Online Appendix 1

Note: This is Online Appendix 1 of Mhango P, Chipeta E, Muula AS, et al. Implementing the Family-Led Care model for preterm and low birth weight newborns in Malawi: Experience of healthcare workers. 2020;12(1), a2266. https://doi.org/10.4102/phcfm.v12i1.2266

TABLE 1-A1: Number of participants recruited per cadre and data collection period.

Cadre	Data period 1 (*n*)	Data period 2 (*n*)	Total (*n*)
Facility-based staff			
Clinical officer	3	2	5
Medical assistant	2	0	2
Nurse-midwife†	16	15	31
Hospital attendant	16	15	31
Subtotal health facility	37	32	69
Community-based health workers			
Health surveillance assistant	25	29	54
Total	**62**	**61**	**123**

†, Nurse-midwives include registered nurse-midwives and nurse-midwife technicians.

TABLE 2-A1: Births, admissions and referrals.

Indicator	Data period 1	Data period 2	Total
Number of babies born preterm or LBW in the past 3 months	212	243	455
Number of babies < 2500 g admitted to KMC in the past 3 months	111	127	238
Percentage of eligible babies admitted to KMC	52%	52%	52%
Number of babies referred to district hospital	7	2	9

LBW, low birth weight; KMC, kangaroo mother care.

TABLE 3-A1: Individual observations completed on the monitoring sheets.

No.	Observation	Data period 1		Data period 2		Total	
		n	%	*n*	%	*n*	%
1.	Temperature monitored twice/day	16	59	44	88	**60**	**78**
2.	Respirations monitored twice/day	16	59	42	84	**58**	**75**
3.	Tone monitored twice/day	16	59	44	88	**60**	**78**
4.	Colour monitored twice/day	16	59	45	90	**61**	**79**
5.	Urine monitored twice/day	16	59	45	90	**61**	**79**
6.	Stools monitored twice/day	16	59	44	88	**60**	**78**
7.	Feeds recorded as per schedule	10	37	49	98	**59**	**77**
8.	Weight of baby recorded every day	22	81	49	98	**71**	**92**
9.	Mode of feeding recorded on feeding chart	23	85	50	100	**73**	**95**
Mean percentage score		-	**62**	-	**92**	-	**81**

TABLE 4-A1: Adherence to discharge criteria.

No.	Criterion	Data period 1 (*n* = 27)		Data period 2 (*n* = 50)		Total (*n* = 77)	
		n	%	*n*	%	*n*	%
1.	No danger signs present	25	93	47	94	**72**	**94**
2.	Baby regained birth weight	15	56	20	40	**35**	**45**
3.	Discharge weight: > 1500 g (hospital)/> 1800 g (health centres)	21	78	31†	78	**52†**	**78**
Mean percentage score		-	**75**	-	**71**	-	**72**

†, Data for this criterion not available for one facility, percentages calculated accordingly.

TABLE 5-A1: Observations in follow-up care records.

No.	Actions taken	Data period 1 (*n* = 18)		Data period 2 (*n* = 33)		Total (*n* = 51)	
		n	%	*n*	%	*n*	%
1.	Date entered on KMC follow-up form	5	28	27	82	32	63
2.	Weight entered on follow-up form	5	28	28	85	33	65
3.	Weight entered on KMC register	7	39	24	73	31	61
4.	Temperature entered	5	28	25	86	30	59
5.	Family kept the given follow-up appointment	8	44	28	85	36	79
6.	Family returned at another date	1	6	7	21	8	16

KMC, kangaroo mother care.

TABLE 6-A1: Referral criteria: Participants with a correct answer per criterion.

| Actions taken	Data period 1 (*n* = 19)		Data period 2 (*n* = 14)		Total (*n* = 33)	
	n	*%*	*n*	*%*	*n*	*%*
Birth weight < 1500 g	11	59	2	14	13	39
Presence of danger sign(s)	13	68	6	43	19	58
Mother very sick	0	0	1	7	1	3
No surrogate/Non-acceptance KMC	0	0	1	7	1	3

KMC, kangaroo mother care.

