KANGAROO MOTHER CARE (KMC) POLICY AND GUIDELINES FOR THE WESTERN CAPE PROVINCE

Compiled by: KANGAROO MOTHER CARE PROVINCIAL TASK TE

Kangaroo Mother Care (KMC) Policy and ies for the Western Cape Province.

Compiled by the Kangaroo Mother Care Provincial Task Team

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1. introduction

1.1 Definitions and abbreviations

1.1.1. KMC - is an intervention for the care of the low birth weight (LBW) infant. It consists of four components:

1.1.1.1. Kangaroo position
Stable LBW infants are nursed skin-to-skin between their mother's breasts. Skin-to-skin care may be intermittent at first, but should gradually become continuous and persist until the infant weighs at least 2000g.

1.1.1.2. Kangaroo nutrition
Infants should be fed own mother's milk, either by breastfeeding on demand or by expressed breastmilk via naso-gastric tube or cup.

1.1.1.3. Kangaroo **support**
Support of the mother-infant dyad, both in hospital and at home after discharge, for optimal outcome. This will always depend on the context and should be a dynamic process of development and improvement.

1.1.1.4. Kangaroo discharge
Infants may be discharged from hospital in the kangaroo position at any weight or gestational age, provided they are well and gaining weight on mother's milk and that there are adequate follow-up facilities and support.

1.1.2. Dyad - the mother and infant together are seen as a single unit

1.1.3. IPPV - intermittent positive pressure ventilation.

1.1.4. **LBW** - low birth weight. Infants with birth mass **less** than 2500g

1.1.5. **NICU** -Neonatal Intensive Care Unit

1.1.6. MCWH – Maternal, Child and Women's Health

1.1.7. MOU - Midwife Obstetric Unit. Birthing unit, run by midwives, in the community for level one patients.

1.2. Policy Development

1.2.1 With increasing costs and rationalization in all sectors of health care in South Africa it has become necessary to find and implement efficient and cost effective ways of caring for our patients. KMC has been shown to be a safe effective and affordable method of caring for LBW infants in many contexts around the world, in our own country and in our own province.

1.2.2. The KMC Policy and Guidelines for the Western Cape Province has been developed under the auspices of the MCWH Sub-directorate in conjunction with the Provincial KMC Task Team. The Policy and Guidelines are aimed at all health care workers including, doctors, nurses, occupational therapists, physiotherapists, nutritionists, social workers, policy makers and managers.

1.2.3. The development has been a consultative process with several draft versions being distributed to the regionsldistricts for comment and revision. On completion the policy will be distributed to the four regional offices. private and provincial hospitals and health care facilities, district health services, NGO's, CBO's and other role-players for implementation and support. Other services and directorates such as Support Services, Human Resource Development, Health Information. Nutrition and Mental Health, have been, or will be, consulted and involved in the implementation process.

1.2.4. The mechanisms for feedback to the PAWC KMC Task Team are set out in the Policy.

1.3. Disclaimer

1.3.1 The Policy and Guidelines are presented as safe standard practice and statements made are supported by references available from KMC Interest Group (see paragraph 4. **2.4.).** The safety of the infant should be of paramount importance and the practice of KMC should be in line with all other policies and developments.

1.3.2. The policy and guidelines are not seen as finite. but rather as undergoing continual evolution and refinement with time and experience. The mechanisms for feedback to the PAWC Task Team are set out in the policy.

1.3.3. The Department accepts no liability for any damages or **loss** recognized by law that may be suffered as a result of the incorrect usage of the methods promoted in the policy.

1.4. Origins of KMC

1.4.1. Although women of many cultures have carried their infants against their breasts for centuries, KMC **as** described above was 'rediscovered in Bogota, Colombia in the 1970s in response to shortages of people power and other resources in hospitals there. Drs Rey and Martinez developed KMC as a method of ambulatory care for low birth weight infants in their hospital where there had been high morbidity and mortality among these infants due to overcrowding and sepsis. As soon as the infants are stable and the mothers trained in the KMC method, the infants are sent home, irrespective of weight or gestational age, carried between their mothers' breasts at all times and fed only mothers' milk. They are followed Up at a special KMC clinic.

