Towards a Baby-friendly Hospital—Innovation in Midwifery Practice

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Breastfeeding is globally recognised as the optimal feeding to nourish and nurture infants. World Health Organization develops the Baby-friendly Hospital Initiative (BFHI) for breastfeeding support. The BFHI contributes to improving the exclusive breastfeeding worldwide and, coupled with support throughout the health system, can help mothers sustain exclusive breastfeeding. Although the breastfeeding initiation has achieved a substantial increase since last decade in Hong Kong, the exclusive breastfeeding prevalence is below the WHO recommendation. Increasing breastfeeding exclusivity and duration are global public health imperatives. Midwives play a key role to strengthen breastfeeding and enhance mothers' confidence in breastfeeding. We implement innovative evidence-based midwifery care on infant feeding education, mother-baby friendly childbirth practices and develop integrated infant feeding service. Although various challenges are faced in the journey of baby-friendly initiatives, midwives work collaboratively with other stakeholders to uphold the support policy and overcome barriers towards baby-friendly designation.
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Introduction

Breastfeeding is globally recognised as the optimal feeding method to nourish and nurture infants. Its desirable effects and benefits on growth, immunity, and cognitive development[1] appear to be dose-dependent on exclusiveness and duration. It is a priority and is essential to public health. According to the World Health Organization (WHO) and the American Academy of Pediatrics, exclusive breastfeeding is the gold standard of successful breastfeeding. Studies indicate that Hong Kong infants who exclusively breastfeed for ≥4 months have 27% fewer doctor visits for respiratory infections and 21% fewer visits for gastrointestinal infections[2,3].

Although the breastfeeding initiation rate in Hong Kong has achieved a substantial increase in the last decade from 57.58% in 2005 to 86.16% in 2015[4] (Figure 1), the exclusive breastfeeding rate remains considerably below the WHO target. A local breastfeeding survey from the Hospital Authority and Department of Health reported average exclusive breastfeeding rates at 1 month postpartum and at 6 months as 22% and 2.3%, respectively in 2012[5] (Figure 2); such figures are far behind the universal goal of 75% and 25.5%. Studies indicate that many mothers' premature discontinuation of breastfeeding is preventable with effective care. There is evidence that increased breastfeeding exclusivity and duration can be protected, promoted, and supported through coordinated implementation of hospital policies and evidence-based practices[3,6].

The Baby-friendly Hospital Initiative (BFHI) has been launched worldwide by the WHO and United Nations Children's Emergency Fund (UNICEF). It aims to improve hospital practices and enhance breastfeeding rates by promoting the worldwide adoption of the Ten Steps to Successful Breastfeeding (Table) and compliance with the International Code of Marketing of Breast-milk Substitutes[7,8]. In recent years, the opportunity to enhance the promotion of breastfeeding has been introduced as the Hospital Authority pursues the BFHI. According to a midwifery series[9], the practice of midwifery is defined as skilled, knowledgeable, and compassionate care for childbearing women, newborn infants, and families across the continuum throughout prepregnancy, postpartum, and the early weeks of life. Midwifery compassionate care consists of courage, communication, competence, commitment, compassion, and caring in providing women-centred care, informed choice, autonomy, and continuous care to lactating mothers and their families. Midwives

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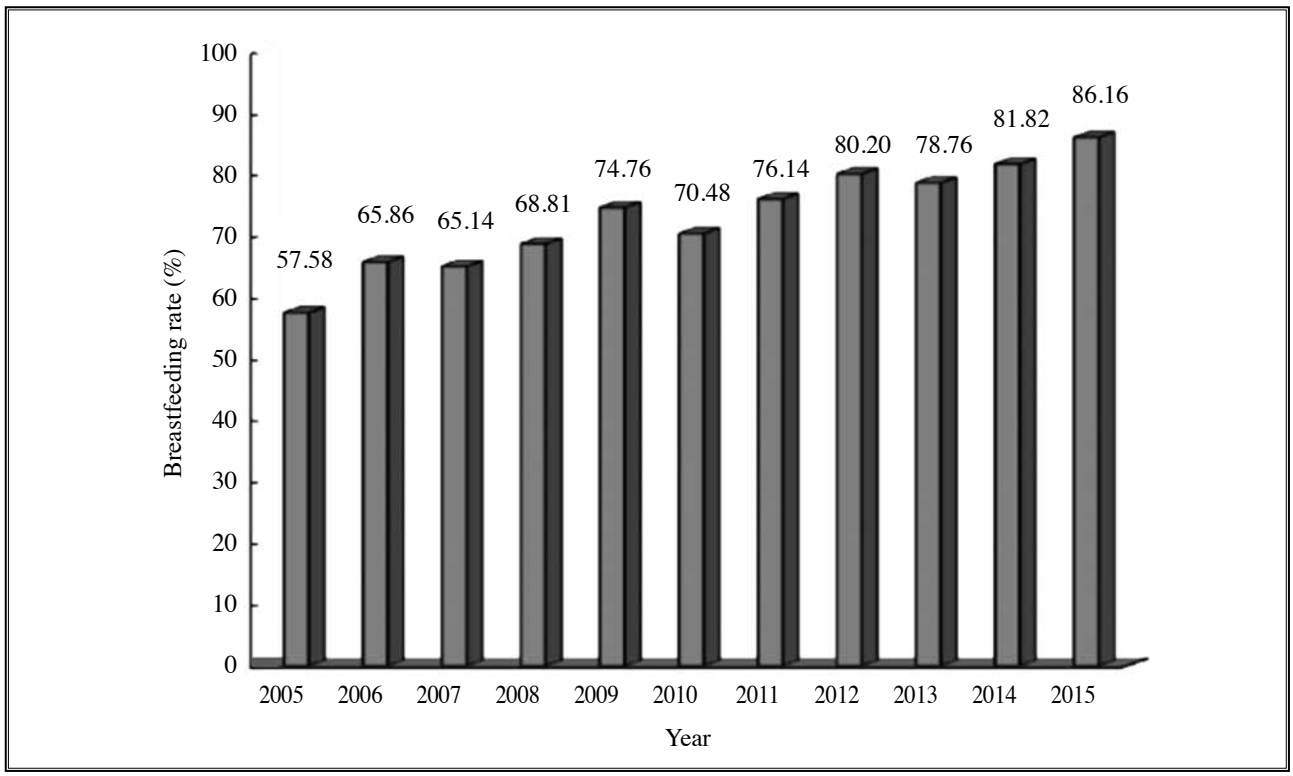

Figure 1. The overall mean breastfeeding rates upon hospital discharge from 2005 to 2015[4]

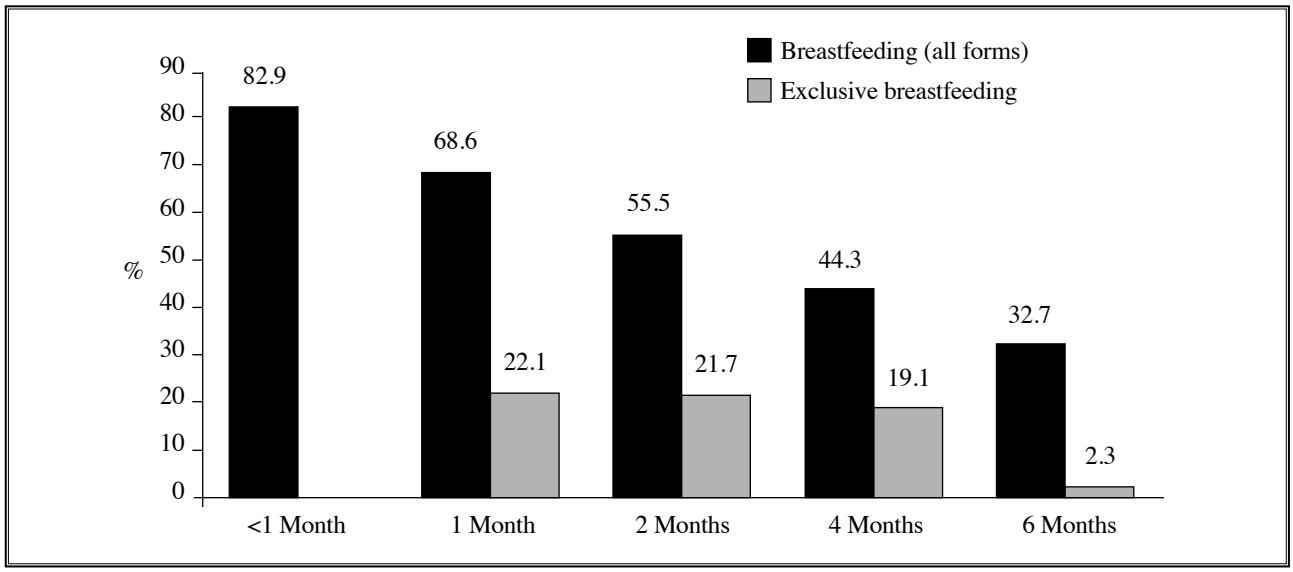

Figure 2. Breastfeeding statistics in 2012[5]

work in partnership with women to strengthen women's own capabilities to care for themselves and their family. They also play a key role in concerted efforts to implement breastfeeding support policies and mother-baby friendly practices in accordance with global criteria to enhance positive breastfeeding experiences, as well as breastfeeding exclusivity and duration.

Innovation in Midwifery Practice

Infant Feeding Education

Education for pregnant women about infant feeding should be an ongoing process. It commences at the first antenatal booking and should continue throughout pregnancy up to the hospital stay during the postpartum period.

Table. Ten Steps to Successful Breastfeeding[7]

1.	Have a written breastfeeding policy that is routinely communicated to all health care staff.
2.	Train all health care staff in skills necessary to implement this policy.
3.	Inform all pregnant women about the benefits and management of breastfeeding.
4.	Help mothers initiate breastfeeding within half an hour of birth.
5.	Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.
6.	Give newborn infants no food or drink other than breast milk, unless medically indicated.
7.	Practise rooming-in: Allow mothers and infants to remain together 24 hours a day.
8.	Encourage breastfeeding on demand.
9.	Give no artificial teat or pacifiers (also called dummies or soothers) to breastfeeding infants.
10.	Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospitals or clinics.

In the past, the majority of local antenatal education was conducted in a big group and women seldom had a chance to raise or discuss their concerns. In order to strengthen education about infant feeding, individual counselling and small group discussions should be coordinated by midwives. Two-way communication with mothers helps to create a trusting and caring relationship[9-12]. Antenatal infant feeding education can be innovative and women-centred. It includes increased numbers of morning and evening classes, engagement of family members, and free access to teaching materials on the website, flyers, DVDs, and breastfeeding education packages. In small group discussions and individual counselling, midwives are able to demonstrate empathy, actively listen to women's feedback, and encourage them to be aware of their own capacities. They are empowered to make decisions and have a sense of control to access information and lactation support. Antenatal education should also cover the prerequisites of BFHI, such as skills in hand expression, responsive feeding cues, handling of expressed breast milk, the risks of giving supplements in the first 6 months, and optimal positioning and attachment of the newborn.

During the classes, trained midwives coach mothers using breast models and dolls. Midwives act as skilled companions to share successful breastfeeding experiences and offer anticipatory guidance to women. Mothers are informed about continuity of care if they encounter any breastfeeding difficulties after birth. Midwives make a concerted effort to enhance breastfeeding exclusivity and build mothers' confidence in breastfeeding.

Safe preparation and feeding of infant formula is discussed individually if the mother opts for formula feeding in the postpartum period.

Mother-friendly Childbirth Practice

In 1994, 31 individuals and 26 national organisations in the United States set up the Coalition for Improving Maternity Services[13]. It launched the Mother-Friendly Childbirth Initiative (MFCI) and the Ten Steps of the MFCI for mother-friendly hospitals, birth centres, and home birth services in 1996. They are listed below:

1. Offers all birthing mothers unrestricted access to birth companions, labour support, and professional midwifery care.
2. Provides accurate, descriptive, statistical information about birth care practices.
3. Provides culturally competent care.
4. Provides the birthing woman with freedom of movement to walk, move, and adopt positions of her choice.
5. Has clearly defined policies, procedures for collaboration, consultation, links to community resources.
6. Does not routinely employ practices, procedures unsupported by scientific evidence.
7. Educates staff in non-drug methods of pain relief and does not promote the use of analgesics, or anaesthetic drugs.
8. Encourages all mothers, families to touch, hold, breastfeed, care for their babies.
9. Discourages nonreligious circumcision of the newborn.
10. Strives to achieve the WHO/UNICEF Ten Steps of the BFHI to promote successful breastfeeding.

