
Standard Specifications of Equipment, Medicines and Supplies for National MNCH Programme

Volume-I: Situational Analysis Report



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ABBREVIATIONS

AJK	Azad Jammu and Kashmir
AIMS	Abbassi Institute of Medical Sciences
BEmONC	Basic Emergency Obstetric and Neonatal Care
BHU	Basic Health Unit
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CMW	Community Medical Worker
DA	Diploma in Anaesthesiology
DFID	Department for International Development
DGO	Diploma in Gynaecology and Obstetrics
DHQ	District Headquarter Hospital
EmONC	Emergency Obstetric and Neonatal Care
ETT	Endo-tracheal Tube
FALAH	Family Advancement for Life and Health
FATA	Federally Administered Tribal Area
FCPS	Fellow of College of Physicians and Surgeons
FMO	Female Medical Officer
HLSP	Higher Level Skills Partnership
I/V	Intravenous
IMR	Infant Mortality Rate
LHV	Lady Health Visitor
MGD	Millennium Development Goals
MMR	Maternal Mortality Rate
MNCH	Maternity Neonatal and Child Health
MO	Medical Officer
NMNCHP	National Maternal Neonatal and Child Health Programme
OBGY	Obstetrics and Gynaecology
ORS	Oral Rehydration Salts
PPRA	Public Procurement Regulator Authority
RHC	Rural Health Centre
TA	Technical Assistance
THQ	Tehsil Headquarter Hospital
TRF	Technical Resource Facility
UNFPA	United Nation's Population Fund
UNICEF	United Nation's Children Fund
WB	World Bank
WHO	World Health Organization
WMO	Woman Medical Officer

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1 INTRODUCTION AND BACKGROUND

Every year around 8 million children die of preventable causes, and more than 350,000 women die from preventable complications related to pregnancy and childbirth. If the gaps in service delivery are bridged, the gains can be enormous. Reaching the targets for MDG 4 (a two-third reduction in under-five mortality) and MDG 5 (a three-quarters reduction in maternal mortality and universal access to reproductive health) would mean saving the lives of 4 million children and about 190,000 women in 2015 alone.¹

The health status indicators of Pakistan are poorer than most low-income countries, even when compared with countries having a lower Gross National Product per capita. The percentage of total government health expenditure in relation to Gross Domestic Product in Pakistan is also much lower than many developing countries. While the health of the population in Pakistan has improved over the past decades, the rate and level of improvement has been unsatisfactory

Contributing factors include poverty, low levels of literacy and lack of civic facilities such as proper sanitation and water. More importantly, however, there are weaknesses in the healthcare delivery system including insufficient focus on preventive interventions, gender imbalances, weak human resource development and insufficient funds. Since the country's independence, there have been considerable improvements in the health indicators. One example is that the infant mortality rate (IMR) has decreased from over 150 in the 1950s to 82 in 2002. Unfortunately, a corresponding decrease in newborn mortality rate (deaths under one month of age) has not been achieved. The newborn mortality rate now constitutes more than half of all infant deaths. Likewise, maternal mortality ratio (MMR) is believed to have declined considerably since independence and is estimated to range between 350-400 maternal deaths per 100,000 live births. Contraceptive prevalence rate has shown a slow and steady increase over the most recent time period (1980 and later), although the increase in the use of traditional methods and condoms is higher than that of other temporary methods. Surgical sterilization still seems to be the method of choice for women having five or more births already. Total fertility rate (TFR) has shown a steady decline over the last two decades, which some scholars consider to be as remarkable as that in the East Asian countries where the demographic transition is near completion. Nonetheless, overall progress in maternal, newborn and child health (MNCH) has remained unsatisfactory when compared with neighbouring countries, even though our IMR, MMR and newborn mortality

¹ The UN Secretary General's Global Strategy for Women's and Children's Health

rates are higher than those in India, Bangladesh and Sri Lanka. Responding to the need for a coherent, innovative, sustainable, reliable and cost-effective strategy in MNCH, the Ministry of Health commissioned its National MNCH Strategic Framework in April 2005. The vision of the strategic framework is “a society where no family suffers the loss of a mother or newborn due to preventable or treatable causes”. The Framework pledges to ensure availability of high quality MNCH services to all, especially the poor and disadvantaged. The Framework aims to improve the accessibility of high quality and effective MNCH services through development and implementation of sustainable provincial and district programmes, with the objective of achieving MDG 4 and 5. A majority of the maternal and early newborn deaths can be avoided by ensuring prenatal, natal, postnatal and newborn care and availability of Emergency Obstetric and Newborn Care (EmONC) services within reasonable travel distance. Under the proposed programme, health facilities at all levels will be strengthened and equipped to provide a comprehensive maternal and newborn health services package in an integrated fashion. In addition, all DHQs and a majority of THQs will be upgraded to provide comprehensive EmONC services. Similarly, all THQs and RHCs will be upgraded to provide basic EmONC services.

To address the needs of the National MNCH Programme, a PC-I was developed in 2006 to implement the strategic plan of the Programme in order to improve accessibility of quality MNCH services through development and implementation of an integrated and sustainable MNCH Programme at all levels of the health care delivery system. Under the proposed project, health facilities (DHQ, THQ and RHC) at all levels were to be strengthened and equipped to provide comprehensive emergency maternal, obstetrics and newborn care (CEmONC) at all DHQ and most of THQs and basic emergency maternal, obstetrics and newborn care (BEmONC) at all THQs and RHCs in an integrated fashion. The package would include prenatal, natal, postnatal and newborn care, medical treatment of common female illnesses, routine infant and child care, integrated management of childhood illnesses and referral and transportation services. The Programme aimed to ensure delivery of quality MNCH services in more than 7,000 health facilities involving over 15,000 healthcare providers.²

Quality services are contingent upon continuous and uninterrupted supply of medical equipment and drugs/medicines needed to be made available at all service outlets of the Programme. Timely procurement of quality medical equipment, drugs/medicines and general goods (like IT equipment, furniture and electronic items) is considered crucial for the MNCH

² National Maternal, Newborn and Child Health Programme Communication Strategy Framework for Pakistan
Published: July 2009

Programme to ensure delivery of quality services at all levels of the Programme. Timely availability and quality assurance of goods are highly important factors that need to be addressed during the procurement process. Supply and acceptance of inferior quality goods will not only affect the performance of other components of the Programme (like EmONC) services but may also lead to financial loss and audit observations. One of the most significant steps to ensure the quality of goods to be purchased consists of development of clear and well-defined specifications. Development of standard specifications in the procurement process is one of the critical requirements explained under Rule 10 of the Public Procurement Rules-2004

During the procurement capacity assessment of the MNCH Programme which was conducted by TRF in October 2009, it was identified that PC-I of the MNCH Programme provided lists of goods, drugs/medicines and medical equipment to be purchased by the Programme on yearly basis as per requirement but it did not provide detailed and generic specifications of the items. Based on an assessment report, a Procurement Capacity Strengthening Plan was developed and one of the conclusions and recommendations was that the MNCH Programme was in need of a detailed generic and standard specification for all the items listed in the PC-I.

The Technical Resource Facility (TRF) is a five year project, funded by UKaid from the Department for International Development (DFID) and the Australian Agency for International Development (AusAID). TRF supports improvements in the policies, strategies and systems and helps to build the capacity of the government at provincial and district levels by providing strategic and result oriented technical assistance (TA). The purpose of the TA is to help the government achieve its goal of improving people's access to quality health care services thereby improving their health, with focus on poor people and marginalised groups.

The TRF initiated assistance to the National MNCH Programme for designing and development of specifications of medical equipment, drugs / medicines and general items. The services of two consultants (Biomedical Engineer and Pharmacist) were hired for this assignment. The scope of work and work plan were developed in consultation with National MNCH Programme and the consultants were required to carry out two major assignments i.e. (i) analysis of the current situation in terms of list of items, specifications and level of satisfaction of the end users and (ii) development of detailed standard specifications of final list of items.

2 OBJECTIVES

Overall objective of the TA assignment was to design detailed generic specifications of medical equipment, drugs/medicines and general items for the National MNCH Programme, however prior to developing specifications, a detailed, situational analysis of the MNCH Programme was required to:

- review the specifications already prepared by the National MNCH Programme;
- visit the provincial and Special Areas (Gilgit-Baltistan, AJK and FATA) offices of MNCH Programme and facilities at selected districts to ascertain the comprehensiveness of listed items in the PC-I for anticipated service delivery;
- get the viewpoints of actual users / service providers in the field about the existing list of supplies of MNCH Programme, their level of satisfaction and to obtain suggestions on addition / deletion of any item.
- identify and understand the issues and risks in the field regarding existing specifications of MNCH supplies that affect the implementation of Programme activities.
- develop a situational assessment report, indicating detailed analysis of the existing situation, issues and risks and recommendations for mitigation.

The situational analysis report will be followed by detailed generic / standard specifications of existing medical equipment, drugs / medicines and general items listed in the PC-I of National MNCH Programme and those additional items suggested by the field staff / service providers for the consideration of the Programme.

3 METHODOLOGY

A methodology was developed for the assignment and following sources were made use of to assess the practicability of enlisted equipment, drugs / medicines and general items listed in PC-I vis-à-vis their rationale to the mandated services to be provided under MNCH Programme and the appropriateness of preliminary specifications in relation to needs.

- (i) Review / study of documents, relevant to the assignment, i.e:-
 - PC-I to understand the needs and provision of resources;
 - PPRA guidelines;
 - technical specifications developed by UNICEF; and
 - Standard procurement specifications of various district governments.

- (ii) Meetings with programme officials at national, provincial and Special Areas levels;
- (iii) Meetings with clinical service providers not directly working under MNCH Programme i.e. paediatricians, gynaecologists and obstetricians, anaesthesiologists, pathologists, pharmacists and procurement officials in public sector organisations;
- (iv) In the MNCH Programme, one district in each province and Special Areas was selected for conducting interviews of service providers and managers, responsible for implementing MNCH Programme objectives. Care was taken in selection of districts, facilities and interviewees to include only those who were equipped with MNCH related products and the service providers were fully involved in providing MNCH services. Rationale behind this selection was to extract maximum information from limited number of facilities and service providers to understand the products and their standard specifications, obtain suggestions (if any) about deletion / addition of any item(s) and / or change in the specifications with sound justification and identify issues related to the specifications which would be followed by a development of comprehensive lists of needs.
- (v) Since the sample data set was small, two separate questionnaires (Annexure I & II) were developed for medicines / drugs and medical equipment / general items respectively with relevant questions / information to assess the above situation and ensure uniformity and quality of the data.
- (vi) The geographical areas which were assigned for situational analysis, broadly covering the entire country, are as under;
 - Provincial MNCH office Sindh and one district,
 - Provincial MNCH office Balochistan and one district,
 - Provincial MNCH office Punjab and one district,
 - Provincial MNCH office Khyber Pakhtunkhwa and one district,
 - Provincial MNCH office Gilgit-Baltistan and one district,
 - MNCH office Azad Jammu and Kashmir and one district,
 - MNCH office FATA at Peshawar
 - Federal MNCH Office at Islamabad.
- (vii) The main stakeholders for receiving, using equipment and prescribing drugs are the end users. Their technical and/or clinical usage input was considered vital for the situational analysis and thereafter, for development of specifications. It was, thus, important to select all service providers who are involved in the chain of service delivery and implementation

of EmONC services. Following specialists / service providers were selected for interview at each facility as they are the end users and directly responsible for delivery of MNCH mandated services;

- Obstetrician / Gynaecologist / Woman Medical Officer,
- Paediatrician / Neonatologist / Medical Officer in charge,
- Anaesthetists,
- Pharmacist / Medical Store In-charge,
- Nurses / LHV / CMW,
- Pathologist / Lab In-charge

4 FIELD ASSESSMENT

Based on the above mentioned criteria for selection of health outlets and service providers, the districts in each province and Special Areas were identified after consultation with the Provincial Programme Managers. A work plan (Annexure III) was developed, conferred with and endorsed by the National Programme Manager for visiting the provinces and communicated to all concerned, by the National Programme Manager.