1.4.2 The dramatic improvement in the outcome of the Bogota patients prompted investigation from the WHO/UNICEF and soon North American. European and other health services around the world were putting KMC into practice in addition to, and in some instances instead of, their conventional methods of LBW infant care. Numerous **studies have** shown KMC to be a safe and effective method of caring for these infants.

1.5. How to do KMC

1.5.1. Kangaroo position

1.5.1.1. KMC should start. irrespective of gestational age or weight, as soon as the baby is stable and in 40% (or less) head-box oxygen. KMC may be practiced continuously or intermittently. Non-resident mothers should practice KMC throughout every visit i.e. intermittent KMC.

1.5.1.2. The baby is dressed in a nappy and a cap and placed in an upright position against the mother's bare chest, between her breasts and inside her blouse. Both mother and baby may be covered with a blanket or jacket if it is cold. The mother should wear a button down top and she should tie the top under the baby's bottom or tuck it into the waistband of her skirt or slacks so that her baby is secure and does not slip out! This method is usually adequate for KMC.

1.5.1.3. Special tops may have the disadvantage of introducing the idea that KMC cannot be done unless a custom made garment is worn, but a simple 'Boob-tube" of cotton/ lycra is inexpensive and comfortable for both mother and baby. The mother should be encouraged to make, bring or wear whatever suitable garment she can affoid.

1.5.1.4. Fathers, grandparents or any other responsible adult of the mother's choice may also do KMC with the baby if the mother is unable to do KMC, or if she needs to be relieved for a while. These support KMC givers, especially the father, should be involved in KMC training as early as possible, together with the mother, while the infant is still in the Neonatal Unit.

1.5.2. Kangaroo nutrition

1.5.2.1. The baby should be allowed to breast feed freely. Adequate and regular feeding is essential, particularly at night. Infants under 1500g should be fed at least every two hours and infants over 1500g at least every three hours. Breast milk should be the first. second and third choice: it is cost effective to admit mothers for this reason alone. Babies who are not gaining weight adequately should receive a breast milk fortifier, which supplies extra protein, calories and phosphate.

1.5.2.2. With early and continuous skin-to-skin contact, even infants of 30 weeks gestation are able to breastfeed exclusively. Babies who are unable to suckle may be fed expressed breast milk via a naso-gastric tube or cup. Babies should remain in the Kangaroo Position while receiving a tube feed and the mothers should hold the feeding funnel. The mother may adjust the position of the baby to breast- or cup-feed. Babies should NOT be fed in incubators, cribs or cots while mothers are visiting.

1.5.2.3. If breast milk is insufficient, or breastfeeding inadvisable, formula may be added or substituted. Mothers who are HIV positive should be counselled about feeding their infants according to their circumstances, current scientific information and current policies.

1.5.3. Kangaroo support

1.5.3.1. The mother should have the concept of KMC explained and demonstrated to her in the antenatal clinic. The explanations and demonstrations should continue after the baby is born until the mother is motivated and able to put the baby in the Kangaroo Position by herself and to breastfeed. Staff at all levels of neonatal care should be able to educate parents about KMC. to assist them with positioning of the infant, drips, oxygen tubing, feeding, and to discuss any queries they might have. Mothers need strong emotional support and practical guidelines for prolonged KMC, (say in the absence of incubators).

1.5.3.2. One of the most cost-effective methods of providing support to the mother-infant dyad is to establish a dedicated KMC Ward where the mother and her baby can live together while doing KMC 24 hours per day prior to discharge from hospital. Here the mother should be responsible for her baby under the supervision of a nurse. She should be shown the KMC Ward and informed of what is expected of her while she is there and what she should bring with her. The KMC Ward should be as comfortable as possible and have a homely rather than a hospital atmosphere.

1.5.3.3. The baby may be transferred to the KMC Ward with the mother if the baby is well. growing satisfactorily and is at least partially breastfed (or cup-fed if breastfeeding is not possible). The mother should have been trained in Kangaroo Position and Nutrition. The professional nurse in charge of the unit may approve the transfer in consultation with the doctor. The baby should be signed out in the folder in the same way as any other in-house transfer in the hospital or clinic.