TABLE 7-A1: Knowledge questions.

| No.	Question
1	Preterm and low birth weight babies are more prone to infections than term babies weighing 2.5 kg.
2	A 1800 g baby was discharged home 2 weeks ago and now returns for a follow-up visit. Today the baby weighs 2000 g; this is normal weight gain.
3	Preterm/low birth weight babies who cannot take milk from the mother's breast should only be fed expressed breast milk.
4	Family-Led Care refers to care the family provides to their preterm/low birth weight baby once mother and baby are discharged to home
5	While in the hospital, the family should monitor and record the baby's feeding, temperature, respirations and tone.
6	If a baby does not come for the follow-up appointment, it is the responsibility of the facility staff to find out the condition of the baby and encourage them to return for the appointment and record this in the KMC register.
7	Once home, the family should continue to monitor the baby's temperature, breathing, skin colour and condition of the cord once a day and record it on the KMC monitoring form.
8	At the time of discharge, the family should be counselled when and where to return for follow-up care.
9	Families do not need to bring the KMC monitoring form when they return for follow-up appointments.
10	While in the hospital, KMC babies should have their colour, tone, respirations and temperature checked and recorded once a day by staff at the health facility.

KMC, kangaroo mother care.

TABLE 8-A1: Knowledge assessment of professionals (mean percentage scores).

Cadre	Data period 1 (%)	Data period 2 (%)	Total (%)
Clinical officers	63	65	64
Medical assistants	70	-	70
Nurse-midwives	74	67	71
Total	**72**	**67**	**69**
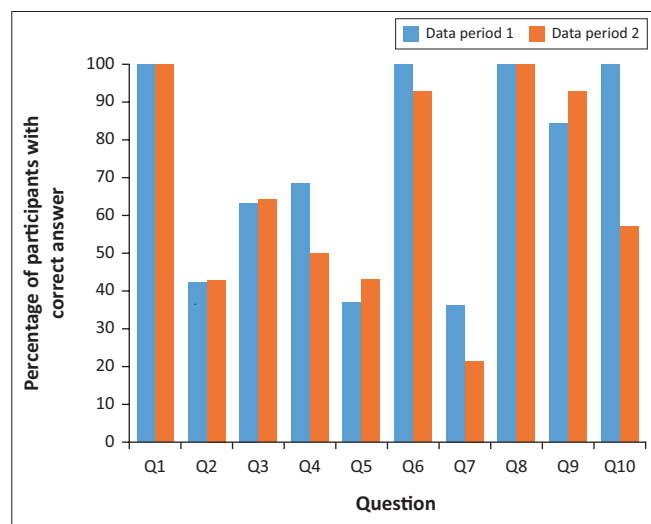
Note: Likert-Scale values: Strongly disagree, 0; Disagree, 1; Neutral, 2; Agree, Strongly agree, 4.
KMC, Kangaroo mother care; LBW, low birth weight; FLC, Family-Led Care.
FIGURE 1-A1: Percentage of health professional participants answering individual knowledge items correctly.
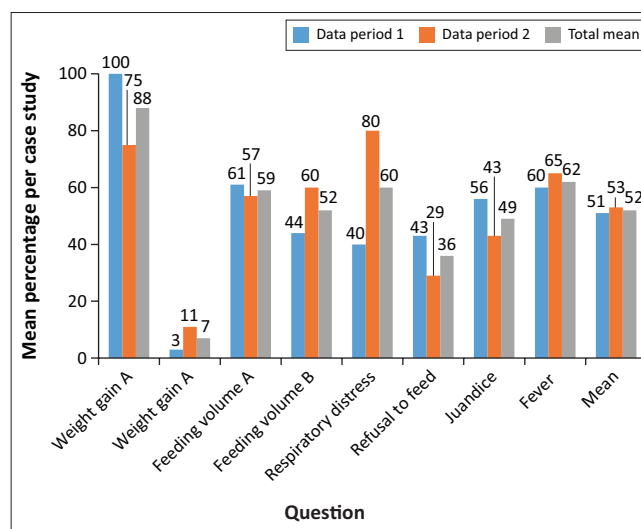
FIGURE 2-A1: Application-of-knowledge assessment (mean percentage scores per case topic).