As part of the assignment, the team proceeded for field assessment using questionnaires to analyse the situation. The strategy was to first visit the provincial and Special Areas programme offices and then proceed to the identified districts with any of the relevant staff members as a liaison officer. Despite the fact that the facilities and the service providers were thoughtfully selected, many gaps, particularly in human resources, were identified at different levels of service delivery points which adversely affected the overall objectives of the Programme. Specialists' positions were lying vacant or inadequately filled by untrained / under qualified persons that reflected during the interview and the team felt hindrances in receipt of essential input that lead towards inconsequential data extraction from the field. These gaps were evident in each province / district visits, as seen in the tables in Annexure VI largely due to missing specialists. All the available service providers interviewed had little or no knowledge of standard specifications and were neither oriented to do so nor had contributed but most were fully versed with the clinical use of equipment and medicines. Only MNCH offices at Punjab and AJK had involved specialists of teaching hospitals to amend and upgrade specifications already prepared by National MNCH Programme that were shared with the team. The already available specifications are value added which will be consulted in developing detailed technical/standard specifications.

MNCH being a global issue, numerous studies have been conducted and documents produced. Data size expected from the selected facilities, though significantly informative, was considered statistically insignificant. A theoretical review of relevant studies by the WHO, UNICEF, UNFPA

and WB, was also conducted. The study considered most relevant considered was “Packages of Interventions for Family Planning, Safe Abortion Care, Maternal, Newborn and Child Health” which played significant role in finalisation of list of equipment and drugs.

During field assessment, the team visited all provinces and Special Areas (except Gilgit-Baltistan) and concerned districts and held meetings / interviews with the management staff and service providers of the National MNCH Programme. List of staff which the team met is in Annexure VII. Discussion points are briefly described as under:

4.1 Sindh

Outcome of the discussions

Reservation was shown by the Provincial Programme Manager over the fact that they were not consulted during the development of existing specifications. The Manager desired the input of the staff to be given due consideration in revision of specifications.

There were gaps in requirements, which were necessary to fill for the service delivery ranging from human resource deficiency and inability of the staff to make use of the available resources e.g. non usage of incubators donated by an agency of the United Nations which were lying packed in stores for quite some time due to the reason that no application training had been given to the relevant staff at DHQ hospital. Clinical staff was not familiar with the specification of equipment, they had no formal training in raising demands with specifications for equipment and medicines and relied on their clinical and practical experience to demand goods from usage point of view without resorting to any detail in specifications. Service delivery was 24/7 but not 30 days a month as the service was hampered due to unavailability of staff, equipment or medicines. THQ hospitals were comparatively better resourced than DHQ hospitals and even the doctors at RHC were keen to perform 24/7 services which was not possible due to unavailability of resources including equipped operating rooms and staff.

4.2 Balochistan

Outcome of the discussions

There were no reservations shown on the specifications at provincial programme level. Visit to Bolan Medical Complex was much informative and detailed discussions were carried out with end users who were delivering MNCH mandated services on 24/7 basis, being a tertiary level facility. Major deficiency pointed out was unavailability of para-medical staff and irregular supply of medicines to perform the services. The provincial programme office

purchased various medicines in bulk, as per PC-I 's list, through provincial governments rate contract, negotiated tendering procedures and distributed among the districts according to their requirement. The team intended to visit any district and health facilities for getting feedback on the equipment and medicines, however the local authorities of MNCH Programme informed them of the security risks and advised not to move outside the terrain of secured places.

4.3 Punjab

Outcome of the discussions

Provincial Programme office, Punjab was keen to go through available specifications and suggested, after consultation with senior consultants of various teaching hospitals in Lahore, modifications to the specifications of medical equipment and medicines of National MNCH Programme. They also adopted standard specifications of additional equipment considered vital for delivery of services from Price Vocabulary Medical Stores list. The modified and extended list was shared with the team, which will definitely be useful and will serve as a reference document for finalisation of standard and technical specifications of goods for the National MNCH Programme. Punjab is also taking advantage of provincial governments rate contracts for procurement of medicines and purchased bulk supplies for the districts. Visit of the team to district Gujranwala was productive as the panel of consultants had the opportunity to see the facility running 24/7 with full backup of medical equipment, medicines and the staff members were fully aware of the needs and necessities. However, during the visit to THQ hospital Kamonke, the team observed multiple issues related to service delivery due to the unavailability of gynaecologists, paediatricians and paramedical staff. Though, the former Women Health Project of Ministry of Health had adequately equipped the facility for CEmONC but human resource issues deprived the masses of basic health facilities at Kamonke.

4.4 Azad Jammu and Kashmir

Outcome of the discussions

MNCH Programme office at AJK had also assessed the needs of equipment and medicines in consultation with AIMS's consultants and had purchased accordingly for the Programme. Though the purchased items didn't match with list of Programme's PC-I, however these were aligned to the essential AJK drug list. During interviews and discussions, it was revealed that the service providers had no orientation or knowledge about the standard specifications and were never contacted by the Programme for this purpose. They were only

familiar with brand names of medicines and medical equipment in relation to their clinical usage.

4.5 Federally Administered Tribal Area

Outcome of the discussions

The team visited MNCH FATA office located in Peshawar and obtained relevant information. The team also intended to visit the nearest district / tribal area but the concerned authorities warned them about the security risk as the situation in FATA is much volatile and any movement in the area without permission would be dangerous. Therefore, the team couldn't visit any of the health facilities in the FATA area; however, the officers of the above mentioned offices were called to the MNCH FATA office, Peshawar, and were given questionnaire. The feedback received would then be incorporated to finalise this report which would be used further for developing technical/standard specifications.

4.6 Khyber Pakhtunkhwa

Outcome of the discussions

The MNCH provincial office had no comments on the available specifications of the goods. They procured medicines and medical equipment from the government of KP's approved firms which were qualified per provincial government's rate contracts procedure. During visit to DHQ hospital Nowshera, one of the identified districts, the team observed that the hospital had rendered out services in recent floods and was in a state of rehabilitation. THQ hospital Pabbi was effectively operating as a DHQ level hospital. RHC was also in despair due to floods with no equipment, furniture and medicines. The service providers were apt in application and clinical use of equipment and medicines but had no orientation or knowledge of standard specifications and were never involved in any such activity. Staff issue was again observed here as well. Consequently, anaesthesia in the busy THQ hospital was being administered by a technician.

4.7 Gilgit-Baltistan

As per the approved work plan and itinerary, the team was supposed to visit Gilgit-Baltistan for assessing the existing situation and getting a feedback about the standard specifications. But despite several attempts, the team was unable to fly to GB due to either unclear weather conditions or unavailability of seats. Moreover, Eid holidays during scheduled dates also hampered the visit plan. However, the questionnaires were sent to the MNCH Programme Coordinator to gather data / information from service providers but no

response was received even after repeated telephonic reminders.

Service providers at each facility suggested some additional medicines and medical equipment, not catered to in the PC-I's lists, which were deemed necessary to meet the challenging situation in MNCH services and to achieve MDGs 4 & 5. The suggested medicines, medical equipment and general items along with brief specifications are enlisted against each facility at Annexure VI. This list was consolidated and rationalised in line with the MNCH mandated services and WHO standards and the final list of existing as well as additional suggested items was prepared and is available at Annexure IV & V. Detailed specifications of these items are to be developed separately in the form of a catalogue.

5 ANALYSIS

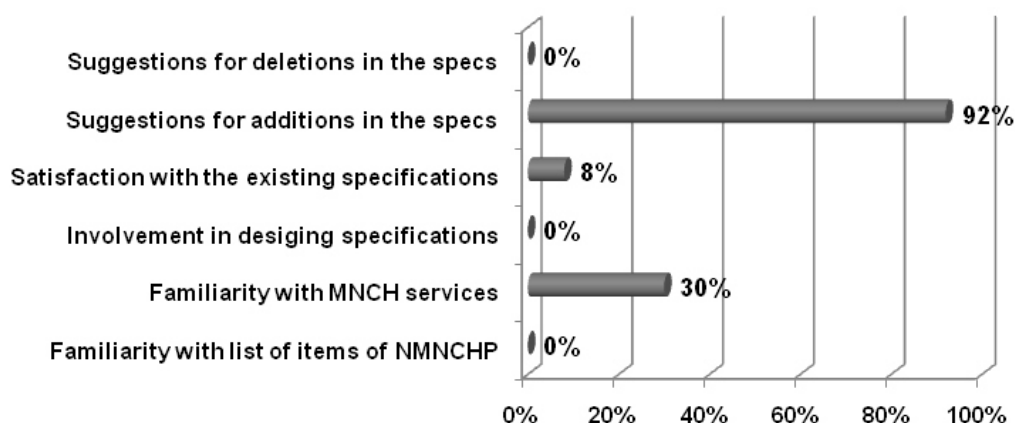
Total 53 service providers were interviewed across the country and basic information relevant to the task were obtained through prescribed questionnaire. None of the members reported as having ever been involved in designing / developing standard specifications of medicines, medical equipment and general items, though they had some knowledge about the products but only restricted to usage and brand identification. Majority of interviewees were not fully satisfied with the existing specifications listed in the PC-I of the Programme. During discussion with the field staff, the team didn't receive any single proposal for deletion of any item from the existing list; however, based on their practical experience, most of the service providers suggested additions in the list and an improvement in the specifications. This feedback can further be elaborated as:

- None of the service providers has suggested deletions from the existing list of items, however almost all had desired an improvement in the specifications.
- 92% of the service providers have suggested additions in list of drugs / medicines listed in the PC-I of the National MNCH Programme with different strengths and forms / dosage.
- Only 8% of the service providers were satisfied with the existing specifications but they couldn't justify as to why they were satisfied. The additional drugs list would be reviewed technically with WHO Essential Drug List, National Essential Drugs List and WHO Treatment Intervention for MNCH.
- 92% of the service providers were not satisfied with the existing specifications of drugs / medicines listed in the PC-I of the Programme and stressed on the

improvement and designing of detailed standard specifications for ensuring quality products.

- The team received almost 100% unsatisfactory response from the service providers about specifications vis-à-vis knowledge of medical equipment and drugs / medicines. They were hardly oriented or involved in the past in developing technical and standard specifications.
- Only 30% were familiar with the MNCH services, whereas rests of 70% service providers were either partially aware or totally unaware about the mandated services.
- Almost all the interviewed members were not totally familiar with MNCH items listed in the PC-I of the Programme,

Below bar chart summarises the outcome of interviews and responses of service providers:



The pharmacists, custodians of drugs / medicines, were available only in Punjab at DHQ and THQ hospital level and in Khyber Pakhtunkhwa, Sindh, FATA, Balochistan and AJK at tertiary hospital level but were not involved in the development of generic specifications. Mostly dispensers or storekeepers were assigned the task to get involved in drug management. The facilities visited had no proper storage facility for drugs / medical / surgical supplies. The storage conditions did not meet even the satisfactory standards for assuring the maintenance of quality of drugs. There was no concept of environmental control particularly with reference to basic factors like heat, humidity and light controls which could result in a chemical and physical degradation of drugs. An acute shortage of drugs was observed in all the health facilities related to MNCH with some positive picture in Punjab only but with improper storage facilities. Though majority of drugs required were common in all

provinces, there were some specific requirements, which varied from area to area depending on the disease prevalence pattern. There was inadequate availability of drugs for children in the health facilities visited throughout Pakistan. The drugs for women and children are supplied through National MNCH Programme and by the Provincial Health Departments. Both these sources were inadequate. As a result the minimum requirements of the facility were not met.

