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**MCFC**

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# **Egyptian Journal of Breastfeeding**

*Volume (12) January 2016*



**Theme of current issue**  
*Celebrating 25 Years of BFHI*

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***Issued by the Mother Child Friendly Care Association***

**MCFC-Egyptian Journal of Breastfeeding (EJB)****Volume (12) January, 2016****Theme: Celebrating 25 Years of BFHI**

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**Authorship.** Authors should give their full names and the name and address of their institutions. **Tables and Figures** should be numbered consecutively (e.g. Table 1, Fig. 1) and should not exceed a total of 4.

**Abstracts** should not exceed 250 words, in English at the beginning and is translated into Arabic, at the end of the article. **The body of the text** should be structured as Background, Methods, Findings and Discussion, typed in a double spaced word document (font 12 Times New Roman), not exceeding 12 pages (size A4). The journal does not accept any papers or work funded by infant milk formula companies or code violators. Ethical considerations for work on mothers and babies should be clearly described.

**References** should not exceed 30. They should be in American Psychological Association (APA) style used for citing in social sciences articles. Then they are sorted alphabetically and numbered for reference in the text. For more information on references please refer to <http://owl.english.purdue.edu/>.

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**About MCFC**

The MCFC is a not-for-profit organization that focuses on achieving optimal child health through education and awareness. The Egyptian Journal of Breastfeeding is composed of three sections. The first section deals with common health and policy issues surrounding breastfeeding. The second section presents original research, case reports and surveys. The third section is an Arabic section with a variety of educational topics and events. In this issue we celebrate 25 years since the birth of the Baby Friendly Hospital Initiative and also World Breastfeeding Week for 2015 for empowering working Breastfeeding mothers. It is cited as "Eg J Breastfeeding" and is available free of charge from our web site:

[www.mcfc.org.eg/publications/](http://www.mcfc.org.eg/publications/)

## Table of Contents

### Introduction

<i>Ten Steps to successful Breastfeeding</i>	4
<i>UNICEF/WHO word on World Breastfeeding Week</i>	5
<i>Egypt's commitment to scale with Baby Friendly</i>	8

### Section I : Editorial articles

<b>I.1. Updated review of the benefits of exclusive and prolonged breastfeeding</b>	9
<b>I.2. Cost and savings from optimal breastfeeding practices</b>	13
<b>I.3. Celebrating 25 years of Baby Friendly</b>	15
<b>I.4. Rising burden of noncommunicable diseases in the region: Can breastfeeding promotion reverse trends?</b>	18

### Section II : Research Studies and Reports

**Impact of early first hour skin-to-skin contact on maternal psychological status and child development**

*Behairy OGA, ElAbd SE, ElBakry S, Refaey D, Abul-Fadl AM.* 21

**Evaluating effectiveness of hospital policies in changing practices of maternity and pediatric services**

*Abul-Fadl AMA, Abdel Baset EM, Abu Shady O, Behairy OGA, Fikry MM, AlYasin SZ.* 31

**How much training can change antenatal care practices in counseling and breastfeeding promotion?**

*Abul-Fadl AMA, Abdel Baset EM, Abu Shady O, Behairy OGA, Fikry MM, AlYasin SZ.* 43

**Use of labour and delivery criteria as performance indicators for monitoring Baby Friendly Status**

*Abul-Fadl AMA, Abdel Baset EM, Abu Shady O, Behairy OGA, Fikry MM, AlYasin SZ.* 57

### Case Reports in Breastfeeding

*Hithamy S* 73

الجزء الثالث : من البحوث الى التجربة العملية والتطبيقات الميداني: 75

- حالات عن الرضاعة الطبيعية - مقالة مترجمة من الدكتورة/ شروق الهيثمي
- إعادة الرضاعة الطبيعية - مقالة مترجمة من الدكتورة/ شروق الهيثمي
- إندفاع تدفق اللبن - الدكتورة/ شروق الهيثمي
- الرضاعة الطبيعية والتوائم الثلاثة - الدكتورة/ شروق الهيثمي
- الأسبوع العلمى للرضاعة الطبيعية لعام 2015 : دعم الأم العاملة المرضع

# Ten Steps to Successful Breastfeeding for Making Hospitals Baby Friendly

*Every facility providing maternity services and care for newborn infants should:*

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 through continuous uninterrupted skin-to-skin contact.
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 - that is, allow mothers and infants to remain together - 24 hours a day.
8. Encourage breastfeeding on demand or to feeding baby cues.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support systems within facilities or communities and refer mothers to them on discharge from the hospital or clinic.

*In addition every facility must end the distribution of free and low cost supplies of infant milk formula and abide with the International Code of Marketing of Breastmilk Substitutes.*

**Mother friendly practices** encourage a normal vaginal delivery and the use of natural ways of pain relief, presence of a birth companion of mother's choice, use of non sedative pain killers, movement and light drinks and allowing mothers to choose the positions of her choice in labour.

**Source:** *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services*, a joint WHO/UNICEF statement published by the [World Health Organization](http://www.who.int).



**Breastfeeding is Baby's Choice: Non breastfed babies are miserable, desperate and lost! So why not make all babies happy, secure and safe?**



**UNICEF Executive Director Anthony Lake  
WHO Director General Margaret Chan**

**World Breastfeeding Week Message**  
***Breastfeeding and work -- Let's make it work!***

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Every year, the global community sets aside a week to draw attention to the vital importance of breastfeeding, not only in the lives of the most disadvantaged children but also in the strength of societies. The theme of this year's World Breastfeeding Week, ***Breastfeeding and Work -- Let's make it work!***, focuses on what we can do to help millions of working mothers give their babies the best possible start in life -- by supporting stronger workplace policies that promote breastfeeding.

We know that breastfeeding helps children to survive and thrive -- enabling infants to withstand infections, providing critical nutrients for the early development of their brains and bodies, and strengthening the bond between mothers and their babies. And the benefits of breastfeeding last a lifetime. A recent Lancet study<sup>1</sup> found that infants who were breastfed for at least one year went on to stay in school longer, score higher on intelligence tests, and earn more as adults than those who were breastfed for only a month.

Despite this growing evidence, only 38 per cent of infants around the world today are breastfed exclusively for even the recommended first six months of life. And while breastfeeding rates have increased in all regions of the world, global progress has stalled.

The World Health Assembly has set a global target of increasing exclusive breastfeeding rates for children under six months of age to at least 50 per cent by 2025. To achieve this ambitious and very important goal, we need to tackle all the barriers to breastfeeding.

Governments should lead the charge by making breastfeeding a policy priority in national development plans, increasing resources for programming that supports breastfeeding, and working with communities and families to promote the full benefits of breastfeeding.

But we should also do more to overcome an obstacle that prevents potentially millions of women from breastfeeding: Workplace policies that do not support the right of working mothers to breastfeed their babies on the job.

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<sup>1</sup> Victora, C. G, et al, "Association between breastfeeding and intelligence, educational attainment, and income at 30 years of age: a prospective birth cohort study from Brazil" *Lancet*, vol. 3, no. 4, April 2015, pp. e199 - e205.

Today, of the approximately 830 million women workers in the world, the majority do not benefit from workplace policies that support nursing mothers<sup>2</sup>. And this figure does not include women working in informal, seasonal or part-time employment -- often the poorest women in poorer countries -- who may face even greater barriers to continued breastfeeding.

This is not only a loss to working mothers and their babies. It is also a loss to employers. Working mothers with adequate maternity benefits -- including a breastfeeding-supportive workplace -- report increased job satisfaction and greater loyalty to their employers. Breastfed children fall sick less often, so their mothers are absent from work less often, too. These effects in turn contribute to higher productivity -- ultimately benefiting businesses and the larger economies to which they contribute.

Recognizing these connections, the International Labour Organization has adopted three Conventions to establish protective measures for pregnant women and new mothers, including the right to continue breastfeeding -- and to promote feasible options for women who are outside formal work settings. Globally, 67 countries have ratified at least one of the three maternity protection Conventions. More governments should join this growing movement -- and take action to implement these important protections.

We know that breastfeeding improves the lives of millions of children and ultimately benefits families, communities, and societies. Our challenge now is to make breastfeeding work in the workplace, too. Together, we can help working women to breastfeed and reap the benefits for themselves, for their children, and for the health and well-being of future generations.

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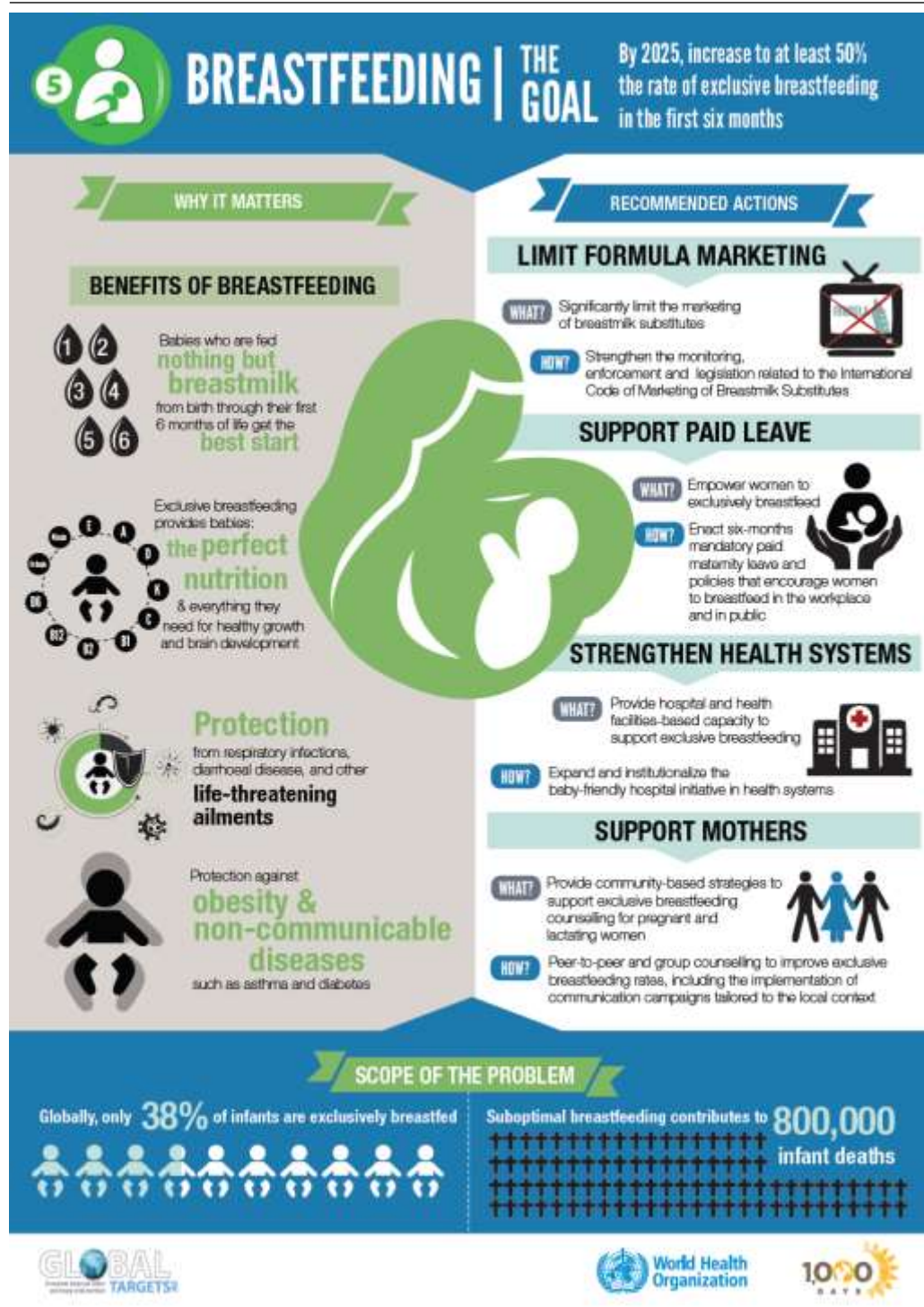


Mr. Anthony Lake  
UNICEF Executive Director



Dr. Margaret Chan  
WHO Director General





## Egypt's commitment to scale with Baby Friendly

Egypt was one of the 12 flagship countries that led the path for promoting, supporting and protecting breastfeeding through Baby Friendly hospitals around the world. This started in 1991 when the Innocenti declaration was announced. At this time UNICEF took the lead in supporting Egypt to lay the foundation for a model of the Baby Friendly Hospital Initiative programme (BFHI) implementation which later moved towards making maternal and child health centers all over the country Baby Friendly.

Egypt achieved tremendous success in the past when it achieved the mid-decade goals in 1995 by going to scale with the BFHI throughout the country. The institutionalization of the BFHI as a program under the Primary Health care sector through the department of MCH in MoH was a tremendous achievement in 1995. The succession of Ministerial decrees that were released to protect and support breastfeeding from the early 1980s starting from the first one in 1979 that declared the prohibition of promotion of products under the scope of the International Code of Marketing of Breastmilk Substitutes (ICMBMS) in all health facilities paved the way to subsequent resolutions and legislations ending in the modified law for protecting the rights of the child and by the Ministerial decree (36/2014) released by the first Woman Minister of Health at that time, that stated that all health facilities are urged to implement the Ten steps to Baby Friendly and abide by the International Code of Marketing of Breastmilk Substitutes.

Since then the mortality rates of infants and children have declined progressively to more than one half indicating that the promotion of breastfeeding did influence the overall health and survival of children.

However the recent Demographic health survey in 2014 has shown a decline in the exclusive breastfeeding rates. This has alerted the health care system in Egypt to take active steps to prevent the consequences this could have on the future health and survival of our children. Such a finding was to be expected since the tremendous achievements attained in the decade of the 1990s had waned with the turn of the century as a result the past decade and a half had resulted in a status quo in the implementation and progression of Baby Friendly hospitals despite its integration by the Quality Department of MoH as a standard in the accreditation of hospitals.

Such successes were poorly appreciated and were not used to motivate other hospitals to become Baby friendly. Swamped by the burden of acute epidemics and chronic diseases, as a result little attention was given to nutrition support programs. This led to a further marginalization of the MCH efforts to promote breastfeeding. The Curative and Quality sectors of MoH have the potential to endorse MCH activities in scaling with the Baby Friendly throughout the country.

Unfortunately the health care system has been hounded by the greed of Infant Milk Formula (IMF) companies to get their share in the market of government subsidization programme for distributing low cost IMF through the health care system and the market. The latter was intended in the era when poverty and ignorance prevailed and medical staff were not trained in the skills that have recently emerged in lactation management.

Evidence has shown that Baby Friendly hospitals and health facilities that implement the Ten steps for promoting and supporting breastfeeding can have significant effects on successful initiation and continuation of breastfeeding especially in the early months when protecting the health of children will have a significant effect on reducing future handicap from serious morbidity and mortality.



## Section I: Editorial articles

### I.1 Review of Updated Benefits of Exclusive and Prolonged breastfeeding

#### Introduction

The benefits of breastfeeding have long been proved and there is no debate that breastfeeding is safer and more advantageous to babies and their mothers. However research has taken a turn to prove that breastfeeding when exclusive and prolonged to two years has more benefits than when it is not exclusive and limited for shorter durations. This trend has mounted to a buildup of research studies that enable workers to analyze them into systemic reviews and perform meta-analysis for them. A supplement of the *Acta Paediatrica* has been dedicated for this purpose.

#### Infectious diseases

It is estimated that breastfeeding could prevent 13% of all deaths from preventable diseases in children under five around the world. <sup>(1,2,3, 4)</sup>

A systematic review and meta-analysis for evidence on the association between duration and exclusivity of breastfeeding and the risk of acute otitis media (AOM) from twenty-four studies, showed that any form of breastfeeding was found to be protective for AOM in the first 2 years of life. Exclusive breastfeeding for the first 6 months was associated with the greatest protection, followed by 'more versus less' breastfeeding and 'ever versus never'. The systematic review and meta-analysis provides evidence that breastfeeding protects against AOM until 2 years of age, but protection is greater for exclusive breastfeeding and breastfeeding of longer duration. Exclusive breastfeeding during the first 6 months was associated with around a 43% reduction in ever having AOM in the first 2 years of life. After 2 years of age, there is no evidence that breastfeeding

protects against AOM; however, there were few studies and the evidence quality was low. <sup>(5)</sup>

#### Cardiovascular risks

Breastfeeding can promote infant growth through its nutritional properties and also by reducing incidence and severity of potentially growth-affecting infections, especially diarrhea and respiratory diseases, <sup>(1,2)</sup> and by improving feeding during illness. <sup>(3)</sup>

On the other hand, obesity, which is known to be one of the risk factors of cardiovascular disease is shown to be reduced by breastfeeding. A meta-analysis of 24 studies reporting on mean BMI showed that the interventions had no impact on weight or length/height but significant reduction in body mass index/weight-for-height z scores which was limited to studies from low- and high income settings. <sup>(7)</sup>

In Egypt a study carried out in Menoufia and Gharbia governorates for children under age of five years, showed that all children in Egypt were exclusively breastfed for six months that the risk of stunting would be reduced from 29% as shown by the current and previous EDHS studies <sup>(8)</sup> to less than 3% of any stunting in this age period. The study concluded that exclusive breastfeeding in the first six months is protective against the development of stunting, partly due to the protection against illness that could lead to malnutrition on the one hand, and possibly by the breastmilk growth promoting factors that offer these children a greater potential for growth. <sup>(9,10)</sup>

#### Prolonged Breastfeeding Practices and Maternal Health Outcomes

A systematic literature to evaluate the effect of breastfeeding on maternal health outcomes related to breastfeeding practices.

First: Long-term outcomes that included breast carcinoma, ovarian carcinoma, osteoporosis and type 2 diabetes mellitus.

Second: Short-term outcomes that include lactational amenorrhoea, postpartum depression, postpartum weight change.

### **Long-term outcomes of prolonged breastfeeding**

Prolonged breastfeeding for over 12 months was associated with reduced risk of breast and ovarian carcinoma by 26% and 37%, respectively.

Exclusive breastfeeding was associated with 32% lower risk of type 2 diabetes. Also evidence suggests that the longer the mother breastfeeds the less the risk of development of type 2 diabetes mellitus in linear dose-response analyses up to 32%. Moreover, there appeared to be a 9% reduction in relative risk for each 12-month increase in lifetime duration of breastfeeding.

No conclusive evidence of an association between breastfeeding and bone mineral density was found breastfeeding on the risk of osteoporosis. However, calcium metabolism and bone metabolism are substantially altered during pregnancy and lactation, and high calcium demand during lactation makes women more prone to bone resorption and subsequent osteoporosis. However, it has been suggested that during lactation, oestrogen imposes minor inhibitory effect on periosteal bone formation and permits periosteal expansion which increases bone size after weaning<sup>(11)</sup>. This may be in favor of later weaning i.e. longer duration of breastfeeding into the second year.

### **Short Term outcomes of exclusive breastfeeding**

Exclusive breastfeeding and predominant breastfeeding were associated with longer duration of amenorrhoea. Shorter duration of

breastfeeding was associated with higher risk of postpartum depression. Breastfeeding may promote weight loss due to lactation<sup>(12)</sup>, but there is a lack of strong evidence to support this hypothesis<sup>(13)</sup>. Factors such as age, gestational weight gain and prepregnancy weight confound such analyses<sup>(14,15,16)</sup>.

### **How the benefits of breastfeeding are optimized**

Grummer-Strawn<sup>(17)</sup> state that the mechanisms by which the benefits of breastfeeding affect health are extremely varied, and this variation implies that different metrics of breastfeeding behaviour must be utilized to truly understand the relationships of interest. Rarely is it adequate to group all breastfeeding behaviour into a single category regardless of duration, intensity, feedings per day, mode of delivering milk to the infant or timing of feedings.

Many of the maternal benefits of breastfeeding are likely related to the hormonal changes of lactation. In the child the composition of the breastmilk is influenced by the variations occurring in breastmilk when given exclusively or in combination with other foods or in the form of restricted feeds. This might affect the health effects on growth and development. For example, unrestricted feeds promote the intake of long chain polyunsaturated fatty acids which may be important for intellectual development as well as ghrelin and leptin which may be important for appetite regulation. Exclusive breastfeeding permits the optimal utilization of the pathogen-specific antibodies which may be important for protection against otitis media as well as nonspecific immune factors which may be important for asthma.<sup>(18)</sup>

On the other hand, the feeding of breast milk from a bottle or cup rather than feeding directly from the breast may be more important for outcomes such as malocclusion<sup>(19)</sup> or obesity. In fact exclusive breastfeeding has a beneficial impact on nonspecific

malocclusions; while prolonged breastfeeding has a positive impact on preventing malocclusions, regardless of the type of occlusion disorder.<sup>(19)</sup>

Even when most of the infant's diet comes from breastfeeding, small amounts of infant milk formula fed by bottle can substantially alter the intestinal flora, with health outcomes yet to be fully elucidated.

Tham et al<sup>(20)</sup> report that before 12 months more breastfeeding versus less is protective against dental caries while the risk increases after 12 months, but suggest that this may reflect a higher rate of night feeding among breastfed toddlers, indicating that timing of feedings is important for some health effects in addition to the intake of sugary drinks and oral hygiene may be contributing factors. While the papers in this supplement attempt to assess different aspects of breastfeeding (e.g. exclusive vs. nonexclusive, longer vs. shorter, 'more' vs. 'less'), the extant literature often ignores key details of the feeding behavior).

The protective effect of breastfeeding against diabetes mellitus was initially shown when any milk formula was introduced in the first six months, thereby sensitizing the immune system to foreign proteins in this milk and potentiating the development of antibodies to the Islet of Langerhans and insulin leading to the disease. Hence we see again here that it is the practice of exclusive breastfeeding that entails the protective effect of breastfeeding against the development of diabetes, at least in part. The same mechanism is seen with allergies and hypersensitivities whereby the practice of exclusive breastfeeding in the first six months of life is important in delaying and down setting the onset and severity of the eczema or bronchial asthma or other allergic diseases.

In conclusion:

The protective effects of breastfeeding are enhanced by the optimal practices identified to make the best out of breastfeeding. In this context we have emphasized the importance of exclusive breastfeeding for the first six

months and continued breastfeeding for two years with no bottles or pacifiers (artificial nipples). However more research is needed to show the relationship of these practices to other diseases in the mothers and babies particularly related to the development of cancer and mental health problems. We recommend that all mothers are provided the suitable support to breastfeed exclusively for six months and continue breastfeeding for two years. This also entails that maternity leaves for working breastfeeding mothers be extended to six months or 26 weeks and that flexible hours be afforded thereafter and for at 2 years for the duration of her breastfeeding.