1.5.3.4. In the KMC Ward the baby will be in the Kangaroo Position all the time i.e. continuous KMC. The mother should be encouraged to wear her day clothes rather than a nightdress or hospital gown. She should be mobile in preparation for doing her household chores with her baby in the Kangaroo Position at home. There should be no cribs or cots in the KMC Ward. When the mother goes to the bathroom the baby should be placed safely on her bed and the nurse informed. The baby should never be given to a stranger to hold.

1.5.3.5. Some special babies or mothers with problems may benefit from spending time in the KMC Ward, but may not be able to cope without nursing supervision. Where there is no 24-hour nursing supervision in the KMC Ward, these babies should be transferred back into the neonatal unit at night.

1.5.3.6. The KMC Ward should be used as a venue for education and empowerment of mothers of LBW infants. Short lectures and informal discussion on KMC, mother craft, infant and child health topics should be instituted and mothers who are visiting their babies in the neonatal unit should be included.

1.5.4. Kangaroo discharge

1.5.4.1. Discharge plans should be discussed with the parents from the start of KMC! The baby will need to be in the Kangaroo Position 24 hours a day from the time helshe comes out of the incubator until helshe weighs at least 2kg. That means KMC at home 24 hours a day after discharge. If the mother needs a break the father or other responsible adult may relieve her for a while until the next breastfeed. The mother may also need a caretaker for her baby if she has to go back to work or school, in which case the father, granny or other caretaker may take over. These support KMC givers, especially the father, should be involved in KMC training as early as possible with the mother and while the infant is still in the Neonatal Unit.

1.5.4.2. The baby is discharged provided that he is well, gaining at least 15g per day, is feeding adequately on the breast or by cup and that the mother is confident in handling and is committed to doing KMC at home. However if the mother or baby do not fulfil the discharge criteria the discharge is delayed irrespective of the baby's weight. The weight at discharge depends on the baby's wellbeing, the mother's maturity and socio-economic standing and access to follow-up facilities.

1.5.4.3. The infants should be discharged at a weight appropriate to the follow up care that health care services in that specific area are able to provide i.e. the better the follow-up facilities, the earlier the infant may be discharged.

1.5.4.4. After discharge infants should be seen frequently for weight checks. The smaller infants, less than 1800g, should be seen daily, whereas those over 1800g may be seen every second or third day. Infants who do not gain at least 15g per day should be discussed with a doctor and any infant who persistently fails to gain weight or who is ill in any way should be referred to a medical practitioner. Infants may be readmitted if necessary.

1.5.4.5. The immunization schedule for infants in KMC is the same as for any other infant.

1.6. Benefits of KMC

KMC is an intervention that benefits everybody.

1.6.1. The infant

1.6.1.1 Benefits to the infant have been documented extensively. Physiological function such as temperature control. cardiovascular stability, respiratory rate, and gastro-intestinal adaptation is as good, or better, in infants exposed to KMC compared to infants in conventional LEW infant care. The infants remain in a more restful state gaining comfort from the mother's voice and heartbeat. Infants receiving KMC also have fewer serious infections, grow faster and go home sooner.

1.6.1.2. It has been shown that more infants receiving KMC breastfeed, and breastfeed for longer, than infants in conventional LEW infant care. This is a major benefit in a developing country where malnutrition and gastro-intestinal infections account for a large percentage of infant mortality and morbidity.

1.6.1.3. KMC also improves mother-infant (and father-infant) bonding which has spin-off effects on decreasing child neglect and abuse.

1.6.1.4. There is some evidence to suggest that the KMC infants have improved neuro-psychological performance, but this requires further investigation.

1.6.2. The parents

1.6.2.1. Parents benefit by being included in the team involved in caring for their LEW infant. Both the mother and–father can do skin-to-skin care, although the mother is the primary KMC provider because only she can breastfeed. The parents are empowered through gaining confidence in handling their infant resulting in better bonding and less chance of child abuse and neglect. The improvement in, and longer duration of breastfeeding is also of benefit to the mother.

1.6.3. The Health Service

1.6.3.1 The increased rate of growth and fewer infections translate into significant economic benefits to the health service in terms of shorter hospital stay and reduced bed occupancy. The cost of care is further reduced in that the parents, particularly the mother, are physically involved in caring for their own child thereby reducing the nursing workload. Thus there is in effect a significant addition to the workforce. The presence of mothers in hospital with their babies for intermittent or continuous KMC shortens the hospital stay significantly and is cost-effective as the cost of feeding the resident mother is relatively small.