As discussed, during the situational assessment of the National MNCH Programme, The team received suggestions from the service providers for inclusion of numbers of drugs including antibiotics, anaesthesia and painkillers which would be reviewed in light of WHO preventive / treatment interventions for women and children's health and National / WHO Essential Drugs List. It was also observed that the performance indicators for National MNCH Programme didn't include any indicator which could assess the availability of efficacious and quality drugs in the health facilities; hence the system was deprived of one of the major components of public health services. Though WHO and other international health agencies recommend induction of pharmacists in the drug supply management system for handling such vital aspects of selection, development of standard specifications, procurement, distribution and use of drugs, but the PC-I of National MNCH Programme does not provide the post of pharmacist at any level of the Programme.

With the piecemeal information from service providers and review of available services envisaged at CEmONC and BEmONC facilities vis-à-vis their requirements, rationalised lists (Annexure IV & V) of medicines / drugs, medical equipment and general items were prepared which addressed the comprehensive needs of MNCH mandated services.

6 ISSUES AND RISKS

6.1 All facilities that were visited had acute shortage of clinical and support staff and supplies i.e. gynaecologists, neonatologists (almost non-existent), anaesthetists, pharmacists, nurses, midwives, essential drugs, medical supplies and equipments. There was also a mismatch of staff, facilities and resources. Available resources were not fulfilling the demand of even a single facility, the clear reason being spread of National MNCH Programme countrywide without considering resources, both human resource and physical assets. Some facilities were adequately equipped for CEmONC but lack of human resources and knowledge about the usage of equipment was hampering the MNCH services.

Reengineering the whole programme by simply upgrading carefully selected facilities to CEmONC and BEmONC as model facilities and orientation of service providers regarding specifications of items in relation to assessment of their own need of service deliveries could boost up the performance very prominently. Thereafter, replication of same models in other facilities would have far reaching effects rather than the current models where even if all physical needs were met, lack of human resources and awareness of specifications would not make the desired grades at these facilities.

- 6.2 Due to unavailability of detailed specifications and guidelines for use, various items procured by the Programme, were found lying packed at different health outlets without being used. The reasons being that the items were selected without proper information about field requirements and lack of familiarity of service providers regarding the usage of the equipment.
- 6.3 Alongside technical and financial support by DFID and AusAID, the National MNCH Programme is also supported by other development partners such as UNICEF, Save the Children, UNFPA, USAID and WHO. There is more duplication than complimenting of resources being provided by the development partners due to lack of coordination among the partners and within the National MNCH Programme. None of the development partners have worked on improving and upgrading the existing specifications of goods of National MNCH Programme, which may lead to wastage of time and money. DFID and AusAID have initiated support for the Programme through TRF to develop detailed specifications and guidelines.
- 6.4 The majority of the service providers did not know much about the MNCH and could not explain the CEmONC and BEmONC services. Though the Programme Managers at provincial offices were fully aware of the enlisted items and Punjab had conducted exercises to upgrade the preliminary equipment specifications prepared by the National MNCH office by involving consultants from tertiary care facilities and had provided some input while AJK shared lists of medicines and their specifications using AJK's standardised list of drugs, none of the service providers in the field knew about the medical equipment, medicines / drugs and general items enlisted in the PC-I. The service providers were not involved in any exercise related to development of generic specifications of drugs and equipments and most of them had limited knowledge of generic specifications of goods.

Most of the service providers only knew brand names of items and nomenclature of the equipment in general and very few knew about the generic names of drugs, their strength / formulation / packaging details and technical parameters. This necessitates development of generic standard specifications in order to procure quality items.

- 6.5 The demands raised by the service providers sometimes were not coordinated with the mandated services being provided at the facility or his / her expertise. A doctor at RHC demanded medicines and equipment to perform caesarean whereas no proper operation theater with anaesthesia facility was available at the health outlet (RHC). Similarly, ventilators with parameters / specification were demanded whereas qualified anaesthetists were not available to perform invasive ventilation.
- 6.6 Vital components of specific needs of items and its quantity assessments in the fields are missing that ensures adequate provision and utilisation of material resources.
- 6.7 The equipment and medicines being provided through the National MNCH Programme were duplicating the annual supplies made through provincial health department and are being used interchangeably outside MNCH mandate and vice versa without monitoring systems in place to ensure usage within mandated programmes.
- 6.8 Despite dual source, widespread initiation has rendered the Programme ineffective due to meager resources. Provision of material resources is the focus. There is no human resource development and where it is being addressed through CMW project, the qualifying CMWs are left with no jobs or stipend to work as productive members of the community. They are in fact, adding to quackery.
- 6.9 The medicines / drugs being supplied lack proper storage facilities at health units and result in loss of efficacy during storage.
- 6.10 There was no concept of preventive maintenance of equipment at any of the facilities visited, while maintenance services even at provincial levels were non-existent in the public sector. Even the major equipment suppliers have offices at provincial headquarters and for them provision of services for small equipment at remote sites is hardly feasible. PC-I does not cater to any biomedical technicians and neither do the provincial health services have any provision for them. Hence, if service provision is not catered to, the equipment is

likely to go out of service soon for want of minor service needs. Care will be taken to keep the specification simple so that the user can prevent faults by routine maintenance and fix minor problems in-house with minimal application training.

Although, the reach of the National MNCH Programme is widespread, it will fail to achieve its desired objectives if the gaps, which are directly or indirectly linked to the standard specifications, are not properly addressed and mitigated. Even if ample medicines / drugs and medical equipment are supplied, facilities are not geared to manage and use the inventory, as human resources, knowledge of proper use and storage facilities are non-existent. Even if the appropriately specified equipment is supplied, utility connections, application training and maintenance services are non-existent and even if all the above is addressed to, appropriately trained human resource to run MNCH clinical programmes is scarce.

7 RECOMMENDATIONS

- 7.1 It would be wise as a first step to do a thorough HR capability assessment of facilities, fill the gaps if possible, then do need assessments as there are many sources like MNCH, Provinces and number of NGOs trying to bridge the gaps. MNCH should only bridge the gaps in needs based on the capability of the facility to handle the service to be provided.
- 7.2 Instead of starting MNCH services in many districts, one district or facility from each Province should be selected as a model for MNCH services focusing on maximum finances and resources at the selected district / facility, training of service providers in identification and usage of medicines / drugs and medical equipment, developing it into a state of the art facility, subsequently extending this programme to other facilities in the Province. MNCH Programme should focus on developing a pilot project first that is to be followed.
- 7.3 Awareness programmes in areas of rational prescribing, identification and selection of goods, developing standard specifications, good storage practices, good pharmaceutical procurement practice for the concerned personnel should be devised to improve the performance standards of MNCH services through seminars, workshops focusing on training of prescribers, paramedics, drug managements personals etc. A formulary for MNCH Programme should be developed for providing accurate and authentic prescribing information for rational prescribing especially in case of infants and children that presents a unique set of challenges to the prescribers.

7.4 Both, at federal and provincial level, pharmacists should be placed for active participation in developing and reviewing specifications, supply chain management of medicines and for the facilitation of prescribers in their prescription.

7.5 For equipment, emphasis should be given on mandatory provision of application training by suppliers and attendance of application training and consultation of user manual by end users till expertise is developed in usage of equipment. Preventive maintenance responsibility should lie with the end user. No untrained person should use the equipment specifically where life is threatened by improper use of equipment.

This is where demand for equipment also necessitates scrutiny of capability of the end user.

7.6 For maintenance of equipment, it is not feasible for the supplier to provide services for small equipment in far flung areas where the cost of service provision is more than the cost of equipment itself. At the time of bulk purchase, the procuring agency should negotiate successfully with the firm and incorporate in the contract document, logistics arrangement for transport of equipment to service points, after sales services and provision of replacement of damaged equipment. The Programme should have at least one biomedical engineer at provincial level to address service issues on their equipment and should train him with full backup of technical literature and parts.

All the above necessitates proper attention to be given while addressing fulfilment of demands from facility / service provider by:

- Capability assessment reconciled with need assessment;
- Enhancement of capability through need assessment;
- Ensure availability of right items in the right quantity, at reasonable price and at a recognised standard of quality achieved through well defined generic specifications;
- Assessment of complete requirement of medicines / drugs, medical equipment & general items for MNCH mandated services' delivery along with development of their well defined generic specifications would be addressed under the assigned TOR. A specification catalogue would be developed; and
- The catalogue will then be presented to the stakeholders in an orientation workshop that will also focus on the development of consensus on the generic specifications between the stakeholders.

Annexure I: Questionnaire related to drugs and medicines

Questionnaire (To be filled in by the person who would be interviewed or with the help of interviewer)

A: Basic information

Name / Level of facility_____	Date_____
Name of In-charge _____	Name of Interviewee _____
City / Town. _____	Designation_____
District_____	Experience with MNCH_____
Province _____	Years of experience_____

1. Are you fully aware about the list of drugs/medicines of National MNCH Programme?	Yes / No / Partially aware
2. Are you familiar with the MNCH mandated services being provided in the field?	Yes / No / Partially familiar
3. If yes or partially familiar, what are the basic and comprehensive services?	
4. When were MNCH services started in this facility?	
5. Have you ever been involved for designing/development of specifications of medicines / drugs?	Yes / No
6. Do you know what types of Medicines / Drugs are required for your facility?	Yes / No
7. Do you have a detailed list of medicine / drugs required for your facility?	Yes / No
8. Do you have the written criteria / SOPs for designing / development of specifications of medicines / drugs?	Yes / No
9. Do you have professional services of qualified pharmacists for designing / development of specifications of medicines / drugs in your facility?	Yes / No

B: List of Drugs / Medicines given in the PC-I of MNCH Programme and their use at the facility level.

Sr. No.	Name of Medicine/Drug	Specification Given in the PC-I	Usage at the Facility Level			
			DHQ	THQ	RHC	BHU
For Mother						
1	Amoxicillin	Capsules 500mg				
2	Amoxicillin	Capsules 250mg				
3	Amoxicillin	Injection				
4	Metronidazole	Tablets 400mg				
5	Metronidazole	Tablets 200mg				
6	Metronidazole	Injection				
7	Ciprofloxacin	Tablets 500mg				
8	Ciprofloxacin	Tablets 250mg				
9	Ciprofloxacin	Injection				
10	Dexamethasone	Tablets				
11	Dexamethasone	Injection				
12	Adrenaline (epinephrine)	Injection				
13	Aminophylline	Injection				
14	Atropine sulfate	Injection				
15	Calcium gluconate	Injection				
16	Digoxin	Injection				
17	Diphenhydramine	Injection				
18	Dopamine	Injection				
19	Frusemide	Tablets 40mg				
20	Frusemide	Tablets 20mg				
21	Frusemide	Injection				
22	Insulin	Injection 7/30				
23	Naloxone,	Injection				
24	Glucose (5%, 10%)	Not Mentioned				
25	Normal saline	Not Mentioned				
26	Ringers lactate	Not Mentioned				
27	Magnesium sulphate	Injection				
28	Nifedil	Capsules				
29	Methyldopa	Tablets				
30	Adalat	Capsules				
31	Ergometrine	Injection				
32	Oxytocin	Injection				
33	Diclofenac	Tablets				

34	Diclofenac	Injection				
35	Salbutamol,	Tablets				
36	Salbutamol	Injection				
37	Heparin	Injection				
38	Sodium citrate	Not Mentioned				
39	Thiopentone	Injection				
40	Pancuronium / atracurium / vecuronium	Not Mentioned				
41	Lignocaine	Not Mentioned				
42	Propofol	Injection 50 ml				
43	Propofol	Injection 20 ml				
44	Neostigmine	Injection				
45	Syringes	Not Mentioned				
46	Surgical Cotton	Not Mentioned				
47	Gauze	Not Mentioned				
48	Bandages	Not Mentioned				
For Child						
49	Amoxicillin	Oral Suspension				
50	Metronidazole	Oral Suspension				
51	Metronidazole	Injection				
52	Benzyl penicillin	Powder for Injection				
53	Cloxacillin	powde oral use 125mg				
54	Gentamicin	Injection				
55	Dexamethasone	Injection				
56	Chloroquine	Syrup 50mg				
57	Pyrantel	oral suspension 50mg				
58	Diazepam	Injection 5mg/ml, 2ml amp				
59	Mag: sulphate	Injection				
60	Phenobarbital	Tablets 15-100mg				
61	Dextran 70*	Injectable solution				
62	Polyvidone iodine	10% Solution				
63	Oral Rehydration Salt (ORS)	Not Mentioned				
64	Glucose (5%, 10%)	Not Mentioned				
65	Normal saline, retinol drips	Not Mentioned				
66	Zinc Sulphate	Tablets /syrup				
67	Misc (Vit B, Iron Supplements, Folic Acid)	Not Mentioned				
68	Halothan	Inhalation				

69	Nitrous Oxide	inhalation				
70	Lidocai+ne	Injection				
71	Ephedrine	Injection 30mg				
72	Paracetamol	Syrup				
73	Sevoflurane	Not Mentioned				

Are you satisfied with the present specifications of medicines / drugs given in the PC-I?	Yes / No
If NO, what are the reasons? (use separate sheet if required)	
Any suggestion for improvement in the current specifications	Annex I
Do you suggest deletion of any drug / medicine from the above list?	Yes / No
If yes, what are those drug(s) / medicine(s)?	
Please describe valid reasons / justifications for deletion? (use separate sheet if required)	
Do you suggest addition of any MNCH related medicine/drug in the above list?	Yes / No
If yes, what are those drug(s) / medicine(s)?	Annex-II
Please describe valid reasons / justifications for inclusion?	Annex-II
What should be the specifications of additional medicines/drugs?	Annex-II
What is the ratio (%wise) of supplies of medicines to your facility?	
Are the medicines/drugs meeting the community requirement in terms of quality of specifications?	Yes / No
Have you ever faced any problem due to specifications of medicines / drugs?	Yes / No
If yes, what are those medicines / drugs and describe about the type of problem(s)? (use separate sheet if required)	
How did you resolve the problem(s)? (use separate sheet if required)	
Have you ever received any complaint from the community regarding any medicine/drugs due to specifications?	Yes / No
If yes, what are those medicines / drugs and describe about the type of complaint(s)? (use separate sheet if required)	
How did you respond to the complaint(s)? (use separate sheet if required)	
Do you maintain a record of complaints regarding specifications and the action taken to resolve the problems?	Yes / No

Signature of the Interviewee

Annexure II: Questionnaire related to equipment and general items

(To be filled in by the person who would be interviewed or with the help of interviewer)

Name / Level of facility _____	Date _____
Name of In-charge _____	Name of Interviewee _____
City / Town. _____	Designation _____
District _____	Experience with MNCH _____
Province _____	Years of experience _____

1.	Are you familiar with National MNCH Program and its mandate?	Yes / No / Partially
2.	Are you familiar of the MNCH mandated services to be provided from your facility?	
	i. Basic	Yes / No / Partially
	ii. Comprehensive	Yes / No / Partially
3.	When were the MNCH services attached to the facility?	
4.	Do you have a detailed list of items and do you know what types of items are authorized for your facility under MNCH Program?	Yes / No / Partially
5.	Are you familiar with the current specifications of the equipment?	Yes / No / Partially
6.	If yes, are you satisfied with the specification?	Yes / No / Partially
7.	If no, what additional parameter is desired in the equipment	Annexure I
8.	Were you ever involved in the development of specifications of these equipments?	Yes / No / Partially
9.	Are you satisfied with the quality of equipment procured against the current specifications in meeting the clinical needs	Yes / No / Partially
10.	If no, where is the deficiency?	Quality / After Sales Service / Consumable availability / usability
11.	Do you want to add any equipment / medical supply / general item in the list for your facility?	Yes / No
12.	If yes, name and give the specification of the item	Annexure II

List of Medical Equipment and General Items in PC-I earmarked for various level of facilities.

List of Equipment with Specification in PC-I	Specifications Required	DHQ with Comprehensive Services	THQ With Basic Service	THQ / DHQ with WHP	RHC With Basic Services	BH U
Abdominal retractors, double-ended Richardson						
Adult Ambu bag and mask						
Anesthesia Machine						
Anesthetic face masks						
Artery forceps						
Artery forceps 7 inch						
Baby Cot (Simple)						
Baby Cot with heating Facility						
Baby Resuscitation Kit (Inclusive Of Unisuction Pump Emergency Cylinder With Regulator, Airways, Laryngoscope, Ambu Bag)						
Baby Warmenrs						
B P Apparatus Mercury Desk Type						
Blunt-ended scissors						
Chemistry Analyzer						
CTG Machine						
Counter (Cell)						
Curved operation scissors, 17cm						
Curved operating scissors, blunt pointed (Mayo), 17 cm						
D&C Instruments set						
Defibrillator						
Delivery Kits						
Dissecting forceps plain 7 inch						
Dissecting forceps, toothed						
Disposable Oxygen Mask						
Disposable Syringe Cutter						
ECG Machine						
Electric Instrument sterilizer 12x6						
Emergency medicine trolley						
Endotracheal tubes No. 3.5						
Epidural sets						
Examination Couch & light/lamp						
Examination lamp						
Fetal stethoscope						
Foetal Monitor						
General Instrument set						
Glucometer						
Gynae Instruments Set						
Height Measuring Device/ Board						

Hematology analyzer						
Hysterectomy forceps, straight, 22.5 cm						
Incubator (Lab)						
Infant Incubators						
Infant Ambu bag						
Infant B.P. Apparatus (cuff 2.5 cm)						
Infant face mask (2 different sizes)						
Infant laryngoscope						
Infusion pump						
Jar for forceps						
Laryngoscopes						
Long straight artery forceps						
Lumber puncture kit						
Mosquito forceps, 12.5 cm						
Mucus extractor						
Mumectomy Screw						
Nebulizer						
Needle holder						
Needle holder, straight, 17.5 cm						
Obstetric forceps						
Ophthalmoscope						
Oxygen cylinder complete with trolley & regulator						
Perineal/Vaginal/Cervical Repair						
Phototherapy Unit						
Portable Light & rechargeable batteries (OT)						
Pulse Oxymeter						
Rectangular instrument tray & lids						
Round-bodied Needles No. 12, size 6						
Scissors dissecting blunt pointed						
Screen folding complete						
Sim's Speculum right angle, large						
Sim's Speculum right angle, medium						
Sim's Speculum right angle, small						
Spin Machine (Centrifuge)						
Sponge Forceps						
Sponge Forceps 22.5 cm						
Spring type dressing forceps (ss)						
Steam Inhaler						
Sterilizing Drum						
Stethoscope Paediatric Littman Type						
Stitch Scissor						
Straight Artery Forceps, 16 cm						
Straight Operation Scissors, 17cm						
Straight operating scissors, blunt pointed (Mayo), 17 cm						

Suction apparatus electrically operated						
Suction Catheter C h 10						
Suction Catheter C h 12						
Suction Machine (for Infants)						
Surgical knife Blades						
Surgical knife Handle No.3						
Surgical knife Handle No.4						
Tissue Forceps, 19 cm						
Towel clips						
Triangular point suture needles, 7.3cm, size 6						
Ultrasound Machine						
Uterine Sound						
Uterine haemostasis forceps, 20 cm						
Vulsellum forceps						
Vacuum Extractor						
Weight scale Adult						
Weight scale Infant						
Water Distillation Unit						
X-Ray illuminator						
Furniture & Fixture						
Cabinet Instrument large						
Counter (Lab)						
Examination Table						
Fowler bed (Iron)						
Lab Cabinet						
Office Chairs						
Office Table with Drawers						
Patient Stool						
Plain Chairs						
Steel cabinet large						
General and IT equipment						
Split Air Conditioner						
Split Air Conditioner with Heating System						
Electric Water Cooler						
Power Generator 50 Kva (Diesel)						
Refrigerator 10 cu ft						
Room Thermometer						
UPS power supply system						
Computer System with accessories						
UPS for Computer System						
Printer Laser Jet						

Additional Requirement of Equipment other than those listed in PC-I

Electro-Medical Equipment

Name clinical service provided	Equipment available	Additional equipment desired	Broad specifications of desired equipment	Are you trained to use this equipment	Is the training formal or informal

Medical Supplies:

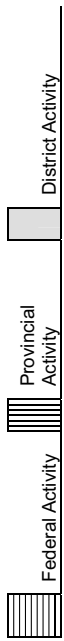
Name clinical service	Supplies available	Additional medical supplies desired	Broad specifications of medical supplies	Are you trained to use this device	Is the training formal or informal

General Items:

Facility infrastructure	Items Available	Items desired	Reason for demand	Broad specifications of items

Signature of the Interviewee

Activities	2010																																										
	Sept 2010									October 2010									November 2010																								
Inputs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
catalogue format	27	28	29	30	4	5	6	7	11	12	13	14	18	19	20	21	25	26	27	28	1	2	3	4	8	9	10	11	12	15	16	17	18	19	20	21	22	23	25	29			



 Federal Activity Provincial Activity District Activity

Annexure IV: Rationalised list of medicines

List of additional medicines / drugs required for MNCH Programme.

A	Generic Name of Drug
1.	0.45% Dextrose/Saline 0.18 Infusion
2.	1/5 Dextrose/Saline Infusion
3.	Accoran Injection
4.	Aluminium Hydroxide + Magnesium Hydroxide Suspension
5.	Amikacin Injection
6.	Amikacin Suspension
7.	Aminophylline Syrup
8.	Amlodipine Tablets
9.	Ammonium Chloride Syrup
10.	Amodiaquine Syrup
11.	Amoxicillin + Cloxacillin Suspension
12.	Amoxicillin Drops
13.	Amoxicilline + Clavulanic Acid Suspension
14.	Amoxicilline + Clavulanic Acid Tablets
15.	Ampicillin Injection
16.	Anthelmintic oral
17.	Antitetnus Toxide Injection
18.	Artemether + Lumifantrine Suspension
19.	Artemether + Lumifantrine Tablets
20.	Artemether Injection
21.	Artesunate Injection
22.	Azithromycine Syrup
23.	Azithromycine Tablets
24.	Beclomethason + Sulbutamol Inhaler
25.	Benzethin Benzyl Penicillin Injection
26.	Benzyl Benzoate Lotion
27.	Bisacodyl Suppository
28.	Bupivacaine Spinal Injection 7.5mg &5mg
29.	Calcium + Vitamin D Tablets
30.	Calcium Oral Supplement
31.	Captopril Tablets
32.	Cefaclor Drops
33.	Cefaclor Suspension
34.	Cefadroxil Suspension
35.	Cefepime Injection
36.	Cefepime Injection
37.	Cefixime Capsules
38.	Cefixime Suspension
39.	Cefixime Tablets
40.	Cefotaxime Injection
41.	Ceftazidim Injection
42.	Ceftriaxone Injection