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## I.2 Cost and Savings from Optimal Breastfeeding Practices

Unfortunately, few people understand the extent to which breastfeeding benefits the mother's health and how breastfeeding results in savings for the whole country.

### *A few such examples are:*

In 2001, the USDA concluded that if breastfeeding rates were increased to 75 percent at birth and 50 percent at six months, it would lead to a national government savings of a minimum of \$3.6 billion (and this only considered a few of the health benefits of breastfeeding, not all of them).

The American Academy of Pediatrics (AAP) reports that each formula-fed infant costs the healthcare system between \$331 and \$475 more than a breastfed baby in its first year of life. <sup>(1)</sup>

The cost of treating respiratory viruses resulting from not breastfeeding is \$225 million a year. <sup>(2)</sup>

Health benefits for the nursing mother include a reduction in risk of many cancers and other serious diseases, during and after lactation. The National Cancer Institute reported the national expenditure on breast cancer treatment in 2004 was \$8.1 billion, meaning extended nursing could save upwards of \$4 billion a year. <sup>(3)</sup>

There would be a drastic reduction in required treatment for type 2 diabetes for women that breastfed. Currently, the cost of their treatment and lost wages is roughly \$78 billion a year. <sup>(4)</sup>

Infant formulas were originally designed to be a medical nutritional tool for babies who are unable to breastfeed due to unfortunate circumstances such as maternal death or illness, inability on the part of the infant to breastfeed due to prematurity, malformation of oral cavity, illness, or in the rare event that a mother had insufficient milk supply. However, formula does not fully meet all the nutritional needs or any of the immunity

needs of infants, it leaves their immune systems flailing and open to possible disease and infection as well as increases their changes of allergies due to receiving foreign proteins at a time when the baby's gut is still very immature and developing. Only breastmilk is species specific to the human infant and only breastmilk is the perfect food for a human infant. <sup>(1)</sup>

Drawing on epidemiological studies that relate breastfeeding to the risk of otitis media, gastroenteritis, and necrotizing enterocolitis, and estimates of treatment costs, it is estimated that an increase in breastfeeding rates from the 1998 levels (64% at hospital discharge and 29% at 6 months) to the Surgeon General's targets (75% at discharge and 50% at 6 months), would save a minimum of \$3.6 billion. <sup>(2)</sup>

The majority of these savings (\$3.1 billion) are attributable to preventing premature deaths due to necrotizing enterocolitis, which cost \$8.3 million per death. The savings do not include many other conditions with economic consequences, such as cognitive effects and other childhood, maternal, and chronic illnesses. <sup>(1)</sup>

A cost analysis for all pediatric diseases for which the Agency for Healthcare Research and Quality reported risk ratios that favored breastfeeding: necrotizing enterocolitis, otitis media, and gastroenteritis, hospitalization for lower respiratory tract infections, atopic dermatitis, sudden infant death syndrome, childhood asthma, childhood leukemia, type 1 diabetes mellitus, and childhood obesity. If 90% of US families could comply with medical recommendations (set in 2005) to breastfeed exclusively for 6 months, the United States would save \$13 billion per year (as per 2007 dollars) and prevent an excess 911 deaths, nearly all of which would be in infants (\$10.5 billion and 741 deaths at 80% compliance). <sup>(2)</sup>

In Indonesia the economic value of breastmilk is estimated to contribute to \$520 million/year to the economy, which amounts to 10% of the value of all exports, 2.5% of the total national budget, and about 1.5% of gross national product. <sup>(4)</sup>

The volume of breastmilk produced per year is estimated by multiplying the average daily milk volume by the duration of breastfeeding for urban and rural women. This volume of milk is compared with the cost of purchasing infant formula, which would be about \$500 million.

The cost of increased family planning services per year needed to replace the contraceptive effect of lactational amenorrhea is calculated as a function of current mean durations of lactational amenorrhea for urban and rural women and the number of urban and rural women currently breastfeeding, which provides an estimate of the couple-protection-years provided. This estimate shows that 4.5 million couple-years of contraception are provided annually. Using the cost of providing a year of contraceptive protection, an annual savings of \$80 million is estimated. <sup>(4)</sup>

Over the next 20 years, NCDs will cost more than US\$ 30 trillion, representing 48% of global GDP in 2010, and pushing millions of people below the poverty line. Mental health conditions alone will account for the loss of an additional US\$ 16.1 trillion over this time span, with dramatic impact on productivity and quality of life. By contrast, mounting evidence highlights how millions of deaths can be averted and economic losses reduced by billions of dollars if added focus is put on prevention. <sup>(5)</sup>

Cost effectiveness studies in our region are lacking but there is increasing financial burden of NCDs in the EMRO region as WHO estimates that during 2011–2025, cumulative economic losses due to NCDs in low- and middle-income countries are estimated at US\$ 7 trillion. <sup>(6)</sup>

In Egypt alone death from cardiovascular disease among women is 155 per 100,000.

Death from cancer is 112 per 100,000. Breastfeeding can reduce the risk of cardiovascular disease among women and can reduce the risk of cancer. Breastfeeding can also reduce obesity, consequences of high blood pressure and cholesterol among breastfeeding women. <sup>(7)</sup> It is estimated that:

- \* 2.6 Million people die as a result of being overweight or obese.
- \* 4.4 Million people die as a result of raised total cholesterol levels.
- \* 7.1 Million people die as a result of raised Blood pressure

Breastfeeding can reduce these costs.

Actually the costs of infectious disease saved by breastfeeding can be doubled for NCD.

In China US\$ 550 Billion and in Russia US\$ 200 Billion would be lost over ten years due to heart disease, stroke and diabetes. <sup>(7)</sup>

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### 1.3.Celebrating 25 years of Baby friendly



#### Introduction

The Baby Friendly Hospital Initiative (BFHI) has stood the test of time as the updated evidence supporting the Ten steps is growing and is being adopted in developed countries as a priority for development and economic growth development of these nations. Infant milk formula feeding is currently regarded by these developed nations as a market that can be expanded to reach needy populations rather than a product that can be promoted in their countries. In their countries a new product has replaced these milk substitutes so that instead of these wealthy countries spending their money on milks and bottles, they are spending it on getting professional support to enable them to continue to breastfeed and make the best and full use of their milk. To these mothers breastmilk and breastfeeding is no longer a commodity that they can take or discard, rather it is becoming an essential practice in their reproductive life and a best practice to follow.

The shift of Baby friendly practices from being practiced by developing countries to being the norm of developed countries has resulted in many changes in the worldwide perception of why BFHI linked practices are really a priority for our current century:

**Firstly:** The growing interest in BFHI has motivated many Universities and *educational* Institutes to integrate the Baby friendly practices in their teaching curriculum and design special teaching programs for this initiative and the Ten steps. A medical student graduated from any Western medical or nursing educational Institute is fully aware of these practices and is expected to implement it in his or her practice on graduation.

**Secondly:** There is growing interest in research that is no longer focused on the immediate effects of breastfeeding on reducing communicable disease and mortality but rather on the problems of developed

countries including the four major noncommunicable diseases as cardiovascular disease, diabetes, cancer and respiratory diseases. This has increased the commitment of these countries to the Baby friendly as the dollars saved by breastfeeding in preventing and reducing the intensity of these diseases has been shown to amounts to billions and trillions.

**Thirdly:** With the growing interest in *environmental pollution* and its effect on magnifying the toll of diseases and on economic development, there is rising awareness of the realization that products once known as breastmilk substitutes are in fact hazardous to babies especially as their critical periods of growth and development. The terms of allogenic, allergenic have evolved into toxigenic and mutagenic as more carcinogens and gene perpetrating agents linked to these products are identified by the activist groups that work to protect the environment.

**Fourthly:** Baby friendly fits the current trends towards making hospitals work towards becoming *accredited public health facilities* i.e. promoting prevention rather than providing medical and surgical treatment. In fact treatment is currently geared to implementing secondary and tertiary prevention strategies rather than giving patients a quick fix. As such Baby friendly assists mother at delivery to hold her baby immediately after delivery as a part of the management and prevention of postpartum bleeding and uterine inertia in mothers and to protect the newborn from acquired hospital nosocomial infections that may have fatal or handicapping consequences.

**Fifthly:** Baby Friendly fits the model of promoting *healthy family relationships* and decrease societal maladies including child

abonnement, dysfunctional families, divorce, violence and mental disorders.

**Sixth:** Baby friendly (by promoting breastfeeding continuity) is a strategy in face of the *population problem* as it not only assists in family planning by spacing out pregnancies but it is also a very valuable and inexpensive resource that can contribute to decreasing world hunger and assist populations in wars and famines or draughts, making it an important reserve for preserving the human race from extinction.

**Seventh:** Baby Friendly is a means for *unifying the language* mothers use with their babies in all countries all over the world, the language of love which is conveyed by the mother to her baby when she breastfeeds him or her and that it is reciprocated to her by the gratitude in their eyes and body language as they curl into their arms. Baby friendly allows the development of this language when the baby is born through the first hour skin-to-skin, a practice that bonds them in an everlasting unique relationship that has been identified by the Western psychologists to have important effects on the brain development and its ability to sustain future stresses in life and have stable relationships and be less vulnerable to develop psychiatric disorders. The latter and former are growing needs in societies with nuclear families that are common in industrial countries.

**Eighth:** Baby Friendly addresses the *economic* problems that have perplexed economists in that it provides resources that do not decrease with consumption, in fact it increases the more it is consumed, but follows the laws of demand and supply. It also is an ideal portfolio of societal welfare whereby the milk (product) consumed will produce health benefits on the short and long term and thereby has short and long term paybacks to the community. This is similar to vaccination

programs which cost the country but will prevent major diseases that can be even more costly. However breastfeeding has no cost apart from mother's diet. This is also referred to in quality as cost benefit and cost effective interventions, except that breastfeeding is not an intervention, it is nature's norm of nurturing babies by their mothers.

**Ninth:** Baby friendly is Baby's *human right* to getting the right start he or she is entitled to from birth, the right to be in their mother's arms to get the nourishment that is prepared for them over the past nine months of their gestation. It is also a human right for women to have a fulfilling and rewarding reproductive cycle and to be rewarded for the pain she they have endured during birth. The act of holding the baby comes with "motherhood" feelings of ecstasy and delight caused by brain changes that also stimulate the release of natural pain relief chemicals (oxytocin and endorphins) and milk making hormones (prolactin), and climaxing in an intense "bonding" which enhances secure long term relationships with their baby.

**Tenth:** Baby friendly is the best start for ensuring successful *parenting* and making the most of parenthood for both the caretakers and the newcomer. As much as it is nature's reward for every baby for enduring being enclosed in a dark space for 9 months, it is also parents' guide to empower them to learn how to manage and communicate with this newcomer in their new life. Baby Friendly practices help develop their confidence to become competent as caretakers by inspiring their parenting skills as they learn to become more tolerant, to listen to their baby's needs, to respond to their cues through nurturing and to empathize with parental love to them and later teach them the skills of how to live their lives to the full.

*The editor*  
**Prof. Dr Azza Abul-Fadl**



## **THE BABY FRIENDLY HOSPITAL INITIATIVE (1991-2016)**

**ذكرى مرور 25 عام على إعلان المستشفيات الصديقة للأم والطفل  
2016-1991**

بعد مرور **25** عام على إعلان مبادرة يدعم فيها حقوق الطفل في أن يبدأ الرضاعة بالطريقة الصحيحة التي يسمح له ولأمه أن يستمران في الرضاعة الطبيعية ، لا زال هناك مستشفيات ولادة كثيرة تضرب بعرض الحائط وتدخل البدائل للرضيع وتفصل الرضيع عن أمه وتهدر حقوقه في أن يبدأ حياته في أحضان أمه بعيداً عن التدخلات الطبية التي تعوق البداية التي فرضتها الفطرة – فهل هناك حل لهذه الكارثة؟

## **I.4. Rising Burden of Noncommunicable Diseases in the Region: Can Breastfeeding Promotion Reverse Trends?**

A total of 56 million deaths occurred worldwide during 2012. Of these, 38 million were due to noncommunicable diseases (NCDs), principally cardiovascular diseases, cancer and chronic respiratory diseases. Nearly three quarters of these NCD deaths (28 million) occurred in low- and middle-income countries.

### **DEVELOPING COUNTRIES ARE THOSE THAT SUFFER MOST FROM THE DEATH TOLL OF NCDs**

Breastfeeding is shown to decrease the risk of obesity.<sup>(1, 2, 3)</sup> A study of 32200 Scottish children aged 39-42 months found that the prevalence of obesity was significantly lower among those who had been breastfed, after adjusting for socioeconomic status, birthweight and gender (odds ratio 0.70, 95% CI 0.61-0.80).<sup>(4)</sup> Studies have linked not breastfeeding with risk of obesity and its consequences linked to cardiovascular diseases and diabetes.<sup>(5,6)</sup>

### **NOT BREASTFEEDING PREDICTS LATER OBESITY**

#### **Breastfeeding and cardiovascular disease:**

Raised levels of CRP are associated with an increased risk of cardiovascular disease including coronary heart disease, heart attacks, angina and strokes – and Type-2 diabetes in later life.

It was found that CRP level was 20 per cent lower in those breastfed for at least three months and were almost 30 per cent lower in those breastfed for at least a year.

CRP is an important biomarker of heart disease and was found to be lower in women who breastfeed.

#### **Breastfeeding women and decreased risk of NCDs:**

In 140,000 postmenopausal women the cumulative total duration of breastfeeding was determined. *The longer women nursed babies, the less likely they were to develop diabetes, heart disease, or stroke.*<sup>(7,8)</sup>

It is estimated that for every 100 women who accumulate at least 12 months of breastfeeding over their lifetime, one case of diabetes would be prevented. Also for every 125 women who accumulate 12 months of breastfeeding, one case of heart disease would be prevented.

A study in America was carried out to establish whether prolonged breastfeeding would reduce postmenopausal risk factors for CVD.

Incidence of CVD in 139,681 women related to lactation and risk factors (obesity, hypertension, diabetes, and hyperlipidemia). The women who had never breastfed were more likely to be obese and to have hypertension, diabetes, or hyperlipidemia than were those who had lactated. Breastfeeding for 12 months was 10–15% less likely to be associated with hypertension, diabetes, hyperlipidemia, and CVD.<sup>(7,8)</sup>

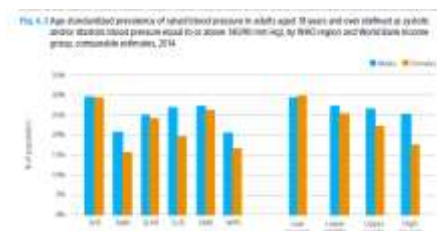


### **Poverty and NCDs**

- \* Chronic disease risks and deaths are increasing rapidly especially in low and middle income countries (80%)
- \* Chronic disease is an underappreciated cause of poverty & hinders the macroeconomic development.
- \* The total number of deaths from chronic disease is double that of infectious disease.

### How can Breastfeeding reverse the trends:

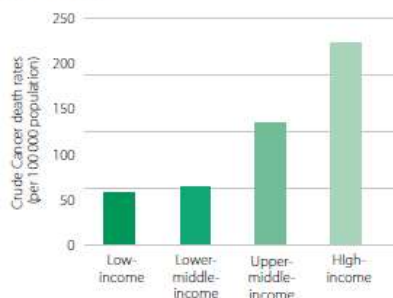
Breastfeeding can reduce hypertension in women who breastfeed.



Breastfeeding is a cost effective approach for prevention & control of hypertensive disease <sup>(8)</sup>.

Breastfeeding protects against maternal and childhood cancers and can play a significant role in reducing the burden of cost of treating these diseases <sup>(9, 10)</sup>.

**Fig. 1.6** Global cancer mortality, by World Bank Income group, 2012 (crude mortality rate per 100 000 population) (6)



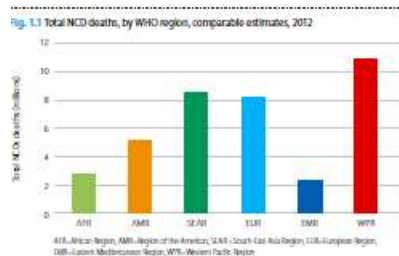
The burden of death and cost of treating cancer can be reduced by breastfeeding.

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Total duration of breastfeeding and of exclusive breastfeeding was studied and compared in 99 childhood cancer cases and 90 controls. When average duration of exclusive breastfeeding was compared, the difference was highly significant for all cancers ( $p < 0.001$ ) and for lymphoma ( $p < 0.001$ ) <sup>(11)</sup>.

### IN CONCLUSION:

- \* NCD including heart disease, stroke, cancer, chronic respiratory disease and diabetes are claiming the lives of over one half of deaths globally.
- \* Breastfeeding is inversely related to obesity (BMI), diabetes, cancer and hypertension among breastfeeding women.
- \* Risk factors that cause CVD as obesity & C-reactive protein are associated with not breastfeeding or shorter duration of breastfeeding.
- \* Babies who are breastfed are less prone to develop type 1 & 2 diabetes, obesity and leukemia.





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## Section 2: Research Studies and Reports

### Impact of Early First Hour Skin to Skin Contact on Maternal Psychological Status and Child Development

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#### Abstract

**Background:** Early first hour skin-to-skin contact (FSSC) between mother and baby has been shown to reduce neonatal mortality by up to 22% but faces many challenges.

**Aim:** To study the effect of the practice of early FSSC and care through skin to skin on child development and maternal postpartum depression.

**Methods:** This is cross sectional, hospital based study was conducted for 200 women seen during the last trimester in pregnancy of whom one half of the cases were randomly assigned to receive intense preparation to demand FSSC from their birth attendant. They included 100 from the private sector and 100 from public sector. The women were assessed for the depression score twice; once during the last trimester and the second time at 6-8 weeks postpartum using the Beckwith Depression score tool. Their babies were followed up at 2, 4 and 6 weeks and assessed for their development and health and feeding patterns at the end of the follow-up period at 6-8 weeks. We used the Denver developmental scale for assessing their milestones of development at 8 weeks of age.

**Results:** The cohort was divided into: group 1a (39 cases) prepared in the third trimester to FSSC and performed FSSC, group 1b (61 cases) prepared but did not perform FSSC and group 2 (100 cases) were not prepared and did not perform FSSC. The maternal depression score decreased significantly at 8 weeks postpartum by  $-4.9 \pm 6.17$  in group 1a compared to groups 1b and 2 ( $mn = -3.28 \pm 4.44$  and  $mn = -0.65 \pm 7.16$  respectively) at  $P < 0.01$ . Morbidity necessitating hospitalization was 2.5% in group 1a compared to 19.6% in group 1b and 34% in group 2 ( $P < 0.05$ ). Developmental scores attained by group 1a were 100% compared to 57% and 50% in groups 1b and 2 respectively.

**Conclusion:** Antenatal preparation to FSSC plays an essential role for mother's commitment to request for FSSC and make the birth attendant respond to her needs. When combined with exclusive breastfeeding FSSC has an additive effect on reducing exposure to infectious diseases. The decrease in postpartum depression in mothers is probably through FSSC and may have influenced superior development of those infants exposed to FSSC.

Key words: exclusive breastfeeding, skin to skin care, post-partum depression, development

#### Introduction

Early first hour skin to skin contact (FSSC) between mother and baby has been shown to reduce neonatal mortality by up to 22%. <sup>(1)</sup> Early FSSC contact has many benefits as baby is usually cries

less, baby skin to skin feels safe and can hear mother's heartbeat which is familiar to him. It stabilizes baby's core temperature thus preventing hypothermia. <sup>(2)</sup> It also stabilizes

respiratory and heart rate. It assists newborn baby's blood sugar to be regulated. The practice has psychological benefits as it strengthens bonding between mother and baby and many mothers find that they can communicate with their baby more easily and thus identify with their needs. Newborn skin to skin contact with mother after birth results in colonization of baby with mother's bacteria which helps prevent sepsis and allergic diseases. One of the major skin to skin benefits is for premature babies where continuous care "skin-to-skin" with premature babies which is termed Kangaroo care can actually reduce the need for extra oxygen intake.<sup>(3, 4, 5)</sup>

Despite such benefits still, there are considerable constraints that face the implementation of FSSC in medical practice. Key to success of such a practice is empowering women to demand it from their care takers and practice it themselves. Maternal control of their child birth can have significant effects on the success of the breastfeeding experience. However many mothers have low self-esteem and poor confidence and thus give way to the control of their child birth to others. The underlying reason for this could be their tendency to have higher depression scores.<sup>(6)</sup> The extent to which this may influence their feeding practices and their child's development is debatable.<sup>(7)</sup>

Hence the aim of this study was to assess whether mothers exposed to early FSSC could attain better control over their nurturing practices and whether this could be related to their psychological status as measured by their depression scores before birth and at 2 months after birth in those exposed to FSSC versus those not exposed to FSSC. Also how

these practices influenced the developmental progress of their child in the first critical 6-8 weeks of their life.

### Subjects and Methods

This prospective study was conducted for 200 pregnant women in the third trimester attending in private and public sectors in Qualubia Governorate during the period from June 2014 to June 2015. The public sector consisted of two hospitals: Benha University hospital and Benha Teaching hospital. The private was Dr Ahmed Rizk maternity hospital in Benha. All hospitals were not designated as Baby Friendly.

The 200 cases were randomly assigned to two groups (Group 1 and group 2) each of them consisted of 100 pregnant women.

**Inclusion criteria** included women in the third trimester of pregnancy who were healthy and had no pregnancy related complications, or major medical condition, and not receiving any medication. **Exclusion criteria** included women with diabetes mellitus, endocrine, renal or hepatic or cardiac disease, major fetal anomalies or intrauterine growth retardation (IUGR), preterm birth, eclampsia, pre-eclampsia or antepartum hemorrhage.

**Intervention:** Group 1 was prepared in the third trimester by giving them information about the importance of exclusive breastfeeding and early initiation of breastfeeding through the first hour of skin to skin contact (FSSC) using printed matter and audiovisual aids. Group 2 received no antenatal preparation. They were assessed for the depression score measured by the Beckwith Depression score tool. All mothers were followed up in the postnatal period at two weeks, four weeks and six weeks. At 6-8 weeks all mothers were reassessed by the depression scale tool. All infants were assessed for their feeding practices and health status as well as their development using the Denver developmental scales at 6 -8 weeks of age. The mother's perception and satisfaction with her child's development was also taken into consideration through follow-up phone calls.

**Statistical Analysis:** The collected data were represented and analyzed using SPSS V-16.- Qualitative data were described as number and percentage. Quantitative data were described as mean  $\pm$  standard deviation. The median will be provided for non-normally distributed data. Kolmogorov-Smirnov test was used to test the normality of data distribution. Student-t test was used to assess the statistical significance between two population means with normal data

distribution. Chi-square test was used to compare the qualitative data between independent group samples. Mann-Whitney U test was used for two independent groups of abnormal data distribution. Kruskal-Wallis test is used for comparison of more than two independent groups of abnormal data distribution. Levels of significance included a cut off of P value  $\geq 0.05$  which was considered non-significant.

## Results

The mothers in group I who were prepared antenatally for FSSC were further subdivided into group 1a; who practiced FSSC (39%) and group 1b; who did not practice FSSC (61%). These were compared to group 2; who were not prepared for FSSC antenatally and only one of them practiced SSC (1%).

**Table (1):** compared the epidemiological data of the three groups. There was statistically significant difference between the three groups as regards to the level of education, type of occupation of the mother and the number of children at  $P < 0.05$ . Illiteracy was highest in group 2 (24%), while mothers with higher education were highest in Group 1a (58.9%) followed by group 1b (44.2%) compared to 8% in group 2. Mothers with professional occupation were more common in Group 1a (69.2%) followed by group 1b (47.5%) compared to 5% in group 2. However there was no significant difference as regard: age at  $P > 0.05$ .

**Table (2)** showed that exposure to disease necessitating hospitalization was statistically significantly higher among group 2 (34%), compared to 1b (19.6%), but it was lowest in group 1a (2.5%) at  $p < 0.05$ .

**Table (3)** showed that the mean postpartum depression score decreased from  $29.21 \pm 5.91$  to  $24.3 \pm 6.4$  in group 1a, and from  $27.6 \pm 4.6$  to  $24.3 \pm 4.2$  in group 1b and from  $27.1 \pm 3.2$  to  $26.4 \pm 4.4$  in group 2. The mean percent change for the depression score was highest among group 1a (16.7%) compared to group 1b (11.5%) and group 2 (2.3%).

**Table (4)** shows that at 8 weeks of age all infants (100%) exposed to FSSC had achieved over 100% of the Denver scales for their age, while 57.4% of those not exposed and 50% of those who were not exposed and were not fully breastfeeding achieved 100% of the skills. In group 2 20% achieved  $< 10\%$  of the skills and 30% of them achieved 10-100% of the skills. The difference was statistically significant at  $P < 0.001$  between the first group and the other groups. The difference was most prominent in the skills of the fine motor and the social interactions particularly regarding the

spontaneous smiling and ability to follow post midline.

## Discussion

The study showed that for mothers to perform first hour skin-to-skin contact (FSSC) they need to be prepared antenatally before birth. Hence mother's knowledge and determination can influence the practice by placing pressure on the birth attendants to perform it even if she delivers in a non-baby friendly hospital. The early (FSSC) increased the duration of exclusive breastfeeding and significantly reduced maternal depression. Other workers have shown that early FSSC has many psychological benefits, as baby usually cries less and is more closely bonded to the mother. It strengthens bonding between mother and baby and many mothers find that they can communicate with their baby more easily and thus recognize their needs. Babies who are kept FSSC with their mother for one hour after birth are more likely to latch on without help and are more likely to breastfeed exclusively in the first 6 months and to continue to breastfeed much longer.<sup>(9)</sup>

Our study also showed that morbidity was less in cases exposed to FSSC. Other workers have shown that (FSSC) between mother and baby has been shown to reduce neonatal mortality by up to 22%.<sup>(7)</sup> FSSC baby stabilizes baby's core temperature preventing hypothermia. It also assists newborn baby's blood sugar to be regulated, stabilizes oxygenation, respiratory and heart rate. Newborns offered FSSC after birth becomes colonized with mother's bacteria which prevent septicemia and allergic diseases. Premature babies benefit from continued "skin-to-skin care" as they can actually reduce the need for extra oxygen intake.<sup>(8)</sup>

In our study higher levels of education and mother occupation influenced the practice of FSSC so that in group1a, mothers with higher educational level (58.9%) and those who had professional jobs (69.2%) were more likely to practice FSSC and later care for their baby through skin to skin (SSC) and exclusively breastfeed. While mothers of group1b and group 2 who had lower educational levels and professional status did not practice SSC, and this was highly significant. In the Cantrill <sup>(10)</sup> study the distribution of mothers in their sample was as follows: 55.3% achieved all or part of their secondary education, 23% had some form of tertiary education and 17% had undertaken post graduate studies. This is similar to our findings and indicates that women with higher education are more empowered to demand this practice from their birth attendants.

The depression score in the three groups decreased after birth, but the decrease was more significant in group 1a. The mean percent change in the depression score was 16.7% in group 1a compared to 11.5% and 2.3% in groups 1b and 2. This similar to the findings of <sup>(11)</sup> and <sup>(12)</sup> who reported that mothers with eclampsia and post-partum depression exposed to FSSC with breastfeeding had synergistic effects on sedating and calming both mother and baby and empowering the mother to care and feed her baby.

In Egypt <sup>(13)</sup> a study on the depression score of mothers with preterm babies exposed to SSC found that those mothers had significantly lower depression scores than those who did not practice SSC with their LBW babies. A study was conducted for 73 preterm infants who received FSSC in the neonatal intensive care unit that were matched with 73

control infants who received standard incubator care. Workers observed that at 37 weeks' GA, mother-infant interaction, maternal depression, and mother perceptions showed more positive effective responses, touch, and adaptation to infant cues, and infants showed more alertness and less gaze aversion. Mothers reported less depression and perceived infants as less abnormal. <sup>(14)</sup>

In our study babies offered FSSC had lower risk of serious infections requiring hospitalization as only 2.5% in group1a and 19.6% were admitted to the hospital in group 1b compared to 34% in group 2 ( $P<0.05$ ). Early initiation of breastfeeding, FSSC and exclusive breastfeeding for the first six months of life decrease neonatal and infant deaths by reducing the risk of infectious diseases. <sup>(15)</sup>

Fathers play an important role by performing FSSC themselves with their baby when mother is not available and also by encouraging mother to initiate breastfeeding. However in our study none of the fathers performed FSSC with their previous or current baby. This is probably related to local traditions that do not accept such a practice for males. Without the father's help, many women may be motivated to continue to breastfeed exclusively through the sometimes rocky first days and weeks of nursing. <sup>(17)</sup> When the father encourages and reassures the mother she tends to feel more confident in her choice of breastfeeding. The father's support is critical especially in a mother that is breastfeeding for the first time. Furthermore, many studies have reported type of roles the fathers can provide for supporting their wives in exclusive breastfeeding immediately after the birth of the infant up to the age of 6 months. These include paternal

participation in decision on infant feeding mode and involvement in child care.<sup>(17)</sup>

Our study showed that the group of infants exposed to FSSC had higher developmental outcomes. Although there is no direct evidence of FSSC on development<sup>(18)</sup> however other workers have postulated that FSSC can promote development and improve intelligence through establishing cardiorespiratory stabilization and decreasing crying<sup>(19)</sup>, both of which can increase the cerebral blood flow and improve brain oxygenation in a critical period of brain growth.<sup>(20)</sup> Others have proposed that FSSC to promotes release of oxytocin by mother and baby thereby increasing their potential for sensitive parenting.<sup>(21)</sup> FSSC promotes mother-infant interaction<sup>(14)</sup> and later cognitive development.<sup>(22)</sup>

Moreover FSSC release of oxytocin can improve maternal depression status that can consequently have positive effects on child brain development by decreasing stress caused by the high cortisol levels.<sup>(23, 24, 25)</sup>

**In conclusion** FSSC is driven by woman's will and demand. When woman are convinced they can pressure the health system to do it for her and her baby. FSSC supports and reinforces successful postpartum breastfeeding practices especially exclusive breastfeeding thereby reducing exposure to infectious diseases, in this critical period of life. It promotes child development probably by improving the psychological status of the mother. It is an effective, efficient, acceptable, safe and affordable method for caring of infants as it supports baby health status by improving his respiratory and cardiac function and increase infant- maternal bonding and maternal-infant interactions

thus decreasing depression score and thereby enhancing child development.

**Recommendations:** All mothers should be prepared for FSSC through intensified antenatal education to pregnant women and their partners about the importance of demanding early FSSC and practising exclusive breastfeeding using various educational tools including audiovisual aids. Hospitals caring for mothers at birth should become Baby Friendly. This should begin by education of medical students and practicing physicians about benefits of FSSC and exclusive breastfeeding. Mandating continued medical education hours for re-licensure status of physicians should be installed in the health care system free of industrial influence.

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**Table (1): Comparison between study groups regarding mother age, level of education, occupation and parity**

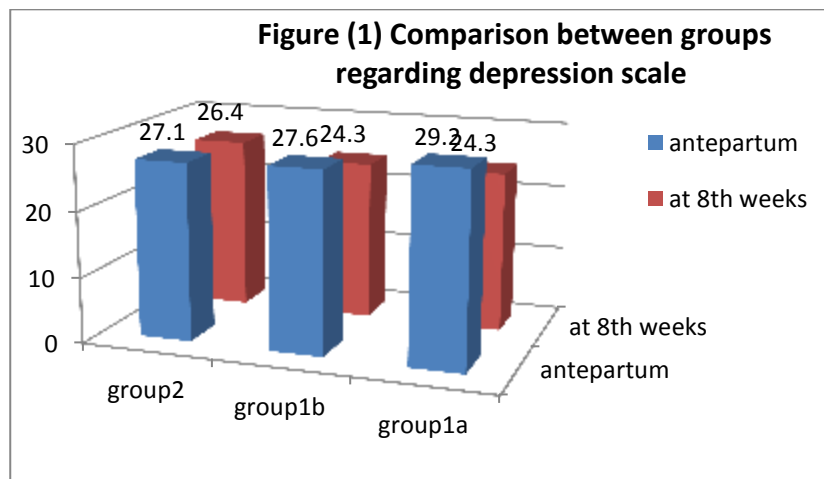
		Group1a	Group1b	Group2	P-Value
<b>Age</b>	<b>Mean</b>	28.1	27.6	27.4	0.66 (ANOVA)
	<b>SD</b>	3.7	4.1	4.4	
	<b>Median</b>	28	28	28	
<b>Level of Education</b>	<b>Illiterate</b>	1 (2.5%)	4 (6.5%)	24%	0.001 (Chi <sup>2</sup> )
	<b>1ry school</b>	0	5 (8.1%)	11%	
	<b>2ndry school</b>	15 (38.4%)	25 (40.9%)	57 (57%)	
	<b>High education</b>	23 (58.9%)	27 (44.2%)	8 (8%)	
<b>Mother occupation</b>	<b>House wife</b>	12 (30.7%)	28 (45.9%)	92%	0.001 (Chi <sup>2</sup> )
	<b>Manual work</b>	0	1 (1.6%)	0	
	<b>Business woman</b>	0	3 (4.9%)	3%	
	<b>Professional worker</b>	27 (69.2%)	29 (47.5%)	5%	
<b>Number of children</b>	<b>Mean</b>	0.82	1.31	1.72	0.001 (Kruskal-Wallis)
	<b>SD</b>	0.85	1.19	1.33	
	<b>Median</b>	1	1	2	

**Table (2): Comparison between study groups regarding exposure to disease necessitating hospitalization**

<b>Disease</b>	<b>Group1a</b>	<b>Group1b</b>	<b>Group 2</b>	<b>Total</b>	<b>P-value (Chi<sup>2</sup>)</b>
<b>Yes</b>	<b>1 (2.5%)</b>	<b>12 (19.6%)</b>	<b>34%</b>	<b>47</b>	<b>0.001</b>
<b>No</b>	<b>38 (97.4%)</b>	<b>49 (80.3%)</b>	<b>66%</b>	<b>153</b>	

**Table (3): Comparison of mean depression score in groups exposed to early skin to skin (group 1a) versus those not exposed (group 1b) and those not fully breastfeeding (group 2)**

Depression scale		Group1a	Group1b	Group 2	Total	P-value (ANOVA)
Antepartum	Mean	29.21	27.64	27.11	27.6	0.03
	SD	5.91	4.61	3.27	4.36	
At 8 <sup>th</sup> week	Mean	24.31	24.36	26.46	25.4	0.01
	SD	6.42	4.26	4.48	9.95	
Difference (8 <sup>th</sup> week- Antepartum)	Mean	-4.9	-3.28	-0.65	-2.28	0.01
	SD	6.17	4.44	3.88	7.16	



**Table (4) : Distribution of developmental outcomes assessed by Denver scales at 6-8 weeks of age in groups exposed to first hour skin to skin (Group 1a) versus those not exposed (groups 1b ) and those who were not fully breastfeed (group 2)**

Denver scale items		Group 1a (N:39)	Group 1b (N:61)	Group2 (N:100)
Gross motor	Equal movement	39 (100%)	45 (73.8%)	80 (80%)
	Lift head up ward in ventral position	39 (100%)	45 (73.8%)	80 (80%)
Fine motor	Follow to midline	39 (100%)	45 (73.8%)	50 (50%)
	Follow post midline	39 (100%)	35 (57.4%)	20 (20%)
Social	Smile spontaneously	39 (100%)	45 (73.8%)	55 (55%)
Language	Respond to bell	39 (100%)	61 (100%)	80 (80%)
	Cooing	39 (100%)	35 (57.4%)	80 (80%)
Total score	0 ( not initiated skill)	0 (0%)	0 (0%)	0 (0%)
	1 (<10% achieved skill)	0 (0%)	0 (0%)	20 (20%)
	2 (10-100% achieved skill)	0 (0%)	26 (42.6%)	30 (30%)
	3 (>100% achieved skill)	39 (100%)	35 (57.4%)	50 (50%)
P-value (Chi <sup>2</sup> )	P1 (Gr1a-Gr1b):< 0.001 Highly significant P2 (Gr1a-Gr2) :< 0.001 Highly significant P3(Gr1b-Gr2) :< 0.001 Highly significant			

## تأثير البداية المبكرة بملامسة جلد الأم لجلد الوليد فى الساعة الأولى من الولادة على الصحة النفسية للأم وتطور الطفل

الدكتورة /علا جلال على بحيرى ، الدكتورة / شريهان سالم السباعي العبد ، أ.د/ شويكار البكري ، أ.د/ دعاء الرفاعى سليمان ، أ.د/ عزة محمد عبد المنعم أبو الفضل  
قسم طب الأطفال وقسم النفسية والعصبية بكلية الطب –جامعة بنها  
مستخرج من رسالة الماجستير للطبيبة شريهان سالم السباعي العبد

**مقدمة:** لقد أثبتت الأبحاث أن تلامس جلد الام والطفل بعد الولادة مباشرة يقلل من نسبة وفيات المواليد بـ 22% ولكن رغم أهميته فهناك مقاومة من المجتمع الطبي والمنتفعين فى تطبيقه.  
**الهدف من البحث:**

كان الهدف من هذه الدراسة معرفة تطبيق ممارسه الجلد للجلد بعد الولادة على الحالة النفسية للام وتطور الطفل وتحديد الإستراتيجيات التى يمكن أن تساعد فى تطبيق هذه الممارسة بنجاح.

**طريق البحث:** تم تحديد مائتى امرأة حامل من العيادة الخاصة و الوحدات الصحية وتقسيمهم الى مجموعتين (1و2) بعد أن تعرض نصف عدد الامهات (100) لجلسات توعية عن أهمية بداية الرضاعة الطبيعية بتلامس جلد الام والطفل ثم قياس درجة الاكتئاب للامهات فى المجموعة التى طبقت ممارسة الجلد للجلد ومقارنتها بالمجموعات التى لم تطبقها وذلك قبل وبعد الولادة (عند 8 أسابيع) ومتابعة صحة الأطفال ونمط الرضاعة على مدار 6 الى 8 أسابيع من العمر ثم تقييم تطور الطفل عند 8 أسابيع باستخدام أداة "دنفّر".

**النتائج:** أظهرت التحليلات الإحصائية تحسن فى درجة الاكتئاب عند الأمهات فى المجموعة (أ): و اللاتي تم تعليمها البداية الصحيحة للرضاعة الطبيعيه بملامسه الجلد للجلد وبالفعل التزموا وقاموا بتطبيق ممارسة الجلد للجلد بعد الولادة كان عددهم (39) أما بالمقارنة الى المجموعة (ب1): و اللاتي تم تعليمها البداية الصحيحة للرضاعة الطبيعيه بملامسه الجلد للجلد ولم يلتزموا بملامسه الجلد للجلد بعد الولادة وكان عددهم (61) والمجموعة (2): اللاتي لم يتم تعليمهن ولم يمارسن الجلد للجلد وعددهن (100). إذ أوضحت النتائج أن الامهات التى مارسن تلامس جلد للجلد قد إنخفضت نسبة الاكتئاب لديهن بالمقارنة الى الأمهات التى لم يمارسن بحيث إنقص متوسط تغيرالاكتئاب لديهن بمتوسط  $4.9 \pm 6.1$  ، أما مجموعة (ب1) فكان متوسط تغير الاكتئاب  $3.2 \pm 4.4$  ، ومجموعة (2) كان  $0.65 \pm 3.8$  وكانت الفروق لها دلالة إحصائية مؤثرة. كما قل تعرض الأطفال للأمراض الخطيرة التى تحتاج الى حجز بالمستشفى من 12.6% فى مجموعة (ب1) و 34% فى مجموعة (2).مجموعة الى (أ1) كان 2.5% والذين تعرضوا لبداية الرضاعة بالطريقة الصحيحة. كما كان معدل التطور عند أطفال المجموعة الأولى 100% بالمقارنة الى 57% و 50% فى المجموعة الثانية والثالثة بالتوالى.

**الاستنتاجات والتوصيات:** يساعد تعليم الامهات قبل الولادة الطريقة الحديثة لبداية للتعامل مع المولود بوضعه ملامساً الجلد للجلد مع أمه فور ولادته فى تقليل من إصابات الأطفال بالأمراض المعدية وفى خفض نسبة الاكتئاب عند الامهات كما تزيد من معدلات تطور الأطفال ولذلك لابد من تشجيع الامهات على هذه الممارسة من خلال توعية وتحضير الحامل لها وأيضاً تدريب مستشفيات الولادة الخاصة والعامة لتطبيقها من خلال برنامج المستشفيات الصديقة للطفل.

# Evaluating Effectiveness of Hospital Policies in Changing Practices of Maternity and Pediatric Services

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## Abstract

**Introduction:** Increasing breastfeeding is a public health priority supported by strong evidence. In 2009, the Egyptian Minister of Health released a decree in 2014 §36-2014, requiring all hospitals abide to the World Health Organization's (WHO's) and UNICEF recommended "Ten Steps for Successful Breastfeeding" (Ten Steps). This legislation strengthened the national program of Breastfeeding promotion of Maternal and Child Health Department.

**Objective:** The purpose of this study was to assess hospital policy compliance with Ministerial decrees for obligating hospitals with delivery services to become Baby Friendly for promoting, supporting and protecting breastfeeding by meeting the Ten steps of WHO and UNICEF and abiding by the code.

**Methods:** An assessment of the current status and needs of hospitals for becoming Baby Friendly was conducted to all hospitals to prepare them to abide by the Ministerial decree. The hospitals were oriented to the survey to be conducted and were requested to prepare a hospital policy and orient their staff to the initiative. A sample of 30 maternity public hospitals were surveyed: 7 in Alexandria, 9 in Qalubiya, 4 in Gharbia and 10 in Sohag governorates. We identified 12 hospitals that had a written policy and 18 hospitals did not have written policy. We conducted statistical analysis to compare the practices related to the global criteria for each of the Ten Steps in the hospitals in order to examine to what extent having a policy influenced improvement in the practices.

**Results:** Overall practices in all hospitals were low whether there was a policy or not. However hospitals with a policy showed significantly higher scores in the global baby friendly criteria related to the initiation of breastfeeding (given baby to hold in 5 minutes of delivery practicing early skin to skin contact up to first breastfeed) and also exclusive breastfeeding in the postnatal ward. Step 7 "rooming-in", step 8 "on-demand feeding", and step 9 for bottles and pacifiers scored high and were similar in both groups for the post-partum ward but not for the neonatal units (NCUs) where babies were separated from the their mothers and were offered bottles. Still these practices were higher in hospitals with a policy.

**Conclusions:** Baby Friendly practices can be supported by political commitment and it is useful in committing and obliging facilities to become Baby Friendly. However even if a written policy that covers all the ten steps and the code is present, it does not necessarily mean the hospital is Baby Friendly. Still it remains an important tool for making staff aware and sensitized to the goals of Baby Friendly

**Recommendations:** A written policy needs to be supported by a mechanism for monitoring its implementation and sustainability and for strengthening training and education in updated practices in breastfeeding support.

## Introduction

The Baby Friendly Hospital Initiative (BFHI) is a global program initiated in 1991 by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) in response to the Innocenti Declaration (1990). This program recognizes hospitals that offer the optimal level of care at birth for mothers and newborns for successful initiation of breastfeeding. A Baby-Friendly hospital focuses on the needs of the newborns and helps mothers and families to give their infant the best possible start in life. It supports women to successfully initiate and continue to breastfeed their babies according to the internationally recognized evidence based practices (set as global criteria) and therefore receives special recognition for having done so. Since the start of the BFHI, over 15,000 hospitals worldwide have received the Baby-Friendly designation <sup>(1)</sup>.

The BFHI protects, promotes and supports breastfeeding through the Ten Steps to Successful Breastfeeding developed by UNICEF and the World Health Organization. In order to achieve Baby-Friendly designation, every maternity facility must have a written breastfeeding policy that is routinely communicated to all health care staff. Having a written policy is main stay for becoming Baby friendly and a hospital that does not have a policy even if it meets all the remaining steps does not become recognized as Baby friendly. However there is considerable debate as regards to whether having a policy actually means that the hospital is implementing all the remaining steps of becoming Baby friendly. Changing practices takes time and requires intensive training but changing rules and setting regulations, protocols in management does not. It is expected that hospitals that do have a policy need to institute a system that allows all patients to receive the services according to the set policy <sup>(2)</sup>.

In 1992 a regulation was set by the Undersecretary of primary health care to

obligate all hospitals to become Baby Friendly. In 2014 a ministerial decree with a clear statement obligating all hospitals to become Baby Friendly was released. This made BFHI become a national priority supported by the political will and commitment of the government to make as many hospitals as possible Baby Friendly. However because of the political instability and rapid turnover of government officials, the dedication waned and a status quo in BFHI set in <sup>(3)</sup>.

The UNICEF in Egypt is reviving its interest to support the Ministry in making hospitals Baby Friendly by supporting nongovernmental organizations to conduct baseline surveys to identify needs of Baby Friendly in the country. The objective of this study was to assess hospital policy compliance with Ministerial decrees for obligating hospitals with delivery services to become Baby Friendly for promoting, supporting and protecting breastfeeding by meeting the Ten steps of WHO and UNICEF and abiding by the code <sup>(4)</sup>.

## Subjects and Methods

The study was conducted using the adapted tools of the UNICEF and World Health organization (WHO) for assessing Baby Friendly Hospitals. A permission form the Ministry of Health's Department of Maternal and Child Health in Egypt was acquired in order to enter the facilities and collect information from staff and clients. The research was funded by UNICEF Egypt, Cairo office. All public hospitals providing maternity services were studied in the governorates of Alexandria (10), Qalubiya (9) and Sohag (10) and only 4 public hospitals in Gharbia governorate. Three pediatric hospitals were excluded from Alexandria, so the total hospitals under study were 30 maternity hospitals, mostly general hospitals with maternity and neonatal services (only one purely maternity).

**Tools:** The UNICEF/WHO assessment tools were used and the structured interview forms were translated into Arabic. Also the compilation summary sheets of BFHI assessment devised of UNICEF/WHO was translated and adapted to country needs as a non-HIV endemic area <sup>(5)</sup>.

In this study we expected all the hospitals to have a policy in abidance with the Ministerial decree



and the instructions received from the MCH coordinator as the subnational coordinator for Breastfeeding in the governorate. However only 12 (40%) out of the 30 hospitals had a written policy displayed in full or as a summary but officially recognized and having the MoH logo and name of the MCH/MoH department so as to be official.

**Sample:** The sample included 777 mothers with babies less than 6 weeks of age, 781 maternity staff and 260 support support staff collected from 30 maternity public hospitals: 7 in Alexandria, 9 in Qalubiya, 4 in Gharbia and 10 in Sohag governorates. The sample was classified into Group I which included 12 hospitals with a written policy and group II which included 18 hospitals that did not have written policy.

The sub-analysis compared the selected global criteria in the hospitals with the policy to promote and protect breastfeeding by covering the Ten steps and code, and those without such a policy. The criteria selected included criteria under steps 4, 5, 6, 7, 8, 9 and 10 and the code as shown in tables 1 to 6. The criteria covered early initiation, holding baby skin to skin for one hour immediately after birth, giving or prescribing no prelacteals or supplements unless medically indicated, teaching mothers techniques of breastfeeding, feeding cues, rooming-in, encourage cue feeding, offering no bottles or pacifiers and discourage them by informing mothers of the hazards of their use and hazards of unnecessary supplements. The data covering the criteria were collected from health staff (doctors and nurses) support staff and mothers in the delivery ward or whose babies were in the NCU using the structured interview forms of the UNICEF/WHO for BFHI global assessment. Finally ensuring mother has access to support in breastfeeding after discharge. These criteria were analyzed and compared between the groups and subjected to statistical analysis in order to examine to what extent having a policy influenced improvement in the practices.

**Statistical analysis:** The collected data were represented and analyzed using SPSS V-16.- Qualitative data were described as number and percentage Quantitative data were described as mean  $\pm$  standard deviation. The median will be provided for non-normally distributed data. Kolmogorov-Smirnov test was used to test the normality of data distribution. Student-t test was used to assess the statistical significance between two population means with normal data distribution. Chi-square test was used to compare

the qualitative data between independent group samples. Mann-Whitney U test was used for two independent groups of abnormal data distribution. Kruskal-Wallis test is used for comparison of more than two independent groups of abnormal data distribution. Levels of significance expressed as P value  $\geq 0.05$  was considered non-significant.

## Findings

The results of the sub-analysis for comparing hospitals with and without hospital policy for promoting and protecting breastfeeding are displayed in tables 1 to 6.

### Global Criteria for Step 4:

#### Practices in maternity wards:

Table (1) compares practices related to step 4 "Initiate breastfeeding with half hour of birth" as by new interpretation "through immediate and continued skin to skin for one hour or up to first breastfeed". The table shows that in hospitals with a written policy the babies were given to their mothers to hold within 5 minutes of birth in vaginal and Cesarean section (C-S) deliveries (mean score 62.5 and 8.3 respectively) compared to hospitals with no policy (mean score 55.08 and 5.6 respectively), but the difference was not significant  $P < 0.05$ . However in hospitals with a written policy the babies who were given to their mothers to hold were also encouraged to hold in STS (mean score = 65.8) compared to those with no policy (mean score = 37.5) but only in vaginal deliveries at  $P = 0.007$ . None of the CS deliveries practiced STS in either group of hospitals.

#### Practices in neonatal care units (NCUs):

In NCUs the practice of giving the babies to their mothers to hold STS was low but still more mothers were encouraged to hold their baby STS in the hospitals with a policy than without (mean score 58.1 vs. 36.5 respectively), but the difference was not statistically significant ( $P = 0.18$ ) as shown in table (1).

Mothers were encouraged to recognize their babies' readiness to breastfeed while on STS more often in hospitals with a policy (mean score = 50.4 in group I vs. 32.3 in group II respectively) but the difference was not statistically significant ( $P = 0.13$ ) as shown in table (1).

### Global Criteria for step 5:

#### Practices in maternity wards:

Table (2) compares practices related to step 5 and showed that both groups had high scores with regards teaching mothers the breastfeeding technique (mean score = 71.75 I group I vs. 71.8

in group II) with no significant difference ( $P>0.05$ ). But the score for teaching mothers the technique of hand expression was low in hospitals with a policy with no significant differences between both groups ( $P>0.05$ ).

Interviews with staff and mothers showed that although mothers in the first group reported being offered help more often, still overall this practice was low in both groups (mean score= 43.1 and 39.8 respectively) with no significant differences between the two groups ( $P>0.05$ ) as shown in table 2.

#### **Practices in neonatal care units (NCUs):**

The scores of staff who instructed mothers to express milk for babies in NCU and to do so at least 6 times a day were somewhat higher in the first group than the second (mean score 36.7 and 44.2 in group I vs. 22.7 and 28.6 for group II). The difference was not significant ( $P>0.05$ ) as shown in table 2.

#### **Global Criteria for step 6:**

##### **Practices in maternity wards:**

Table (3) compared abidance of staff with prohibition of drinks or food unless medically indicated (Step 6). Hospitals with a policy were more likely to achieve 75% exclusive breastfeeding at discharge than the other group (mean score=50 for group I vs 16.7for group II) at  $P=0.006$ .

Clinical protocols related to breastfeeding were available in the group of hospitals with a policy compared to the other group (mean score 58.3 in group I vs 16.7 in group II) at  $P<0.001$ . Prescriptions issued were based on medical reasons were reported more by the hospitals with a policy but the difference was not significant (mean score=75 in group I vs 59.8 in group II) at  $P=0.2$ .

Mothers in the first group reported being exclusively breastfed (mean scores = 73.9 in group I vs 21.1 in group II), the difference was statistically significant at  $P<0.001$ .

##### **Practices in NCUs:**

Health staff in the first group tended not to prescribe BMS to babies in NCU compared to the second group (mean scores= 68.6 vs. 14.5). The difference was statistically significant at  $P<0.001$ . Non-clinical staff appeared to contribute significantly to encouraging mothers to exclusively breastfeed in both groups of hospitals but the difference was not significant (mean score= 62 vs 74.1) at  $P=0.41$ .

#### **Global Criteria for step 7, 8 and 9:**

##### **Practices in maternity wards:**

Table 4 compares the extent of abidance to the criteria of steps 7, 8 and 8 for encouraging rooming-in, on-demand feeding and prohibiting bottles and pacifiers respectively. The mean scores for these practices were slightly higher in the hospitals with a policy than without but the difference was not statistically significant except for mothers in the first group who reported being advised to feed their babies with no restrictions on frequency or duration (mean score 72 in group I vs. 47.5 in group II) at  $P=0.08$ . Also mean scores of mothers who reported that their babies were not offered pacifiers (92 in group I vs. 70.1 in group II), the difference had a borderline statistical significance of  $P=0.06$ .

#### **Global Criteria for step 10:**

##### **Practices in maternity wards:**

Step 10 assessed guidance and referral services provided by hospitals to ensure continued support after discharge. Hospitals with policy tended to coordinate with mother support groups and other community services more often than hospitals without a policy (mean score= 33.1 for group I vs. 11.1 for group II) at  $P<0.001$ . Also printed matter given to the mother on where to go was more likely to be provided by hospitals with a policy than those without (mean score = 41.7 for group I vs. 5.6 for group II) at  $P<0.001$ . Other criteria were low and no differences were present between the groups under study  $P>0.05$ , as shown in table (5).

#### **Global Criteria for the International Code of Marketing of Breastmilk Substitutes (ICBMS):**

##### **Practices in maternity and pediatric wards:**

Adherence of the hospital staff to the code was shown to be generally higher in the hospitals with a policy. In the hospitals that did not have a policy over one third of thee hospitals reported they received free gifts from the representatives of breastmilk substitutes company (including prooducts as infant milk formula, bottles, teats or pacifiers). About one quarter of them displayed or distributed promotional products of these companies to women or accepted their gifts. There was no statistically significant differences between the hospitals except for keeping infant milk formula out of sight from mothers which was higher in the hospitals with a policy than those without (mean score= 93.3 in group I vs. 55.6 in group II) at  $P<0.05$  as shown in table (6). In this section of analysis we included three other pediatric hospitals from Alexandria governorate.

## Discussion

Increasing breastfeeding is a public health priority supported by strong evidence. This study shows that having a policy does make a difference in improving practices related to the Ten steps. Practices that made a difference were early initiation through first hour skin to skin (FH-STSS) and exclusive breastfeeding especially for preterm babies. Of course these practices need further improvement as they were still below the target to become Baby Friendly. In a study conducted by Rosenberg et al, <sup>(7)</sup> to explore the association between the Ten Steps of the Baby Friendly Hospital Initiative (BFHI) of the World Health Organization (Geneva, Switzerland) and breastfeeding at 2 days and 2 weeks, showed that compliance with individual Steps ranged from 5.3% for Step 2 (staff training) to 93% for Step 4 (helping with breastfeeding initiation) and Step 8 (encouraging feeding on demand). When analyzing each Step individually, however, only the presence of a written hospital policy was independently associated with breastfeeding percent improvement.<sup>(7)</sup> This institutional-level evaluation supports the findings in our study that reinforcing implementation of the Ten Steps by political statements are associated with increased breastfeeding. Furthermore it suggests that hospitals with comprehensive breastfeeding policies are likely to have better breastfeeding support services and better breastfeeding outcomes.

Recently in Egypt, a Ministerial decree (36-2014) was released obligating all health facilities that provide maternity services to mothers and babies to implement the Ten steps of the UNICEF/WHO and abide by the code.

Although no study was done to examine the effect of such a decree on the improvement of breastfeeding practices, yet during the MAS survey, the surveyors discovered that officials and directors were unaware of this Ministerial decree indicating that it was poorly disseminated to these facilities <sup>(8)</sup>. A study in the United States of America <sup>(9)</sup> examined the impact of state breastfeeding laws on breastfeeding initiation and duration as well as on disparities in these infant feeding practices. They examined breastfeeding status before and after the institution of laws between 2000 and 2008 among 326 263 mothers from 32 states in the USA. Breastfeeding initiation was higher by 1.7 percentage points in US States with new laws particularly among lower income classes. However the policy may lose effect if there is no regular communication as this decreases recall of the policy statement. Hence it is important to appoint a focal person or local coordinator in each facility to regularly remind colleagues and form a task force or committee to organize regular meeting and activities to discuss problems and find solutions and implement improvements.<sup>(7)</sup>

In 2009, New York passed Public Health Law § 2505-a, requiring that hospitals support the World Health Organization's (WHO's) recommended "Ten Steps for Successful Breastfeeding" (Ten Steps). This legislation strengthened and codified existing New York State's hospital perinatal regulations. The purpose of this study was to assess hospital policy compliance New York laws and regulations related to breastfeeding. A policy review tool was developed to quantify compliance with the 28

components of breastfeeding support specified in New York Codes, Rules, and Regulations and the new legislation. In 2010 and 2012, hospitals received individual feedback from the New York State Department of Health, which informed hospitals in 2012 that formal regulatory enforcement, including potential fines, would be implemented for noncompliance. The number of components included in hospital policies increased from a mean of 10.4 in 2009, to 16.8 in 2011, and to 27.1 in 2013) ( $P < .001$ ); a greater increase occurred from 2011 through 2013 than from 2009 through 2011 ( $P < .001$ ). The percentage of hospitals with fully compliant policies increased from 0% in 2009, to 5% in 2011, and to 75% in 2013 ( $P < .001$ ), and the percentage that included all WHO's 10 steps increased from 0% to 9% to 87%, respectively ( $P < .001$ ).<sup>(9,10)</sup>

Although legislation or even regulations requiring certain practices are important, still without regular and sustained monitoring full implementation may come to a standstill. Studies suggest that increased monitoring and enforcement of regulations and laws result in improved compliance and greater impact<sup>(11)</sup>. Examples include the decline in adolescent smoking that was directly associated with the degree of local and state enforcement of laws prohibiting tobacco sales to minors<sup>(11)</sup>. However such regulations as shown by laws for limiting resident hours indicated that compliance was low until stricter enforcement, inspections, and fines were put in place.<sup>(12)</sup>

Policies and guidelines have recommended that structured programs to support breastfeeding should be introduced. In our study we noticed that

hospitals in which recent structured programs to promote breastfeeding and train staff when implemented in the hospitals improved practices even more. This was evident in the Gharbia hospitals as compared with the hospitals in Qalubiya and Alexandria that had implemented the program some time before. A review of evidence<sup>(13)</sup> of outcomes of structured compared with non-structured breastfeeding programs in acute maternity care settings to support initiation and duration of exclusive breastfeeding showed that the latter and former showed significant improvement in breastfeeding initiation following introduction of a structured breastfeeding program. Hence, structured programs compared with standard care may positively influence the initiation and duration of exclusive breastfeeding and any breastfeeding and may have a greater benefit than unstructured program.<sup>(13)</sup> In Egypt, the MCH/MoH supported by UNICEF has adopted and institutionalized the Baby friendly Hospital Initiative as a national program from 1995. To accelerate implementation after a period of status quo by the political instability of the change of the regime in 2011, a national task force devised a plan and instituting monitoring of its implementation by MCH/MoH.

Exclusive breastfeeding is a public health priority. In this study we noticed wide disparities between the hospitals that had policies. So that Alexandria and Qalubiya hospitals had lower rates than Gharbia; with regards to early initiation through FH-STS and exclusive breastfeeding. The program had been previously instituted in the accreditation system of health facilities as a requirement to become accredited and

most of the Hospitals that having a policy in Alexandria were the ones that were accredited by the MoH accreditation body in the MoH at that time in the early 2000s, with the change of the regime it is hoped this can also be revitalized. A strong body of evidence links maternity care practices, based on the Ten steps to successful breastfeeding, to increased breastfeeding initiation, duration and exclusivity. Despite having written breastfeeding policies, New York (NY) hospitals varied widely in reported maternity care practices and in prevalence rates of breastfeeding, especially exclusive breastfeeding, during the birth hospitalization, this was attributed to lack of a monitoring or auditing system.

<sup>(14)</sup> This changed when the NY State Department of Health developed the Breastfeeding Quality Improvement in Hospitals (BQIH) Learning Collaborative. The evidence-based maternity care practices from the *Ten Steps to Successful Breastfeeding* provided the basis for the Change Package and Data Measurement Plan. They illustrated that engagement of breastfeeding experts, partners, and stakeholders in refining the Learning Collaborative design and content, in defining the strategies and interventions (Change Package), can drive hospital systems change to achieve hospital aims. They recommend that hospitals in other states may consider using these results to prioritize breastfeeding support services through development of hospital breastfeeding policies and to utilize institutional surveys as a component of breastfeeding quality improvement initiatives. <sup>(14)</sup>

This study clearly shows the need for having policies that support and protect

breastfeeding in all hospitals providing services to mothers and babies in perinatal period. Communicating the legislations issued by the government in this respect is needed. Follow-up surveys are important to show trends and celebrate success stories. A survey of all Canadian maternity hospitals was conducted in 1993 and 2007 on routine maternity care practices and policies including infant feeding. The study showed that over the 14 years separating the two surveys, Canadian maternity hospitals substantially improved their implementation of the WHO International Code of Marketing Breast-milk Substitutes (WHO Code) and their adherence to the WHO/UNICEF Ten Steps. The significant finding was that in 1993 58% had a written policy this increased to 85 percent in 2007, this resulted in a significant decrease in the discharge sample packs containing formula given to mothers and use of pacifiers (soothers). <sup>(15, 16)</sup>

In this analytical study we found that hospitals that did have a policy had higher scores with regards to compliance to the WHO code. Other workers have demonstrated similar findings. <sup>(2,17)</sup> However policies alone without mandating implementation with fines and penalties linked to these laws are needed to ensure that hospitals do comply with these laws. <sup>(18)</sup>

We conclude that it is clear that Egypt has achieved many success stories over the past 2 decades to promote and protect breastfeeding. However these achievements need to be substantiated with critical strategic analysis in order to use the lessons learnt to develop policies and plans to facilitate progress towards achieving universal and sustained designation for recognition of maternity

services as Baby friendly. We recommend that Baby Friendly hospitals adopt continuous quality improvement management initiatives inside the hospitals for ensuring high quality services and improving outcomes of health and survival of mothers and babies while reducing the economic losses to the health system and the national economy from the hazards of not breastfeeding.

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**Table (1): Comparison of hospitals in Qalubiya (8), Alexandria (7) and Sohag (10) with and without policy with regards global criteria of step 4**

	Criteria of Step 4 Mothers report that they were:	Mean score for Hospitals with policy (12)	Mean score for Hospitals with no policy (18)	T- test	P value
C4-2	Given their baby within 5 minutes of birth in NVD	62.5	55.08	0.63	0.73
C4-3	Given their baby within 5 minutes of birth in CS with GA	8.3	5.6	0.3	0.77
C4-4	Given their baby to hold skin to skin for one hour in NVD	65.8	37.5	2.93	0.007
C4-5	Given their baby to hold skin to skin for one hour in CS with GA	0	0	0.00	1
C4-6	Encouraged to recognize their babies' readiness to breastfeed while on skin-to-skin.	50.4	32.3	1.37	0.18
C4-7	Encouraged to hold their baby skin-to-skin in NCU	58.1	36.5	1.58	0.13

GA: General anesthesia; CS: cesarean section; NCU: neonatal care unit

**Table (2): Comparison of hospitals in Districts of Qalubiya, Alexandria and Sohag governorates with and without policy with regards global criteria of Step 5 of the BFHI**

	Criteria of Step 5 in %	Hospitals in Districts with policy (12)	Hospitals in Districts with no policy (18)	t	p
	<b>Interviews with staff</b>				
C5-3	Teach mothers correct positioning and attachment	71.75	71.8	0.007	0.99
C5-4	Teach mothers correct hand expression	46.025	65.1	1.75	0.09
	<b>Interviews with mothers</b>				
C5-6	Offered further help with breastfeeding within 6 hours	43.1	39.8	0.28	0.78
C5-8	Taught milk expression	34.5	27.6	0.72	0.48
C5-10	Offered help to start their breastmilk coming in NCU	37.3	25	1.05	0.3
C5-11	Offered help to express breastmilk in NCU	36.7	22.7	1.2	0.24
C5-13	Instructed to express their milk 6 times or more every 24	44.17	28.6	1.23	0.23

**Table (3) Comparison of hospitals in Districts of Qalubiya governorate with and without policy with regards practices related to the global criteria of step 6**

#	Criteria of Step 6	Hospitals in Districts with policy (12)	Hospitals in Districts with no policy (18)	t	p
C6.1	At least 75% of the full-term babies delivered in the past year were exclusively breastfed or fed expressed breastmilk from birth or discharge	50	16.7	2.19	0.006
C6.2	Clinical protocols or standards related to breastfeeding are available	58.3	16.7	3.1	<0.001
C6.5	Prescription of substitute is based on acceptable medical reasons	75	59.8	1.3	0.2
C6.7	Breastfeeding mothers in postpartum wards report babies received only breastmilk	73.9	21.1	4.02	<0.001
C6.8	Mothers informed of EBM & hazards of BMS	45	48.4	0.29	0.7
C6.9	Health staff do not prescribe BMS in NCU	68.6	14.5	3.95	<0.001
C6.10	Non-clinical staff support exclusive breastfeeding	62	74.1	0.83	0.41

**Table (4) Comparison of hospitals in Districts of Qalubiya, Alexandria and Sohag governorates with and without policy with regards global criteria of Steps 7,8 and 9**

	Criteria of Step 7	Hospital with policy (12)	Hospitals with no policy (18)	T	p
C7-1	By observation babies and mothers are rooming-in	60.5	54.44	0.66	0.51
C7-2	Mothers report babies not separated from them	88.5	76.6	1.03	0.31
C8-1	Mothers taught to recognize feeding cues	44	44.18	0.02	0.99
C8-2	Mothers report advised to feed their babies with no restrictions on frequency or duration	72	47.5	1.76	0.08
C9-1	Babies observed, were not using bottles and teats	83	61.14	1.93	0.06
C9-2	Mothers report that their babies were not fed any fluids in bottles	79	64.7	1.15	0.26
C9-3	Mothers report that their babies were not offered pacifiers	92	70.1	1.96	0.06

**Table (5) Comparison of hospitals in Districts of Qalubiya, Alexandria and Sohag governorates with and without policy with regards global criteria of Step 10**

	Criteria of Step 10 in %	Hospital with policy (12)	Hospitals with no policy (18)	T	p
C10-1	Mothers are given information concerning where they can get support on discharge	50	50	0.006	0.99
C10-2	Hospital coordinates with mother support groups and other community services	33.3	11.1	3.9	<0.001
C10-3	Facility encourages follow-up system for mothers	41.7	44.4	0.29	0.7
C10-4	Printed information is distributed to mothers	41.7	5.6	3.99	<0.001
C10-5	Mothers report that they have been given information on how and where to get help	48.3	40.32	0.28	0.69



**Table (6) Comparison of hospitals in Districts of Qalubiya, Alexandria and Sohag governorates with and without policy with regards global criteria of the Code**

	Criteria of Code in % In compliance to the code:	Hospital with policy (15)	Hospitals with no policy (18)	X2	P
C1	No employees of manufacturers or distributors of breastmilk substitutes, bottle, teats or pacifiers have any direct or indirect contact with pregnant women or mothers.	93.3	83.3	1.54	0.21
C2	the hospital does not receive any free gifts from manufacturers or distributors of breastmilk substitutes, bottles, teats or pacifiers.	93.3	61.1	5.89	0.015
C3	pregnant women, mothers and their families are not given marketing materials, samples or gift packs by the facility that include breastmilk substitutes, bottles, pacifiers, other equipment for preparing feeds or coupons.	93.3	77.8	1.55	0.2
C5	no promotional materials for breastmilk substitutes, bottles, teats or dummies or any other designated products, as per national laws, are displayed or distributed to pregnant women, mothers or staff.	93.3	77.8	1.55	0.2
C6	Infant formula cans and prepared bottles are kept out of view.	93.3	55.6	7.27	0.007
C7	Staff can give two reasons why it is important not to give free formula samples from the infant formula companies to mothers (during an interview with those randomly selected from different departments of the facility).	78.9	73	0.86	0.4

Group I (15): include the 3 pediatric hospitals in Alexandria

## تقييم تأثير وجود سياسة لدعم وحماية الرضاعة الطبيعية في تغيير ممارسات مقدمي الخدمة بمستشفيات الولادة ورعاية الأطفال

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هذا البحث مستخرج من نتائج المسح الميداني لدراسة إحتياجات المستشفيات الصديقة للطفل والذي تم تحت رعاية الإدارة العامة لرعاية الأمومة والطفولة بوزارة الصحة والسكان وبدعم من منظمة الأمم المتحدة للأطفال (اليونيسف) بالقاهرة.

### الملخص

المقدمة: تعد رفع معدلات الرضاعة الطبيعية من إحدى أولويات الصحة العامة وهي مدعومة بالأدلة العلمية القوية ، وقد أصدر وزير الصحة المصري قرار وزاري في عام 2014 بالزام المستشفيات بدعم توصيات منظمة الصحة العالمية ومنظمة اليونيسف لتطبيق الخطوات العشر لدعم وحماية الرضاعة الطبيعية الناجحة. الغرض من هذه الدراسة: هو تقييم وجود سياسة لتعزيز ودعم وحماية الرضاعة الطبيعية داخل المنشآت التي تقدم خدمات ولادة ورعاية مواليد مع القرارات الوزاريه على تطبيق الممارسات المتصلة بالخطوات العشر لمنظمة الصحة العالمية واليونيسف.

طرق البحث: تم إجراء تقييم للوضع الحالي و إحتياجات المستشفيات لتصبح ملائمة للطفل لإعدادهم للالتزام بموجب مرسوم وزاري ، وقد تم توجيه المستشفيات لأعداد السياسات وتدريب موظفي المستشفيات على هذه المبادرة. وشملت الدراسة عينة من مستشفيات الولادة وهما 30 مستشفى موزعين كالاتي : 7 في محافظة الإسكندرية ، 9 في محافظة القليوبية ، 4 في محافظة الغربية و 10 في محافظة سوهاج . و قد وجدنا 12 مستشفى كان لها سياسة مكتوبة و 18 مستشفى لم يكن بها سياسة مكتوبة . و قد قمنا بمقارنة الممارسات المتعلقة ببعض المعايير العالمية لكل من الخطوات العشر في جميع المستشفيات لفحص ما إذا كان وجود السياسة أدت الى تحسين الممارسات ام لا.

النتائج: على الرغم من أن مستوى الأداء في معظم المستشفيات المقاسة بمتوسط المعايير العالمية سواً كان للمستشفى سياسه أم لا ، كان أقل من المطلوب لحصولها على الإعتماد الدولي كمستشفى صديقة للطفل ، إلا أن المستشفيات التي كان لديها سياسة أظهرت نتائج أعلى في المعايير الصديقة للطفل المتعلقة ببدء الرضاعة الطبيعية مثل (احتضان الام للطفل في أول 5 دقائق من الولادة لممارسة الجلد للجلد حتى بدايه الرضاعة الأولى والرضاعة الطبيعية المطلقة و بعض وليس كل المعايير في وحدة حديثي الولادة. وقد سجلت الخطوة 7 " المساكنة " و الخطوة 8 " التغذية عند الطلب " ، و الخطوة 9 بمنع البيبرونات و اللهايات للرضع أعلى الدرجات في هذه المستشفيات وكانت النتائج متدنية في وحدات حديثي الولادة التي كانت تفصل الأطفال عن أمهاتهم وتعرضهم للتغذية بزجاجات الارضاع.

الاستنتاجات: الممارسات الصديقة للطفل يمكن أن تدعم من خلال وجود سياسة للمنشأة في هذا الصدد ، ولكنها أداة لتحفيز وتوجيه مقدمي الخدمة وتوعيتهم بالمعايير اللازمة لتطبيق الخطوات العشر ولكنها تحتاج الى آلية لرصد ومتابعة تنفيذها واستدامتها و أيضاً بتعزيز التدريب والتعليم على الممارسات التي يتم تحديثها باستمرار في هذا المجال المتغير.

## How Much Training Can Change Antenatal Care Practices in Counseling and Breastfeeding Promotion?

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### Abstract

**Introduction:** Education of pregnant women through antenatal care (ANC) is crucial for preparing women to the Ten steps of Baby friendly. However it requires intensive training which is unfortunately a costly intervention for programs and Ministries of health especially for developing countries.

**Aim:** To identify the needs for training of Maternal and Child Health (MCH) Staff who give ANC and study its impact on Baby friendly practices in all health facilities at primary and secondary level for continuum of care.

**Methods:** This is a sub-analysis of study of the multicenter Baby Friendly Needs Assessment survey BFHI-MAS) conducted by Mother Child Friendly Care Association in collaboration with the MCH department in the Ministry of Health (MoH) and funded by UNICEF in which 4 governorates were surveyed including 32 hospitals and 69 maternal and child health (MCH) centers. The MCH were grouped into 2 to 3 MCHs representing a district health office (DHO). The study included a total of 25 DHOs that were classified according to the level of training of their staff in breastfeeding support (for at least 20 hours). This included 9 DHOs with >50% of their trained (group I), 7 DHOs with 20-50 % staff trained (group II) and 9 DHOs with <20% staff trained in breastfeeding support (group III). The criteria for steps 2, 3, 5 and 6 of the Baby friendly were analyzed accordingly and the mean score attained by each DHO compared according to the assigned group.

**Results:** The adequacy of antenatal education was low in all groups of DHOs (mps=11.1, 14.2 and 11.1 in groups I, II and III respectively). The criteria of providing "ANC education in breastfeeding to 70% of women" was not met by all groups (mps 78.5, 42.4, 47.1 for groups I, II and III respectively). These women (or at least 70% of them) were able to recall information given to them mostly in groups I (mps= 86.1, 46.6, 50.2 for groups I, II and III respectively). Criteria for step 6 of "Mothers reported encouraged to exclusively breastfeed" was low in all groups (mps= 27.66, 34.5, and 9.1 for groups I, II and III respectively). Criteria of "The health staff did not prescribe substitutes except for acceptable medical reasons" was highest in group I (mps= 93.3, 84.2 and 77.9 for groups I, II and III respectively). Non clinical staff advise mothers of the importance of exclusive breastfeeding was high in all groups (mps= 85.9, 71.07, and 63.02% in groups I, II and III).

**Conclusions:** Training over 50% of staff in primary health units was coherent with improvement of health services provided to mothers for promoting and supporting breastfeeding. The efficacy of training is reflected in the adequacy of antenatal education and postnatal counseling and can be sustained by refresher trainings, monitoring and continuous evaluation.

## Introduction

In Egypt the findings of the recent EDHS survey in 2015 <sup>(1)</sup> have shown that exclusive breastfeeding rates are sadly declining, so that at 4-5 months of age 13.3% are being exclusively breastfed and only 20.4% of moms are breastfeeding for up to two years. Health worker's lack sufficient of knowledge of the importance of skillfully communicating updated breastfeeding practices. A survey sent to pediatricians, obstetricians, family practitioners and nurses in the United States of America showed a response rate of 50% to 75%. One-third of respondents reported that they did not initiate the discussion of breastfeeding with mothers. Over 80% of pediatricians and family practitioners recommended giving supplementary fluids to breastfed infants. Returning to work or resuming studies was regarded by all categories of professionals as a major reason for discontinuation of breastfeeding. <sup>(1)</sup> Similar results were reported by other workers. <sup>(2,3)</sup>

A review of eleven trials to evaluate the effectiveness of interventions which aim to encourage women to breastfeed, in terms of changes in the number of women who start to breastfeed, showed that health education and peer support interventions can result in some improvements in the number of women beginning to breastfeed. Findings from these studies suggested that larger increases are likely to result from needs-based, informal repeat educational sessions than more generic, formal antenatal sessions. <sup>(4)</sup>

According to the Baby Friendly Step 2 calls for training all staff in the skills necessary to implement the policy, while Step 3 calls for educating pregnant women of the benefits of breastfeeding

and the skills needed to successfully breastfeed. Several studies have shown that prenatal education plays an important role in early initiation of breastfeeding in Egypt <sup>(5)</sup> and other countries. <sup>(6)</sup> In addition it influences duration of exclusive breastfeeding in Egypt <sup>(7)</sup> and other countries. <sup>(8, 9)</sup> In India antenatal breastfeeding education influenced 70% of under-five mortality, hence prenatal care reinforced by breastfeeding health nutrition education is associated with significant reduction in child morbidity and mortality. <sup>(10)</sup>

Women who are unable to breastfeed do so because they are not adequately empowered and informed about breastfeeding, their lack of knowledge and feelings of adequacy make them a prey to the marketing tactics of infant milk formula companies. Exposure to prenatal counseling and education through direct contact or printed matter can make a difference in their decision and commitment to breastfeed, improve their media literacy capabilities and make them less vulnerable to misinformation. <sup>(10)</sup>

There is a considerable debate in the literature as to how much training is needed to make health workers competent in educating pregnant women about breastfeeding practices. Because the traditional medical education system is not based on patient education and use of communication skills with patients which for a long time was not part of the competencies they were assessed for as medical practitioners, hence many of the old system medical professionals, find difficulty in gaining competence in these skills. Furthermore, the extent of training in breastfeeding counseling that would enable a health worker to perform education is not clearly defined. Hence

the aim of this study is to assess how much of the training resulted in change in practice of staff in the prenatal education and in postnatal support of mothers after returning to the health units for follow-up.

## Subjects and Methods

This is a sub-analysis of the national study conducted in Egypt for assessing the needs of Baby friendly hospitals; "The Multicenter Baby Friendly Needs Assessment survey: BFHI-MAS) conducted by Mother Child Friendly Care (MCFC) and supported by the Maternal and Child Health department in the Ministry of Health (MCH-MoH) and funded by UNICEF in which 4 governorates were surveyed. The study covered a total of 25 district health offices (DHOs) including 69 maternal and child health (MCH) centers. Each district was represented by a cluster sample of 2 to 3 MCHs that were randomly selected from each DHO to represent the district. They included at least one main medical center with very high flow and 2 health centers peripherally based. Interviews were conducted with the 544 staff from the MCH and 443 pregnant women and 368 community health workers and support staff working with the MCH. The tools used were the structured interview forms of the UNICEF/WHO BFHI assessment adapted for local use and translated into Arabic before use. The data was compiled in the summary sheets of the same source, adapted and translated into the local language.

The investigators who conducted the interviews were trained in the use of the forms and represented either International Board Certified Consultants (IBCLCs) or university staff. The interviews were strictly confidential and none of the forms were circulated to the facilities or the health directorates.

The 25 DHOs were grouped according to the level of training of their staff in breastfeeding support (for at least 20 hours). This included 9 DHOs with >50% trained (group I), 7 DHOs with 20-50 % staff trained (group II) and 9 DHOs with <20% trained in breastfeeding support (group III). The criteria for steps 2, 3, 5 and 6 of the Baby friendly were analyzed accordingly and the mean score attained by each DHO compared according to the assigned group.

The global criteria of Step 2 assess the percent of staff trained and test the knowledge of the clinical staff in the UNICEF/WHO Ten steps and the code by their ability to answer at least 4 out of 5 questions

related to the benefits of these practices. The global criteria of Step 3 assess the presence of educational material used for pregnant women and mothers and the content of material given them and also to assess the knowledge of the pregnant women about the practices related to the Ten steps and mother friendly practices, as well as their ability to recall some of the information given out to them or received during their visit by the attending staff. Step 5 criteria assess the knowledge of the staff about the correct techniques of positioning baby at breast, attachment to breast and milk expression and the ability of the interviewed mothers to show these techniques. Step 6 assesses whether women were supported by clinical and non-clinical staff to exclusively breastfeed, also if they were not breastfeeding or prescribed supplements, it was based on acceptable medical reasons or informed choice, and that she was shown how to feed her baby safely.

The data were scored by mean percent distribution for each MCH and the collective scores for each governorates were added up to relevant groups in each governorate and then calculated into mean percent score (mps) for the group and compared between the three groups.

**Statistical analysis:** The collected data were represented and analyzed using SPSS V-16.- Qualitative data were described as number and percentage Quantitative data were described as mean  $\pm$  standard deviation. The median will be provided for non-normally distributed data. Kolmogorov-Smirnov test was used to test the normality of data distribution. Student-t test was used to assess the statistical significance between two population means with normal data distribution. Chi-square test was used to compare the qualitative data between independent group samples. Mann-Whitney U test was used for two independent groups of abnormal data distribution. Kruskal-Wallis test is used for comparison of more than two independent groups of abnormal data distribution. Levels of significance expressed as P value  $\geq 0.05$  was considered non-significant.

## Results

The results of the 69 maternal and child health centers in 25 DHOs of the four governorates of Alexandria, Qalubia, Gharbia and Sohag are shown in tables 1 to 6. They were analyzed according to the level of training of their staff in breastfeeding support (for at least 20 hours) as follows: 9 DHOs with >50% trained (group I), 7 DHOs with 20-50 % staff trained (group II) and 9 DHOs with <20% trained in breastfeeding support (group III).

The global criteria for steps 2, 3, 5 and 6 of the Baby friendly were analyzed accordingly and the mean score attained by each DHO compared according to the assigned group.

#### **Global BFHI Criteria for Step 2:**

Table (1) shows that facility heads reported their staff received training in the Baby friendly 20 hours course for promoting and supporting breastfeeding in 14.3% in groups I and II and 3.7% of group III. One quarter of those in group I had received adequate clinical training. Staff that reported receiving at least 20 hours of training in breastfeeding varied from, 59% in group I, 29% in group II and 1.4% in group III.

The total scores were lowest in Alexandria and highest in Sohag. Clinical staff able to answer 4 out of 5 questions in breastfeeding management ranged from a mean score of 71% in group I, 60% in group II and 22.7% in group III. Non clinical staff oriented to the policy of breastfeeding promotion ranged from 46% in group I to 28.4% in group II and 55.24% in group III.

#### **Global BFHI Criteria for Step 3:**

Table (2) and figure (1) illustrate differences between the DHOs in the three governorates of Qalubia, Alexandria and Sohag, regarding education received by pregnant women during their antenatal visits to the MCH in relation to percent trained staff by district health office in the three governorates.

Head of health facility reported providing education to 80% of pregnant women in 55.6% in group I, 52.4% of group II and 38.9% in group III. Written material is made available to teach mothers in 11.1% of group I, zero percent in group II and group III. This was statistically significant at  $P<0.05$  and  $P<0.01$  respectively between group I and II and between groups II and III, demonstrating an incremental increase with training.

Antenatal information was termed adequate when it covered the benefits of breastfeeding for both baby and mother; the mother friendly practices, the importance of early continued skin-to-skin contact at birth with early initiation of breastfeeding followed by rooming-in/bedding-in 24 hours a day, on-demand or baby-led feeding, how to breastfeed with good positioning and attachment, and how to assure enough milk;. Also to give the mother handouts about the importance of exclusive breastfeeding for the first 6 months, to continue to breastfeed for two years. The criteria of Step 3 for

“information to mothers was adequate” was very low (mps = 11.1 in group I, 14.2 in group II and 11.1 in group III). There was no statistically significant difference between the three groups at  $P>0.05$ .

The criteria that “at least 70% of women reported being offered ANC education in breastfeeding” was highest in group I (mps = 78.5 of group I, 42.4 of group II and 47.1 of group III). These women (or at least 70% of them) were able to recall information given to them (mps=86.1 of group I, 46.6 of group II and 50.2 of group III). In both items group I showed statistically significant higher score at  $P<0.01$  and  $P<0.05$  respectively. Also group II showed a statistically significant higher score than group III at  $P<0.01$  and  $P<0.05$  respectively, demonstrating an incremental increase in education with training as shown in table (2) and figure (1).

#### **Global BFHI Criteria for Step 5:**

Table (3) and figure (2) show a comparison between the three groups with regards to breastfeeding techniques. The mean percent score of the staff that report that they teach positioning and attachment to mothers was highest in group I (mps = 92.2 in group I, 72.14 in group II, 65.02 in group III). In both items group I showed statistically significant higher score at  $P<0.01$  and  $P<0.05$  respectively. Also group II showed a statistically significant higher score than group III at  $P<0.05$  and  $P<0.05$  respectively, demonstrating an incremental increase in education with training as shown in table (3) and figure (2).

The mean percent score of the staff reported that they teach mothers hand expression was highest in group I (mps = 85.6 in group I, 65.04 in group II, 55.4 in group III). The mean percent score for the staff who reported they teach mothers how to give a safe substitute was highest in group I (mps = 92.9 in group I, 80.2 in group II, 65.5 in group III). In both items group I showed statistically significant higher score than both other groups at  $P<0.05$  and  $P<0.05$  respectively. Also group II showed a statistically significant higher score than group III at  $P<0.05$  and  $P<0.05$  respectively, demonstrating an incremental increase in skill teaching with training as shown in table (3) and figure (2).

#### **Global BFHI Criteria for Step 6:**

Table (4) and figure (3) compare the mean score for criteria of Step (6) related to supporting mothers to exclusively breastfeed during their

visits to the MCH by percent trained staff by district health office in the three governorates. If babies are prescribed any substitute it is based on acceptable medical reasons or informed choices for receiving something else. This was low in all groups. The mean percent score was 11.1 for group I, 14.2 for group II and 33.3 for group III. Group I showed statistically significant higher scores with group III at  $P < 0.05$ . Also group II showed a statistically significant higher score than group III at  $P < 0.05$ , demonstrating some incremental increase in knowledge with training as shown in table (4) and figure (3).

Mothers deciding not to breastfeed, who reported that clinical staff who discussed with them the various feeding options, were able to describe what was discussed to help them to feed their baby in their situations. The mean score was low in all groups and received a mean score of 22.5 in group I, 22.2 in group II and 18.9 in group III. There was no difference between the groups ( $P > 0.05$ ). Since this was intended for HIV communities it was not realistic to include in the interview. However it was expected to address feeding of expressed breastmilk for preterms and use of cup feeding for those unable to feed at the bottle. The low score indicate that these practices were not implemented.

The mean score of the criteria for mothers who were breastfeeding that stated that: "the following reported that they were encouraged to exclusively breastfeed" was low in all groups (mps= 27.66 in group I, 34.5 in group II and 9.1 in group III). Group I showed statistically significant higher score than group II and III at  $P < 0.05$  and  $P < 0.05$  respectively. Also group II showed a statistically significant higher score than group III at  $P < 0.05$ , demonstrating an incremental increase in education about exclusive breastfeeding with training as shown in table (4) and figure (3).

The mean score of the criteria that stated that "health staff did not prescribe substitutes except for acceptable medical reasons" was highest in group I (mps= 93.3 among group I, 84.2 for group II and 77.9 for group III). The mean score of the criteria for non-clinical staff that stated that they: "advise mothers of the importance of exclusive breastfeeding" was highest also in group I (mps= 85.9 in group I, 71.07 in group II and 63.02 in group III). For both items group I showed statistically significant higher score than group II and III at  $P < 0.05$  and  $P < 0.05$  respectively. Also for both items, group II showed a statistically significant higher score than group III at  $P < 0.05$ ,

demonstrating an incremental increase in support of exclusive breastfeeding with training as shown in table (4) and figure (3).

## Discussion

This study shows the incremental effect of training of primary health unit staff in a district on the significant improvement in most but not all of the practices depending on the quality and methodology of training used. Unfortunately, in most situations, the traditional didactic take the upper hand over the practical training of staff. Training in counseling skills is the most difficult to achieve. Staff are usually overwhelmed with their clinical responsibilities, and have little time and patience to give, in order to counsel mothers. In Egypt professional counselors are not appointed nor does the educational system supply them, as there is no such degree program that qualifies such professionals, nor is it recognized by the Ministry of health as a post. It is expected that village leaders and social workers take up this duty. However their education and training does not qualify them as counselors. Moreover even our education system for health professionals is inadequate as there is no accreditation system for relicensure through CME hours of training. The conferences for health professionals are pharmaceutically driven and directed mostly to the most popular clinicians that can profit the pharmaceutical company sponsoring the training with no consideration to support the education of primary health staff.

The maternal and child health (MCH) centers play an important role in preparing the pregnant woman through education in breastfeeding during the antenatal care (ANC) visits and this profoundly impacts postpartum practices and thereby the health of children. One

study showed that the Baby Friendly Hospital Initiative (BFHI) was shown to be effective in promoting certain health outcomes in infants from Belarus. Pregnancy is an ideal time to encourage healthy lifestyles as most women access health services and are more receptive to health messages; however few effective interventions exist. Indirect evidence suggests that interventions with a component of lay support (e.g. peer support or peer counseling) are more effective than interventions with structured education or professional support in increasing both short- and long-term breastfeeding rates, compared to the usual care. Prenatal combined with postnatal interventions are more effective than usual care in prolonging the duration of breastfeeding. <sup>(11)</sup>

In a community based study in Egypt with inclusion of 1000 eligible women with babies under 2 years bivariate analysis showed that factors favoring exclusive breastfeeding were age of the mother (<25 years), with secondary or higher education, number of children, with no history of complicated pregnancy or lactation problems, received health education about Breastfeeding and having knowledge about Breastfeeding. Logistic regression model showed that the most influential significant predictor for exclusive Breastfeeding was receiving health education about breastfeeding and adequate knowledge about breastfeeding. Although all rural Egyptian mothers included, initiated Breastfeeding, the rate of its exclusivity was low. They concluded that comprehensive education about Breastfeeding during pregnancy is strongly needed to promote Breastfeeding among these women. <sup>(7)</sup>

Another study in Egypt showed that the commonest cause for prelacteal feeds

(PLF) given to babies in hospitals was lack of prenatal education. About 58% of newborns received prelacteal feeds. The commonest PLF was sugar/glucose water (39.6%). The most frequent reasons for giving PLF are tradition (61.0%) and mother's/mother in law's advice (58.3%). The logistic regression revealed that the independent predictors of PLF are urban residence; maternal education; father's education; low, middle, and high social class; maternal obesity; receiving antenatal care at private clinics and no antenatal care; Caesarean section; female babies; low birth weight; and admission to neonatal intensive care. They concluded that indiscriminate use of PLF should be discouraged with a focus on medical education and in antenatal maternal health education. <sup>(5)</sup>

Training of health staff in innovative ways of counseling pregnant women and mothers is important. A study was conducted to determine the effect of breastfeeding education based on the health belief model (HBM) toward primiparous women. The study showed that in the fourth month, the mean of child weight in the experimental group was significantly higher than that of the control group ( $P=0.001$ ) and exclusive breastfeeding was significantly higher than in the control group ( $P=0.007$ ). Prenatal education in this study which was based on HBM was successful, and knowledge, attitude, self-efficacy, and related indicators improved. The necessity of producing standard education packages for education of pregnant mothers, especially in their first pregnancy, by health professionals is perceived as an important strategy to improve the health behavior of these future mothers. <sup>(12)</sup>



A systemic review <sup>(13)</sup> included 17 studies with 7131 women in the review and 14 studies involving 6932 women contributed data to the analyses. Five studies compared a single method of breastfeeding education with routine care. Peer counselling significantly increased breastfeeding initiation. Three studies compared one form of breastfeeding education versus another. No intervention was significantly more effective than another intervention in increasing initiation or duration of breastfeeding. Seven studies compared multiple methods versus a single method of breastfeeding education. Combined breastfeeding educational interventions were not significantly better than a single intervention in initiating or increasing Breastfeeding duration. However, in one trial combined breastfeeding education significantly reduced nipple pain and trauma. One study compared different combinations of interventions. There was a marginally significant increase in exclusive breastfeeding at six months in women receiving a booklet plus video plus lactation consultation compared with the booklet plus video only. Two studies compared multiple methods of breastfeeding education versus routine care. The combination of breastfeeding booklet plus video plus lactation consultant was significantly better than routine care for exclusive breastfeeding at three months. <sup>(14)</sup>

Expanding beyond the mother to the family members especially the husband has been shown to be beneficial in changing mothers' practices towards exclusive breastfeeding. Several studies have shown the impact of including the father in antenatal counseling and in classes directed to the pregnant woman. <sup>(15, 16)</sup> Very few Australian infants are

exclusively breastfed to 6 months as recommended by the World Health Organization. There is strong empirical evidence that fathers have a major impact on their partner's decision to breastfeed and on the continuation of breastfeeding. An expanded study is being designed for the purpose in Australia to evaluate the effect father support on mothers' practice in breastfeeding using cost-effectiveness evaluation of the interventions. <sup>(17)</sup>

One study in China identified sub-groups of pregnant women at risk for not breastfeeding. Such subgroups included lower maternal education and those who had a cesarean section were significantly less likely to breastfeed. Also, paternal smoking and having a pregnancy-related health problem were less likely to breastfeed. <sup>(18)</sup> Another study showed that appropriate breastfeeding education sessions need to be tailor-made for prenatal stage to improve exclusive breastfeeding intention and practice in rural Odisha in India. <sup>(8)</sup>

A study was conducted to determine whether women who are liable to discontinue breastfeeding could be identified at hospital discharge, to enable targeted interventions. Factors that were significantly associated with early cessation of breastfeeding were maternal factors of lower education (less than 12 years of schooling, no completion of further education), smoking (pre-pregnancy or during pregnancy), and newborn factors of preterm birth and low birthweight (all  $p < 0.01$ ). These variables correctly identify 83% of women. They concluded that they could identify women who initiate and then prematurely discontinue breastfeeding prior to hospital discharge. There is a need to evaluate additional interventions that support longer duration of breastfeeding

in women at risk of early discontinuation of breastfeeding.<sup>(9)</sup>

Prenatal education influences early breastfeeding initiation rates. A systemic review found that initiation of breastfeeding in the first hour of life ranged from 11.4%, in a province of Saudi Arabia, to 83.3% in Sri Lanka. Cesarean delivery was the most consistent risk factor for non-breastfeeding within the first hour of life. "Low family income", "maternal age less than 25 years", "low maternal education", "no prenatal visit", "home delivery", "no prenatal guidance on breastfeeding" and "preterm birth" were all reported as risk factors in at least two studies.<sup>(6)</sup>

In Nigeria, early initiation of breastfeeding was associated with higher maternal education, frequent antenatal care (ANC) visits but deliveries at a health facility with caesarean section was associated with delayed initiation of breastfeeding. Educated mothers, older mothers and mothers from wealthier households exclusively breast fed their babies. The risk for bottle feeding was higher among educated mothers and fathers, and women from wealthier households including mothers who made frequent ANC visits. They concluded that to improve the early breastfeeding health facility practices, breastfeeding initiatives should target all mothers -particularly low socioeconomic mothers – and ensure improved access to ANC and maternal health services, make hospitals baby friendly hospital and encourage community initiatives for mothers.<sup>(19)</sup>

In a study in India it was shown that breastfeeding reduces child mortality by 70%. While improving the standard of living reduces child mortality by 32%. Also prenatal care and breastfeeding health nutrition education are associated

significant factors for child mortality. Their findings concluded that under-five mortality can be reduced when training and education programs that target women from pregnancy are intensified.<sup>(10)</sup>

A trained pediatrician plays a relevant role on increasing breastfeeding rates and its duration. A study was conducted to provide health professionals with information on theory and practice of breastfeeding counseling. To improve their performance, in 1993, WHO designed a 40-hour course using an important didactic strategy aimed at health professionals and mothers. The goal was to protect, promote and support maternal nursing by increasing her confidence and self-esteem. Scientific evidence proves the effectiveness of Breastfeeding Counseling. Moreover, health professional's knowledge and practice influence breastfeeding outcomes and are very important to increase breastfeeding rates.<sup>(20, 21, 22, 23, 24)</sup>

Focusing on residency programs and integrating breastfeeding management into these programs for pediatricians and obstetricians as well as family physicians is recommended.<sup>(7, 25, 26)</sup>

However many of these physicians are targeted by infant milk formula company representatives who impose their products and gain their trust and sympathy and thereby use them to promote their products through prescriptions, posted material, free samples, sponsoring their events or supplying equipment to their clinics and thus violating the international code of marketing of breastmilk substitutes.<sup>(27, 28)</sup>

The most harmful and detrimental practice is the distribution of free and low cost formula through health facilities which is strongly prohibited by the BFHI especially for breastfeeding mothers who

have no medical indication but need to be counselled and supported in breastfeeding.<sup>(29)</sup>

In our study community health workers were shown to significantly improve exclusive breastfeeding. Other workers have demonstrated how these groups can influence breastfeeding initiation with reductions in antenatal hospitalization, episiotomy, instrumental delivery and hospital stay. Training of traditional birth attendants as a part of community based intervention package has significant impact on referrals, early Breastfeeding, maternal morbidity, neonatal mortality, and perinatal mortality.<sup>(30)</sup> Formation of community based support groups decreased maternal morbidity, neonatal mortality, perinatal mortality with improved referrals and early breast feeding rates. At community level, home visitation, community mobilization and training of community health workers and traditional birth attendants have the maximum potential to improve a range of maternal and newborn health outcomes.<sup>(30)</sup>

In Egypt, the EDHS reports that breastfeeding practices are not optimal; as 6 in 10 children were reported to have received a PLF after birth and around 3 in 10 children less than 6 months are being bottle fed. As a result one third of children under-five are stunted as reported by the EDHS survey in 2008 and currently one in five children under five are stunted and wasting is on the rise

from 7 to 8 percent.<sup>(1)</sup> However, the EDHS survey shows that 82.8 percent have had at least four antenatal care visits to the maternal and child health centers (MCH) and 81.5 percent have had a postnatal visit within the first week of birth. The rates are lowest in mid Upper Egypt governorates and Frontier governorates and highest in the urban and Lower Egypt governorates.<sup>(1)</sup> These findings present an opportunity for primary health care educational interventions that can improve the exclusive and continuation Breastfeeding rates.

We recommend the use of innovative media and communication methodologies in ANC education in Breastfeeding focusing on the benefits, practices and means of supporting women to have a normal delivery and be able to do early skin-to-skin. Also to develop means for continued training of health professionals in intrapartum mother-friendly and postpartum baby-friendly practices that enhance establishment of lactation in order to prevent neonatal problems and improve maternal health outcomes. This could be accomplished by transforming our health facilities into learning institutions for health professionals as well as for mothers as a pre-requisite for providing optimum health care services to the community.

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**Table (1) Distribution of training by percent staff trained in the three governorates in relation to their knowledge and practice**

	GRP I (>50% staff trained)					GRP II (20-50% staff trained)					GRP III (<20% staff trained)				
Scored Criteria in percent	SG (5)	Qal (3)	Alx (2)	T (9)	Mn	SG (3)	Qal (3)	Alx (1)	T (7)	Mn	Qal (1)	SG (2)	Alx (6)	T (9)	Mn
MCH reports Training in UNICEF20 hrs BFHI course	100	33	0	133	14.78	0	0	100	100	14.3	0	0	33	33	3.7
Receive 4 hrs of clinical Training	200	33	0	233	25.89	100	0	0	100	14.3	0	0	0	0	0
Staff confirm being trained	317.3	213.3	0	530.6	58.9	120	81.7	0	201.7	28.8	12.5	0	0	12.5	1.4
Staff answer 4/5 Q	262.3	216.7	157.8	636.8	70.8	220	166.7	33.3	420	60	98.8	83	22.59	204.39	22.7
Support Staff orientated to policy	149.8	74.9	190	414.7	46.08	38.8	70	90	198.8	28.4	115	100	282.13	497.13	55.24

**Table (2) Comparison of the mean score for criteria of Step (3) related to education received by pregnant women during their antenatal visits to the MCH in relation to percent trained staff by district health office in the three governorates:**

Criteria for step 2	GROUP I (>50% staff trained)		GROUP II (20-50% staff trained)		GROUP III (<20% staff trained)		P-value (ANOVA)
	Total score (9)	% Mean score	Total score (7)	% Mean score	Total score (9)	% Mean score	
Facility provides education to 80% of pregnant women	500	55.56	367	52.4	350	38.89	G1-G3<0.05 G2-G3<0.05
Written material is available to teach mothers from	100	11.1	0	0	0	0	G1-G2<0.01 G1-G3<0.01
Antenatal information is adequate*	100	11.1	100	14.2	100	11.1	>0.05
At least 70% of women report being offered ANC education in breastfeeding	706.7	78.5	296.6	42.4	424.1	47.1	G1-G2<0.01 G1-G3<0.01
At least 70% of women can recall information given to them	775	86.1	326.3	46.6	452.06	50.2	G1-G3<0.05 G2-G3<0.05

\*The importance of breastfeeding for both baby and mother; the importance of skin-to-skin contact after birth; the importance of early initiation of breastfeeding; the importance of rooming-in/bedding-in 24 hours a day; the importance of feeding on demand or baby-led feeding; the importance of feeding frequently to help assure enough milk; the importance of good positioning and attachment when breastfeeding; the importance of exclusive breastfeeding for the first 6 months, giving no other liquids or foods.

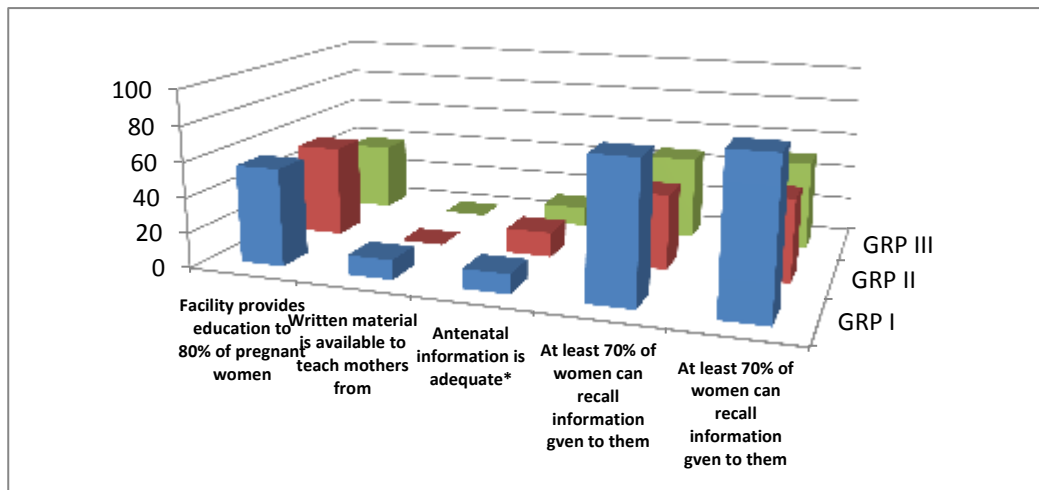
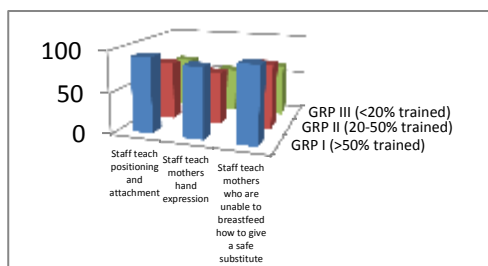


Figure (1) Comparison of the mean score for criteria of Step (3) related to education received by pregnant women during their antenatal visits to the MCH in relation to percent trained staff by district health office in the three governorates:

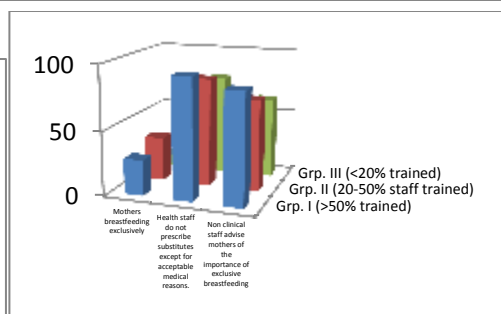
Table (3): Comparison of the mean score for criteria for guidance in breastfeeding techniques by MCH staff according to percent trained in the district health office of the three governorates surveyed

Criteria of Step 5	GROUP I (>50% staff trained)		GROUP II (20- <50% staff trained)		GROUP III (<20% staff trained)		P-value (ANOVA)
	T (9)	mps	T (7)	mps	T (9)	mps	
Staff teach positioning and attachment	829.75	92.2	505	72.14	585.2	65.02	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05
Staff teach mothers hand expression	770.1	85.6	455.3	65.04	498.85	55.4	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05
Staff teach mothers who are unable to breastfeed how to give a safe substitute	836	92.9	561.7	80.2	589.4	65.5	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05

\*mps: mean percent score



**Figure (1)** Comparison of the mean score for guidance in breastfeeding techniques received by breastfeeding mothers during their visits to the MCH in relation to percent trained staff by district health office in the three governorates.



**Figure (2)** Comparison of the mean score for criteria of Step (6) related to supporting mothers to exclusively breastfeed during their visits to the MCH by percent trained staff by district health office in the three governorates.

**Table (4):** Comparison of the mean score for criteria of Step (6) related to supporting mothers to exclusively breastfeed during their visits to the MCH by percent trained staff by district health office in the three governorates

	GROUP I (>50% staff trained)		GROUP II (20- <50% staff trained)		GROUP III (<20% staff trained)		P-value (ANOVA)
	T (9)	mps	T (7)	mps	T (9)	mps	
Criteria of Step 6							
If babies are prescribed any substitute it is based on acceptable medical reasons or informed choices for receiving something else.	100	11.1	100	14.2	300	33.3	G2-G3<0.05 G1-G3<0.05
If mothers have decided not to breastfeed, that the staff have discussed with them the various feeding options and were able to describe at least one thing that was discussed to help them decide what was suitable in their situations or said they didn't want the information.	203	22.5	155.5	22.2	170.08	18.9	>0.05
Mothers who were breastfeeding: the following reported that they were encouraged to exclusively breastfeed	248.9	27.66	241.4	34.5	82.5	9.1	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05
Health staff do not prescribe substitutes except for acceptable medical reasons.	840	93.3	589.7	84.2	701.3	77.9	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05
Non clinical staff advise mothers of the importance of exclusive breastfeeding	773.8	85.9	497.5	71.07	567.2	63.02	G1-G2<0.05 G2-G3<0.05 G1-G3<0.05

\*mps: mean percent score

## كم التدريب المطلوب في وحدات رعاية الحوامل الذي يؤدي الى رفع معايير التوعية في برامج تشجيع الرضاعة الطبيعية

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^جمعية أصدقاء رعاية الأم والطفل بالأسكندرية – المنسق الإقليمي للأسكندرية

هذا البحث مستخرج من نتائج المسح الميداني لدراسة إحتياجات المستشفيات الصديقة للطفل والذي تم تحت رعاية الإدارة العامة لرعاية الأمومة والطفولة بوزارة الصحة والسكان وبدعم من مكتب منظمة الأمم المتحدة للأطفال (اليونيسف) بالقاهرة.

### المخلص

**مقدمة:** يعد التدريب من المدخلات المؤثرة في تغيير الممارسات الصديقة للطفل ولكنها تكلف الدولة الكثير وتمثل عبء خاصة بالنسبة للبلدان النامية والتي تواجه تحديات في الصحة.

**الهدف:** تحديد كم التدريب المطلوب لمقدمي الخدمة العاملين بخدمات الرعاية للوصول الى المعايير الدولية لمبادرة المنشآت الصديقة للطفل لتحسين خدمات التوعية للحامل والمرضع في الممارسات الناجحة في الرضاعة الطبيعية.

**طرق البحث:** قد تم إجراء في 4 المحافظات بما في ذلك 32 من الإدارات الصحية بما في ذلك الممارسات في القطاع الخاصة وقد تم تصنيفها وفقا لمستوى تدريب موظفيها في دعم الرضاعة الطبيعية (لمدة 20 ساعة على الأقل) الى ثلاث مجموعات : المجموعة الأولى والتي تعرضت لتدريب أكثر من 50% من العاملين الصحيين داخل منشأتها الصحية والمجموعة الثانية والتي كان نسبة التدريب بها من 20 الى 50% و المجموعة الثالثة كانت أقل من 20% وقد تم مقارنة الأداء في المجموعات الثلاثة وفقاً للمعايير الدولية للخطوات العشر لبرنامج مبادرة المستشفيات الصديقة للطفل.

**النتائج:** التدريب < 50% من الموظفين في وحدات الرعاية الصحية الأولية حققت نتائج أعلى في تحسين الممارسات التوعية والتعليم للأمهات بالمقارنة للتدريب في المجموعات الأخرى لأقل من 50% ، وكان ذلك واضحاً مع المعايير الخاصة بالتوعية أثناء الحمل وتعليم الأم طريقة الرضاعة وتعصير الثدي ودعم الرضاعة المطلقة وعدم وصف إضافات أو ألبان صناعية للطفل وأظهرت الدراسة علاقة طردية مع التدريب وتحسن الأداء في المعايير الدولية للمبادرة فكلما زادت نسبة التدريب إرتقت الخدمة والدعم للأمهات ، ومع ذلك فإن خدمات توعية الحامل ما قبل الولادة كانت متدنية.

**الاستنتاجات:** ترجح الدراسة التحليلية أهمية التدريب وبالأخص للعاملين في خدمات الحوامل وتوصي الدراسة بضرورة تطوير تقنيات التدريب والتركيز على التدريب العملي وبالأخص في مهارات التوعية والمشورة مع عقد تدريبات لاحقة وإدخال نظم الرصد والتقييم المستمر للأداء لإكتشاف الفجوات في الأداء والتركيز عليها من أجل رفع مستوى أداء العاملين والوصول الى دعم الرضاعة الطبيعية المطلقة لمدة 6 أشهر ومواصلة الرضاعة الطبيعية لمدة عامين لدعم صحة الطفل وخفض نسب التقزم والأمراض المعدية وغير المعدية المستقبلية.



## Use of Labour and Delivery Criteria as Performance Indicators for Monitoring Baby Friendly Status

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### Abstract

**Introduction:** Baby Friendly global criteria for step 4 calls for early initiation of breastfeeding through skin-to-skin contact (SSC) which is vital for the health and survival of infants as well as successful breastfeeding. It is preceded by giving the baby to the mother to hold for a few minutes.

**Objective:** The purpose of this study is to examine how the practice of giving the baby to hold immediately after birth which precedes SSC can influence other practices related to the Ten steps for achieving successful breastfeeding.

**Methods:** A survey for the assessment of the current status and needs of districts for becoming Baby Friendly (BFH) was conducted in a sample of 102 health facilities providing maternity and neonatal services in 32 health districts of 4 governorates in Egypt including 652 staff and 469 mothers with full-term babies and 206 with preterm babies (<6 weeks of age). The sample was subdivided according to their compliance with the process of giving the baby to the mother to hold immediately after birth, as a sub-criterion of step 4 of the Ten steps of UNICEF/WHO Baby friendly Global criteria. The groups of the sub-analysis included: group I whose mean percent score (mps) for giving the baby to the mother immediately after birth was >70%; for the second group of districts, group II included those districts with mps of 50-70%; the third group included those with mps of <50%. The groups were compared with regards to training and antepartum mother friendly practices as well as postnatal Baby Friendly practices.