1.7. KMC in different contexts

1.7.1. While KMC sounds simple enough, there is considerable complexity within each of its components and any Provincial Policy applied requires great sensitivity to the particular context in which KMC is to be practiced, recognizing the diversity within the Province: urban and rural, public and private, primary to tertiary.

1.7.2. It should be emphasized that there is no rigid or fixed way of doing KMC. Each child (even at 28 weeks) and each mother is a unique individual with individual likes and dislikes. Health workers should be looking at each mother-infant dyad to constantly improve the comfort and continuity of KMC in whatever way the circumstances in the health care facility allow.

1.7.3. In situations where there are no incubators, continuous KMC for LBW infants must be obligatory from birth and particular training should be provided for nurses who work in such areas.

1.7.4. In areas where there are inadequate resources for the community's needs KMC is an efficient, safe and cost effective intervention.

1.7.5. In high-tech intensive care units with high staff to patient ratios, ventilated babies can be placed in the KMC position to promote bonding between the mother and infant and breast milk production.

2. KMC Vision and Mission

2.1. Our vision is to have KMC established as a safe and effective method of care for LBW infants throughout the Province.

2.2. Our mission is to facilitate the implementation of KMC at all levels of health care in the Western Cape Province.

3. Objectives

The objectives of the KMC Policy are:

3.1. To change attitudes about the way in which LBW infants and their mothers are managed.

3.1.1. The KMC policy needs to establish the cardinal concept that a baby and its mother are a single unit. The implementation of KMC requires change in the current patterns of thinking and practice in all spheres of health care. It requires change to the entire system.

3.1.2. The major obstacle to the implementation of KMC at present is the human factor. KMC represents a radical departure from the accepted hospi-centric approach to the care of the newborn LBW infant that is accepted by health care workers and the public at large.

3.1.3. The following categories of people in both public and private sectors need to be convinced and persuaded concurrently:

a) health workers;
b) health care administrators;
c) health care funders:
d) policy makers;
e) alternative health care providers;
f) parents and caregivers and
g) the general public.

3.2. To promote the training of health care workers in KMC.

3.2.1. KMC should be taught as the standard management for all infants, whether LBW or not, to be applied from birth and to be included in the breast feeding policy. Health care workers at all levels, both under- and post-graduate, should be trained in KMC. All training facilities should include KMC in the curricula and inservice training of medical students, nurses, dieticians, physiotherapists, occupational therapists and social workers.

3.2.2. Initial teaching should primarily be for the training of trainers. Subsequently trainers would continue to train staff in their regions. districts or institutions. Training may consist of seminars and lectures (which would sensitize the staff to KMC) as well as formal training courses.

3.2.3. KMC should be included in existing outreach training programs, such as COPUCAPUPEP. and in continuing medical education and refresher courses for medical practitioners.

3.3. To make the public aware'of KMC and its benefits.

3.3.1. Mothers are central to the care of their newborn infants and should never be separated from them. It is essential to educate the public about KMC and its benefits for it to be accepted and put into practice.

3.3.2. Public awareness may be achieved by means of posters and pamphlets in health care centers, in the media, popular press, radio and television, and by role model example. A KMC patron, someone of high standing in the community either locally or nationally, would be an enormous asset to the cause. It is important to promote KMC as the norm in the community – i.e. 'KMC is the way to carry your baby when you shop, or go on the bus, or visit your friends, or do your housework 'etc.

3.4. To establish KMC as the method of care for LBW infants at all levels of health care throughout the Western Cape Province.

3.4.1. In order to achieve this goal it is necessary to determine the level of neonatal care given and the resources and facilities available at each institution in the Western Cape Province. Levels of care can broadly be classified as follovis:

a) tertiary hospitals with ample resources
b) secondary hospitals with ample resources
c) secondary hospitals with limited resources
d) primary hospitals with reasonable resources
e) primary hospitals with limited resources
9 MOUs/day hospitals with reasonable resources
g) MOUs with limited resources.

3.4.2. Once the facility has been categorized, KMC appropriate for that particular level can be instituted. For example in areas where there are no incubators KMC should be practiced continuously from birth, or, in a sophisticated NICU, KMC skin-to-skin care should be started once the infant is stable.