Regarding Step 1, studies reveal that birth companions can provide psychological support to the birthing woman and increase their confidence and ability to give birth[14]. Continuous labour support also facilitates

the physiological labour process and women's feelings of control and competence. As a result, the need for obstetric intervention may be reduced[14]. In view of the known benefits, husbands or significant others are encouraged to accompany the birthing women during labour and birth until transfer to the postnatal ward. During labour, apart from providing psychological support, the birth companion also gives physical support such as massage for the women and providing help to mobilise, use the birth ball or adopt different positions. This support has a positive effect on the birth process. In addition, in order to create a sense of peace, a dimly lit birthing room is prepared and a quiet environment encouraged. Women are also supported by named midwives throughout their labour and birth.

For Step 4, research indicates that mobilisation during active labour may shorten the process and improve birth outcome[15]. At present in some hospitals, birthing women who are low risk are encouraged to move around during active labour and various labour and birth positions are introduced to them during the antenatal period. Instead of being confined to bed, or using the lithotomy or semi-recumbent position, women can choose the most suitable position for themselves such as sitting, kneeling, adopting an all fours position or lying on their side.

For Step 6, evidence indicates keeping a labouring woman nil by mouth causes dehydration and undermines her morale[16]. In Hong Kong, it has been routine practice in many maternity institutes that women in labour are not allowed to eat or drink. Low-risk birthing women should be encouraged to eat and drink as one of the methods to facilitate spontaneous births. By supporting this management, the chance of mothers and infants needing to be separated following interventions may be reduced after birth, and uninterrupted skin-to-skin contact (SSC) and breastfeeding can be initiated immediately at birth.

Episiotomy has been a routine practice in the past. Nonetheless, there is evidence that it is not routinely necessary and does not reduce the chance of a third- or fourth-degree perineal tear[17]. Midwives in the public sector no longer perform routine episiotomy. Likewise, interventions such as rupture of membranes, vaginal examination, continuous fetal heart monitoring, intravenous infusion, and suctioning of the newborn at birth are only performed if indicated.

For Step 7, an antenatal childbirth massage teaching programme has been launched. LK Massage Programme was initially developed through two research projects and has been launched in the United Kingdom[18]. It is an intervention that involves the use of specific massage techniques and touch in combination with slow controlled breathing. It also promotes upright positions during active labour and the involvement of birthing partner or midwife. The first phase of this Programme has been designed to complement maternal/paternal adaptations to late pregnancy, circadian uterine activation, spontaneous labour and birth, and immediate undisturbed SSC between the mother-infant dyads, and enhances mutual attachment and lactation[19]. It helps the women in labour to relax and cope with uterine contractions. This evidence-based programme promotes natural physiological labour and birth. It suggests that regular massage with relaxation techniques from late pregnancy to birth is an acceptable coping strategy in labour pain. It was introduced to midwives in Hong Kong in 2009.

Studies show that Pethidine leads to maternal sedation and disorientation, depresses neonatal respiration, and hinders thermoregulation and the initiation of rooting and suckling reflexes[20,21]. Infants exposed to Pethidine take longer to identify their mother's smell and coordinate suckling, and swallowing reflexes, and these effects last for up to 72 hours after birth[22].

Newborn infants exposed to epidural analgesia have a higher chance of respiratory depression, and take longer to respond to maternal temperature regulation, recognise maternal smell, respond to her voice and coordinate suckling, and swallowing reflexes. These effects are more obvious in those exposed to higher doses of fentanyl[23].

Currently, to provide labouring women with an alternative choice, non-drug labour pain relief such as breathing exercises, birth ball, LK Massage Programme, aromatherapy, music and warm compresses are provided in most public maternity units. They are safe for women and fetuses[24].

Early Skin-to-skin Contact Following Birth for at Least an Hour

The Cochrane systematic reviews[25] suggest that immediate contact between mother and newborn can improve breastfeeding outcomes, maternal affectionate behaviour, attachment, and shorten crying time. The literature concludes that there are no adverse effects of SSC[25]. It is simple and needs minimal financial resources. It promotes rest, reduces stress and lowers stress hormones, encouraging early mother-infant bonding, protecting infants from harmful germs, and easing their transition

to extrauterine life[26,27]. Some observational studies have determined that extended and uninterrupted early SSC influences effective suckling[28]. Evidence shows that SSC immediately after birth accompanied by suckling at the breast enhances a neonate's recognition of maternal milk odour, and has enduring effects on breastfeeding[29]. Successful SSC experiences are associated with breastfeeding exclusivity and demonstrate a dose-response relationship[28,30].

