



Ministry of Health

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Acronyms:

BFHI	Baby Friendly Hospital Initiative
BF	Breast Feeding
EBF	Exclusive Breast Feeding
МОН	Ministry of health
MOCI	Ministry of Commerce and Industry
NICU	Neonatal Intensive Care Unit
UNICEF	United Nations Children's Fund
WHO	World Health Organization
BMS	Breast Milk Substitute
OS1649/2021	The Omani Specification of Marketing Regulation of Designated
	Products for Infants and Young Children
SSC	Skin to Skin Contact
LBW	low birth weight

Definition

- 1. **Baby Friendly Hospital Initiative:** A global program established by UNICEF and the World Health Organization (WHO) to promote breastfeeding support in all maternity units within hospitals.
- 2. **Breast Milk Substitute (BMS):** Encompasses Infant Formula and Complementary Food substitutes for breast milk.

- 3. Exclusive Breastfeeding: Refers to the practice of providing an infant solely with breast milk, without the introduction of any other liquids, foods, water, herbs, or substances during the initial six months of life.
- 4. **Finger feeding:** An alternative neonatal feeding technique utilized to address breastfeeding difficulties and encourage proper use of oral musculature.
- 5. Lactation consultant (IBCLC): A certified professional recognized by the International Board of Lactation Consultant Examiners (IBLCE), specializing in addressing breastfeeding concerns and managing both common and complex lactation issues.
- 6. **Mixed feeding**: Involves a combination of both breastfeeding and formula feeding methods.
- 7. **Skin to Skin Contact (SSC):** Denotes the practice in which newborns are placed directly on their mother's bare chest following birth.
- 8. **Non-nutritive sucking** refers to suckling without fluid intake, unlike nutritive suckling which involves fluid introduction and bolus formation in the mouth and throat.
- 9. **Supplementary feeding**: Pertains to provide additional fluids other than maternal milk to breastfed infants under six months of age; these fluids may encompass donor human milk, infant formula, glucose water, or other BMS options.
- 10. The Omani specification of marketing regulation of Designated Products for Infants and Young Children (OS 1649/2021): A set of guidelines issued by the Ministry of Commerce in 2021 in coordination with nutrition section of Ministry of health to regulate the proper utilization of Breast Milk Substitutes (BMS) and their appropriate marketing strategies.

Infant Feeding Guidelines

Chapter one:

1. Introduction:

Breastfeeding is a natural and beneficial source of nutrition and provides the healthiest start for an infant. In addition, breastfeeding promotes a unique and emotional connection between mother and baby.

The role of the Baby Friendly Hospital Initiative (BFHI) is to protect, promote and support breastfeeding by providing a framework for Baby Friendly hospitals to operate within called the Ten Steps to Successful Breastfeeding.

Ministry of health represented by the Nutrition Department, launched a National Guide of Baby-friendly Hospital in June 2023 as part of its efforts to encourage breastfeeding in health institutes. The standards embedded in the Ten Steps to Successful Breastfeeding are the global criteria to reflect the expansion of the initiative created by World Health Organization (WHO) and UNICEF. MOH aim to achieve exclusive breastfeeding for the first six months of life, followed by the introduction of appropriate complementary foods while continuing breastfeeding until the age of two.

Khoula hospital is committed to delivering a healthcare environment that encourages, promotes, and supports breastfeeding for parents through staff involvement.

Non-compliance with the guideline risks breaking global standards set by WHO, potentially affecting Khoula Hospital's BFHI accreditation and impacting patient care quality.

Staff members at Khoula Hospital can return to work while breastfeeding, with entitlement to flexible lactation breaks and management support under the Employee Breastfeeding Policy. Refer to employee breastfeeding policy.

2. Purpose:

The purposes of these guidelines are to:

2.1 promote, support, and encourage breastfeeding as the optimal feeding method for babies.

- 2.2 Discuss health benefits of breastfeeding and potential risks of breast milk substitutes with women and their families, enabling them to make informed choices about baby feeding methods.
- 2.3 Create an environment for women to breastfeed their babies, and ensure they are given sufficient information and support to enable them to breastfeed exclusively for six months, and then as a part of their infant's diet beyond the first year of life.
- 2.4 Adhere to the WHO Code and Omani regulation standard specification (OS 1649/2021) for marketing breast milk substitutes, ensuring ethical practices in promoting such products.
- 2.5 Provides process details to meet all the requirements of Baby Friendly Health Initiative (BFHI) accreditation.