3.5. To set guidelines for the use of KMC in health care facilities.

3.5.1. KMC may be adapted to suit different contexts. KMC should be given to all LBW infants (<2500g) as it improves bonding, breastfeeding and thermal control. It is important that the mother-infant dyad be referred together from one level of care, or institution, to another.

3.5.2. At all levels of health care KMC may be used in the compassionate care of the dying infant. It allows parents to bond with their child and helps them through the grieving process in a positive way.

3.5.3. Guidelines for KMC at various levels of health care in both the public and private sectors are set out in Table 1 (pg. **14).**

3.6. To set guidelines for transporting LBW infants in KMC.

3.6.1. The use of KMC in transporting infants has not yet been formally researched. This needs to be done in order to confirm its safety. It is imperative that due care is taken for the safety of the infant.

3.6.2. The mother should sit in the back seat and wear a seat belt, but the seat belt should not be placed over the infant. The seatbelt should be placed between the infant and the mother and the infant should be securely held.

3.6.3. Present resources for moving stable preterm. or LBW. infants between hospitals and clinics are inadequate. This results in delays in admission of infants to tertiary and secondary level hospitals, often to the detriment of the infants' health. There are even longer delays in returning the infant to the referring hospitals once they are well and growing, thus valuable high care and ICU spaces are blocked. Transport of well or stable infants in KMC would go a long way to alleviating this problem. Some specific training of ambulance personnel will be necessary, but a paramedical qualification is not necessary.

3.6.4. In cases where there is no transport incubator available and the infant requires urgent transfer, it may be advantageous to transport the infant in the KMC position, providing adequate support such as oxygen and IPPV are given and monitored during transit. In such cases qualified paramedic ambulance staff are required. Such a case would be at the discretion of the doctor in charge of the infant.

3.7. To establish criteria and facilities for follow-up of babies in KMC.

3.7.1. KMC results in the earlier discharge of LBW babies. More frequent follow-up is necessary to confirm wellbeing and weight gain as well as to provide support for the mother. The follow-up visits should be scheduled according to the discharge weight, weight gain and wellbeing of the infant. Centile charts for weight gain for CBW babies must be used. If weight gain is inadequate, the infant must be referred. See 1.4.4. Kangaroo Discharge.

3.8. To promote evaluation and monitoring of all aspects of KMC.

3.8.1. Indicators such as the number of infants given KMC. their length of stay and their health outcomes should be monitored closely at institutions in all levels of health care. This should reflect not only the savings the program produces, but also pick up problems where these may occur.

3.8.2. A standardized register should be kept as a starting point with a view to computerization at a later date.

3.9. To provide a forum for discussion and support of KMC.

3.9.1. A KMC forum should be established under the auspices of the MCWH Sub-directorate and representatives from allied sub-directorates and services in the public and private sectors.

3.9.2. The purpose of this forum would be:

a) to initiate and establish KMC throughout the Western Cape Province;
b) to support KMC in the Regions once it has been established;
c) to arrange regular meetings:
d) to initiate and review biomedical and systems research;
e) to review the KMC data collected and
f) to monitor the quality of care.

4. Resources required for implementation of KMC

4.1. Budget

4.1.1. Materials, training, monitoring and evaluation and a KMC program could be accommodated within the existing structures with varying amounts of financial and other input.

4.1.2. It is essential that a specified sum of money should be allocated from the budget of each hospital for establishing a KMC unit. Financial support should also be available for health workers to attend training courses.

4.2. Health Promotion and Marketing

4.2.1. Advertising and stationary costs - these should be regarded as a necessary investment!

4.2.2. Posters - one is already available through the auspices of the PAWC Department of Health. Sub-directorate Nutrition, telephone number **021-460-9249**.

4.2.3. Pamphlets - several have already been compiled by the Groote Schuur Hospital Neonatal Unit, telephone number **021-404-6025.** These are available in Afrikaans, English and Xhosa and could be adapted for more general use.

4.2.4. Reprints of scientific studies showing the efficacy and safety of KMC should be available to health care workers. The KMC Interest Group, telephone number **021-404-6025,** has a bibliography of journal articles.

4.2.5. Cochrane Centre, MRC for systematic reviews,

4.2.6. Videos - a local video on the application of KMC at Groote Schuur Hospital. is available (Telephone number **021- 404-6025.)** A video on KMC in the community setting is required.