In recent years, healthy newborns have been placed on their mother's abdomen and chest to allow SSC immediately following both vaginal and Caesarean births, and left to find their way to the mother's breast. They are allowed to stay snuggled for at least an hour. Routine procedures such as weighing, measuring, and physical examination are delayed until after this period.

Rooming-in—Allowing Mothers-infant Dyad to Remain together 24 Hours a Day

Historically in birthing hospitals, it was routine practice to keep a healthy newborn infant in an incubator for several hours and then in the nursery after the mother transferred to the postnatal ward, in order to provide better observation and promote improved maternal sleep. Infants who had had uncomplicated vaginal births would be returned to their mothers after an observation period. Nonetheless, babies born by Caesarean section were cared for in the nursery for at least 2 days following birth. Current research reveals that it is optimal for mothers and infants to stay together continuously during the day and night (rooming-in) after birth unless there are medical reasons for the contrary[31,32]. Separation of a mother and her baby may have a harmful effect on their relationship and on breastfeeding success[33]. Mothers who are with their infants for longer periods of time, particularly in SSC, have higher scores on tests that estimate the strength of a mother's attachment to her infant. By staying together, mothers learn their infants' needs and how to care for and comfort them quickly[34-36]. In addition, mothers rooming-in with their babies and those with more SSC produce more breast milk[37], breastfeed longer, and are more likely to breastfeed exclusively compared with those who have limited contact with their infant[28,30,38]. The infants also cry less, are soothed more quickly, and spend more time sleeping quietly[26-28].

In recent years, the practice of 24-hour rooming-in has been implemented for healthy infants and mothers in public maternity hospitals, and frequent extended SSC is encouraged. Every effort is made to unite mother and baby as soon as possible for those mothers and babies who require obstetric interventions. This change in policy complies with the global criteria and current evidence-based practice.

Supporting Mothers with Early Breastfeeding and Establishing Lactation

Midwives who support mothers with early breastfeeding and lactation need to identify the correct attachment and the optimal position for the mother to breastfeed. Mothers are taught how to massage their breasts as well as hand expressing milk, recognise feeding cues, and the ways to establish lactation by effective suckling.

Developing the Infant Feeding Team for Breastfeeding Support

The Global Strategy for Infant and Young Child Feeding[38] states that breastfeeding mothers should be able to have access to certified lactation consultants who can build confidence, improve feeding techniques, and prevent/resolve breastfeeding problems. The certified lactation consultants in the infant feeding team carry out breastfeeding assessment and lactation consultations. They also monitor breastfeeding prevalence, coordinate breastfeeding promotion, deliver lactation training for health care professionals, facilitate interdisciplinary collaboration, and lead breastfeeding practices and support lactating mothers' needs.

Lactation support by lactation consultants includes breastfeeding coaching, lactation management, telephone follow-up after hospital discharge, and a lactation clinic. Within the lactation clinic, mothers are helped with attachment, positioning, poor breast milk removal, and are provided support and advice when there is poor baby weight gain. A local retrospective case review carried out in one of the birthing hospitals in 2013 suggested that the expert support from lactation consultants during hospital admission helped mothers to sustain breastfeeding and could lead to higher breastfeeding exclusivity at 1 week and 4 weeks postpartum. Mothers reported that support from lactation consultants was significantly helpful in sustaining breastfeeding[39].

Conclusions

Promoting breastfeeding is a public health priority. Midwives have a key role to play and work collaboratively with other stakeholders to support breastfeeding and the establishment of a baby-friendly hospital in accordance

with global criteria. Transforming breastfeeding is complex and midwives face multiple barriers. Nonetheless, we are confident that courage, caring, and intuition will overcome the profound challenges to achieve comprehensive breastfeeding success in the coming years. Let us join together to provide compassionate midwifery care to our mothers and their infants.

Declaration

All authors have disclosed no conflicts of interest.

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