3. Scope:

These guidelines apply to all health care professionals caring for mothers and babies admitted in DGKH.

Chapter two:

4. Structure

- 4.1 This is the guidelines of DGKH which cover the WHO 10 steps of successful breastfeeding.
- 4.2 The Ten Steps are divided into two sections: Critical Management Procedures (Steps 1 and 2), which ensure consistent care delivery.
- 4.3 Key Clinical Practices (Steps 3-10), focusing on individual care for mothers/birthing parents and infants in relation to infant.
- 4.4 Critical management procedures to support breastfeeding by:
 - 4.4.1Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.
 - 4.4.2 Have a written infant feeding policy that is routinely communicated to staff and parents.
 - 4.4.3 Establish ongoing monitoring and data-management systems.

- 4.4.4 Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding.
- 4.5 Key clinical practices to support breastfeeding:
 - 4.5.1 Discuss the importance and management of breastfeeding with pregnant women and their families.
 - 4.5.2 Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.
 - 4.5.3 Support mothers to initiate and maintain breastfeeding and manage common difficulties.
 - 4.5.4 Do not provide breast-fed newborns any food or fluids other than breast milk, unless medically indicated.
 - 4.5.5 Enable mothers and their infants to remain together and to practice rooming-in 24 hours a day.
 - 4.5.6 Support mothers to recognize and respond to their infants' cues for feeding.
 - 4.5.7 Counsel mothers on the use and risks of feeding bottles, teats and pacifiers.
 - 4.5.8 . Coordinate discharge so that parents and their infants have timely access to ongoing support and care.

4.6 Critical management procedures (10 steps):

- 4.6.1. Step one (a): comply fully with the international code of marketing of breast-milk substitutes and the Omani Standard Specification OS1649/2021 by the following:
 - A. Breast milk substitutes should not be sold or promoted in DGKH premises and should be purchased through normal procurement channels.
 - B. The display of information and distribution of materials promoting breast milk substitutes, feeding bottles, teats, or dummies are prohibited.
 - C. The acceptance of gifts, non-scientific literature ,money, or support for in service, infant feeding related education or events from breast milk substitute manufacturers is prohibited, such as calendars and stationery or equipment displaying company's logo are also not permitted.
 - D. Company representative should not contact with pregnant women and mothers and their families.

- E. Distribution of Educational materials and literature provided by manufacturers for families are not allowed.
- F. All healthcare professions working in the hospital should not give samples of breast milk substitute, bottles and teats to the general public
- G. The access of formula companies representatives to the facility and health care professional is restricted
- H. Any form of violation of the code should be reported electronically by writing Incident report that send automatically to nutrition department in ministry of health and implement corrective action.
- 4.6.2. **Step one (b):** Have a written infant feeding guideline that is routinely communicated to staff and parents by ensure that
 - A. Infant Breastfeeding guideline should be communicated to all healthcare staff in contact with pregnant women and mothers.
 - B. New and existing healthcare professionals' should be able to access a copy of the guideline from the shared file in Al shifa system.
 - C. Summary of the guideline should be visible to pregnant women and families displayed in Maternity and child health (see **appendix 1&2**).
- 4.6.3 **Step One (c)**: Establish ongoing monitoring and auditing by ensure that:
 - A. Continue monitoring early initiation and exclusive breastfeeding rates and integrate those data into medical charts and relevant registers.
 - B. All Mandatory breastfeeding education of staff should be recorded.
 - C. Quality Improvement activities such as education session, cross audit should be undertaken if targets are not met and to make action plan to improve compliance.
 - D. Regular meeting with BFHI committee every 6 months to review implementation of the breastfeeding rates data or early if required.
 - E. Education Checklists created to guarantee all important tips discussed before during and after delivery to mothers to sustain quality of care .Refer to **Appendix 2-7**.