4.2.7. Media – KMC should be promoted in the popular press, on radio and on TV. This should not be limited to documentary coverage, but also incorporate KMC in local 'Soapies" etc.

4.2.8. Fundraising – each health care facility should be responsible for its own fundraising efforts

4.3. Training

4.3.1. At the initiation Of a KMC program, training of key personnel is important. Initially the training of trainers should be at tertiary institutions. A two-day (approximately **15** hour) training seminar has already been set up and implemented at Groote Schuur Hospital. Thereafter training should be done at regional level. All categories *of* health workers and students should receive theoretical and practical training in KMC and the implementation thereof.

4.3.2. The skills for training within the province are adequate for the task.

4.3.3. Information regarding forthcoming KMC training is available from:

i) Deputy Director: Maternal, Child and Women's Health.
PAWC Dept. *of* Health,
Private Bag **X2060,**
Cape Town, 8000.

Tel: **(021)-483-2686 / 4266 / 2680 / 3737**
Fax: **(021)-483-4345**

ii) The Department of Neonatal Medicine,
H46 OMB. Groote Schuur Hospital.
Private Bag,
Observatory. **7935.**

Tel: **(021)-404-6025 / 6024 / 6069**
Fax: **(021)-447-1660**

iii) The Department of Neonatal Medicine,
Tygerberg Hospital
P O Box 19063,
Tygerberg, **7505.**

Tel: **(021)-938-6480**
Fax: **(021)-931-7810**

4.3.4. Health workers *of* the individual health care facilities and volunteer mothers who have practiced KMC should train parents or caregivers.

4.4. Personnel

4.4.1. Motivation for KMC implementation most commonly comes in the form of enthusiastic individuals. The main resource required is commitment from management, policy formulatorsldecision makers and health workers. This is probably best provided by visits to centers already practicing the method, preferably in well-resourced units, as well as a unit similar to the one wishing to start. This should once again take place in a regional context.

4.4.2. KMC is intensive care, but the mother provides most of that care. The mothers should be regarded as full members of the health care team, and not as patients, although for stable and continuous KMC. it is in fact the mother who will take up most of the health workers' time in terms of support and motivation. Mothers require a considerable amount of practical and emotional support and this must be factored into any KMC protocol. Any enthusiastic staff member, who does not have to be a professional nurse, can provide this kind of support.

4.4.3. There should be a key person, preferably a nurse, who is in charge of KMC patients and the KMC ward at each facility providing KMC. This person should be trained at a tertiary institution and be able to train others in his/her facility and community

4.5. Building and furnishing

4.5.1. No specialized equipment is required, but it is necessary to provide space for the mothers, as full boarders. Ideally such a place should be adjacent to the Neonatal Unit, however, any rooms with beds, ablution facilities and reasonable access to the Neonatal Unit will suffice. In future all neonatal units should be designed to include maternal accommodation.

4.5.2. Visiting mothers will require a comfortable chair next to the infant's incubator for intermittent KMC. and chairs for spouse or partner. and refrigeration facilities for expressed breast milk. In admitting mothers to continuous KMC it is useful to provide them with comfort and antidotes to boredom such as a loungeldining area, laundry facilities, microwave oven, kettle, refrigerator for snacks, TV. radio, handwork, reading material. None of this is essential. but these "luxury" items could be obtained through fundraising efforts and charitable organizations.

4.5.3. **Table 2** (pg. **15-16)** gives guidelines for the planning and commissioning of KMC facilities

4.6. Pharmacy

4.6.1. The following items should be available if indicated:

4.6.1.1. Galactogogues such as Metoclopramide may help to improve breast milk production. This is especially important for mothers who are only able to visit their babies infrequently.
4.6.1.2. Breast milk fortifiers, which increase calcium, phosphorus and caloric content in breastmilk, for infants less than 1500g.
4.6.1.3. Multivitamin syrup.
4.6.1.4. Vit D syrup.
4.6.1.5. Iron syrup.
4.6.1.6. Preterm formula for supplementation of breastmilk if indicated.

4.7. Housekeeping

4.7.1. Accommodating mothers will incur laundry, cleaning and catering costs, and a small increase in consumables. However these are minimal when set against the savings generated by KMC.

