about traditional methods; hardly any woman reported to have been currently using these methods. The current use level which is made up of modern methods only is in fact higher by 2 percentage points than the national average and 5 percentage points higher than its provincial average. The survey also reveals another important finding that Chitrali women either use injections (12.5 percent) or pills (9.4 percent). The use of all other methods is just nominal.

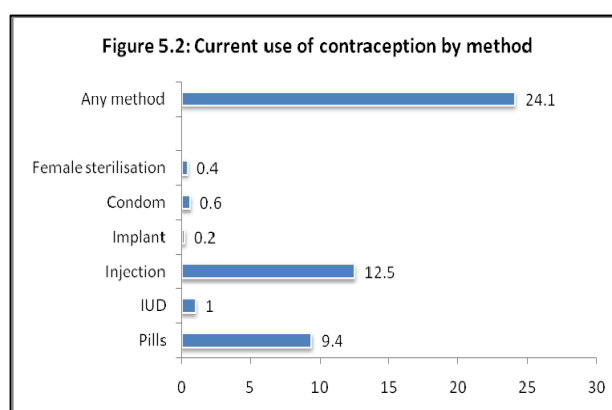
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Table 5.1: Percentage of currently married women with younger child less than two years by knowledge and ever-use of contraceptive methods

Background characteristics		Intervention Areas			Comparison Areas			All Areas		
		Percentage of women who have heard at least one method of contraception	Percentage of women who had ever used a method of family planning		Percentage of women who have heard at least one method of contraception	Percentage of women who had ever used a method of family planning		Percentage of women who have heard at least one method of contraception	Percentage of women who had ever used a method of family planning	
		Percentage	Percentage# Women		Percentage	Percentage# Women		Percentage	Percentage# Women	
Age of mother	< 25	97.1	30.4 207		96.2	21.9 210		96.6	26.1 417	
	25-34	97.4	39.5 306		97.9	39.9 326		97.6	39.7 632	
	35 +	97.9	40.3 144		96.0	42.7 124		97.0	41.4 268	
Birth Order	1	97.3	16.8 149		96.5	11.8 144		96.9	14.3 293	
	2 – 3	97.0	42.2 230		96.3	37.5 267		96.6	39.6 497	
	4 – 5	99.4	47.1 172		98.6	43.1 144		99.1	45.3 316	
	6 +	95.3	36.8 106		97.1	47.6 105		96.2	42.2 211	
Level of education	None	97.3	34.6 448		96.1	31.7 385		96.8	33.3 833	
	Upto Primary	94.4	44.4 54		96.5	33.3 57		95.5	38.7 111	
	Middle	95.3	44.2 43		96.4	30.9 55		95.9	36.7 98	
	Upto Secondary	100.0	40.6 64		98.8	43.0 86		99.3	42.0 150	
	Secondary	100.0	37.5 48		100.0	44.2 77		100.0	41.6 125	
Wealth quintiles	Poorest	98.6	27.4 146		94.3	28.6 105		96.8	27.9 251	
	Second	97.1	34.3 137		94.2	33.9 121		95.7	34.1 258	
	Middle	95.8	34.0 144		97.6	35.2 125		96.7	34.6 269	
	Fourth	96.7	42.1 121		98.6	33.6 146		97.8	37.5 267	
	Richest	99.1	50.5 109		98.8	39.9 163		98.9	44.1 272	
Total		97.4	36.8 657		97.0	34.7 660		97.2	35.8 1,317	

Note: Contraceptive methods include Oral Pills, IUD, Injections, Condom, Implants and Sterilization, Rhythm and withdrawal

Table 5.3 shows that the current use of contraception is slightly higher in the Intervention (25 percent) compared with the Comparison areas (23 percent). Interestingly, younger women have higher use rate compared to older women. Similarly, low parity women are also catching up with the higher parity women.



The influence of education is quite visible on the current use of contraception. A difference of about 13 percentage points is noted among women with no education and those who have above secondary schooling. Similarly, the current use gap between the poorest (19 percent) and the richest (30 percent) is notable, but one in five poor women are also using

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contraceptives. The survey indicates that contraceptive prevalence can increase in Chitral district if family planning methods especially Injectable and pills are made easily accessible.

Table 5.2: Percentage of currently married women having a living child 0-23 months who knows a source of a modern method

Background characteristics		Percentage of women who knows source of a modern method					
		Intervention areas		Comparison areas		All areas	
		Percentage	# Women	Percentage	# Women	Percentage	# Women
Age of mother	< 25	89.9	207	91.0	210	90.4	417
	25-34	86.6	306	93.9	326	90.3	632
	35 +	86.8	144	91.1	124	88.8	268
Birth Order	1	87.9	149	93.8	144	90.8	293
	2 - 3	88.7	230	91.0	267	89.9	497
	4 - 5	86.6	172	92.4	144	89.2	316
	6 +	86.8	106	94.3	105	90.5	211
Level of education	None	85.5	448	91.7	385	88.4	833
	Upto Primary	90.7	54	87.7	57	89.2	111
	Middle	93.0	43	94.5	55	93.9	98
	Upto	95.3	64	94.2	86	94.7	150
	Secondary +	89.6	48	96.1	77	93.6	125
Wealth quintiles	Poorest	79.5	146	89.5	105	83.7	251
	Second	87.6	137	86.8	121	87.2	258
	Middle	90.3	144	92.0	125	91.1	269
	Fourth	88.4	121	96.6	146	92.9	267
	Richest	94.5	109	95.1	163	94.9	272
Total		87.7	657	92.4	660	90.1	1,317

Note: Modern contraceptive methods include Oral Pills, IUD, Injections, Condom, Implants and Sterilization

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Table 5.3: Currently married women having younger child age 0-23 months by current use of contraceptives

Background characteristics		Percentage of women who are currently using a family planning method								
		Percentage of women who are currently using a family planning method	Percentage of women who are currently using a modern method		Percentage of women who are currently using a family planning method	Percentage of women who are currently using a modern method		Percentage of women who are currently using a family planning method	Percentage of women who are currently using a modern method	
		Percentage	Percentage	# Women	Percentage	Percentage	# Women	Percentage	Percentage	# Women
Age of mother	< 25	28.5	28.5	207	23.8	23.8	210	26.1	26.1	417
	25-34	24.5	24.2	306	22.7	22.7	326	23.6	23.4	632
	35 +	22.9	22.9	144	21.8	21.8	124	22.4	22.4	268
Birth Order	1	24.2	24.2	149	22.9	22.9	144	23.5	23.5	293
	2 – 3	26.5	26.5	230	23.6	23.6	267	24.9	24.9	497
	4 – 5	25.6	25.0	172	21.5	21.5	144	23.7	23.4	316
	6 +	24.5	24.5	106	22.9	22.9	105	23.7	23.7	211
Level of education	None	21.4	21.2	448	22.3	22.3	385	21.8	21.7	833
	Upto Primary	29.6	29.6	54	21.1	21.1	57	25.2	25.2	111
	Middle	37.2	37.2	43	14.5	14.5	55	24.5	24.5	98
	Upto Secondary	32.8	32.8	64	23.3	23.3	86	27.3	27.3	150
	Secondary +	37.5	37.5	48	32.5	32.5	77	34.4	34.4	125
Wealth quintiles	Poorest	19.2	19.2	146	19.0	19.0	105	19.1	19.1	251
	Second	19.7	19.7	137	17.4	17.4	121	18.6	18.6	258
	Middle	29.2	28.5	144	21.6	21.6	125	25.7	25.3	269
	Fourth	27.3	27.3	121	26.0	26.0	146	26.6	26.6	267
	Richest	33.9	33.9	109	27.6	27.6	163	30.1	30.1	272
Total		25.4	25.3	657	22.9	22.9	660	24.1	24.1	1,317

5.5 Birth spacing

Women were asked about reasonable spacing time between two births. Table 5.4 shows that an overwhelming majority (72 percent) reported that in their opinion the difference between the two births should be 2-3 years, while another quarter opined that the duration between births should be four years or even more. Those who reported the duration to be two years or less were hardly one percent. The opinion regarding spacing duration was similar in the intervention as well as comparison areas.

It was also encouraging to know that women, who were younger or older; educated or uneducated; and poor or wealthy all opined to have more than 2 years of birth spacing. This illustrates that with little efforts, Chitral can become a model district which is potentially ready to change its demographic features through appropriate attention

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Table 5.4: Percentage of currently married women with youngest child 0-23 months by their opinion about spacing between two births

Background characteristics		Intervention					Comparison					All areas				
		Opinion about spacing time					Opinion about spacing time					Opinion about spacing time				
		Less than 2-years	2-3 years	4 + years	DK	# Women	Less than 2-years	2-3 years	4 + years	DK	# Women	Less than 2-years	2-3 years	4 + years	DK	# Women
Age of mother	< 25	1.5	70.9	25.7	1.9	206	.5	72.2	25.8	1.4	209	1.0	71.6	25.8	1.7	415
	25-34	1.0	72.9	23.9	2.3	306	.6	70.9	27.0	1.5	326	.8	71.8	25.5	1.9	632
	35 +	1.4	72.2	22.9	3.5	144	2.4	70.2	21.0	6.5	124	1.9	71.3	22.0	4.9	268
Birth Order	1	1.4	77.0	18.9	2.7	148	.7	80.4	16.8	2.1	143	1.0	78.7	17.9	2.4	291
	2 - 3	1.7	73.5	23.5	1.3	230	.4	68.9	29.2	1.5	267	1.0	71.0	26.6	1.4	497
	4 - 5	1.2	66.3	30.2	2.3	172	2.1	69.4	25.0	3.5	144	1.6	67.7	27.8	2.8	316
	6 +	--	71.7	23.6	4.7	106	1.0	66.7	28.6	3.8	105	.5	69.2	26.1	4.3	211
Level of education	None	1.3	73.4	22.4	2.9	447	1.3	72.7	21.8	4.2	385	1.3	73.1	22.1	3.5	832
	Upto Primary	--	68.5	25.9	5.6	54	--	61.4	38.6	--	57	--	64.9	32.4	2.7	111
	Middle	2.3	69.8	27.9	--	43	--	66.7	33.3	--	54	1.0	68.0	30.9	--	97
	Upto Secondary	1.6	70.3	28.1	--	64	--	67.4	32.6	--	86	7	68.7	30.7	--	150
	Secondary +	--	68.8	31.3	--	48	1.3	77.9	20.8	--	77	8	74.4	24.8		125
Wealth quintiles	Poorest	7	78.1	18.5	2.7	146	1.0	76.2	21.0	1.9	105	8	77.3	19.5	2.4	251
	Second	7	75.9	20.4	2.9	137	--	69.4	24.8	5.8	121	4	72.9	22.5	4.3	258
	Middle	1.4	72.0	25.2	1.4	143	--	76.0	21.6	2.4	125	7	73.9	23.5	1.9	268
	Fourth	1.7	69.4	25.6	3.3	121	1.4	69.0	26.9	2.8	145	1.5	69.2	26.3	3.0	266
	Richest	1.8	62.4	33.9	1.8	109	1.8	67.5	30.7		163	1.8	65.4	32.0	.7	272
Total		1.2	72.1	24.2	2.4	656	.9	71.2	25.5	2.4	659	1.1	71.6	24.9	2.4	1,315

Chapter 6

KNOWLEDGE OF HIV/AIDS AND OTHER DISEASES

Pakistan in line with the global recommendations and the United Nations mandate is committed to attain the health related millennium development goals on all health aspects including HIV/AIDS, tuberculosis, and hepatitis B&C. A number of measures are underway to achieve Pakistan's health sector goals and to bring a visible change in health status of the country. Specific health programme initiatives are taken to prevent HIV/AIDS from spreading and control T.B., malaria and hepatitis.

In the Chitral baseline survey, currently married women with living children less than two years of age were asked whether they had ever heard of HIV/AIDS, tuberculosis and hepatitis B&C. Based on the information provided, this chapter examines the status of knowledge about HIV/AIDS, T.B. and hepatitis B&C in the sample areas of Chitral.

6.1 Knowledge about HIV/AIDS

Table 6.1 shows that not a high proportion of women are yet aware or have even heard of AIDS. The survey reveals that only one in nine women (11 percent) had heard of AIDS. The knowledge level about AIDS in the district of Chitral is much lower compared to the national average of 44 percent (PDHS, 2008). One of the reasons for this low knowledge level may be lack of access to print as well as electronic media in most parts of the Chitral district.

In the comparison areas, the proportion of women who had heard of AIDS is nearly 12 percent as compared with the intervention areas where one in ten (10 percent) had knowledge about the disease. The awareness about AIDS is relatively higher among younger women and those with parity 1 (who also are supposed to be younger). Education was found to be strongly related with acquiring knowledge about AIDS. A woman with Secondary and above education was eight times (39 percent) more likely to know about AIDS compared with those who had no education (5 percent). However, primary education is not found to have any influence on most of the indicators discussed in this report and knowledge about AIDS is not an exception. Women in the highest quintile were also more knowledgeable (21 percent) compared with those who were in the first quintile (4 percent). Similar relationships of education and wealth with the knowledge about AIDS were found in the intervention and comparison areas.

Annex 9

Table 6.1: Percentage of Women with younger child age 0-23 months have heard of AIDS

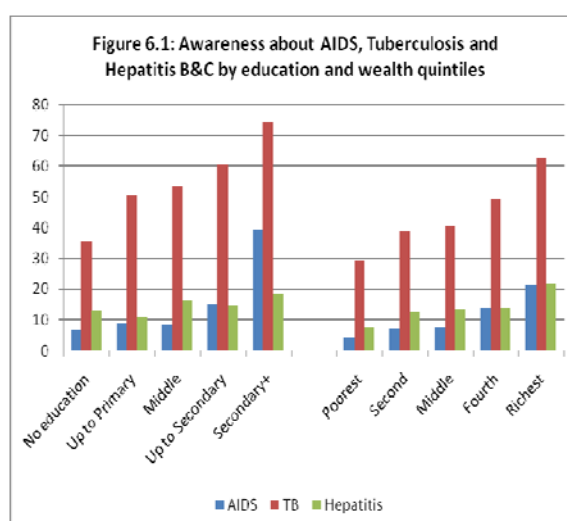
Background characteristics		Intervention		Comparison		All areas	
		Has heard of AIDS		Has heard of AIDS		Has heard of AIDS	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	12.6	207	13.3	210	12.9	417
	25-34	10.1	306	12.9	326	11.6	632
	35 +	5.6	144	6.5	124	6.0	268
Birth order	1	12.1	149	13.2	144	12.6	293
	2 - 3	11.3	230	12.0	267	11.7	497
	4 - 5	7.6	172	12.5	144	9.8	316
	6 +	7.5	106	8.6	105	8.1	211
Level of education	None	5.4	448	7.5	385	6.4	833
	Upto Primary	3.7	54	14.0	57	9.0	111
	Middle	16.3	43	1.8	55	8.2	98
	Upto Secondary	20.3	64	11.6	86	15.3	150
	Secondary +	39.6	48	39.0	77	39.2	125
Wealth quintiles	Poorest	3.4	146	4.8	105	4.0	251
	Second	5.8	137	8.3	121	7.0	258
	Middle	7.6	144	7.2	125	7.4	269
	Fourth	16.5	121	11.6	146	13.9	267
	Richest	19.3	109	22.7	163	21.3	272
Total		9.9	657	11.8	660	10.9	1,317

Table 6.2: Percentage of Women with younger child age 0-23 months have heard of TB

Background characteristics		Intervention		Comparison		All areas	
		Has heard of TB		Has heard of TB		Has heard of TB	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	48.8	207	45.2	210	47.0	417
	25-34	45.4	306	46.6	326	46.0	632
	35 +	32.6	144	40.3	124	36.2	268
Birth order	1	48.3	149	47.2	144	47.8	293
	2 - 3	46.1	230	41.2	267	43.5	497
	4 - 5	44.2	172	47.2	144	45.6	316
	6 +	31.1	106	48.6	105	39.8	211
Level of education	None	32.8	448	37.7	385	35.1	833
	Upto Primary	50.0	54	50.9	57	50.5	111
	Middle	72.1	43	38.2	55	53.1	98
	Upto Secondary	64.1	64	58.1	86	60.7	150
	Secondary +	85.4	48	67.5	77	74.4	125
Wealth quintiles	Poorest	28.1	146	30.5	105	29.1	251
	Second	32.1	137	46.3	121	38.8	258
	Middle	39.6	144	41.6	125	40.5	269
	Fourth	55.4	121	44.5	146	49.4	267
	Richest	71.6	109	56.4	163	62.5	272
Total		43.7	657	45.0	660	44.3	1,317

6.2 Knowledge about Tuberculosis

Though Tuberculosis (TB) is not an alien disease in Pakistan, yet not all people are aware about it. Similar position was observed in the sample areas of Chitral. Table 6.2 shows that 44 percent women who were mothers of children age less than 2 years had heard about TB at the aggregate level. Knowledge level was almost similar in the comparison areas (45 percent) and in the Intervention areas (44 percent). Age and parity are inversely related to the knowledge level about TB. Younger and women with one child are more likely to know about TB compared to older women and those having six or more children. Similarly



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education and wealth status are strongly related with knowledge about TB. Women with above secondary education are twice more likely (74 percent) to know about TB compared with those who have no education (35 percent). Similarly, women who are economically better off are also twice more likely (63 percent) to have heard about TB than those who are poor (29 percent). Similar relationship exists between knowledge of TB and background characteristics of women like age, parity, education and wealth status both in the intervention and comparison areas.

6.3 Knowledge about Hepatitis B&C

The government of Pakistan is taking appropriate measures to contain Hepatitis B&C and reduce the burden of disease through nationwide programme of creating awareness about the fatality of the disease and precautions to avoid contracting it. Both print and electronic media are being used for this purpose. However, the knowledge level about hepatitis B&C as assessed in the baseline survey appears to be low as one would expect in view of the awareness creation campaigns. Table 6.3 shows that only one in seven women (14 percent) reported to have heard of hepatitis B&C. The knowledge level is slightly better in the Intervention areas (16 percent) compared with the comparison areas (12 percent). Relationships of knowledge and background characteristics are also in the expected directions-younger women, women with low parity, education and wealth status have strong relationship with knowledge about hepatitis B&C.

Table 6.3 Percentage of Women with younger child age 0-23 months have heard of Hepatitis (B&C)

Background characteristics		Intervention		Comparison		All areas	
		Has heard of Hepatitis		Has heard of Hepatitis		Has heard of Hepatitis	
		Percentage	# Children	Percentage	# Children	Percentage	# Children
Age of mother	< 25	20.8	207	11.0	210	15.8	417
	25-34	13.1	306	12.6	326	12.8	632
	35 +	15.3	144	12.1	124	13.8	268
Birth Order	1	18.8	149	11.8	144	15.4	293
	2 - 3	17.0	230	11.2	267	13.9	497
	4 - 5	15.7	172	12.5	144	14.2	316
	6 +	10.4	106	13.3	105	11.8	211
Level of education	None	14.3	448	12.2	385	13.3	833
	Up to primary	9.3	54	12.3	57	10.8	111
	Middle	27.9	43	7.3	55	16.3	98
	Up to Secondary	18.8	64	11.6	86	14.7	150
	Secondary +	25.0	48	14.3	77	18.4	125
Wealth quintiles	Poorest	8.2	146	6.7	105	7.6	251
	Second	12.4	137	13.2	121	12.8	258
	Middle	14.6	144	12.0	125	13.4	269
	Fourth	20.7	121	8.2	146	13.9	267
	Richest	27.5	109	17.8	163	21.7	272
Total		16.0	657	12.0	660	14.0	1,317

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ANNEX 10: Revised Organigram