TABLE 9-A1: Summary of counselling observations.

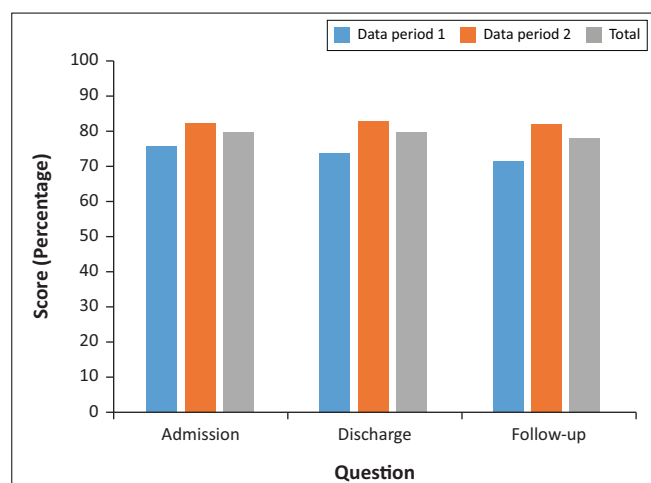| Observation		Real observation (*n*)	Role play (*n*)	Total (*n*)
1. Initiating basic care	Data period 1	1	7	8
	Data period 2	2	10	12
	Total	**3**	**17**	**20**
2. Pre-discharge counselling	Data period 1	1	6	7
	Data period 2	2	9	11
	Total	**3**	**15**	**18**
3. Follow-up counselling	Data period 1	6	2	8
	Data period 2	4	9	13
	Total	**10**	**11**	**21**
Total	Data period 1	8	15	23
	Data period 2	8	28	36
	Total	**16**	**43**	**59**

FIGURE 3-A1: Summary of counselling scores.

TABLE 10-A1: Initiating basic care.

Observation	Data period 1 (*n* = 8)		Data period 2 (*n* = 12)		Total (*n* = 20)	
	Yes	%	Yes	%	Yes	%
Real observation	1	-	2	-	3	-
Role play	7	-	10	-	17	-
1. Gathers:						
a. flip chart	8	100	11	92	19	95
b. family monitoring form and pencil	6	75	10	83	16	80
c. take-home leaflet for counselling	2	25	8	67	10	50
2. Invites available caregivers for baby	5	100	7	58	12	60
3. Introduces self to family	2	25	6	50	8	40
4. Asks family what they see in the picture	8	100	10	83	18	90
5. Defines KMC	5	63	11	92	16	80
6. Discusses benefits of KMC	8	100	11	92	19	95
7. Discusses keeping baby warm	7	88	11	92	18	90
8. Explains and demonstrates putting baby on skin to skin	8	100	12	100	20	100
9. Explains infection prevention measures	7	88	11	92	18	90
10. Explains that breast milk is best food for baby	5	63	7	58	12	60
11. Explains feeding						
a. Frequency	8	100	11	92	19	95
b. Route (tube, cup, breast)	8	100	11	92	19	95
12. Explains baby's daily milk volume will be communicated	5	63	11	92	16	80
13. Explains newborn danger signs	7	88	11	92	18	90
14. Explains what to do if they danger sign/s seen	8	100	10	83	18	90
15. Explains and demonstrates use of family monitoring form	5	63	11	92	16	80
16. Asks if there are questions	5	63	9	75	14	70
17. Thanks family for time	4	50	9	75	13	65
Mean score (%)	-	**76**	-	**83**	-	**80**

TABLE 11-A1: Pre-discharge counselling.

Observation	Data period 1 (*n* = 7)		Data period 2 (*n* = 11)		Total (*n* = 18)	
	n	%	*n*	%	*n*	%
Real observation	1	-	2	-	3	-
Role play	6	-	9	-	15	-
1. Gathers:						
a. flip chart	6	86	10	91	16	89
b. family monitoring form and pencil	5	71	10	91	15	83
c. take-home leaflet for counselling	3	43	10	91	13	72
2. Invites available care givers for baby	4	57	8	73	12	67
3. Introduces self to family	3	43	6	55	9	50
4. Asks family what they see in picture	4	57	10	91	14	78
5. Tells family baby is doing well and after discharge, they will continue care at home	6	86	10	91	16	89
6. Reminds family how to keep baby warm at home	6	86	10	91	16	89
7. Discusses what to do when baby feels cold while on skin to skin	2	29	6	55	8	44
8. Teaches family how to prevent baby from getting infections at home	7	100	10	91	17	94
9. Reminds family that breast milk is best food for baby	4	57	8	73	12	67
10. Teaches family how feeding baby at home						
a. Quantity (if baby is cup fed)	2	40†	7	64	9	56†
b. Frequency	6	86	9	82	15	83
c. Route (tube, cup, breast)	7	100	10	91	17	94
12. Reviews danger signs to watch on baby	6	86	10	91	16	89
13. Discusses what to do when they see one or more danger sign at home	6	86	11	100	17	94
14. Encourages use of basic family monitoring form at home	6	86	11	100	17	94
15. Requests family to bring monitoring form when coming for follow-up care	7	100	10	91	17	94
16. Explains how family can support mother at home	6	86	11	100	17	94
17. Encourages family to come for follow-up care	6	86	8	73	14	78
18. Gives family appointment day	6	86	9	82	15	83
19. Asks if family has any questions	5	71	7	64	12	67
Mean score (%)	-	**74**	-	**83**	-	**80**

†, In 2 cases this observation was not applicable; calculation of percentage was made out of 5 instead of 7 for data period I and 16 instead of 18 for the total.

TABLE 12-A1: Follow-up counselling.

Observation	Data period 1 (*n* = 8)		Data period 2 (*n* = 13)		Total (*n* = 21)	
	n	%	*n*	%	*n*	%
Real observation	6	-	4	-	10	-
Role play	2	-	9	-	11	-
1. Gathers necessary equipment	6	75	12	92	18	86
2. Introduces self to family	1	13	7	54	8	38
3. Welcomes family and thanks them for coming for follow-up	7	88	11	85	18	86
4. Reviews with family how the baby was cared for at home	8	100	11	85	19	90
5. Checks if there were challenges at home	6	75	10	77	16	76
6. Reviews the family monitoring form to determine if it was being used correctly at home	5	63	10	77	15	71
7. Calculates to check if baby has adequate weight gain or allowable physiological weight loss	8	100	11	85	19	90
8. Examines the baby	5	63	12	92	17	81
9. Shares findings of examination with family	5	63	11	85	16	76
10. Documents required information in:						
a. Register	5	63	10	77	15	71
b. health passport for baby	6	75	11	85	17	81
c. follow-up form	5	63	11	85	16	76
11. Gives family date of the next appointment day	6	86†	9	69‡	15	88¶
12. Books family in the diary for the next appointment day	5	71†	8	62‡	13	76¶
13. Thanks the family for coming for follow-up and checks if they have questions	7	88	11	85	18	86
Mean score (%)	-	**71**	-	**82**	-	**78**

†, In one case this observation was not applicable; calculation of percentage was made out of 7 instead of 8.

‡, In three cases this observation was not applicable; calculation of percentage was made out of 10 instead of 13.

¶, In four cases this observation was not applicable; calculation of percentage was made out of 17 instead of 21.