4.7.2. Mothers may be requested to bring their own linen and toiletries (see Table 2) and to assist with the maintenance of a hygienic environment.

4.8. Follow-up

4.8.1. Existing community follow-up facilities could be used for following the infants in KMC. The most important aspect of follow-up is to ensure adequate weight gain and feeding, and to promote the use of KMC in the community, and nurses trained in KMC can do this. A paediatrically trained medical officer or specialist should see the baby intermittently as per discharge letter. or on a referred basis if there are problems.

4.9. Transport

4.9.1. It might be a proposition to invest in a dedicated baby transport buslcombi in which stable infants in the KMC position can be transported back to the referral or step-down hospitals in the region without having to use the over-extended ambulance service. This requires further detailed investigation.

4.10. Health Information

4.10 1. Standard data collection form will be used: one for individual facilities and one composite form for the Regions. Regions will be responsible for the distribution and collection of the forms. See copies attached as Appendix A.

4.10.2. A computer program and operator will be required to collate data and make it available for support, research and promotion of KMC. This could be incorporatedin existing data collection systems.

4.11. Support

4.11.1. Support visits should be regarded as part of the continuous development of the KMC intervention and provision should be made for KMC to be incorporated into the existing MCWH outreach programs such as CAPE/COPE/PEP programs.

4.11.2. With increasing experience. training and confidence it should be possible to nurse stable growing infants with weights of 12009 and above in the MOUs or peripheral clinics, allowing resources at tertiary and secondary hospital level to be used more efficiently and appropriately. This can be followed by ambulatory care whereby mothers provide continuous KMC at home, from when their infants weigh about 1200g, and report to the MOU or other support structure daily.

Table 1: KMC *Guidelines* for Specific Levels of Health Care

Health care facility	Infant: condition and care required	Mother	KMC provided
Level 3 hospital	Neonatal ICU. (Infants <1000g are accepted for ventilation only in exceptional circumstances.)	High risk, pregnant, requiring Level 3 care herself. Postnatal, to accompany infant - especially mother from "out of town". *To* provide breastrnilklbreaslfeed.	Intermittent skin-to-skin care once infant is stable. Continuous KMC while awaiting discharge or transfer to another healtt care facility. Recommended target: 25% of nursery occupancy should be KMC beds.
Level *2* hospital (good resources)	Neonatal ICU Graduate from NICU	Pregnant mother requiring Level 2 care herself. Postnatal - accompanying infant - especially mother from "out of town".	Intermittent skin-to-skin care once infant is stable. Continuous KMC while awaiting discharge or transfer to another health care facility, provided the infant is stable. Recommended target: **40%** of nursery occupancy should be KMC beds.
Level **2** hospital (basic resources)	Graduate from NICU	**To** provide breastmilklbreaslfeed.	
	Graduate from NICU – stable	Pregnant mother requiring Level 1 care herself. Postnatal- accompanying infant - especially mother from "out of town". Provide breastmilk / breastfeed.	Baby *is in* continuous KMC from birth provided the infant is stable. Continuous KMC while awaiting discharge or transfer to another health :are facility, provided the infant is stable. Recommended target: 90% **of** nursery occupancy should be *KMC* beds.
MOU	Stable infants	'regnant mother requiring MOU care. vlother to stay with infant all the time. Provide breastmilk / breastfeed. vlother is confident in handling her infant.	3aby in continuous KMC from birth. Continuous KMC while awaiting jischarge or transfer to another health :are facility. provided the infant is stable. Recommended target: 90% of nursery occupancy should be KMC beds.

Table 2: Guidelines for Planning and Commissioning KMC Facilities.

