ESSENTIAL NEWBORN CARE: INTRODUCTION

Essential Newborn Care Implementation Toolkit 2013

The Introduction defines Essential Newborn Care and provides an overview of Newborn Care in South Africa and how to use the Essential Newborn Care improvement toolkit.

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ACKNOWLEDGEMENTS

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INTRODUCTON

The birth of a child is usually occasioned by a well term baby and a healthy mother. In the minority of cases the pregnancy may be complicated by maternal illness, preterm labour, a difficult delivery or other problem resulting in babies requiring additional neonatal care at and after birth.

Essential newborn care is the care required by all neonates (first 28 days of life) whether they are born healthy, small or unwell. It includes appropriate preventive care, routine care, transition and care of sick and small babies. The success with which mortality and morbidity are prevented will depend to a large extent on the commitment and expertise of the health workers responsible for newborn care.

Essential maternal care is just as important in protecting the mother and the unborn child during the pregnancy and labour and requires the availability of adequate and appropriate obstetric services and delivery facilities. Essential maternal care is not covered by this toolkit.

The table below shows neonatal mortality for South Africa from 1999 – 2008. There has been very little improvement over the last 10 years.

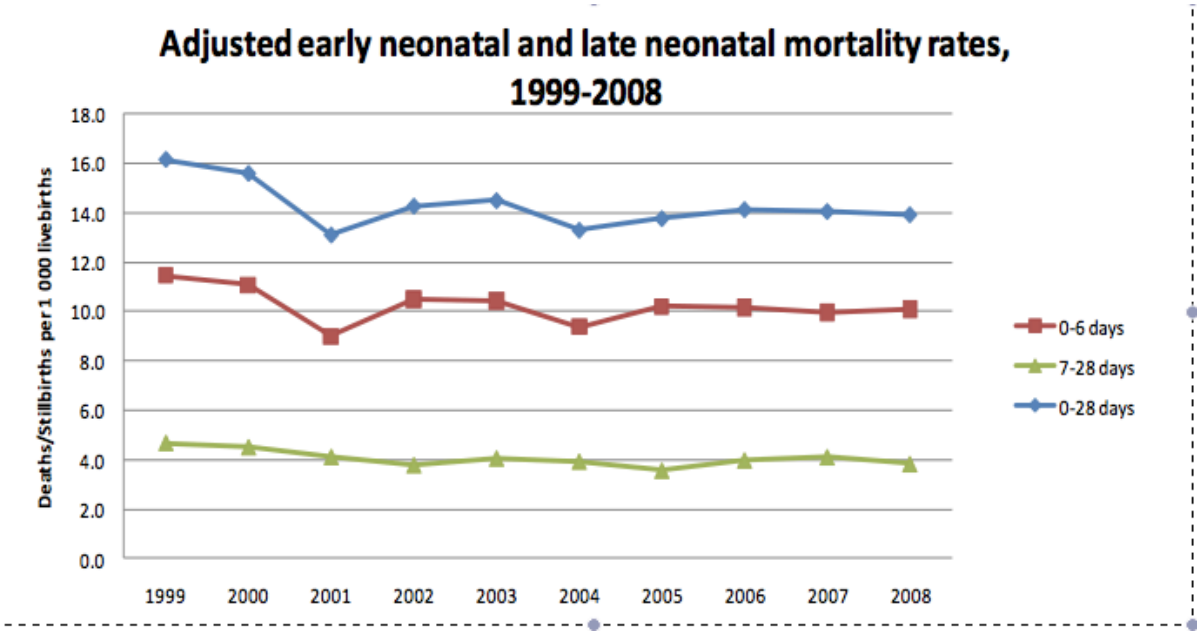

Figure 1. Neonatal Mortality Rates 1999 - 2008 South Africa. From National Perinatal Morbidity and Mortality Report 2008 – 2010. June 2011

58.7% of all deliveries in South Africa are done at district hospitals and clinics. These facilities have a great responsibility in terms of newborn care. District Hospitals have the highest number of neonatal deaths while they are modestly staffed and equipped. There are no specialists on site to provide assistance when babies follow an untoward clinical course.

Table 4.7. Early neonatal death rates per birth weight category

Weight category	CHC	DH	RH	PT	NC
500 - 999g	339.71	578.13	533.50	430.30	308.79
1000 - 1499g	82.25	230.94	163.64	115.17	70.06
1500 - 1999g	18.08	137.38	41.25	19.94	23.20
2000 - 2499g	2.88	14.73	11.63	9.77	13.89
2500g+	0.64	5.34	4.21	3.63	6.38

Table 1. Early Neonatal Death rates per weight category. From National Perinatal Morbidity and Mortality Report 2008 – 2010. June 2011

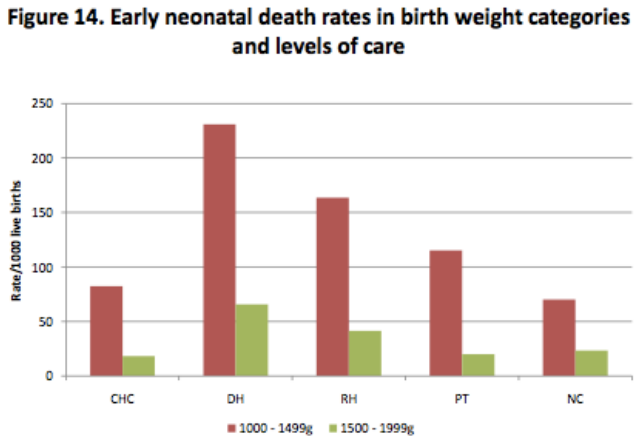

Figure 2 . Early Neonatal Death rates in birth weight categories and levels of care. From National Perinatal Morbidity and Mortality Report 2008 – 2010. June 2011

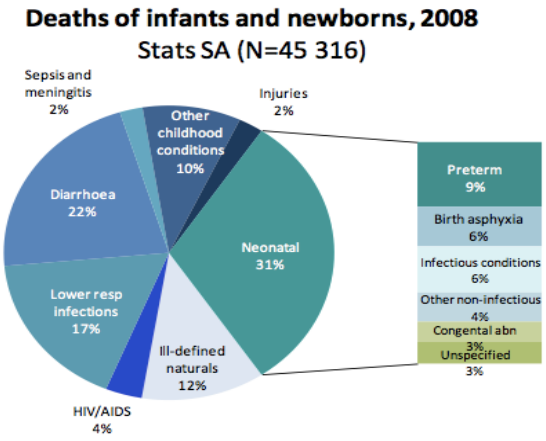

Figure 4: Cause of death profile for infants and newborns, 2008

Source: Own calculations from data provided by Statistics South Africa

Figure 3. Causes of death for infants and newborns. From National Perinatal Morbidity and Mortality Report 2008 – 2010. June 2011

Figure 3 shows that 31% of under five deaths in South Africa are due to neonatal causes, with prematurity, birth asphyxia and infection being the top 3 neonatal causes of death.

THE LINC INITIATIVE

The authors have been working with doctors, nurses and managers in Clinics, Midwife Obstetric Units, District, Regional and Tertiary Hospitals for many years and have collectively identified how newborn care can be improved through the implementation of a number of organizational changes.

There work has included supporting Limpopo Initiative for Newborn Care (LINC), a comprehensive initiative to improve newborn care in Limpopo Province. LINC has visited managers and health workers to share a vision for newborn care and advise on norms and standards for clinical care and the environment in

which care is best provided. Neonatal skills were improved through training, mentorship and providing accessible, guidelines and job aids. Lessons learned from LINC can be found in the booklet "Improving Newborn Care in South Africa: Lessons learned from Limpopo Initiative for Newborn Care."

Innovations and advances such as kangaroo mother care, continuous positive airway pressure, the elimination of mother to child transmission of HIV and the increasing availability of a variety of monitoring devices have fuelled opportunities for effective change.

These ideas and some of the resources that have been developed to support implementation are contained in the Essential Newborn Care Improvement toolkit. Improvements require commitment from managers, doctors and nurses in equal measure but it is hoped that the guidance and tools provided in this package will facilitate and encourage the process of optimizing newborn care.

OVERVIEW OF ESSENTIAL NEWBORN CARE

Essential newborn care embraces the following important activities:

TRANSITION AND NEONATAL RESUSCITATION:

Most babies will start breathing adequately within one minute of birth and require little or no immediate assistance. Some babies, for a variety of reasons, but most commonly because of intra uterine hypoxia, sedation or prematurity, will lack the normal respiratory drive required to successfully establish respiration at birth. It is not always possible to predict antenatally which babies are likely to encounter this problem and so it is crucial that each delivery facility has personnel and equipment capable of providing neonatal resuscitation at birth. A small investment of time and effort can ensure that resuscitation is competently provided and has the potential to save many lives and prevent neurological injury.

ROUTINE CARE AT BIRTH:

All newborns babies need to be assessed at birth to triage those that are apparently healthy from those needing resuscitation or other care for illness or low birth weight. The mothers of well babies will need support with initiation of breast feeding. The babies themselves need preventive eye care and vitamin K as well as a thorough examination in the first 24 hours. Some well babies need additional care for elimination of mother to child transmission of HIV or the treatment of possible congenital syphilis. Others may be recognized as being at high risk for neonatal problems such as jaundice or sepsis and additional monitoring or care may be needed. Some institutions may have instituted additional screening procedures for hypothyroidism, cardiac abnormalities and hearing. All babies will need polio and BCG vaccination before discharge from the health facility.

INPATIENT CARE OF SICK AND SMALL NEWBORNS:

Newborn babies who weigh less than 2 kg or who are unwell for whatever reason will need to be admitted to the neonatal unit of the health facility where they are born for appropriate inpatient care. For most ill newborns this will be a level I facility. However some will need to be transferred to a level II or level III facility for specialist care. It is sometimes possible to identify the need for specialist neonatal care antenatally. When this is the case, it is preferable to arrange for the mother to be admitted to a level II or III facility for the delivery.

Expert guidelines are available to facilitate the provision of standard neonatal care for most neonatal problems encountered at the District hospital level. Norms and standards for staffing, facilities, drugs and equipment help to support health workers by ensuring the presence of an adequate working environment. These environments will ideally include space for both high care and kangaroo mother care.

Very ill babies needing additional support in the form of cardiac monitoring, nasal CPAP or oxygen in concentrations over 40% should be cared for in a high care section of the neonatal unit. This includes babies with convulsions or frequent apnoea.

Kangaroo mother care provides warmth, stability, nutrition and infection prevention for medically stable low birth weight babies.

Advanced and sophisticated neonatal care such as would be provided in neonatal units under the guidance of Neonatologists falls outside the ambit of this toolkit. Progress in medical care has provided the opportunity to prevent morbidity and mortality in babies born with life-threatening congenital abnormalities or extreme prematurity and those who develop unusual medical or surgical complications during the neonatal period. In the realm of highly specialized services opportunities tend to outstrip the resources to provide them and this results in the need for rationing. Decisions about which babies should be treated and which not, require rigorous ethical debate. In South Africa where highly specialized services are national resources but available in only a few major centres it is inevitably easier for those babies born closest to the centres to access care. Policies and monitoring procedures are crucial to protect against rationing based on geographical proximity or administrative boundaries.

ESSENTIAL MATERNAL CARE

A discussion of essential neonatal care would be incomplete without mentioning essential maternal care. Such care will include:

- Antenatal care
- Antenatal education and preparation for birth
- Respectful intra-partum care, supervised by a qualified health professional, and supported by a companion
- Monitoring for risks and problems with appropriate and timely referral to a higher level of care.

STRUCTURE OF HEALTH SERVICES:

The structure of the health services provides the context within which neonatal services are provided. Health services in South Africa are provided at three levels - these are within communities or households, at clinic or community health centres and at hospitals. Most newborn care services are provided at hospital level although the other levels play an important role in ensuring that newborns survive and thrive.

As part of the restructuring or re-engineering of Primary Health Care (PHC), Ward based Outreach Teams are being established. These teams include Community Health Workers who are expected to play a key role in ensuring that pregnant women access antenatal, intra-partum and postnatal services. They also play an important role in promoting and supporting appropriate home care of newborns following discharge of the mother and newborn from the health facility, especially with regard to supporting mothers to exclusively breastfeed their infants.

District Clinical Specialist Teams play an important role in improving the quality of maternal and newborn health services through improved clinical governance, and provision of support to all levels of the health service.

Hospitals in South Africa are stratified in to 3 levels:

Level I or district hospitals are run by generalist doctors and nurses, some of whom may have a special interest in the area of neonatal care. This is the level that deals with the greatest number of ill newborns and is pivotal in improving neonatal outcomes.

Level II or Regional Hospitals usually have one or more specialist paediatricians on the staff establishment and should offer a 24 hour specialist clinical service. A full spectrum of neonatal high care and some neonatal intensive care are provided at this level.

Level III Hospitals provide a full neonatal intensive care service although certain highly specialized services may be available only at specific level III hospitals.

Although level I, II and III hospitals have been designated for all districts, the ability of any given facility to provide the appropriate services depends on the status of its staffing, equipment, medicines, supplies and infrastructure. Some level II hospitals are without paediatric specialists and neonatal intensive care equipment. Where this is the case the level I and level III hospitals need to restructure the way they work together to compensate for the gap at level II. Often this means that the level I (district) hospital would best serve their community by providing a slightly extended service. The ability to do so will depend on the ingenuity and energy of the staff and the support of management in providing the necessary facilities.

Provision of care should be viewed as a team responsibility with the team being constituted of all practitioners from level I to level III who are responsible for newborn care. Communication is a critical aspect of teamwork and congenial and professional relationships should be encouraged. Prompt consultation and carefully planned referrals save lives. Equally the senior clinicians on the team have a responsibility to support the vocational growth of their less experienced colleagues through outreach, teaching and the sharing of useful resources.

OVERVIEW OF ESSENTIAL NEWBORN CARE PACKAGE

The aim of the package is to provide provincial, district and facility managers as well as paediatricians and senior clinicians with a set of tools they can use to improve newborn care in their facilities, and as a result decrease the mortality and morbidity of newborns.

This package has been compiled by a group of people who have worked and supported work in Limpopo to improve newborn care over the last decade. We have used the experience and lessons learned, the materials developed over the decade, and considerable experience of the team as a whole to put together a toolkit that we trust you can use to improve newborn care in your setting. We have also drawn on the expertise and work of colleagues in other parts of the country who also share their work and experience. Read about the contributors in the appendix. International reviewers have reviewed the Chart Book on the Management of the Sick and Small Newborn, and we would like to thank Save the Children and Unicef for their ongoing support.