4.6.2 Step Two: Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding by:

- A. All healthcare professionals are responsible for supporting breastfeeding women, helping them overcome any related issues, and providing education on the matter.
- B. All healthcare professionals in contact with pregnant women and mothers should receive breastfeeding management training per BFHI standards, with new staff trained within six months of starting their contract.
- C. The responsibility for providing training lies with lactation specialist team who are to record training attendance.
- D. Written curriculum clearly covering all ten steps to successful breastfeeding is to be available for staff training.
- E. Obstetricians and pediatricians required education session and perform competency assessment to assess their knowledge.
- F. Education is an ongoing process, with yearly updates on BFHI guideline implementation and refreshment courses for staff every 2-3 years.

4.7 Key clinical practices to support breastfeeding:

- 4.7.1 Step Three: antenatal information, all healthcare professionals should discuss the importance and management of breastfeeding with pregnant women and their families and ensure the following:
- A. All pregnant women are aware of the benefits of breastfeeding and the potential health risks of breast milk substitute feeding.
- B. All pregnant women are to be given the opportunity to discuss infant feeding on a one-to-one basis with a health professional, rather than just in group discussion.
- C. Explained to all pregnant women the physiological basis of breastfeeding clearly and simply, together with evidence-based practical skills which have proven to protect breastfeeding and reduce common problems.
- D. Information about possible breastfeeding challenges and how to overcome them should be included .The aim is to give women confidence in their ability to breastfeed.

- E. All pregnant women should receive essential antenatal information by 32 weeks of pregnancy.
- F. If the pregnant women at increased risk for preterm delivery or birth of a sick infant should begin these discussions as soon as possible.
- G. All materials and teaching are to reflect WHO/UNICEF baby friendly best practice standards and provided in a variety of written and electronic formats and available in English and Arabic language

4.7.2 Step four: Facilitate immediate, uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth by ensure that:

- A. All mothers are encouraged to hold their babies with direct skin to skin contact as soon as possible after birth, regardless of their intended feeding method.
 - i. Ensure room temperature is set above 25°C.
 - ii. The mother with HIV positive, they can safely hold their newborns skinto-skin but avoid breastfeeding.
- B. Skin-to-skin contact should be continuous for at least an hour, or until after the first breastfeeding if it occurs sooner and documented in medical record.
- C. The baby allow to begin suckling at their own pace without rushing or interfering.
 - i. APGAR scores, assessment, and ID bracelet placement should be done on the mother's chest.
 - ii. Weight measurement and vitamin k administration can be delay for one hour.
- Continuous supervision of mother and infant is required to minimize the risk of Sudden Unexpected Postnatal collapse in newborns.
- E. If unable to initiate breastfeeding within the first hour, mothers should still receive support to do so when able.
- F. If skin-to-skin contact is interrupted for clinical reasons, it should be resumed as soon as the mother and baby are able.

- G. In caesarean section births, mothers and babies should stay together whenever possible except for medical interruptions.
- H. Intermittent skin-to-skin can be practiced with sick and premature infants as young as 26 weeks gestation when the infant's condition allows.
- I. Both parents should practice skin-to-skin while taking precautions against skin infections through cleansing before contact.

4.7.3 Step Five: Support mothers to initiate and maintain breastfeeding and manage common difficulties through the following:

- A. All breastfeeding mothers should receive assistance within six hours after delivery and during their hospital stay as needed.
- B. All staff nurse should ensure mothers receive practical support to learn effective baby positioning and attachment for successful breastfeeding.
- C. All staff nurse should demonstrate and explain the technique to the mother, thereby helping her attain this skill for herself
- D. All mothers should be provided with education and support in how to manage common breastfeeding challenges.
- E. All breastfeeding mothers are to be shown how to hand express their milk. Information outlining the process is to be provided for women to use as a reference.
- F. Any mothers at risk of delayed lactogenesis should receive special help, including a feeding plan and close follow-up for infant hydration, nutrition, and assistance with expression. Refer to **Appendix 11** for causes of delayed lactogenesis II.
- G. It is the responsibility of trained healthcare professionals are response to help and encourage mothers to express milk and maintain lactation during separations from their babies.
- H. Mothers who are separated from their babies lasts more than few days are encouraged to express milk at least six to eight times in a 24 hour period. They are shown how to express by hand or breast pump with safe handling of expressed milk

I. After discharged, instructions on continuing pumping, storage and labeling of breast milk to be given.

4.7.4 Step Six: Do not provide newborns any food or fluids other than breast milk, unless medically indicated, to consider the following:

- A. All mothers are encouraged to breastfeed exclusively for at least six months and continue breastfeeding for 2 year of life.
- B. For the first six months, breastfed babies should receive no other fluids, except in cases of medical indication or fully informed parental choice. In hospital no breast milk substitute is to be given to a breastfed baby unless prescribed by a medical practitioner. Refer to medical indication for supplementation, see **Appendix 12**
- C. Introducing formula or other foods or fluids can disrupt breast-milk production and interfere with long-term breastfeeding.
- D. Supplementing with infant formula leads to significant changes in intestinal microflora and place infant at risk for infection.
- E. If supplementation are required, every effort is to be made to encourage mothers to express breast milk.
- F. If a breast milk substitute is recommended, parents must be consulted and reasons discussed. Prescribed formula should be recorded in the baby's hospital health record, along with the reasoning.
- G. Parents who request breast milk substitutes should be informed about potential health risks and negative impacts on breastfeeding and must be documented in health records/consent forms.
- H. Safe preparation and handling of breast milk substitutes will be taught to non-breastfeeding families individually at discharge, with written instructions if necessary.
- Monitors and audits the use of formula and collects data on infant feeding showing prevalence of both exclusive breastfeeding during the hospital stay and on discharge.

J. Support mothers with babies in special care unit by assisting them in lactation through frequent milk expression, skin-to-skin contact.

4.7.5 Step Seven: Enable mothers and their infants to remain together and to practice rooming in 24 hours a day, by ensure that:

- A. All mothers should practice rooming in with their babies day and night, promoting close proximity for easy recognition and respond to their infants' cues and establish breastfeeding
- B. Mother-baby separation in the hospital only occurs if the health of either prevents care in postnatal areas, documentation is required.
- C. If the preterm or sick infants need to be in a separate room to allow for adequate treatment and observation, efforts should be made for the parents to spend as much time as possible with their infant and start skin to skin contact and breastfeeding as soon as baby health allows.
- D. All routine procedures, assessments, and screenings for newborns including immunizations, should be performed at the mother's bedside, not in the treatment room.
- E. Healthy and stable infants who requiring intravenous antibiotics or phototherapy can stay with their mothers.
- F. Babies should not separate from their mothers at night, regardless of feeding method.
- G. Mothers with caesarean deliveries should receive appropriate care and the baby should be at the mother's bedside
- H. Regular safe rooming-in practice should be provided to prevent infant falls and suffocation.
- I. After discharge, should encourage the mother to keep babies close at home to better understand their needs and feeding cues.

4.7.6 Step Eight: Support mothers to recognise and respond to their infants' cues for feeding.

- A. Supports Responsive Feeding for both breastfeeding and non-breastfeeding mothers, regardless of delivery method or feeding choice.
- B. Mothers should know there are no limits on feeding frequency or duration, and well term infants' mothers are not advise to feed at set times or for a specific time.
- C. Parents of newborns with low birth weight, preterm, or early term will be instructed to feed their infants at least 8 times per day, following early feeding cues and waking them if necessary.
- D. Cluster feedings in the first 24-36 hours can stimulate milk production and are not a sign of insufficient milk.
- E. Mothers are educated to recognise their baby's cues to feed and encouraged to continue with responsive breastfeeding. Refer to **Appendix 13** for early and late hunger cues
- F. The importance of night-time feeding for milk production is to be explained to mothers.
- G. Mothers of infants in the neonatal intensive care unit should be supported for skin-to-skin contact, behavior cue recognition, and effective breast milk expression soon after birth.

4.7.7 Step Nine: Counsel mothers on the use and risks of feeding bottles, teats and pacifiers by explained that:

- A. There should be no promotion of feeding bottles, teats and pacifiers inside hospital
- B. If expressed breast milk or other supplementary feeds are medically indicated mothers are guided with the use of alternative feeding methods.
- C. NGT, Cup and syringe feeding are temporary measures while a preterm baby learns to breastfeed.
- D. Preterm infants unable to breastfeed directly may benefit from non-nutritive sucking and oral stimulation until breastfeeding is established.
- E. Non-nutritive sucking or oral stimulation could involve the use of a gloved finger or an empty breast.

- F. Bottles, teats and dummies are not recommended for healthy term babies during the establishment of breastfeeding.
- G. If the Parents wishing to use pacifier, the healthcare professions should inform them the risk of pacifier such as reduce maternal milk production and long term bottle and teat use may lead to breastfeeding difficulties.
- H. Mothers who do not wish to breastfeed, the maternity staff will inform mothers and family members of the hygiene risks related to inadequate cleaning of feeding utensils, so they can make an informed choice of the feeding method.
- Nipple shields should only be recommended after a thorough assessment by an experienced lactation consultant.
- J. Mothers using nipple shields need guidance in application, breastfeeding with the shield, and follow-up care.

4.7.8 Step Ten: Coordinate discharge so that parents and their infants have timely access to ongoing support and care.

- A. All healthcare professional in DGKH prioritizes coordinated care for mothers, infants, and families, emphasizing clear communication among healthcare professionals including breastfeeding assistance, follow-up visits, and support from experts.
- B. Mothers advised to visit primary health facility for any concern in her infant general health.
- C. If an infant has difficulty latching or feeding at discharge, individualized feeding plan is provided if needed, potentially delaying discharge.
- D. Contact details for lactation consultant available for mother who have quires through WhatsApp 79234511
- E. Primi mothers and low birth weight term infants have follow-up visits at lactation clinics 2 weeks after birth.

- F. Healthy infants aren't discharged without their mothers unless necessary, and education on breastfeeding and family support is emphasized before leaving the hospital.
- G. The hotline is run by the ministry of health and provides trained counsellors to assist and support parents with issues on breastfeeding. The hotline number is **94288213**.

Chapter 3

5 Responsibility:

5.1. Head of pediatrics shall:

5.1.1. Ensure that all doctors are aware of the guideline and implementing it.

5.2. Head of obstetrics&gynecology shall:

5.2.1 Ensure that all doctors are aware of the guideline and implementing it.

5.3 Director of Nursing Affairs shall:

5 .3.1 Ensure all HoD, supervisors are aware and adhere to the guidelines.

5.4 In-charge nurse shall:

5.4.1. Ensure that all nurses are aware about the guidelines.

6.5. Bed-side nurse shall:

6.5.1 aware about the guidelines.

6 Document history and version control table:

Version	Description	Review Date
1	Initial release	2023

7 References:

- 1. Protecting, promoting and supporting Breastfeeding in facilities providing maternity and newborn services: the revised BABY-FRIENDLY HOSPITAL INITIATIVE
- 2. https://www.unicef.org/media/95191/file/Baby-friendly-hospital-initiative-implementation-guidance-2018.pdf
- 3. #7 ABM Model Maternity Policy Supportive of Breastfeeding English.pdf
- 4. Baby Friendly Hospital Initiative in Oman Health Facilities Providing Maternity Services 2022, Ministry of health
- 5. OS 649/2021, Marketing Regulations of Designated Products for Infants and Young Children.
- 6. HIV Management in Oman, A guide for health care workers, 2015

8. Annexes:

APPENDIX 1 : Summary of Infant Feeding Policy for pregnant women , mothers and their family

























Appendix 2: labour ward- Skin to skin and initiation of breastfeeding checklist:

	Skin to skin and intuition of breastfeeding in labour room						
Mother or baby IP No	Date	Skin to skin immediately		immediately	Initiation of BF	Health education	Staff name
		<1hr	>1hr	Not done Why			

Appendix 3: Operation theatre - Skin to skin and initiation of breastfeeding checklist

	Skin to skin and intuition of breastfeeding in operation theatre							
Mother or baby IP No	Date	CS under spinal	CS under GA	Skin to skin		Initiation of BF	Health education	Staff name
				Done	Not done Why			

Appendix 4: Antenatal checklist - infant feeding

Antenatal checklist -infant feeding			
All of the following should be discussed with all pregnant women by 32weeks of worker discussing the information should sign and date the form. Name: Expected date of delivery	f pregnancy. T	he health	
Topic	Discussed	Date	Staff sig
Listening to mother's ideas, previous experience and anxieties regarding infant feeding			
Importance of exclusive breastfeeding to the baby No other food or drink needed for the first 6 months-only mother's milk Importance of continuing breastfeeding after 6 month while giving other foods (Protect against many illnesses, help baby to grow and develop well, change with baby's needs, babies who are not breastfed are at higher risk of illness)			
Importance of breastfeeding to mother (Protect against breast cancer and hip fractures in later life, form close relationship with the baby, artificial feeding cost money)			
Importance of skin to skin contact immediately after birth (keep baby warm and calm , promote bonding, helps breastfeeding get started)			
Early initiation of breastfeeding (help establish breastfeeding, baby receive colostrum)			
Importance of good positioning and attachment (helps the baby to get milk, and for mother to avoid sore nipple and sore breast, practice with a doll, help is available from lactation team)			
-Feeding baby on demand(Early hunger cues(Gentle motor movement, Mouth opening ,Turing head side to side, Rooting toward object)			
- knowing when baby is getting enough milk			
- Importance of rooming in			
- Risk of using artificial teats, bottles and pacifiers			
Risk of not breastfeeding			
- loss of protection from Illness and chronic diseases			
- Contamination, errors of preparation			
- Risk of bottles and artificial teats			
Other points discussed and any follow up or referral needed:			
HIV and infant feeding discussed Feeding options Risks of mixed feeding			

Appendix 5: postnatal checklist- Mother Breastfeeding education for healthy Newborn

Infant feeding- postnatal checklist			
Name of client			
Торіс	Tick if done	Date	STAFF SIG
Identify the mother and introduce yourself			
Positioning and attachment taught - Told how to hold and attach her baby - Told how to recognise well attached and taking enoughmilk			
Observed the mother breastfeeding her baby			
Teach mother Hand expressing			
Feeding on demand explained - frequently feeding is normal (8-12 times / 24 h) in early weeks - Early hunger cues(Gentle motor movement, Mouth opening ,Turing head side to side, Rooting toward object)			
Exclusive breastfeeding (up to around 6 months) - Giving any food or drink other than breast milk before 6 months may reduce the long-term success of breastfeeding and reduce some of the health benefits. - babies may require additional supplements and they explained why.			
Disadvantages of using bottles, teats and dummies - interfere with breastfeed learning and demand feeding			
Risks of using supplements and artificial feeds discussed: risk of ear,GI,chest infection			
Rooming -in - To help parents recognize their babies feeding cues and to reduce the risk of cot death.			
Storage of breast milk and sterilizing equipment			
Post discharge support lactation team number			

Infant feeding- postnatal checklist			
Name of client			
Торіс	Tick if	Date	STAFF
	done		SIG
HIV and infant feeding discussed			

Appendix 6: Mother Education her infant in Artificial milk

Artificial milk feeding - postnatal checklist	
Торіс	Tick if done
Shown how to bottle feed the baby	
Mother confident bottle feeding her baby	
Baby's safety whilst feeding - Holding your baby & not leaving your baby unattended whilst feeding	
Feeding on demand and how much to offer baby at a feed	
Disadvantages of using dummies - Dummies can interfere with demand feeding.	
Rooming-in baby - To help parents recognize their babies feeding cues and to reduce the risk of cot death,	
Making up artificial formula feeds correctly - It is recommended that a fresh bottle is made for each feed.	
Sterilizing baby feeding equipment	
Exclusive milk feeding up until about 6 months	

Artificial milk feeding - postnatal checklist			
At home do you have:			
Bottles, teats & milk for feeding Sterilizing equipment			
Signature Date completed			

Appendix 7: NICU checklist - Mother Breastfeeding education for infant in NICU

NICU checklist - Mother breastfeeding education for infant in NICU			
Name of client :			
Topic	Tick if done	Date	Staff sig
Identify the mother & introduce yourself to her			
The importance & benefit of breastfeeding and Exclusive breastfeeding (up to 6 months). (breast milk easy to digest, protect baby from infection, diarrhea, boost immunity, brain development, protect mother from disease)			
Received instruction on manual expression of breast milk			
Received demonstration on utilizing a breast pump - Assembling the apparatus, Frequency and duration of pumping (2-3 hours,20min each side)			
Expressing chart given and explained			
Washing & sterilizing equipment discussed			
Storage of breast milk			
Place the baby Skin to skin contact with the mother when the baby is stable			
Help the mother to maintain lactation by frequent expression			
Help mother to take proper position and attachment for breastfeeding and how to recognize good attachment			
Teach the mother to look for sign of early feeding cues (Gentle motor movement, Mouth opening, Turing head side to side, Rooting toward object)			
Risk of giving any food or drink other than breast milk before 6 months (decrease the long-term success of breastfeeding)			
Risk of using pacifiers, artificial teats or milk bottle (interfere with learning breastfeeding techniques & disrupt responsive feeding routine).			
Rooming in after discharge from NICU to postnatal or at home(to become familiar with their infant's feeding signals			
Before discharge, obtain mother lactation team WhatsApp # 79234511			

APPENDIX 8: Mother's feedback about breastfeeding education checklist in English:

Mother's feedback about breastfeeding education checklist Ward Date Client sticke S.NO Statement Yes No Remarks 1 Did the staff introduce herself for you? 2 Did you receive information regarding: 2.1 Importance, benefits of breastfeeding 2.2 Early initiation of breastfeeding 2.3 | Feeding on Demand & frequent breast feeding 2.4 Breastfeeding cues 2.5 Breastfeeding position & latching 2.6 Exclusive breastfeeding for 6 months 2.7 Rooming- in on 24 he basis 2.8 Immediate & sustained skin to skin contact for at least 1 hr 2.9 Hand expression of breast milk 2.10 Breast milk storage 2.11 Risk of formula feed 2.12 Risk of pacifier or artificial teats or bottle feed 3 Mothers with baby in NICU 3.1 Did you initiate breastfeeding / expression of milk within 6 hrs of birth? 3.1 Did you frequently express the milk? 4 Did you receive demonstration regarding the following; 4.1 | Correct positioning of breast feeding 4.2 | Hand expression of breast milk 5 Did you receive lactation clinic contact number? 6 Did you receive printed health education materials

APPENDIX 9: Mother's feedback about breastfeeding education checklist in Arabic:

			قائمة ملاحظات الام	
القسم		التاريخ اسم الام		
الملاحظات	И	نعم	البيانات	التسلسل
			هل قامت الممرضة بتعريف نفسها لك؟	1
			هل حصلتي على معلومات تتعلق بما يلي	2
			أهمية وفوائد الرضاعة الطبيعية	2.1
			اهمية ارضاع الطفل مباشرة بعد الرضاعة	2.2
			ارضاع الطفل عند الحاجة وتكرار الارضاع	2.3
			علامات استعداد الطفل للرضاعة	2.4
			الوضعيات الجيدة للرضاعة والعلامات الدالة على الوضعية الصحيحة	2.5
			اهمية الرضاعة الخالصة اول ستة اشهر من عمر الطفل	2.6
			المساكنة المستمرة بين الام والطفل (بقاء الام والطفل في نفس الغرفة وعدم فصلهما)	2.7
			اهمية ملامسة الطفل لجلد الام بعد الولادة مباشرة	2.8
			كيفية استخراج حليب الام باليد	2.9
			تخزين الحليب	2.10
			اضرار الحليب الصناعي	2.11
			اضرار استخدام اللهايات او زجاجات الارضاع	2.12
			اذا تم تنويم طفلك في الحضانة:	3
			هل بدأتي في الارضاع/ شفط حليب الثدي خلال ٦ ساعات الاولى بعد الولادة	3.1
			هل تقومین بشفط حلیب الثدي باستمرار؟	3.2
			هل حصلتي على تطبيق عملي لما يلي:	4
			وضعية الرضاعة الصحيحة	4.1
			كيفية اعتصار حليب الثدي باليد	4.2
			هل حصلتي على رقم التواصل لعيادة الرضاعةالطبيعية؟	5
			هل حصلتي على منشورات تثقيفية؟	6

APPENDIX10: breastfeeding observation

Mother's name	Date
Baby's name	Baby's age
Signs that breastfeeding is going well	Signs of possible difficulty
GENERAL	
Mother: Mother looks healthy	Mother: Mother looks ill or depressed
Mother relaxed and comfortable	Mother looks this of depressed
Signs of bonding between mother and baby	No mother/baby eye contact
Baby:	Baby:
Baby looks healthy Baby calm and relaxed	☐ Baby looks sleepy or ill ☐ Baby is restless or crying
Baby reaches or roots for breast if hungry	Baby does not reach or root
BREASTS	Property leak and available or see
Breasts look healthy No pain or discomfort	☐ Breasts look red, swollen or sore ☐ Breast or nipple painful
Breast well supported with fingers	Breast held with fingers on areola
away from nipple	
BABY'S POSITION	
Baby's head and body in line	Baby's neck and head twisted to feed
Baby held close to mother's body	Baby not held close
Baby's whole body supported	Baby supported by head and neck only
Baby approaches breast, nose to nipple to nipple	Baby approaches breast, lower lip/chin
BABY'S ATTACHMENT	
More areola seen above baby's top lip	More areola seen below bottom lip
Baby's mouth wide open	Baby's mouth not open wide
Lower lip turned outwards Baby's chin touches breast	Lips pointing forward or turned in Baby's chin not touching breast
SUCKLING	
Slow, deep sucks with pauses	Rapid shallow sucks
Cheeks round when suckling Baby releases breast when finished	Cheeks pulled in when suckling Mother takes baby off the breast
Mother notices signs of oxytocin reflex	No signs of oxytocin reflex noticed

APPENDIX 11: Risk Factors for Delayed or Failed Lactogenesis II or Low Milk Supply				
Maternal factors	Infant factors			
Age over 30, Primiparity.	Early term birth (37–39 weeks).			
Breast problems: Insufficient glandular tissue, flat or inverted nipples tissue, history of breast surgery.	Infant Apgar <8.			
Delivery problems: Cesarean delivery (especially if unplanned), complicated delivery, significant hemorrhage, prolonged labor, preterm delivery (<37 weeks), retained placenta.	High birth weight >3600 g.			
Postpartum depression.	Low birth weight (<2500g).			
Metabolic problems: Diabetes (gestational, types 1 or 2), hypertension, preeclampsia, polycystic ovary syndrome, obesity (pre-pregnancy BMI >30), high cortisol levels, hypothyroidism, extreme tiredness, fatigue or stress.	Poor or painful latch / restricted feedings.			
Previous low supply.	Prelacteal feeds. Prematurity (<37 weeks).			
Tobacco use and some drugs and medications may cause low milk supply				
Age over 30, Primiparity.				

Appendix 12: Medical indication for formula supplementation



Medical indication for formula supplementation Maternal medical indication

Permanent avoidance

• HIV infection, human T-cell lymphotropic virus type I or II.

Temporarily avoidance (no breastfeeding, no EBM)

- Severe illness (sepsis)
- Active herpes simplex virus type 1 (HSV-1) lesión in the breast.
- Untreated brucelosis.
- Sedating psychotherapeutic drugs and abuse drug
- Radioactive iodine-131, Cytotoxic chemotherapy

NO direct breastfeed, but EBM allowed

- Maternal varicella if started 5 days before through 2 days after delivery
- Untreated active tuberculosis (wait until mother is no longer infectious, minimum of 2 weeks on treatment for direct breast feeding).

Delayed or absent lactogenesid

- · Retained placenta
- Sheehan syndrome (postpartum hemorrhage and absence of lactogenesis
- Primary glandular insufficiency
- Breast pathology or surgery and poor milk production

Infant medical condition

Specialized formula and no breast milk:

• Metabolic disorders: Classic Galactosemia, Maple syrup urine disease, Phenylketonuria.

Temporary infant formula:

- Preterm infant < 34 wks, LBW infant (<2 kg), if delay lactogenesis or donor milk unavailable.
- · Hypoglycemia unresponsive to breastfeeding
- Inadequate milk intake:
 - Evidence of significant dehydration (10% weight loss, high Sodium, poor feeding, lethargy) despite correct breastfeeding
 - -Weight loss 8-10% at day 5
 - -Delay bowel movement and continued meconium stool on day 5
 - -Neonatal jaundice with poor milk transfer

APPENDEX 13: Hunger Cues		
Early	Mid	Late
Mouth opening	Stretching	Putting fist or fingers in the mouth, and perhaps sucking vigorously
Gentle motor movement; stirring, with small arm and/or leg movements, or even crossing their ankles	Hand to mouth movement	Flexing arms and legs, a little or a lot
Turning the head from side to side	Sucking motions	Moving arms in big sweeping movement
Rooting towards an object		Moving legs repeatedly and rhythmically. I call this "riding the bicycle."
		Tense affect and stiff posture; clenched fists
		Face turning bright red