Type of KMC	Health care facility	% KMC beds of total infant beds	Accommodation	Furnishing	Soft furnishing, linen, etc	Catering	Personnel	"Luxury" items – could be donated
Intermittent – mothers visit daily, either from the postnatal ward or from home.	Level 3 Level 2 Level 1	50% lodger beds 10% lodger beds VIA	Existing neonatal nursery with spacebetween infant beds.	1 x comfortable chair for mother next to each infant bed. 1x chair for Fatherlother visitor.	Nil extra (over and above what is needed for baby).	Tea/coffee in morning and afternoon. Meals (lunch) for indigent mothers.	Existing nursery staff to supervise and educate mothers. One member of staff should have been trained in KMC at a Level 3 unit. Social worker Domestic worker	Magazines TV Video player – could be used for maternal education too. Kettle, toaster. microwave oven so mothers can make their own food/drinks.
			Area to express breastmilk in privacy.	Mobile screen for privacy Chair Fridge for EBM storage				
			Ablution facilities:	WC Hand basin	Toilet paper Paper towels Soap Cleaning agents			

Table 2 cont'd: Guidelines for Planning and Commissioning KMC Facilities

Type of KMC	Health care facility	% KMC beds of total infant beds	Accommodation as close to neonatal unit as possible.	Furnishing	Soft furnishing, Linen, etc	Catering	Personnel	"Luxury" items – could be donated
Continuous – Mother and baby admitted to dedicated KMC Ward.	Level 3 Level 2 Level 1 MOU	*15%* 10% 30% 30%	Sleeping room – either dormitory accommodation or individual rooms.	Bed – divan rather than hospital bed. Chair Locker Curtains and Floor rugs	Mattress. Blankets/duvet 2 Sheets and 3 pillows per bed. Encourage mothers to bring their own bedding.	meals per day plus coffee/tea morning. afternoon and evening.	Existing nursery staff to supervise and educate mothers. One member of staff should have been trained in KMC at a Level 3 unit. Social worker. Domestic Norker.	Heater Fan TV Video Kettle Toaster Microwave oven Fridge for snacks Magazines and books
			Sitting/dining room – a place for mothers to receive visitors, to watch TV etc., and also be used for maternal education.	Easy chairs – one per bed. Dining table and one chair per bed.	Curtains and Floor rugs			
			Ablution facilities: Personal. Laundry - Could be accommodated in the ablution area.	WC Hand basin Shower (one of each per 4 beds) Washing sink or Washing Machine Drying facilities	Cleaning agents Encourage mothers to bring their own Towels Toilet paper Soap Soap powder Personal toiletries			

CONTRIBUTORS

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Region:			**Type of facility: Please tick**	**Tertiary Hospital**	MOU	**Clinic**
Name of Facility:				**Secondary /Regional Hospital**	**Day Hospital**	
ıtes: ../.../... to ../.../...				**Primary Hospital**	**Other:** (Please specify)	
Admissions:						
KMC:	Continuous from birth					
	Intermittent KMC only					
	Continuous in KMC Ward only later					
	Intermittent then continuous					
	None					
Feeds:	Exclusive breast-feeding					
	Mixed feeding					
	Exclusive formula feeding					
Referrals to another facility	Higher level					
	Lower level					
D/C Home:	<Day 3					
	Day 4-7					
	Day 8-14					
	Day 15-28					
	>Day 28					
Died:						

TOTAL	**<1600g**	**1600-1699g**	**1700-1799g**	**1800 -8999**	**1900 -9999**	**2000-2499g**	**>2500g**
TOTAL							

Do you have a KMC Ward? YES NO | **If "Yes", how many beds does it have?**

COMPLETED BY: _____ **SIGN:** _____ **TEL:** _____

REGIONAL KMC
6-Monthly Monitoring and Evaluation Statistics

Region:				**Number of types of facilities in the Region:**	Tertiary Hospital	MOUs	Clinics
					Secondary /Regional Hospital	Day Hospital	
Dates: .../.../... to .../.../...					Primary Hospital	Other: (Please specify)	
Birth wt categories:		<1000g	1000-1499g	1500-1999g	2000-2499g	**TOTAL**	
Admissions:							
KMC:	Continuous from birth						
	Intermittent only						
	Continuous in KMC Ward only later						
	Intermittent then continuous						
	None						
Feeds:	Exclusive breast-feeding						
	Mixed feeding						
	Exclusive formula feeding						
Referrals to another facility	Higher level						
	Lower level						
D/C Home:	<Day 3						
	Day 4-7						
	Day 8-14						
	Day 15-28						
	>Day 28						
Died:							

Weight at discharge:

TOTAL	<1600g	1600-1699g	1700-1799g	1800 -899g	1900 -999g	2000-2499g	>2500g
TOTAL							

Number of KMC Facilities:	Number of KMC Wards:	Number of KMC Beds: