

WHO document review:

“Managing newborn problems:

A guide for doctors, nurses, and midwives”

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Background and rationale

Afghanistan presents the highest neonatal mortality rates worldwide at an estimated 56.0 deaths per 100 live births (1), because of 23 years conflict and war. Most Afghan women deliver at home, and less than 19% of births are attended by a skilled provider (2). The greatest risk of childhood death occurs during the neonatal period, with about two-thirds of all neonatal deaths occurring during the first week of life. Neonatal mortality rates tend to differ between urban settlement and rural areas. High mortality rates in the country can be the result of different elements such as: lack of basic health services, insufficient trained staff and deficiency of appropriate material. These issues can be tackled and prevented, thus reducing neonatal mortality, in a variety of different ways, beginning with: training of the staff, provision of health services to all mothers during labour process and appropriate care of the newborns (3).

I have chosen the WHO guideline -“Managing Newborn Problems: A guide for doctors, nurses, and midwives (4) because it is an extremely useful tool for health professionals working in limited resource setting. The document provides updated clinical guidelines for the care of newborns at the first referral level. All the mentioned elements make it applicable to Afghanistan.

WHO document summary

The guideline has 4 sections.

1. Assessment, finding and management
2. Principles of newborn baby care
3. Procedures
4. Appendix

For my assignment I have chosen to address section 2: Principles of newborn baby care

The first chapter gives all the simple and relevant indications to **maintain Normal Body Temperature** of newborns, (clothing the baby, changing the napkins, avoiding bathing for the first few hours of life). The chapter also describes the most appropriate methods to monitor the body temperature of the newborn who suffer from serious medical conditions...

Finally, the chapter shows methods for warming and maintaining body temperature such as skin-to-skin contact, Kangaroo mother care etc...

The second chapter describes the **Feeding and Fluid Management** that should start within one hour of life avoiding bottle, pacifiers or other mothers' milk substitutes. It is emphasized that mother follow a balanced diet and good hydration as well as assuming correct position for successful breastfeeding. Suggestions are given for mothers who cannot breast feed to give expressed breast milk by the cup, or other device. The chapter gives detailed information about the IV fluid indication for babies who cannot feed orally, with the different regimens of the dextrose, sodium and potassium infusion.

The third chapter treats about **Oxygen therapy**, which is vital. It explains the indication keys, regarding oxygen, source of oxygen and the methods for oxygen administration.

The fourth chapter gives details on **Antibiotics** for treating conditions such as suspected infection, sepsis, meningitis etc. The chapter also highlights the need, where practicable, of sending blood sample for culture and sensitivity before starting antibiotic empirically which will be changed (according to the culture and sensitivity) only if after 3 days no improvement

is observed. This chapter suggests combination of Ampicillin and gentamicin for sepsis and meningitis, Benzyl penicillin for congenital syphilis with CNS involvement, tetanus and cloxacillin for cellulites.

The fifth chapter discusses **Infection prevention** and recommends for neonate care providers, to wear protective clothing and gloves, use aseptic technique, avoid of unnecessary intravenous fluid and injection, clean the delivery and newborn room, dispose the waste and use a sterile instrument to cut the umbilical cord. Finally it indicates to make available a restrict area for each newborn and to limit the number of people coming in contact with the baby. The chapter also suggests immunization against rubella, measles, hepatitis B virus, mumps and influenza for all clinical staff

The sixth chapter clarifies the **Clinical usage of blood**, and suggests for health facilities with newborn special care unit, to have access to blood specially type O Rh negative, packaged in appropriate bags of 50 ml. Before transfusion blood should be tested for compatibility, (blood group and cross-matched for both mother and baby), and for malaria if in a malaria endemic area.

The seventh chapter explains the value and importance of **Immunization**; it indicates that all neonates are to be vaccinated against polio, tuberculosis and hepatitis B.

The eighth chapter describes the importance of **Assessing growth**, such as the identification of low birth weight and related problems. For assessing growth a standard scale designed for baby should be used.

The ninth and tenth chapters are focused on **Communication and emotional support** for the mother and family who have experienced death of newborn or **Baby with neurodevelopment or birth defect**, as it has been observed that often a feeling of guilt, anger and denial may be present within the relatives. The chapters advice health providers to be respectful, to listen to the parents and to encourage them to ask questions and treat them accordingly to their beliefs and cultures.

The eleventh chapter provides the list of suggestions and procedures necessary to **Transfer and referral a newborn**. The document focuses attention on the need to stabilize the patient in order to reduce risks during the transfer, as well as establish effective and strong communication between the sending and receiving centre.

And finally the last chapter discusses the **Discharge and Follow up** which is an important factor for continuation of proper treatment. Once an improvement of the child conditions has been observed, a discharge form should be prepared with the medical information. It should include diagnosis, treatment, weight gain and plane for follow-up at home.

Literature search

The more appropriate sources to identify the relevant documents related to Managing Newborn problems have been Pubmed, Medline and Cochrane database. Many documents and data regarding Afghanistan were found on the WHO website (<http://www.who.int/library/databases/en/> <http://www.emro.who.int/afghanistan/>). Pediatric textbooks from scientific libraries have been also consulted. Those used by Afghan pediatric doctors are: “GHAI Essential Pediatric” (5), “Maharaban Singh CARE of the NEWBORN” (6) and “NELSON Text book of pediatrics: the Fetus and Neonatal Infant. (7). Afghanistan articles and documents related to newborn problems have been found through Google search. Lastly, some of the information has been collected by interviewing colleagues from hospitals, universities and Ministry of Public Health.

Key words: newborn, Afghanistan, managing newborn problems, neonatal care

The following literature research has been classified by importance and relevance to Afghanistan.

1. In 2008 the Ministry of Public Health, with the collaboration of Tech-serve/USAID/MSH, assessed four provincial and four district hospitals. I was one of the participants and the tool used for the evaluation was: **ASSESSMENT OF THE QUALITY OF CARE FOR HOSPITALIZED CHILDREN IN AFGHANISTAN**. http://www.basics.org/documents/Pediatric_Hospital_Assessment_Report_and_Assessment_Tools_Afghanistan.pdf .
2. In hospitals the assessment had been undertaken the WHO **/Pocket book of Hospital Care for Children has been adopted**. Guidelines for the management of Common illnesses with limited resources (8). http://www.who.int/child_adolescent_health/documents/9241546700/en/
3. MoPH with the collaboration of USAID/MSH, trained numerous health workers in the field of infection prevention **Guidelines for Healthcare Facilities with Limited Resources** was used (9).
4. Many doctors and health workers in the clinics, district hospitals and the provincial hospitals follow the policy of IMCI (Integrated Management of Neonatal and Childhood illnesses). The following link contains recent documents published by BASICS, the USAID agency for children http://www.basics.org/documents/C-IMCI_Training-Facilitators_Guidelines_Afghanistan.pdf
5. Information was found by calling MoPH. The organization will be introducing the newborn guideline, in collaboration with HSSP/Basic/USAID.

WHO document appraisal

Scope and purpose of the WHO document

The main objective of the WHO document is to provide an updated exhaustive guideline to doctors, nurses and midwives who are managing newborn problems. All questions covered by the guideline are fully addressed and the document provides clinical information which is easy to apply in situations and environments with limited resources.

Stakeholder involvement

The guideline was developed with the involvement of different relevant professional groups from WHO, UNFPA, UNICEF and the World Bank.

Document development

There is no evidence regarding the use of systematic methods to search for evidence, but being the guideline the result of a panel of experts from authoritative institutions it is very likely that the interventions in this guide are based on the latest available scientific evidence and that the guide will be updated as new information will be acquired. In addition, the diagnostic and management guidelines in this guide are consistent with the other WHO material.

The methods used for formulating the recommendations are clearly described, in fact the main section of this guide is arranged by clinical signs or findings, which facilitates early identification of illness and provides up-to-date, clear and specific recommendations. Key recommendations are also well categorized by tables, pictures, flow charts

Regarding the application of the guideline, there is clear indication as to where to find support, in fact as reported on the introduction **”many training package and job aids are available to a company the guides in the IMPAC series”**. In conclusion the quality of the document is ensured by review and endorsement by international pediatric association and international federation of gynecology and obstetrics.

Applicability

This guideline has been translated in Dari and it is used by the midwifery program in some clinics and maternity hospitals. Most of the indications contained in the document are applicable but some might not be. The main barriers to the implement of this guideline might include: financial factors, lack of human resources, skills, knowledge and material. In Afghanistan most of the doctors use text books such as GHAI Essential Pediatrics and WHO pocket book of Hospital care for children. Despite it being translated in Dari, it is not widely available (as it can't be found on the internet) and consequently can not be attached to the assignment.

In my opinion the document is extremely relevant to the issue and I strongly recommended the implementation to Afghanistan.

Conclusions

The fourth Millennium Development Goal (MDG 4) aims to reduce child mortality by two thirds between 1990 and 2015. Despite a decade of donations from various sources (World Bank, U.S. and EU) infant mortality in Afghanistan, does not decrease significantly. According to Dr. Suraya Dalil, acting Minister of Public Health, the major obstacles to be overcome are lack of education, lack of roads, shortages of health workers, poor quality in the delivery of health services and food shortages (10). In a contest like that “Managing newborn problems: a guide for doctors, nurses and midwives” is an extremely powerful tool, as improvements of newborn health do not require advanced technologies and high specialized staff. Many problems related to neonatal mortality can be prevented with critical procedures for the newborn during the first days of life. The WHO document provides updated, evidence-based, complete and easy to apply norms and standards. It is therefore an indispensable document for health professionals to tackle the most important newborn problems.

In a country like Afghanistan a broad implementation of this tool can significantly contribute to meet the fourth MDG

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