43.	Cefuroxime Injection
44.	Cephalexin Drops
45.	Cephradine Injection
46.	Cephradine Suspension
47.	Cetizine syrup
48.	Chloramphenicol Eye Drops
49.	Chloroquine Injection
50.	Chloroxylenol Solution
51.	Chlorpheniramine syrup
52.	Clarithromycin Injection
53.	Clarithromycin Suspension
54.	Clotrimazole Vaginal Cream
55.	Clotrimazole Vaginal Tablets
56.	Cloxacillin Injection
57.	Co-trimoxazole Suspension
58.	Cough Syrup
59.	Dexamethasone oral Solution
60.	Diazepam Suppository
61.	Diclofenac Sodium + Misoprostol Tablets
62.	Dimenhydrinate Injection
63.	Dinoprostone Tablets
64.	Doxycycline Capsule
65.	Drotaverine Tablets
66.	Dydrogesteron Tablets
67.	Enoxaprin injection
68.	Etomidate Injection 2mg/ml
69.	Fentanyl Injection
70.	Ferrous Gluconate Tablets
71.	Ferrous Sulfate Syrup
72.	Frusemide Syrup
73.	Furazolidone Suspension
74.	Glucose 25%
75.	Glycopyrolate Injection
76.	Glycopyrolate+ Neostigmine Injection
77.	Heamaccel(polygeline- gelatin derivative) Infusion
78.	Hydralazine Injection
79.	Hydrated Phloroglucinol Trimethyl Phloroglucinol Injection
80.	Hydrocortisone Injection
81.	Hydrocortisone Injection
82.	Hyoscine Compound Tablets
83.	Hyoscine N Butyl Bromide Injection
84.	Hyoscine N Butyle Bormide + Paracetamol Tablet
85.	Ibuprofen Suspension
86.	Ibuprofen Tablets
87.	Ipratopium Bromide Solution
88.	Iron Sucrose Injection
89.	Iron-III Hydroxide Polymaltose Complex Syrup
90.	Isoflurane Inhalation

91.	Isosorbide Dinitrate Injection
92.	Ketamine Injection
93.	Kleen Enema Liquid
94.	Levonogestrel Tablets
95.	Lincomycin Injection
96.	Mafenamic Acid Suspension
97.	Mafenamic Acid Tablets
98.	Mebeverine Capsules
99.	Metoclopramide Injection
100.	Metoclopramide Tablets
101.	Midazolam Injection
102.	Mioflex Injection
103.	Misoprostol Tablets
104.	Montelukast Sodium Sachet
105.	Montelukast Tablet
106.	Nalidixic acid Suspension
107.	Nelbuphine Injection
108.	Normal Saline Nasal Drops
109.	Ofloxacin Tablets
110.	Paracetamol Drops
111.	Paracetamol Injection
112.	Paracetamol Suppository
113.	Pentothal Sodium Injection
114.	Pheniramine Maleate Injection
115.	Phenobarbiton Injection
116.	Phenytoin Injection
117.	Plabolyte M Infusion
118.	Potassium Chloride Injection
119.	Prednisolone Suspension
120.	Progesteron Injection
121.	Promethazine Injection
122.	Propranolol Injection
123.	Quinine Tablets
124.	Ranitidine Injection
125.	Ranitidine Syrup
126.	Ringolact D Infusion
127.	Salbutamol Inhaler
128.	Sidex Solution
129.	Sodium bicarbonate Injection
130.	Sodium Valproate Syrup
131.	Sulbutamol Nebulizing Solution
132.	Sulfadoxine+Pyrimethamine Suspension
133.	Suxamethonium Chloride Injection
134.	Suxamethonium Chloride Injection
135.	Tamoxifen Tablets
136.	Terbutaline Syrup
137.	Tinidazole Tablets
138.	Tobramycin Injection

139.	Tramadol Injection
140.	Tranexamic acid Capsules
141.	Tranexamic Acid Injection
142.	Vancomycin Injection
143.	Vitamin D3 Injection
144.	Vitamin K Injection
145.	Vitamin-C Drops
146.	Vitamin-D Drops
147.	Vitamin-K Drops

Additional surgical medical supplies

B	Items
1.	Baby Urine Bag
2.	Burette for Calculation of dosage
3.	Catgut
4.	Catheter
5.	Chromic Catgut 0,1,2
6.	Cord Clamp
7.	Disposable Oxygen Mask
8.	Disposable Syringes Insulin syringe 1cc, 3cc , 5cc,10cc, 20cc
9.	Endotracheal Tube
10.	Epidural Set
11.	Foley's Catheter
12.	IV Canulla No. 18, 20, 24
13.	IV Chamber
14.	IV Set
15.	N/G Tubes No.6, 8 & 10
16.	Prolene 2/0
17.	Spinal Needle 20G, 22G, 24G& 25G
18.	Sticking Plaster
19.	Suction Catheter 6, 8,10
20.	Suction Catheter Ch 10
21.	Suction Catheter Ch 12
22.	Surgical Blade
23.	Surgical Gloves
24.	Sutures
25.	Urine Bag
26.	Vicryl – 2
27.	Vicryl No. R/B

Annexure V: Rationalised list of equipment and general items

List of equipment and general items

1.	Manual Resuscitator Adult
2.	Anesthesia face masks
3.	Anesthesia Machine with Ventilator and two vaporizers
4.	B. P. Apparatus Mercury Desk Type
5.	Baby Cot (Simple)
6.	Baby Resuscitation Kit
7.	Blood / Infusion Warmer
8.	Blood Gas Analyzer
9.	Centrifuge
10.	Instrument Set - Caesarean Section
11.	Chemistry Analyzer
12.	Colposcope
13.	Counter (Cell)
14.	Emergency Medicine Trolley
15.	CTG Machine
16.	Defibrillator
17.	Delivery Kits
18.	Disposable Syringe Cutter
19.	ECG Machine
20.	Electric Instrument sterilizer 12 x 6
21.	Epidural sets
22.	Examination lamp Mobile with Battery Backup
23.	Fetal stethoscope
24.	Glucometer
25.	Height Measuring Device/ Board
26.	Haematology analyzer
27.	Haemoglobinometer
28.	Hygiene Kit
29.	Incubator (Lab)
30.	Infant Incubators
31.	Infant laryngoscope
32.	Infant Warmer
33.	Infusion pump
34.	Instrument Set - D&C
35.	Instrument Set - General
36.	Instrument Set - Hysterectomy
37.	Instrument Set - Laparotomy
38.	Instrument Set - Preparation
39.	Instrument Set - Suturing
40.	Instrument Set – Abortion Curettage
41.	Instrument Set – Cervical Biopsy and Small Vaginal Surgery
42.	Instrument Set – Circlage (Shirodkar)
43.	Instrument Set – Delivery Room
44.	Instrument Set – Labour Room

45.	Instrument Set – Perineal Protection
46.	Instrument Set – Placenta Set
47.	Instrument Tray
48.	Jar for forceps
49.	Jaundice Meter
50.	Kidney Dish
51.	Laryngeal Mask
52.	Laryngoscopes
53.	Lumber puncture kit
54.	Manual Resuscitator Infant
55.	Microscope
56.	Mucus extractor
57.	Nebulizer
58.	Obstetric forceps
59.	Operating Light Mobile with rechargeable batteries
60.	Ophthalmoscope
61.	Oxygen Concentrator
62.	Oxygen cylinder complete with trolley & regulator
63.	Phototherapy Unit
64.	Portable Rechargeable Light
65.	Pulse Oximeter
66.	Screen folding complete
67.	Steam Inhaler
68.	Sterilizing Drum
69.	Stethoscope Adult Littman Type
70.	Stethoscope Paediatric Littman Type
71.	Suction Apparatus Manual
72.	Suction Machine Electric
73.	Suction Machine for Infants
74.	Surgical Diathermy
75.	Syringe Pump
76.	Transport Ventilator Infant, Paediatric and Adult
77.	Ultrasound Machine
78.	Vacuum Extractor
79.	Vital Sign Monitor
80.	Water Distillation Unit
81.	Weight scale Adult
82.	Weight scale Infant
83.	X-Ray illuminator

	Furniture & Fixture
1.	Cabinet Instrument large
2.	Examination Couch
3.	Examination Couch Gynae
4.	Fowler bed
5.	Lab Cabinet
6.	Laboratory Counter
7.	Office Chairs
8.	Office Table with Drawers
9.	Patient Stool
10.	Plain Chairs
11.	Steel cabinet large
12.	Surgical Scrub
	General and IT equipment
1.	Ambulance
2.	Computer System with accessories
3.	Electric Water Cooler
4.	Power Generator 50 Kva (Diesel)
5.	Printer Laser Jet
6.	Refrigerator 10 cu ft
7.	Room Thermometer
8.	Split Air Conditioner
9.	Split Air Conditioner with Heating System
10.	UPS for Computer System
11.	UPS power supply system 1 Kva

Annexure VI: Information collected during visits

Sindh

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
Sindh Provincial Office, Karachi	Provincial Programme Manager		
DHQ Sanghar	Gynaecologist x 2	WMOs with experience in OBGY and working as Gynaecologist	<p>Medical Supplies: Surgical Gloves, Bandage / Gauze, Catheter, Catgut, Proline, Foly's Catheter, I/V Drip Set</p> <p>Medical Equipment: Surgical Diathermy.</p> <p>Drugs / Medicines: Venofer / Jectofer Injection, Ranitidine Injection, Tripim Injection 1gm, Hyzonate Injection 100mg, Rumin Tablets 400mg, Zatranex Injection, Flagyl Tablet 200mg</p>
	Paediatrician / Neonatologist	Paediatrician was on leave and MO in charge with 10 experience in Neonatology was available for comments	<p>Medical Supplies: I/V Canulla No.24, Plaster, I/V Drip Set, I/V Chamber, Disposable Syringes 1cc, 3cc & 5 cc</p> <p>Medical Equipment: Blood gas monitor, Baby Incubators, Baby Cots, Ward Furniture</p> <p>Drugs / Medicines: Paracetamol Syrup 120mg / 5ml, Glucose 10% 500cc, Cefotaxime Injection 250mg & 500mg, Adrenaline Injection 1cc, Solucartef Injection 100mg, Ringerlact Injection 500cc & 1000cc, Ventoline Nebulizing Solution, Clinical compositum solution, Soda bicarb Injection 50cc, Ampicillin Injection 250mg, Ceftriaxone Injection 250mg & 500mg, Chloroquine Injection, 1/5 D/Saline Injection 500cc, Salbutamol Syrup, Cefixime Syrup. Anti-Emetic Syrup, Quinine Tablets, Artemether Injection 40mg</p>
	Anaesthetist	Medical Officer Incharge of Anaesthesia Department. Visiting anaesthetist not available for comments.	<p>Medical Supplies: Bulb Sucker for Muconium suction, ETT tube Child and Adult</p> <p>Medical Equipment: Anaesthesia Ventilator, Ventilator Paediatric and Adult, Monitor Child and Adult</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			Drugs / Medicines : Anaesthesia Agents (Foren and Halothane), Anaesthesia Drugs, Induction Agent (Etomidat, Propfol Injection, Ketasol Injection), Accoran Injection, Mioflex Injection, Pain Killer, (Nelben, Kinz, Ketamine Injection etc)
	Pharmacist	N/A	
	Pathologist	N/A	
	Nurse / CHW		
THQ Tando Adam	Gynaecologist	DGO	Medical Supplies: Suture Vicryl, Dressing, Bandages, Gauze. Medical Equipment: Vacuum Silicon Cups, Set of Instruments for various procedures, Instruments for PAP Smear, Entonox Apparatus, Surgical scrub Drugs / Medicines: Vaprossor injection, Dimenhydrinate Injection, Cephadrine injection 500mg & 1gm, Solucortef injection, Tramadol injection, Sidex solution.
	Paediatrician / Neonatologist	MO	Drugs / Medicines : ORS low Osmolarity formula, Dextrose saline i/v fluids 0.45% 0.18%, Potassium chloride injection, Dextrose injection 25%, Calcium injection, Vitamin D3 Injection, Calcium syrup, Phenobarbiton injection, Phenytoin injection, Ampicillin injection, Vitamin K injection, Anthelmentic, Cefotaxime injection, Cloxacillin injection, Bricanyl, Montelukast sachet, Montelukast tablets 4mg, 5mg & 10mg, Clarithromycin syrup, Klaracid Suspension, Klaracid injection
	Anaesthetist	DA	Medical Supplies: Laryngeal Mask, Spinal Needle Medical Equipment: Sevoflourane Vaporizer, Anaesthesia Ventilator, Blood Warmer, Central Oxygen Supply, Vital Sign Monitor, Syringe Pump. Drugs / Medicines: Isoflurine, Halothane, Bupivacaine Spinal Injection 7.5ml, Ketamine Injection, Suxamethonium Injection,
	Pharmacist	N/A	

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
	Pathologist	N/A	
	Nurse / CMW		
THQ Shahdadpur	Gynaecologist	DGO	<p>Medical Supplies:</p> <p>Suture Chromic 0 size, Surgical gloves, Disposable gloves, Foley's catheter with bag, Canulla I/V 18,20, Syringes 5cc 10cc</p> <p>Medical Equipment:</p> <p>Instrument Sets</p> <p>Drugs / Medicines:</p> <p>Haemaccel infusion, Solu-cortef injection, Cefotaxime injection 1gm, Cephadrine injection 500mg & 1gm, Cefotaxime injection 500mg, Cefixime capsule 400mg, Ofloxacin tablets 200mg & 400mg, Mebeverine capsules 135mg, Bascopan injection, Anafort injection, Nospa tablets, Cytopan tablet, Mefenamic acid tablet 500mg, Venofer injection, Rubifer injection, Ferrous gluconate tablets, Calcium injection, Calcium oral supplement, Folic acid tablet 5mg, Pyodin solution</p>
	Neonatologist / Paediatrician	MO	<p>Medical Supplies:</p> <p>N/G tube No.6,8 &10, I/V Canulla No.24</p> <p>Medical Equipment:</p> <p>Vital Sign Monitor</p> <p>Drugs / Medicines:</p> <p>Cefotaxime Injection 250mg, 500mg &1gm, Ceftazidim Injection 250mg, Ceftriaxone Injection 250mg, Calcium Sandoz Injection, 5% & 10% Dextrose Saline, Potassium Chloride Injection, Glucose 25%, Ventoline Nebuliser Solution, Clinical Solution, Adrenaline Injection, Solucortef Injection, Decadron Injection, Soda Bicarb Injection 50cc, Ampiciline Injection 250mg, Chloroquine Injection, Quinin Injection, Mether Injection 20mg, 30mg & 40mg, Ringolact D Injection 500ml 1000ml, Playbolite M Injection 500ml & 1000ml, Cefradine Syrup 125mg, Cefixime Syrup 100mg, Azithromycine Syrup 100mg, Citrizine Syrup, Cefadroxil Syrup</p>
	Anaesthetist	DA	<p>Medical Supplies:</p> <p>Spinal needle</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			Medical Equipment: Sevoflurane Vaporizer Drugs / Medicines: Abocain Spinal Injection 7.5ml, Parolyte Injection, Pentotal Injection, Etomite Injection, Succinyl Chloride Injection, Dormicum Injection, Atracurium Injection, Neopyrolyte Injection, Opiod Analgesic, Tonoflex Injection
	Pharmacist	N/A	
	Pathologist	N/A	
	Nurse / CMW		
RHC Jam Nawaz Ali	WMO	Provided by MNCH	Medical Supplies: Cord Clamp, Chromic- 1, Vicryl – 2, Chromic - 2 Medical Equipment: Desired complete OT equipment for C/Section and minor procedures Drugs / Medicines: Cefixime Syrup 100mg, Heamaccel Injection, Artem DS Tablets, Artem Injection, Pyodine Injection

Balochistan

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
Balochistan Provincial Office			
Bolan Medical College	Gynaecologist		Medical Supplies: Burette for Calculation of Dosses Drugs / Medicines: Misoprostol Tablet, Postinar Vaginal Tablets
	Paediatrician / Neonatologist	Assistant Professor	Medical Supplies: Medical Equipment: Dual Temperature Control in Infant Warmer, Blood Gas analyser, Vital Sign Monitor

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			Drugs / Medicines: Cefotaxime Injection 250mg, Ceftazidim Injection 250mg, Amikacin Injection 25mg, 50mg & 100mg, Tobramycin Injection 10mg, Cefepime Injection 500mg, Vancomycin Injection 500mg, Vitamin K Injection, Aminophylline Injection, Potassium Chloride Injection, 12.5% Dextrose Infusion 500ml, Dopamine Injection, Ciprofloxacin Infusion 200mg /100ml, Calcium Gluconate Injection 10%, 10% Glucose 500ml
	Anaesthetist	N/A	
	Pharmacist	N/A	
	Pathologist	N/A	
	Nurse / CMW		
RHC	Gynaecologist	DGO	

Note: due to security reasons only facilities visited were in Quetta metropolis as the province was on strike for 3 days.

Khyber Pakhtunkhwa

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
Khyber Pakhtunkhwa Provincial Office			
DHQ Nowshera	Gynaecologist / WMO		Medical Supplies: Cotton, Surgical gloves, Cat gut 2/6, 1/5, 2/0, Foleys catheter with drainage bag, Syringes 5cc, 10cc Drugs / Medicines: Phloroglucinol injection, Iron tablets, Calcium tablets, Folic acid tablets, Misoprostol tablets, Kleen enema, Heamaccel infusioln, Metronidazole infusioln, Avil injection, Decadron injection, Dettol, Adalat tablets, Adalat capsules 20mg, Norvasc tablets 5mg, Transamin injection 500mg, Cefixime tablets 400mg, Hyzonit injection, Amoxicillin capsules 500mg, Amoxicillin injection 1gm, Metronidazole infusion

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			100ml, Ciprofloxacin injection 1gm, Dexamethasone injection 12mg, Insulin 70/30, Frusemide injection 40mg, Glucose 10% 1000ml, Ringer lactate 1000ml, Nifedil capsules 10mg, Methyl dopa tablets 500mg, Oxytocin injection 5iu & 10iu, Diclofenac tablets 50mg
	Paediatrician / Neonatologist		Drugs / Medicines: Augmentin Suspension 325mg & 625mg, Co-trimoxazole Suspension, Cefaclor Suspension 125mg & 250mg, Cefixime Suspension 100mg & 200mg, Cefotaxime injection 250mg, Ceftriaxone injection 250mg & 500mg, Amoxicillin oral Suspension 125mg & 250mg, Gentamicin injection 20mg & 40mg, Phenobarbitone tablets 30mg, Phenobarbitone elixir, ORS WHO formula, Glucose 500ml, Normal saline nasal drops, Zinc sulphate syrup 10mg / 5ml & 20mg / 5ml, Vidayllin M syrup, Paracetamol syrup 120mg / 5ml & 250mg / 5ml, Amoxicillin injection 250mg & 500mg
	Anaesthetist		Medical Supplies: Canulla IV 20G, & 18G, Spinal needle 20G, 22G, 24G & 25G, Sticking plaster Drugs / Medicines: Tramadol injection, Bupivacain spinal injection
	Pharmacist	N/A	
	Pathologist	N/A	
	Nurse / CMW		
THQ Pabbi	Gynaecologist	DGO	Drugs / Medicines: Gravinate injection, Ceftriaxone injection 1gm, Ranitidine injection, Normal saline 1000ml, Ringer lactate 1000cc, Tramadol injection, Vitamin K injection, Soda bicarbonate injection, Hyper tonic injection, Avil injection, Iron tablets, Folic acid tablets 5mg, Calcium tablets, Metoclopramide tablets, Antacid Suspension, Tranexamic acid injection 500mg, Misoprostol tablets 100mcg, Mefenamic acid tablets 500mg, Cefixime capsule 400mg, Amoxicillin capsules

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			500mg, Amoxicillin injection 1gm, Metronidazole injection 100ml, Ciprofloxacin injection 1gm, Dexamethasone injection 4mg, Frusemide injection 40mg, Magnesium sulphate injection 10ml, Nifedil capsules 30mg, Methyldopa tablets 500mg, Adalat capsules 20mg, Diclofenac tablets 50mg, Salbutamol tablets 2mg, Lignocaine 2%, Gentamicin injection 80mg
	Paediatrician / Neonatologist	MO	<p>Drugs / Medicines:</p> <p>Ceftriaxone injection 250mg, 500mg & 1gm, Cefuroxime injection 250mg, 750mg, Cefotaxime injection 250mg, Amikacin injection 25mg, 50mg, 100mg, Artesunate injection 60mg, 1/5 D/Saline drips 500ml, 1/2 Dxtrose / Saline drips 500ml, Ringer solution drips 500ml, Artemether + lumefantrine syrup 60ml & 30ml, Artimether + Lumefantrine tablets 20/120, Cefadroxil syrup 125mg/5ml & 250mg/5ml, Ibuprofen syrup 60ml, Cefixime syrup 100mg/5ml & 200mg/5ml, Amodiaquine syrup 150mg/5ml, Cough syrup 60ml & 120ml, Amoxicillin oral Suspension 125mg/5ml & 250mg/5ml, Cloxacillin syrup 125mg/5ml & 250mg/5ml, Gentamicin injection 10mg & 20mg, Dexamethasone injection 1ml, ORS WHO formula, Normal saline 100ml & 500ml, Zinc sulphate syrup 10mg/5ml, Ephedrine injection 30mg, Paracetamol 120mg/5ml</p> <p>250mg/5m</p>
	Anaesthetist	Anaesthesia Technician	<p>Medical Supplies:</p> <p>I/V canula 22G, 20G 18G, Spinal needle 22G</p> <p>Drugs / Medicines:</p> <p>Valium injection 10mg, Midazolam injection, Tramadol injection 100mg, Nalbuphine Injection 10mg, Thiopentone injection 500mg, Ketazol injection 250mg/5ml, Suxamethonium injection 100mg, Neostigmine injection 2.5mg, Abocaine spinal injection 7.5mg, Ephedrine injection 1mg, Heamaccel infusion 500mg/500ml, Ringer lactate 1000ml, inhalation 250ml, Enflurane Inhalation, Isoflurane Inhalation,</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			Halothane Propofol injection 200mg, Pancuronium injection 4mg, Atracurium injection 25mg, Vecuronium bromide injection 4mg
	Pharmacist	No pharmacist. a dispenser gave inputs	Drugs / Medicines: Ceftriaxon injection 1gm & 500mg, Augmentin tablets 625, Erythromycin tablets 250 & 500, Augmentin syrup, Velosef syrup 250, Duracef syrup, Calpol 6 plus syrup, Metodine syrup, Lincocin injection 600, Diclofenac tablet 100mg, Metronidazole injection 100ml, Ciprofloxacin infusion 100ml
	Pathologist	N/A	
	Nurse / CMW/LHV		
RHC Akhora Khatak	Gynaecologist	WMO of MNCH Programme	Medical Supplies: I/V Canulla, Cotton, Gloves, Gauze, Syringes 5cc, 3cc Drugs / Medicines: Aldomet 250mg, Transamin 500mg/250mg, Dexamethasone, Ciprofloxacin 250mg & 500mg, Metronidazole 400mg, Folic acid, Amoxicillin injection 500mg & 1gm, Calcium gluconate injection 10%, Digoxin injection 250mg/ml, Normal saline 1000ml, Ringer lactate 1000ml, Adalat capsule 250mg, Oxytocin injection 5iu, Diclofenac injection 50mg, Gentamicin injection 2mg/8ml, Normal saline 50cc, Ringer lactate 1000ml, Oxytocin injection 5iu & 10iu,

Punjab

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
Punjab Provincial Office			
DHQ Gujranwala	Gynaecologist x 3	DGO	<p>Medical Supplies:</p> <p>Branula No.18, 16, Syringes 5cc 10cc, Gauze , Chromic catgut No.2 & 1, Vicryl No 1, Prolene 2/0, Prolene 1 on RBN, Blade, Catheter foley with bag, Blood bag with set</p> <p>Drugs / Medicines:</p> <p>Hydralazine injection 5mg, Isokit injection, Valium injection, Vepressor injection, Avil injection, Paracetamol injection, Cephadrine injection 500mg, Gentamicin injection 80mg, Dydrogesterone tablets 10mg, Misoprostol tablet 200mcg, Haemaccel, Solucortef injection 500mg, Amoxicillin capsules 500mg, Amoxicillin injection 500mg, Ciprofloxacin infusion 100ml, Frusemide injection 20mg, Insulin regular + 70/30, Magnesium sulphate injection 5gm, Methyldopa tablets 250mg, Adalat capsules 10mg, Diclofenac tablets 50mg, Diclofenac injection 75mg, Salbutamol tablets 2mg, Low molecular weight heparin</p>
	Paediatrician / Neonatologist	FCPS	<p>Medical Supplies:</p> <p>Syringes 25G & 24G</p> <p>Drugs / Medicines:</p> <p>Paracetamol suppositories 100mg, Diazepam suppositoties 5mg, Benzathin benzylpennicillin injection 6Miu & 1.2Miu, Nalorphen injection 0.4mg, Cephalosporin third generation injection, Cephalosporin fourth generation injection, Cotrimoxazole Suspension, Ibuprofen Suspension 100mg/5ml, Dextrose 25% infusion 20ml, Potassium chloride injection, Normal saline infusion 100ml, 200ml, 500ml, Metoclopramide injection, Cefixime syrup 100mg/5ml, Ringer lactate-D infusion 500ml & 1000ml, Plabolyte-M infusion 500ml & 1000ml, Ceftriaxone injection 250mgIM & 500mg IV, Ceftazidime injection 250mg IV & 500mg IV, Deltacortil syrup 5mg/5ml, Frusemide syrup, Normal saline nasal drops, Vitamin K drops,</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			Vitamin D drops, Vitamin C drops, Amoxicillin oral Suspension 125mg, 250mg, Metronidazole oral Suspension 200mg, Metronidazole injection 100ml, Benzylpenicillin 10 lac units, Gentamicin injection 10 & 20, Dexamethasone injection 4mg, ORS WHO formula, Glucose 5% & 10% 500ml & 1000ml, Normal saline 500ml & 1000ml, Zinc sulphate syrup 20mg/5ml, Paracetamol syrup 120mg/5ml, Calcium gluconate injection 10%, Dextrose 5% infusion 100ml, 200ml, Ringer lactate infusion 100ml, 200ml & 500ml
	Anaesthetist	DA	<p>Medical Supplies:</p> <p>Spinal needle 27G (pencil point), Spinal needle 27G, IV canula No.24G, 22G, 20G, 18G, 16G & 14G, Epidural set</p> <p>Medicines / Drugs:</p> <p>Isoflorane 100ml, Bupivacaine spinal injection 0.75% & 0.05%, Bupivacaine injection 0.5% (Epidural analgesia), Suxamethonium injection.</p>
	Pharmacist		<p>Drugs / Medicines: Ampiclox Suspension 250mg/5ml,</p> <p>Co-amoxiclave DS Suspension, Clarithromycin Suspension 125mg/5ml, Tinidazole 500mg Tablet, Furazolidine Suspension 120ml, Aspirin (Soluble) 75mg Tablet, Domperidone Suspension, Vitamin-K Injection 10mg/ml, Ketamine Hcl Injection 500mg/10ml, Pheniramine Maleate 22.7mg/ml, Injection, Promethazine 25mg/ml Injection, Amikacin Sulphate 250mg/2ml Injection, Nalbuphine Hcl 10mg/ml Injection, Salbutamol Solution, Isoflurane Inhalation, Anti tetanus Toxoid Injection 1ml</p>
	Pathologist	N/A	
	Nurse / CMW		
THQ Kamoke	Gynaecologist	MO	<p>Medical Supplies:</p> <p>Cat gut chromic N0.1, Cat gut No.2, Vicryl No.1 R/B, Prolene 2/0, Mouth guage, Foly's catheter No.16, Urine bag, Syringes 5cc autodisable</p> <p>Drugs / Medicines:</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
			<p>Hydralazine injection, Doxycycline capsle 100mg, Ceftriaxone injection 1gm, Prostin-E2 tablets, Cytotec tablets 200mcg, Transamin capsule 500mg, Transamin injection 250mg, Amoxicillin capsule 250mg & 500mg, Amoxicillin injection 500mg, Metronidazole infusion 500mg, Dexamethasone injection 4mg, Calcium gluconate injection 10%, Frusemide injection 10mg, Insulin 70/30, Naloxone injection 4mg, Magnesium sulphate 5gm/10ml, Nifedil capsule 10mg, Methyldopa tablets 250mg, Adalat capsule 10mg, Oxytocin injection 5iu, Diclofenac tablets 50mg, Diclofenac injection 75mg, Salbutamol tablets 2mg, Thiopentone injection 500mg, Lignocaine injection 2%</p>
	Paediatrician / Neonatologist	MO	<p>Medical Supplies: Suction catheter size 6, 8,10, N/G tube size 6,8,10, Baby Urine bag</p> <p>Drugs / Medicines: Cotrimoxazole syrup, Salbutamol syrup, Benzyl benzoate lotion, Cefotaxime injection 250mg & 500mg, Clarithromycin syrup 125mg/5ml, Ibuprofen syrup 100mg/5ml, Cefixime Suspension 100mg/5ml, Ammonium chloride cough syrup, Aminophylline syrup & injection, Normal saline & Dextrose for peads 500ml, Hydrocortisone Injection 100mg, Salbutamol Nebulizer solution 50ml, Betamethasone tablet 5mg, Dexamethasone Suspension 15mg/5ml, Salbutamol inhaler, Ipratropium bromide Nebulizer Solution, Ranitidine syrup, Aluminium Hydroxide + Magnesium Hydroxide Syrup, Eye drops, Topical antibiotics cream, Cetirizine syrup 5mg/5ml, Chlorpheniramine syrup, Amoxicillin oral Suspension 125mg/5ml & 250mg /5ml, Metronidazole syrup 100mg/5ml, Metronidazole injection 400mg, Benzylpenicillin injection 10lac units, Gentamicin injection 10mg,20mg, Dexamethasone injection 4mg/ml, Phenobarbitone tablets 30mg, ORS low osmolarity formula sachet, Glucose 5% 500ml, Zinc sulphate Suspension 20mg/5ml, Vitamin B. Complex + iron syrup 60ml & 120ml, Paracetamol syrup 60ml, Normal saline infusion 100ml</p>

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
	Anaesthetist	MO	<p>Medical Supplies:</p> <p>Spinal needle No. 27,25, Endotracheal tube No.2.5,3,3.5,4,4.5,5.6 & 5.7</p> <p>Medical Equipment:</p> <p>Sevoflorane vaporizer, Isoflorane vaporizer, T. Piece breathing circuit for anaesthetic machine</p> <p>Medicines / Drugs:</p> <p>Abocaine spinal injection 0.75%/2ml, Suxamethonium injection 50mg/ml</p>
	Pharmacist		<p>Medical Supplies:</p> <p>Syringes 1ml,5ml & 10ml</p> <p>Drugs / Medicines:</p> <p>Cloxacillin injection 80mg/2ml, Amoxicillin capsule 500mg, Amoxicillin injection 250mg, Ciprofloxacin infusion 200mg/100ml, Dexamethasone tablets 0.5mg, Dexamethasone injection 4mg/ml, Adrenaline injection 0.1% 1ml, Aminophylline injection 250mg/10ml, Atropine sulphate injection 1mg/ml, Dopamine injection 40mg/ml, Frusemide injection 20mg/2ml, Naloxone injection 0.4mg, Dextrose 5% 1000ml, Normal saline 1000ml, Ringer lactate 500ml, Methyldopa tablets 250mg, Ergometrine injection 0.2mg/ml, Oxytocin injection 5iu & 10iu, Diclofenac tablets 50mg, Diclofennac injection 75mg/3ml, Salbutamol tablet 2mg, Salbutamol injection 0.5mg/ml, Lignocaine injection 2% 2ml & 10ml, Benzylpenicillin injection 5lac iu., Dexamethasone injection 4mg/1ml, Dextrose 5%, Ferrous sulphate tablet, Ferrous gluconate syrup, Lignocaine injection 2%</p>
	Pathologist	N/A	
	Nurse / CMW		
RHC Emanabad	Gynaecologist	WMO of MNCH Programme	<p>Drugs / Medicines:</p> <p>Transamin capsules 250mg & 500mg, Bisleri syrup, Venofer injection, Calcium products</p>

AJK

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
Azad Jammu and Kashmir Provincial Office, Muzaffarabad			
Abbas Institute of Medical Sciences Muzaffarabad	Gynaecologist	DGO	<p>Medical Supplies:</p> <p>Disposable surgical, Syringes 5ml, 10ml, 50ml, Gauze 1mx1m, Sterilized gauze 4"x4" & 4"x 6", Sterilized abdominal sponge, sterilised gloves</p> <p>Drugs / Medicines:</p> <p>Cefotaxime sodium injection 1gm, Ceftriaxone injection 1gm, Cefepime injection 1gm, Clexane injection 40mg (enoxaprin), Iron injection (venofer), Iron tablets, Calcium + vit.D tablets, Vitamin B complex tablets, Calcium tablets, Amoxicillin capsules 500mg/250mg, Amoxicillin injection 500mg, Dexamethasone injection 4mg, Human insulin 70/30, Glucose (5% & 10%)1000ml, Normal saline 1000ml & 100ml, Magnesium sulphate injection 10ml & 2ml, Methyldopa tablets 250mg & 500mg, Oxytocin injection 5iu & 10iu, Diclofenac tablet 50mg & 100mg, Diclofenac injection 75mg, Salbutamol tablets 2mg, Heparin 5000iu</p>
	Paediatrician / Neonatologist	FCPS	<p>Medical Equipment:</p> <p>Vital Sign Monitor, Pulse oximeter, Infant ventilator, Transport incubator, blood gas monitor.</p> <p>Drugs / Medicines:</p> <p>Brufen Suspension 100mg/5ml 90ml pack, Cefixime Suspension 100mg/5ml 30ml pack, Ceporex drops 125mg/5ml, Zinc sulphate Suspension 20mg/5ml 60ml pack, Low osmolar ORS, Cefotaxime sodium injection 250mg / 500mg, Optaclor eye drops 0.5% 10ml pack, Amoxicillin oral Suspension 250mg, Metronidazole oral Suspension 200mg, Metronidazole injection 500mg, Gentamicin injection 20mg/2ml, Dexamethasone injection 4mg/ml, Magnesium sulphate injection 550mg,</p>

			Paracetamol syrup 120mg/5ml
	Anaesthetist	FCPS	<p>Medical Supplies:</p> <p>I.V canulla 22, 24, 20,18,16, Syringes 5cc, 10cc, 20cc & 50cc</p> <p>Drugs / Medicines:</p> <p>Vecuronium injection 10mg/ml, Propranolol injection 1mg, Hydralazine injection, Fentanyl injection 50mcg &100mcg, Maxolon injection 10mg/2ml, Zantac injection 150mg/2ml, Propofol 1% 20ml, Abocaine spinal injection 7.5mg/ml, Ketamine injection 50mg/ml</p>
	Pharmacist	Hospital Pharmacist	<p>Medical Supplies:</p> <p>Syringes 5cc, Surgical cotton 500gm roll, Gauze 1mx1m,4"x4"</p> <p>Drugs / Medicines:</p> <p>Cefixime 100mg/5ml syrup, Ceftriaxone injection 250mg and 1gm, Chlorpheniramine 2mg/5ml syrup, Salbutamol 2mg/5ml syrup, Amoxicillin capsule 250mg/500mg, Amoxicillin injection 250mg/500mg, Metronidazole injection 500mg, Ciprofloxacin injection 200mg, Dimenhydrinate injection 200mg, Insulin 70/30, Glucose 500ml / 1000ml, Normal saline 500ml/1000ml, Ringer lactate 500ml /1000ml, Nifedipine capsule 10mg, Oxytocin injection 5iu, Diclofednac tablets 50mg, Diclofenac injection 75mg, Salbutamol tablets 2mg/4mg, Heparin injection 5000iu, Thiopenntone injection 500mg, Pancuronium injection 2mg/ml in 2ml ampoule, Lignocaine injectin 2% & 4%, Neostigmine injection 0.5mg/ml, Amoxicillin oral Suspension 125mg/5ml, Metronidazole oral Suspension 200mg/5ml, Benzyl penicillin injection 5/10 lac unit, Gentamicin injection 40mg/80mg, Dexamethasone injection 4mg, ORS WHO recommended formula, Paracetamol syrup 120mg/5ml.</p>
RHC Gharhi Dupatta	Gynaecologist	WMO of MNCH Programme	<p>Medical Supplies:</p> <p>Syringes 5cc,10cc,, Cotton roll, Gauze sterilized 4"x4", Bandages sterilized dozen pack</p> <p>Drugs / Medicines:</p> <p>Clotrim vaginal tablets and cream, Doxycycline capsules 100mg, Folic acid tablets, Calcium tablets, Ferrous sulphate tablets, Hyoscine compound tablets, Paracetamol tablets 250mg &</p>

			500mg, Ponstan forte tablets, Amoxicillin capsules 500mg/250mg, Amoxicillin injection 500mg&1gm, Calcium gluconate injection 10%, Normal saline 500ml &1000ml, Ringer lactate 500ml & 1000ml, Magnesium sulphate injection 10ml, Methyldopa tablets 250mg, Oxytocin injection 5iu, Diclofenac tablets 50mg & 75mg, Diclofenac injection 75mg, Heparin injection 1ml, Lignocaine injection 2% 10ml
	Paediatrician / Neonatologist	MO Incharge of RHC	<p>Medical Supplies:</p> <p>I.V canula 24G, 22G, N/G tube, Insulin syringes, Catgut 5/0, Surgical blade, Splint,</p> <p>Drugs / Medicines:</p> <p>Cotrimoxazole Suspension 60ml, Cefotaxime sodium injection 250mg & 500mg, Cefotaxime sodium Suspension 125mg/ml & 250mg/ml, Cefotaxime drops 125mg/5ml, Dulcolax suppositories, Ibuprofen Suspension 200mg/5ml, Epival Suspension, Metoclopramide injection 10mg, Artemether + lumefantrine Suspension, Ringer lactate injection 100ml, 200ml & 300ml, Amoxicillin oral Suspension 125mg/5ml & 250mg/5ml, Amoxicillin drops, Benzylpenicillin 0.6miu, Gentamicin injection 10mg, 20mg & 40mg, Dexamethason injection 4mg/ml, Phenobarbitone syrup, ORS WHO formula. Glucose 5% 100ml, 200ml & 300ml, Normal saline 100ml, 200ml & 300ml, Zinc sulphate syrup 20mg/5ml, Iberet syrup/drops, Vidalyn M Syrup 60ml, Lidocaine injection 2%, Paracetamol syrup 120mg/5ml & 250mg/5ml, Paracetamol drops.</p> <p>Note: All oral formulations for children should have dose-measuring teaspoon.</p>
THQ Hatian Bala	Gynaecologist	WMO	<p>Drugs / Medicines:</p> <p>Iron injection /tablets/capsules, Calcium sachet /tablets, Azithromycin tablets 250mg, 500mg, Augmentin tablets 625mg & 1gm, Progesterone injection, Antifungal tablets & vaginal ointment, Third generation Capsules /tablets, Docyclycline capsules, Multivitamins & (B.complex), Folic acid tablets 5mg, Amoxicillin capsules 250mg & 500mg, Amoxicillin injection 1gm, Calcium gluconate injection 10%, Insulin 70/30, Glucose 5%500ml & 1000ml, Normal saline 500ml & 1000ml, Ringer lactate</p>

			500ml & 1000ml, Magnesium sulphate injection 10ml, Nifedil capsules 10mg, Methyldopa tablets 250mg & 500mg, Oxytocin injection 5iu & 10iu, Diclofenac tablets 50mg & 100mg, Salbutamol tablets 2mg, Salbutamol injection 4mg, Heparin injection 500iu, Lignocaine 2% injection 10ml,
	Paediatrician / Neonatologist	WMO	<p>Medical Supplies: I/V canula No. 24, 22, 20</p> <p>Drugs / Medicines: Cefotaxime sodium injection 250mg & 500mg, Ceftriaxone Sodium injection 250mg & 500mg, Zinacef injection 250mg, 500mg, 750mg, Capoten tablets 25mg, Ventolin solution, Panadol drops, Amoxil drops, Ceclor drops, Solucortef injection, Normal saline nasal drops, Xynosine nasal drops (paediatric + Adults), Ponston forte syrup/tablets, Actidil syrup & tablets</p>

FATA

Facility Visited	Officer Interviewed	Experience / Qualification of person interviewed	Additional items suggested by the persons interviewed for inclusion in the PC-I's list
FATA MNCH Office at Peshawar			
AHQ Hospital, Landikotal Khyber Agency	Anaesthetist	MO is working as Incharge of Anaesthesia	<p>Medical Supplies: Endotracheal Tube</p> <p>Drugs / Medicines: Pavolone Injection</p>
RHC Ekka Ghund, Mohamand Agency	Medical Officer		<p>Medical Supplies: I/V Canulla Size 22G, Butterfly size 24G, Sticking Plaster</p> <p>Drugs / Medicines: Tamoxifen Tablets 10mg, Cefachlor Syrup 125mg, 250mg, Cefixime 100mg/5ml, 200mg/5ml, Nalidixic Acid Syp 250mg/5ml, Ceftriaxone Injection 250mg, 500mg & 1gm, Sulfadoxine + Pyrimethamine Syrup, Sulbutamol Solution, Hydrocortison Injection 100mg/2ml, Ibuprofen Syp 100mg/5ml, Ferrous Sulfate Tablet, Ferrous Sulfate Syrup, Nebulizer Machine.</p>

Annexure VII: List of interviewed staff

Provincial Programme Office, Sindh at Karachi

Dr. Sahib Jan Badar, Provincial Programme Coordinator
Dr. Farhana Memon, Epidemiologist
Dr. Nasreen Jamal, TRF Coordinator
Mr. Kashif, Procurement Officer
Mr. Iqbal, Accounts Officer

DHQ Sanghar

Dr. Muhammad Farooq Awan, MS DHQ Sanghar
Dr. Shagufta Nasreen, Senior WMO
Dr. Shabbir Ahmed, Anaesthetic / CMO
Dr. Farhat Mehmood, Medical Officer (CMW School)
Dr. Zulfiqar Ali Saif, MO Paediatrics

THQ Tando Adam

Dr. Gada-e-Hussain, MS
Dr. Chandi Ram, Paediatrics
Dr. Kalsoom, Gynaecology and Obstetrics
Dr. Manzoor Ahmed, Paediatrics
Dr. Noor Ali, Anaesthetics
Mr. Akram, Store Keeper

RHC Jam Nawaz Ali

Dr. Sanoobar, WMO

THQ Shahdadkot

Dr. Marriam Majeed, MS
Dr. Saima Qazi, Anaesthetics
Dr. Mehr-un-Nisa, Gynaecology and Obstetrics
Dr. Muhammad Ali, Paediatrics

Provincial Programme Office, Balochistan at Quetta

Dr. Muhammad Yousaf Bazinjo, Provincial Programme Coordinator

Bolan Medical Complex Quetta

Dr. Noor Ahmad Baloch, Neonatologist
Dr. Attaullah Bazinjo, Paediatrics
Dr. Jahanara Usmani, Gynaecology and Obstetrics

RHC Saurge, Quetta

Dr. Nuzhat, WMO

Provincial Programme Office, Punjab at Lahore

Dr. Sabiha Khursheed Ahmad, Provincial Programme Coordinator
Dr. Tariq Butt, Additional Programme Manager.

DHQ Gujranwala

Dr. Capt. M. Zafar Iqbal, MS.
Dr. Mumtaz Sikandar, Anaesthetics
Dr. Farhana Naeem, Gynaecology and Obstetrics
Dr. Farhat Mubashir, Gynaecology and Obstetrics
Dr. Robina, Gynaecology and Obstetrics
Dr. Tahira, Gynaecology and Obstetrics
Dr. Zulifqar Ali, Paediatrics
Dr. Farrukh Bashir Nagi, Paediatrics
Mr. Bilal-ur-Rehman, Pharmacist
Mr. Saleem Sadiq, Pharmacist (Not interviewed)

THQ Kamoke

Dr. Nawazish Ali, MS
Dr. Mahrukh Razaq, Gynaecology and Obstetrics
Dr. Barkat Ali, Anaesthesia
Dr. Ashfaq Ahmed, Paediatrics
Miss Maria Rafique, Pharmacist

<p>RHC Emanabad Dr. Zahid, Incharge, Senior Medical Officer Dr. Fatima, WMO</p>
<p>MNCH Programme Office, AJK at Muzaffarabad Dr. Sardar Mahmood, Programme Coordinator Dr. Farhat Shaheen, Epidemiologist</p> <p>Abbassi Institute of Medical Sciences, Muzaffarabad Dr. Shabbir Ahmad, Joint Executive Director Dr. Shabbir Ahmed Raja, Anaesthetics Dr. Gul Khan, Gynaecology and Obstetrics Dr. Ijaz , Paediatrics Mr. Sardar Riaz, Pharmacist</p> <p>RHC, Ghari Dopatta Dr. Hanif Awan, Incharge & Paediatrics Dr. Farzana Faisal, FMO & Gynaecology and Obstetrics</p> <p>THQ, Hattian Bala Dr. Hassan Mehmood Kiyani, MS Dr. Yasin, Senior Medical Officer Dr. Mahnaz, FMO Dr. Robina, FMO</p>
<p>MNCH Programme Office, FATA at Peshawar Dr. Pervaiz Kamal, Programme Coordinator</p> <p>Agency Headquarter Hospital, Landi Kotal, Khayber Agency Dr. Urfana, Gynaecology and Obstetrics Dr. Sharif Ullah, Anaesthesia Dr. Zar Alam, Paediatrics Mr. Abdul Haleem, Pharmacy Assistance</p> <p>RHC, Ekka Ghund, Muhmand Agency Dr. Dost Muhammad, Incharge Dr. Adrees, MO</p>
<p>Provincial Programme Office, Khyber Pakhtunkhwa at Peshawar Dr. Zaman Khattak, Provincial Programme Coordinator</p> <p>DHQ, Nowshera Dr. Sabrina, Gynaecology and Obstetrics Dr. Wahad Zaman, Anaesthesia Dr. Amjid Zahoor, Paediatrics Dr. Sadaf Sarwar, WMO Miss Maha Gul, LHV</p> <p>THQ Pabbi Dr. Samiullah, Paediatrics Dr. Najma Jan, WMO Miss Salma Naz, LHV Mr. Abdul Qayyum, Dispenser Mr. Fazil Amin, Anaesthesia (Technician)</p> <p>RHC Akhora Khattak Dr. Bibi Sara, WMO</p>
<p>Federal Programme office, Islamabad Dr. Farooq Akhtar, National Programme Manager Mr. Mansoor Ahmed, Finance Officer (responsible for procurement) Mr. Khalid Mehmood, Assistant Finance Officer (responsible for procurement)</p>