**Results:** Scores for mother friendly were higher for group I districts in all the practices. No SSC was reported with Cesarean sections (CS) when with general anesthesia, only with spinal when staff were trained. SSC was practiced in one third of the mothers in groups I and II compared to 12.9% in group III. Scores in training was lowest in group III. Assisting mothers in latch-on was high in all districts but low for teaching milk expression and assisting in a breastfeed within 6 hours, in group III districts. Mothers in groups I showed the highest score for correct attachment (mps= 61.2 and 70.1 for groups I and II) compared to 43.7 in group III. Babies in the neonatal units reported being informed of the importance of exclusive breastfeeding in 36.8% in group I, 10.6% in group II and 31% in group III (P<0.001). Mothers in postpartum wards reported babies were only fed breastmilk in 72.4% of group I, 47.4% in

group II and 69.7% in group III ( $P < 0.05$ ). More mothers in group I and II reported being encouraged to stay with their babies in the neonatal units (68% and 55.8% in group I and II compared to 34.3% in group III) at  $P < 0.05$ . Rooming-in was highest in group I practices. There were no differences in on-demand feeding between groups. Prohibition of use of bottles and pacifiers was highest in group I (80.4% and 93.1% in group I compared to 66.8% and 73.4% in group II and 74.2% and 30% for group III).

**Conclusions:** Criteria of Step 4 can be used as a strong indicator of Baby Friendly practices and effectiveness of training. The greatest challenge remains in the extended SSC and staff counseling abilities in supporting and guiding mothers in the first breastfeeds. It is recommended to increase and reinforce follow-up training in SSC and use it as indicator for BFHI status during monitoring.

## Introduction

Healthy newborn infants are often separated from their mothers after delivery and may not be put to the breast for hours, or sometimes for days, waiting for breastmilk to 'come in'. This can happen with both hospital and home deliveries, in traditional and modern settings. The practice of early separation is potentially harmful for both breastfeeding and for the development of the mother infant relationship often referred to as 'bonding' <sup>(1, 2)</sup>. Hence, the Baby Friendly Hospital Initiative (BFHI) has emerged from the joint statement of UNICEF and the World Health Organization on the role of successful maternity facilities on successful initiation of breastfeeding. Based on the latter the BFHI was announced which entailed the implementation of the Ten steps that would ensure that breastfeeding would take off in the right direction <sup>(3)</sup>.

Early skin-to-skin contact (SSC) and the opportunity to suckle within the first hour after birth are equally important and complementary to one another. Some contact cannot be avoided when attempting a breastfeed but contact itself does is a process to initiate suckling. Differentiation between the effects of SSC and suckling are so closely interrelated that many studies have ignored them previously <sup>(4)</sup>. In Egypt a study <sup>(5)</sup> showed that early initiation

resulted in reduced postpartum hemorrhage by increasing postpartum uterine activity and thereby reducing the risk of postpartum hemorrhage. However SSC can also increase axillary and skin temperatures, blood glucose levels at 90 minutes, stabilize base-excess, and babies cry less than babies kept next to their mothers in a cot <sup>(6, 7, 8, 9)</sup>. Accordingly the American Academy of Pediatrics (AAP) has endorsed the Ten steps including the updated version of the BFHI in which Step 4 has been revised in its interpretation as such that; the first breastfeed must initiate through SSC until the first suckle for at least one hour. The AAP based on the UNICEF/WHO recommendation urges all neonatologists and pediatricians to adhere by these practices <sup>(10)</sup>.

Each of the Ten steps of the BFHI is essential for the establishment of lactation and put together they complement and reinforce one another. However this relationship between each step to the other and how much weight should be given to each step to ensure that breastfeeding would be successful is not clearly established. Although the global criteria and assessment procedures of BFHI does place scores (in percent) in the BFHI assessment to each criteria <sup>(11)</sup>, however this is based on expected quality of service provided not evidence as to how much this criteria influences the

success of breastfeeding. The aim of this study is to establish a causal relationship that would give a better understanding of how an individual sub-criterion as “giving the baby to the mother to hold immediately after birth” which is derived from step 4 of the Ten steps of BFHI can contribute to criteria in the other steps that are also important for ensuring a successful start in breastfeeding.

## Methods

A survey for BFHI status and needs was conducted in 102 health facilities (representing different sectors i.e. private and public) providing maternity and neonatal services to mothers and babies around birth, representing 32 health districts in four governorates: Alexandria, Qalubiya, Gharbia in Lower Egypt and Sohag in Upper Egypt. Interviews were conducted with 652 health staff working in the delivery and neonatal service outlets in these health districts and 469 recently delivered mothers with full-term babies and 206 mothers with preterm babies (all below 6 weeks of age).

The districts where delivery took place were divided according to how soon the baby was given to the mother to hold. The regional districts were divided into three groups according to whether staff in labour ward gave the baby to the mother within the first 5 minutes of birth. The 3 groups were divided as follows: Group I whose mean percent score (mps) for giving the baby to the mother immediately after birth was >70%; for the second group of districts Group II included those districts with mps of 50-70%; the third group included those with mps of <50%. The three groups were analyzed in relation to intrapartum practices including first hour skin to skin in those mothers whose delivery was normal and those who underwent cesarean delivery with spinal anesthesia or general anesthesia. Also whether the neonatal care department encouraged preterm babies to hold STS as soon as the baby's condition allowed.

**Statistical analysis:** The collected data were represented and analyzed using SPSS V-16.- Qualitative data were described as number and percentage Quantitative data were described as mean  $\pm$  standard deviation. The median will be provided for non-normally distributed data. Kolmogorov-Smirnov test was used to test the normality of data distribution. Student-t test was used to assess the statistical significance between

two population means with normal data distribution. Chi-square test was used to compare the qualitative data between independent group samples. Mann-Whitney U test was used for two independent groups of abnormal data distribution. Kruskal-Wallis test is used for comparison of more than two independent groups of abnormal data distribution. Levels of significance expressed as P value  $\geq 0.05$  was considered non-significant.

## Results

Group I included 8 districts (27%) ; group II had a mps (50-70%) of receiving their babies immediately after birth and included 11 districts (37%); group III had a mps (<50%) of receiving their babies immediately after birth and included 10 districts (34%). The mps was calculated as the collective score for each hospital added up for all the governorates and divided by the number of districts for the total of 8 districts for group I and 11 districts for group II and 10 districts for group III with all four governorates represented in each group.

The groups were compared with regards to antepartum Mother Friendly (table 1) as well as postnatal Baby Friendly practices (tables 2, 4,,5,6,7 and 8) as well extent of exposure to training (table 3).

**Table (1) shows** the distribution of scores (mps) in each group in relation to mother friendly practices. The scores were significantly higher for group I compared to group II and III regarding staff knowledge of practices that should not be performed routinely and labour and birthing practices that support breastfeeding start well and practices that should be avoided ( $P < 0.05$ ) in an incremental manner, i.e. between group I and II and group II and III. But there were no statistical difference between the groups in the antepartum practices that assist mothers to be control of their birth and have a normal vaginal delivery ( $P > 0.05$ ).

**Table (2) compares** the practice of skin to skin in all three groups. Group I showed a significantly higher score for being given their baby immediately after birth whether in deliveries with or without anesthesia. The practice of placing baby SSC with the mother was deficient in all groups (mps=29.7 and mps=29.01 for groups I and II respectively and much lower in group III (mps=12.9) in deliveries when mother was awake and completely absent in all groups of districts among mothers who had received general anesthesia at  $P < 0.001$ . The practice of assisting mothers with babies in neonatal units to initiate the first breastfeed through SSC was also very low in group I and II (mps=16.4 and mps=15.5

respectively) with no statistical difference ( $P>0.05$ ) but they were still higher than group III (mps=6.0) at  $P<0.01$  for both groups with group III.

**Table (3) demonstrates** that the score for training was significantly higher in group (I) mps=44.5 compared to groups II and between II and III (mps=22 and mps=17.1 respectively) at  $P<0.05$ . The knowledge of staff in all three groups was low, ranging from mps=57.3 in group I; mps= 43.5 in group II and mps=34.7 in group III, but there was a significant association between the incremental effect of the practice of giving the baby to the mother immediately after birth, with staff training for clinical staff but not for non-clinical staff ( $P<0.05$  and  $P>0.05$  respectively).

**Table (4) demonstrates** that the groups I and II differed from group III regarding the staff teaching of breastfeeding skills to mothers including latch-on (mps=75 and mps=73 for groups I and II respectively) compared to 70.9% for group III at  $P>0.05$  but was significant for the skills related to hand expression (69.25% and 63.5% compared to 46.1% at  $P<0.05$ ). Staff were likely to give help with breastfeeding with 6 hours of birth in groups I and II (mps=40.1 and mps=57.4 resp.) than in group III (mps=26.2) at  $P<0.05$ . More mothers in groups I and II demonstrated correct attachment (61.2% and 70.1% resp.) compared to group III (mps=43.7) at  $P<0.05$  and milk expression (40.4% and 32.7% for groups I and II) compared to group III (mps=22.8) at  $P<0.05$ .

**Table (5) illustrates** that when babies were prescribed any substitute it was more likely to be based on acceptable medical reasons or informed choices in all districts in group I and III ( $P<0.05$ ) but less so in group II (mps=50.1) ( $P>0.05$ ). In group I (mps=47.5) if mothers have decided not to breastfeed, that the staff have discussed with them the various feeding options ( $P<0.001$ ). Breastfeeding mothers in group I reported that their babies were only given breastmilk in groups I more than in group II at  $P<0.05$  but not for group III ( $P>0.05$ ). Also mothers of babies in neonatal care units were informed of the importance of expressed breastmilk only in 36.8% of group I, 10.6% in group II and 31% in group III at  $P<0.001$  between the groups i.e. showing an incremental relationship. Non-clinical health workers were more likely to promote exclusive breastfeeding in all groups of districts with no difference between groups I and II at  $P<0.05$  but with a difference with group III at  $P<0.05$  as shown in table (5).

**Table (6) demonstrates** the relationship between rooming-in in maternity and neonatal wards and

practice of timeliness of first mother baby contact. Observations in the post-partum wards babies and mothers are rooming-in were 48.1%, 41.4% and 55% in groups I, II and III respectively with differences between groups I and II and II and III at  $P<0.05$  being lowest in group II. However there was a significant difference between the groups in an incremental manner, when mothers were interviewed as more mothers in postpartum ward and in NCU reported babies stayed with them (mps= 95 and 68) compared to the other groups (78.4%, 55.8% for group II) and (mps=73.8 and 34.3 for group III) at  $P<0.05$ .

**Table (7) demonstrates** that differences between groups were statistically significant for teaching mothers feeding cues between groups I and III and II and III and for all groups for encouraging on-demand feeding  $P<0.05$ . They were somewhat higher in groups I and II (mps=51.4; and mps=66.5 for group I respectively, and mps=57.5 and mps=78.1 in group II respectively) compared to mps=31.8 and mps=46.5 in group III respectively.

**Table (8) demonstrates** that staff who prohibit feeding with bottles or sucking on pacifiers was high in all groups so that the percent score was  $>80$  in group I and between 70-80 in group II and between 60-70 in group III. The differences were statistically significant at  $P<0.05$  for bottles and  $P<0.01$  for pacifiers.

## Discussion

This study showed that the mean percent score in the maternity facilities of the districts surveyed that give the baby to the mother to hold within 5 minutes was low (27%) had a score of  $>70\%$  which could make them meet this step for global criteria set by UNICEF/WHO for the Baby friendly districts <sup>(11)</sup>, while 37% were borderline and 34% were below 50%. Several randomized and quasi-experimental studies have examined the influence of early postnatal contact on the initiation or continuation of breastfeeding. In a study <sup>(12)</sup> that compared the effect of early contact, initiated 15-30 minutes postpartum and continued for 15-20 minutes, with that of routine contact of less than 5 minutes immediately after birth, resumed after 12-24 hours, in 30 primipara who intended

to breastfeed. At two months postpartum, breastfeeding without milk supplements was more common in the early contact than in the control group (9/15 versus 3/15,  $P<0.05$ ). In another study<sup>(13)</sup> that compared routine contact (starting at around 9 hours) with early contact (45 minutes immediately after delivery, resumed at 9 hours) in 74 Jamaican mothers and babies when randomly assigned to two groups. The rates of full breastfeeding were higher in the early contact than in the routine contact group both at 6 weeks (76% versus 49%,  $P<0.02$ ) and 12 weeks postpartum (57% versus 27%,  $P<0.05$ ). When interviewed at 12 weeks, early contact mothers were more likely than control mothers to vocalize with them and to rise and follow when their babies were taken away from them. Several consecutive meta-analysis studies<sup>(14, 8)</sup> showed that early contact has a positive effect on the duration of breastfeeding at 2 to 3 months ( $P<0.05$ ).

Also meta-analysis and systemic reviews showed that interventions as breastfeeding guidance and presence of the father during early contact may improve breastfeeding. Also assignment of staff in the delivery/labour rooms in order to help newly delivered mothers initiate breastfeeding early, and also empowering them to request for their babies to be with them are recommended<sup>(15)</sup>.

Our study showed that all labor practices in all groups had very low scores with regards early contact in deliveries carried out by the use of general anesthesia, as none of the cesarean section (C-S) deliveries performed early contact through SSC before the first breastfeed. In Egypt studies<sup>(16, 17)</sup> reported that mothers receiving spinal anesthesia are more likely to initiate breastfeeding

earlier than those mothers receiving general anesthesia. A study carried out in Niger<sup>(17)</sup> showed that none of the cesarean deliveries did SSC and they concluded that C-S was one of the main barriers to SSC whether with spinal or general anesthesia and that this delayed the ignition of breastfeeding to approximately 6 hours. They recommend assigning specific staff in the labour rooms in order to help newly delivered mothers initiate breastfeeding early and empower mothers to request it. It has been shown that newborn's pre-feeding responses were more likely to appear earlier in babies exposed to spinal anesthesia than those exposed to general anesthesia<sup>(18)</sup>. Other workers showed that narcotics and anesthetics influenced C-S delivery outcomes by delaying first breastfeed<sup>(19, 20)</sup>.

This study showed that the early contact group had significantly higher exposure to training. Iker and Mogan<sup>(21)</sup> compared the use of bottles, formula and glucose water in a hospital with rooming-in before and after a four-week part-time training programme was implemented. Several training methods were used but there were no practical sessions. Staff attendance was not compulsory or homogeneous. No significant change was found. The authors concluded that providing information alone was insufficient to effect changes in behaviour. Similar results were obtained by other workers<sup>(22)</sup> who reported the effects of a 3-day course on the clinical breastfeeding support practices of 100 health professionals in Chile.

In this study mothers in the districts with maternity health facility practices that gave their babies to hold at birth demonstrated correct latch on more often than in districts that did not. Perez-

Escamilla et al.,<sup>(14, 23)</sup> studied the effects of rooming-in with or without breastfeeding guidance. Women delivering in a hospital with rooming-in and a 'no-formula' policy were randomly assigned to a group that received individual breastfeeding guidance or to a group who received routine care. Guidance consisted of practical advice from a hospital nurse trained in breastfeeding management, a breastfeeding brochure and wall posters illustrating attachment techniques as well as messages such as 'breastfeed frequently during the hospital stay'. This resulted in a slower decline in exclusive breastfeeding at 4 months postpartum. In another study kindness and support even without technical help or promotional messages can build mothers' confidence and have a lasting effect on breastfeeding. This was shown in a randomized controlled trial in South Africa<sup>(15)</sup> that assessed the effect of supportive companionship during uncomplicated labour exposed to touch and speech to concentrate primarily on comfort, reassurance and praise. At 6 weeks more of the supported than the unsupported mothers were fully breastfeeding. Even a brief individual intervention immediately after delivery was shown to be beneficial in reducing postpartum neonatal weight loss<sup>(24)</sup>.

In this study maternity facilities in most of the districts tended to comply with exclusive breastfeeding, while only one half of the facilities in the districts under study were prescribing formula for an acceptable medical reason and this was even more common in the neonatal units. This is in agreement to the findings of a cross-sectional study in the USA<sup>(25)</sup> who found that mothers were less likely to breastfeed exclusively if the first feed

occurred 7 to 12 hours postpartum or more than 12 hours postpartum.

Our study showed that the staff in the maternity facilities of the districts that practiced early contact more often (group I) were likely to have the knowledge of labour and birthing practices that support breastfeeding start well but not for practices that help mothers to be control of their birth. Antenatal counseling on early contact between mother-newborn couples were positively associated with exclusive breastfeeding<sup>(26)</sup>.

Perez-Escamilla et al.<sup>(27)</sup> analyzed retrospectively the 1991/92 Epidemiology and Family Health Survey from Honduras, which included 714 women with children 0 to 6 months old. The use of prelacteal water was negatively associated with exclusive breastfeeding (OR=0.19, 95% CI 0.09-0.41). The use of milk-based prelacteal feeds was negatively associated with exclusive (OR=0.19, 95% CI 0.08-0.43) and any breastfeeding (OR=0.21, 95% CI 0.09-0.48). Water-based prelacteal feeds were associated with delayed initiation (>24 hours) of breastfeeding (P=0.003). The authors concluded that these results "strongly suggest that prelacteal feeds are a risk factor for poor breastfeeding outcomes."

Also supportive evidence for an association between the use of supplements and premature cessation of breastfeeding is provided by three prospective studies. Kurinij et al in the USA<sup>(25)</sup> found that infants who received water in hospital were significantly more likely to stop breastfeeding by 4 months than those who did not receive water. In a prospective observational study of 166 mother-infant pairs in Chicago conducted by Feinstein et al<sup>(28)</sup>, the use of more than one bottle of formula per day in

hospital was associated with decreased breastfeeding at 4, 10 and 16 weeks.

In this study regarding rooming-in, all districts showed high scores of rooming-in. However there was a significant difference when mothers were interviewed as more mothers in postpartum ward and in NCU reported babies stayed with them (mps= 95 and 68) compared to the other groups (78.4%, 55.8% for group II) and (mps=73.8 and 34.3 for group III) at  $P<0.05$ . Rooming-in can assist early breastmilk production and decrease cross infection. In Indonesia a study of rooming-in resulted in production of mature breastmilk started earlier than in the nursery group, and clinical jaundice was less frequent<sup>(29)</sup>. Yamauchi & Yamanouchi<sup>(30)</sup> in a review of 204 mothers reported that rooming-in infants breastfed more frequently than nursery infants from days 2 to 7 and that they gained more weight per day. Rooming-in mothers were encouraged to breastfeed on demand. Buranasin<sup>(31)</sup> found in a retrospective study that the rate of newborn abandonment in hospital per 1000 live births was reduced from 1.8 to 0.1 two years after rooming-in started. Several studies have shown longer duration of breastfeeding with rooming-in<sup>(14)</sup>.

Routine labour ward practices interfere with the time of breastfeeding initiation. Asking mothers to restrict either the frequency or the length of breastfeeds can interfere with the adaptation process<sup>(32)</sup>, and may lead to engorgement, insufficiency of milk production, and other problems. When there are no restrictions, the frequency and length of breastfeeds varies widely. Howie et al<sup>(33)</sup> observed 50 mothers during 2 consecutive breastfeeds, at 5-7 days postpartum. The length of feeds varied

between 7 and 30 min, the initial rate of milk flow varied from 1 to 14 g/min, and the final milk intake from 42 to 125 g per feed. De Carvalho et al<sup>(34)</sup> in the United States studied 46 mother-infant pairs breastfeeding on demand, without supplements. The suckling frequency varied during the first two weeks of life from 6.5 to 16.5 feeds in 24 hours, and at one month from 5 to 11 feeds in 24 hours. They concluded that when there are no restrictions, the frequency and length of breastfeeds varies widely. Frequent breastfeeding is useful in preventing serious medical conditions as it was shown to decrease incidence and severity of neonatal jaundice<sup>(35)</sup>, decrease nipple pain<sup>(36)</sup> and breast engorgement. It can also increase milk production and milk intake (with correct attachment) which subsequently increases neonatal weight gain<sup>(37)</sup>.

Offering bottles and pacifiers by the maternity staff in the districts surveyed were less common in all districts in postnatal wards but not in the NCU of all groups. Several workers have shown that pacifier users who were discharged with an incorrect suckling technique were less likely to be breastfeeding at four months than those discharged with a correct suckling technique (7% compared with 59%). Among non-users, there was no significant difference at four months between those with correct and incorrect suckling technique at discharge (90% and 82% respectively were still breastfeeding). Thus pacifier use appears to compound and increase a problem with suckling that might otherwise be overcome<sup>(38)</sup>. Pacifier users were nearly 4 times more likely to stop breastfeeding between 1 and 6 months of age than non-users (relative risk 3.84, 95% CI 2.68-5.50;  $P<0.001$ )<sup>(39)</sup>. Even after adjusting

for potential confounders such as perceived insufficiency of milk, the infant refusing the breast, and introduction of other feeds, the adjusted risk remained high (odds ratio 2.87, 95% CI 1.97-4.19) and significant ( $P < 0.001$ )<sup>(40, 41, 42)</sup>. Pacifiers are also associated with malocclusion<sup>(43)</sup> and its high content of nitrosamines is associated with cancer<sup>(44)</sup>.

In conclusion postpartum practices of early initiation influence the other steps in breastfeeding as it is associated with training which assists in overcoming cultural barriers to SSC. C-S deliveries can compromise breastfeeding, but this can be prevented by training in early SSC<sup>(45, 46)</sup>. Early initiation arouses maternal and infant reflexes early thereby teaching mothers and babies to breastfeed intuitively correctly and continue exclusive breastfeeding and to spontaneously respond to their babies' cues and needs<sup>(47, 48, 49)</sup>. Hence early contact awakens the nature's nurturing cues in these mothers and has physical as well psychological benefits to the mother and baby dyad and their future relationship<sup>(50)</sup>. Health facilities serving mothers and babies should encourage training in these policies in order to empower their staff to support these mothers and prevent breastfeeding problems and early discontinuation<sup>(51)</sup>.

Bottles, pacifiers and dummies continue to be hazardous devices when given to newborns<sup>(52, 53, 54)</sup>.

The hazards associated with not breastfeeding to the baby and mother are surmount and are

building up over the past decades since the start of BFHI by James Grant insights, UNICEF director, in the early 1990s<sup>(55, 56)</sup>, who regarded breastfeeding promotion as vital to child health as the immunization program.

Monitoring systems can be extremely useful when instituted inside districts to ensure sustainability and continuous improvement in these policies<sup>(57)</sup>. Hospitals and staff need to be made accountable for their actions and pursued for neglect and malpractice when consumers reach a state of cultural maturity to demand their rights and take their cases to court. Unfortunately, besides hospital routines, other factors as poor access to health services, low socioeconomic status, resistance by consumer and provider to these practices substantiated by ignorance are independent risk factors for not breastfeeding within the first hour through SSC. Inappropriate marketing through media manipulate and direct mother practices away from breastfeeding.

Government policies should promote and protect breastfeeding meaningfully as a means for reducing inequalities in health and promoting economic development<sup>(58)</sup>.



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**Table (1) Comparison of groups with high and low mean scores of timeliness of first mother baby contact with mother friendly practices in mean percent score:**

Criteria	Description of criteria for mother friendly	Grp I (8)		Grp II (11)		GRP III (10)		p-value
		Range	mean	Range	mean	Range	Mean	
<b>MF-1</b>	Written hospital policies require mother/baby friendly labour and birthing practices	0-100	50	0-100	80	0	6.7	P1<0.05 P2<0.001 P3<0.001
<b>MF-2</b>	Staff can describe practices to help mothers be more in control of her birth	0-100	45.6	0-75	39.1	0-100	38.2	P1>0.05 P2>0.05 P3>0.05
<b>MF-3</b>	Staff can list at least three labour and birthing procedures that should not be used routinely but only if required due to complications	0-100	64.9	0-79	35.4	0-62	33.9	P1<0.05 P2<0.05 P3>0.05
<b>MF-4</b>	Staff can describe at least two labour and birthing practices that support breastfeeding start well	0-100	55.7	0-70	28.9	0-100	39.8	P1<0.01 P2<0.05 P3<0.05

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (2) Distribution of mean scores of districts by percent of early initiation by timeliness of first contact with mother with early uninterrupted skin to skin contact:**

Criteria	Groups	GRP I (8)		GRP II (11)		GRP III (10)		p-value
	Description of selected criteria for step 4	Range	Mn	Range	Mn	Range	Mn	
C4.2.	Mothers with NVD or Sp-CS given baby immediately at birth	53.3-100	81.3	50-100	55.4	0-42	10.03	P1<0.01 P2<0.001 P3<0.001
C4.3	Mothers GA CS given baby immediately at birth	0-100	12.5	0	5.09	0-100	10.0	P1>0.05 P2<0.05 P3<0.05
C4.4.	Mothers with NVD or Sp-CS held baby STS	23.3-70	29.7	6-66.7	29.09	0-100	12.86	P1>0.05 P2<0.01 P3<0.01
C4.5.	Mothers GA CS held baby STS	0	0	0	0	0	0	P1>0.05 P2>0.05 P3>0.05
C4.7.	Mothers in SBCU hold STS	0-100	16.4	0-100	15.5	0-100	6.0	P1>0.05 P2<0.01 P3<0.01

GRP: group, NVD: normal vaginal delivery, Sp-CS: cesarean section by epidural or spinal anesthesia, GA: general anesthesia, STS: skin to skin, SBCU: special baby care units- \*P1, (Grp1 vs Grp2) P2 (Grp2 vs Grp3), P3 (Grp1 vs Grp3).

**Table (3) The relationship between timeliness of first contact to the training in Baby friendly according to the BFHI global criteria of step 2:**

Score for Criteria of Step 2	Grp I (8)		Grp II (11)		GRP III (10)		p-value
	Range	Mn	Range	Mn	T	Mn	
Staff who confirm being trained	16.7 - 76	44.45	8 - 86	22	0 - 29	17.1	P1<0.05 P2<0.05 P3>0.05
Staff who were able to answer 4/5	20 - 90	57.3	19 - 81	43.5	10 - 80	34.7	P1<0.05 P2<0.05 P3<0.05
Non clinical staff report being oriented to policy	0 - 57.1	33.5	0 - 83.5	50	0 - 100	24	P1<0.05 P2<0.05 P3<0.05

\*P1 (Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (4) Effect of timeliness of the first contact with the mother in the labour wards on her later practice of breastfeeding techniques according to the BFHI global criteria of step 5:**

Criteria	BFHI Criteria of step 5	Grp I (8)		Grp II (11)		GRP III (10)		p-value
		Range	Mean	Range	mean	Range	Mean	
C5-3	Clinical staff teach mother latch-on	60-93	75	44-96	73.06	40-77	70.9	P1>0.05 P2>0.05 P3>0.05
C5-4	Clinical staff teach mothers hand expression	0-100	69.25	23-100	63.5	0-52	46.1	P1>0.05 P2<0.05 P3<0.05
C5-5	Staff teach mothers who are unable to breastfeed how to give a safe substitute	43-100	89.09	61-100	86.2	25-83	72.8	P1<0.05 P2<0.05 P3<0.05
C5-6	Staff offered help in breastfeeding in 6 hours of delivery	10-80	40.1	11-92	57.4	0-90	26.2	P1<0.05 P2<0.05 P3<0.05
C5-7	Mothers able to demonstrate correct positioning and attachment	0-100	61.2	22.2-100	70.1	0-90	43.7	P1<0.05 P2<0.05 P3<0.05
C5-8	Mothers report staff offered further help on how to express breastmilk	0-60	40.4	0-100	32.7	0-20	22.8	P1<0.05 P2<0.05 P3<0.05

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (5) Effect of timeliness of first mother baby contact on exclusive breastfeeding in maternity and neonatal wards in mean percent score according to the BFHI global criteria of step 6:**

	Selected Criteria of Step 6	Grp I (8)		Grp II (11)		GRP III (10)		p-value
		Range	Mean	Range	mean	Range	mean	
C6-5	If babies are prescribed any substitute it is based on acceptable medical reasons or informed choices	60-100	74.6	53-100	50.1	0-100	75.7	P1<0.05 P2>0.05 P3<0.05
C6-6	If mothers have decided not to breastfeed, that the staff have discussed with them the various feeding options	0-100	47.5	0-50	4.5	0	0	P1<0.001 P2<0.001 P3<0.001
C6-7	Breastfeeding mothers reported that their babies had received only breastmilk	30-100	72.4	0-100	47.4	0-100	69.7	P1<0.05 P2<0.05 P3>0.05
C6-8	Mothers of babies in neonatal care units have been informed of the importance of expressed breastmilk	0-100	36.8	0-100	10.6	0-50	31	P1<0.001 P2<0.001 P3<0.005
C6-9	Staff do not prescribe substitutes except for acceptable medical reasons.	41.7-100	85.25	0-100	54.9	0-100	56.2	P1<0.01 P2>0.05 P3<0.05
C6-10	Non clinical staff advise mothers of the importance of exclusive breastfeeding	14.3-100	68.6	0-100	64.05	0-100	55	P1>0.05 P2<0.05 P3<0.05

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (6) Effect of timeliness of first mother baby contact on rooming-in practices inside maternity and neonatal wards in mean percent score according to the BFHI global criteria of step 7:**

Criteria	Description of criteria for step 7	Grp I (8)		Grp II (11)		GRP III (10)		p-value
		Range	mean	Range	mean	Range	mean	
C7-1	Observations in the post-partum wards babies and mothers are rooming-in	25-100	48.1	10-87.5	41.4	0-75	55.1	P1<0.05 P2<0.05 P3>0.05
C7-2	<b>Mothers interviewed when in the postpartum ward</b> report that their babies have stayed with them since delivery	50-100	95	36-100	78.4	0-100	73.8	P1<0.05 P2>0.05 P3<0.05
C7-3	Mothers in the NCU are encouraged to spend as much time as possible with their babies	0-60	68.05	50-100	55.8	0-100	34.3	P1<0.05 P2<0.05 P3<0.05

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (7) Effect of practice of timeliness of first mother baby contact in mean percent score on on-demand feeding according to the BFHI global criteria of step 8:**

Criteria	Description of criteria for step 8	Grp I (8)		Grp II (11)		GRP III (10)		p-value
		Range	mean	Range	mean	Range	mean	
C8-1	<b>Mothers</b> taught how to recognize if their babies were hungry	27-80	51.4	25-100	57.5	0-100	31.8	P1>0.05 P2<0.05 P3<0.05
C8-2	<b>Mothers</b> report been advised to feed their babies on demand.	20-80	66.9	25-100	78.1	0-100	46.5	P1<0.05 P2<0.05 P3<0.05

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

**Table (8) The relationship between staff that prohibit feeding with bottles or sucking on pacifiers to the degree of practice of timeliness of first mother baby contact in mean percent score:**

Criteria	Description of criteria for step 9	Grp I (>70%) (8)		Grp II (50-70%) (11)		GRP III (<50%) (10)		p-value
		Range	mean	Range	mean	Range	mean	
C9-1	Breastfeeding babies observed, the babies were not using bottles and teats	62.5-100	80.4	50-100	66.8	0-100	74.2	P1<0.05 P2<0.05 P3<0.05
C9-2	Breastfeeding mothers report their babies were not offered bottle	60-100	87.5	0-100	70.5	0-100	71.14	P1<0.05 P2>0.05 P3<0.05
C9-3	Breastfeeding mothers report their babies did not suck on pacifiers	43.3-100	93.1	55.5-100	73.5	55.5-100	30	P1<0.05 P2<0.01 P3<0.01

\*P1(Grp1 vs Grp2), P2 (Grp2 vs Grp3), P3 (Grp1vs Grp3)

## إستخدام معايير الأداء داخل كشك الولادة كمؤشر لمتابعة وضع المستشفيات الصديقة للطفل

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\*\*\*رئيس الجمعية الطبية النسائية المصرية – المنسق الإقليمي لمحافظة الغربية

^قسم طب الأطفال كلية طب بنها – جامعة بنها – المنسق الإقليمي للقلوبية

^^جمعية أصدقاء رعاية الأم والطفل بالأسكندرية – المنسق الإقليمي للأسكندرية

هذا البحث مستخرج من نتائج المسح الميداني لدراسة إحتياجات المستشفيات الصديقة للطفل والذي تم تحت رعاية الإدارة العامة لرعاية الأمومة والطفولة بوزارة الصحة والسكان وبدعم من مكتب منظمة الأمم المتحدة للأطفال (اليونيسف) بالقاهرة.

### الملخص

**مقدمة :** تتحدى المنظمات العالمية بضرورة تشجيع ودعم الرضاعة الطبيعية من خلال البداية المبكرة للرضاعة الطبيعية بملامسة الجلد للجلد كإجراء ضروري للحفاظ على صحة وحياة المواليد ولضمان نجاح عملية الرضاعة الطبيعية. وهناك معوقات كثيرة تواجه مقدمي الخدمة في تطبيق هذه الممارسة والتي تبدأ بإعطاء الطفل للأم فور الولادة لبضع دقائق قبل وضعه عليها ملامساً الجلد للجلد لمدة ساعة أو حتى يرضع على الثدي.

**الهدف:** تستهدف الدراسة تحليل العلاقة بين الإجراءات التي تتم داخل كشك الولادة على ممارسات ما بعد الولادة الخاصة لتحقيق معايير المستشفى الصديقة للطفل.

**طريقة البحث:** أجري مسح لتقييم الوضع واحتياجات المناطق للحصول على لقب مستشفى صديق للطفل وذلك على عينة من 102 من المرافق الصحية التي تقدم خدمات الأمومة والأطفال حديثي الولادة في 32 إدارة صحية في 4 محافظات في مصر ويشمل ذلك لقاءات مع 652 موظفاً صحياً و 469 أمهات معها أطفال رضع (أقل من 6 أسابيع) و 206 أمهات معها أطفال خدج وقد تم تقسيم العينة وفقاً لامتنالها لعملية إعطاء المولود للام مباشرة بعد الولادة، كمعيار فرعي من الخطوة 4 من الخطوات العشرة لمعايير التي وضعتها منظمتي اليونيسف ومنظمة الصحة العالمية.

وقد تم تقسيم العينة الى مجموعات للتحليل الفرعي: المجموعة الأولى : الذين مارسوا إعطاء الطفل إلى الأم مباشرة بعد الولادة بنسبة أكثر من 70 %، والمجموعة الثانية الذين مارسوا هذا الإجراء في 50-70 %، والمجموعة الثالثة الذين مارسوا هذا الإجراء بنسبة أقل من 50 % . وتم مقارنة المجموعات فيما يتعلق بالممارسات الصديقة للطفل بو الأم قبل وبعد الولادة.

**النتائج:** أظهرت النتائج نقص شديد في المعرفة الأمهات بالممارسات الصديقة للام أثناء فترة ما قبل الولادة ولكن كانت هناك علاقة طردية إيجابية كلما كانت المنشأة ملتزمة بنسبة عالية بإجراء البدء المبكر فور الولادة بإعطاء المولود للام وكانت هذه العلاقة ممثلة في باقي الخطوات العشر سواء من ناحية تعليم الأم طريقة الرضاعة أو طريقة تعصير اللبن أو كيفية الإستجابة لطفلها وإرضاعه كلما رغب وأيضاً كان هناك إلتزام أكثر في هذه الإدارات بعدم إعطاء أية ألبان أو مشروبات للطفل عدا لبن الأم ومنع زجاجات الإرضاع واللهيات للرضع طبيعياً وقد إرتبط التحسن في الممارسات بالتدريب ، ولكن كانت معايير

ممارسات الحضانات مع الأطفال المبتسرين فى تشجيع الرضاعة متدنية غير أنها كانت أفضل فى المجموعة الأولى بالمقارنة للمجموعات الأخرى.

**الاستنتاجات:** إعطاء الطفل للأم مباشرة بعد الولادة مؤشر قوى لجودة ممارسات ما بعد الولادة لدعم البداية الصحيحة بالرضاعة الطبيعية وهو أيضاً مؤشر جيد لجودة التدريب وتبقى ممارسة ترك المولود مع أمه لمدة ساعة حتى يرضع وتقديم المشورة من قبل الطاقم الصحى للأم فى الرضعة الأولى من أكبر التحديات التى تواجه المستشفيات الصديقة للأطفال. ولذلك نوصى بتطبيق نظام رصد لمؤشرات تغذية الرضع داخل المستشفيات الصديقة للأطفال لتجويد الخدمة.





## Section III: From Research to Practice

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### Case studies of Breastfeeding Mothers

Presented by Dr. Shorouk Hithamy, IBCLC

#### Case study 1

**A case of a Saudi mother named Om Sultan** who had a normal delivery and in the hospital her daughter received bottle. The milk came in but the baby always slept at the breast and the mother had sore nipple (the cause most probably is incorrect positioning) and then she stopped breastfeeding on the 4<sup>th</sup> day. She was pumping and giving both artificial milk and her milk by the bottle. The child had a surgery for hernia and doctor told her to breastfeed only to improve the baby's immunity. She stopped the artificial milk but continued to give her breastmilk only by bottle because she thought this would make her sleep better and take the feed at one time.

But milk decreased with time, and baby refused to stay latched on when the mother tried to breastfeed her.

She contacted me and I advised her to breastfeed and pump every 3 hours, correcting the latch by reading my articles and seeing videos and doing lots of skin to skin contact, taking lactagouges, and the use of lactation aid.

She read the story of a mother who succeeded in relactation **using it**, so she was determined to make it herself and it was successful especially because the refusal was only because of decreased milk.

She sent me an email later informing me that now the problem is solved and she had stopped the artificial milk and all feeds are at the breast.

After about two weeks, she sent me an email again saying, one of her relatives gave her a baby to take care of for unknown period of time and it may be a year!!!

This baby refused the bottle and accepted only the breast of Om sultan!!! and she and her daughter are 8 months old.

I encouraged her to increase pumping, taking lactagouges and taking domperidone (should be under medical supervision).

In a few days, she was pumping up to 300 ml several times every day. Her two daughters breastfeed at the breast with no formula. Now they are 9 months old and she is so happy. Thank God.

#### Case study 2

**A case of a mother from Morocco.**

She was breastfeeding successfully until she had to travel and leave her son for a month. He was 8 months old, very attached to his mother. I advised her to try to take her son with her but she could not. So I advised her to decrease

breastfeeding gradually to make it easier for the child and to express milk regularly while she is travelling and to take a lactagogue.

When she went back, her son refused the breast completely, and in fact refused the mother. I encouraged her hold her baby skin to skin and try to express her milk and dribble milk on the nipple to encourage him to take it.

After two days, he was completely breastfeeding as if nothing happened.

### Case study 3

**The case of the confused mother** whose baby refused the breast when she was 3 months old due to early offering of artificial nipples (bottles and the pacifiers).

The weight of the baby was not increasing with the formula. I encouraged her to stop the pacifier and the bottle gradually and to give the feeds by cup or any other way.

I also guided her to do a lot of skin to skin, manual expression every 3 hours, prescribed her lactagogues.

The baby was too resistant and the mother was willing to do everything except hold her the baby directly skin-to-skin. The baby wanted the bottle badly and the mother used everything to give the feed, cup, spoon and a **nursing** aid.

She kept trying for a whole month and she needed support and encouragement, and someone to give her hope. Finally one of her relatives who was breastfeeding, took her baby and offered her to breastfeed on her breast. She then tried finger feeding and finally the baby accepted her breast.

Now she is breastfeeding but still giving some formula feedings (she says it is due to personal causes).

The cases are presented by Dr Shorouk Hithamy, IBCLC from MCFC, Egypt.

For contact: [shoroukhithamy@yahoo.com](mailto:shoroukhithamy@yahoo.com)



## Section III: Moving from Research to Practice

## الجزء الثالث : من البحوث الى التجربة العملية والتطبيقات الميداني

957 North Plum Grove Road • Schaumburg, IL 60173 USA  
847.519.7730 • Fax 847.969.0460 • 800-LALECHE

La Leche League International



## نصيحة

راقبي طفلك و  
لاتراقبي الساعة!

نصائح للرضاعة  
الطبيعية

## هل الحليب كاف ؟

بعد اكتمال تكوين و تدفق الحليب:  
\* يتناول الطفل بين 5-6 مرات على مدار 24 ساعة.

\* عند حفاظك البراز بين 2-5 في اليوم هذه المؤشرات تدل على أن الطفل يستهلك حليباً كافياً.

## لا يوجد حليب كاف؟

\* هذا لا يحصل! حيث تتغير نوعية الحليب خلال عملية الإرضاع! إحصري قطرة من الحليب قبل وبعد الإرضاع لترين الفرق . الحليب الأول يغني عن الماء وآخر الحليب يغني عن الطعام ويشبعه.

## ضمان وفرة كمية الحليب

\* أنكي إرضاع طفلك من الثدي الأول ثم الثاني إلى الآخر إذا بدأ أنه مازال جائعاً.  
\* إذا احتاج الطفل لحليب أكثر أو لإبقائه أثناء الرضعة، استخدمي حركة ضغط الثدي (بين أصابعك الخفصة) لاستمرار التدفق.

## تفريح / ألم الحلمتين

\* تذكري بأن وضعية الطفل والالتقام الصحيح للحلمة مهمان جداً لمنع تفريح / ألم الحلمة.  
\* أنهى عملية العنق قبل نزع الثدي من فم الرضيع.

\* أرضعي من الثدي الأكل تفرحاً أولاً.

\* استخدمي الماء فقط لغسل الحلمتين .

\* استخدمي الدهان المصنوع من التوتولين اللقي (متوفر في الصيدليات) لمعالجة التقرحات.  
\* راجعي أخصائية في الرضاعة لمساعدتك.

## البداهات الأولى

\* أرضعي طفلك طبيعياً في أقرب وقت بعد الولادة.

## عدد مرات الإرضاع

\* يحتاج المواليد بين 10 إلى 12 رضعة خلال 24 ساعة ، وكلما أرضعت الأم أكثر كلما زاد إدرار الحليب.

## اللبا ( أول لبنج اللبن )

\* تفرزه الأم في الأيام الأولى بعد الولادة .  
\* قليل الكميات وعالي التركيز ومثالي لمعدة الطفل الوليد.

\* يحمي الطفل ضد العدوى .

\* يساعد على إخراج القي (البراز الجيلي) من بطن المولود والتقليل من اليرقان .  
\* يمنع الرضيع ويغني عن الماء .

## الاحتقان / تحجّر الثدي

\* أرضعي طفلك باستمرار .  
\* الكمادات الباردة أو أوراق الملفوف بين الرضعات تخفف من التورم.

\* خذي حمام دافئ أو وضعي كمادة دافئة قبل الإرضاع .

\* إحصري الذي قليلاً لإدرار قطرات قليلة من الحليب واستعملي أصابعك للضغط الخفيف حول الحلمة حتى يقل الإنسداد .

## إحتياج الطفل للرضاعة أثناء الليل

\* إن حليب الأم سهل وسريع الهضم لذلك يستيقظ الرضيع ليلاً طلباً في الرضاعة مجدداً.

**إستناد مجرى الحليب**  
\* ستلاحظين تكتلاً رقيقاً في الثدي إذا حصل استناد بجري الحليب .

\* عرضي التينين للحرارة وارتاحي قدر الإمكان، لا تجهدي نفسك!  
\* أرضعي طفلك باستمرار وتأكدتي من وضعيته وقت الرضاعة.

## مراحل النمو المتأخر

\* سوزع الطفل أكثر وبالتالي يتكون لديه حليب أكثر وهذه المرحلة تقع في الأسبوع الثالث تقريباً .

## العودة إلى العمل

\* ابحثي عن مكان ملائم في منطقة عملك لشطف وتخزين الحليب .

\* حاولي أن تعودي إلى عملك عندما يكون مخزون الحليب كاف لديك .

\* لشطبي الحليب في مكتب/مقر عملك .

\* خذي الحليب المشعوب معك إلى المنزل لإعطائه للطفل في اليوم التالي، وخالط وجودك مع طفلك أرضعيه من الثدي بشكل مستمر .

## رضاعات الحليب

\* الأطفال الذين يقومون بالرضاعة الطبيعية بشكل جيد لا يحتاجون إلى الإرضاع من الزجاجة .

\* في حال اضطرت لاستعمال الزجاجة استعملي حلمة ذات تدفق خفيف حتى لا تربك الطفل في حال عودته للرضاعة الطبيعية .



## نمطي الرضيع بشكلي و انتقام الحلمة

\* أسمى طريقة برادة وأفضل شكلية بعد وأبعد.

\* خنمي رأس الرضيع على صدرك و اسلمي قدميه بدم يدك الآخر.

\* إلتصقي الرضيع على صدري القوي، يجب أن يكون وجهه و صدره مثالي في مواجهة صدر الأم .

\* داعمي ثديي الرضيع والقشري على بطني عذري .

\* خنمي الرضيع نحوه دون أنه يمد إلى الخلف قليلاً، يهلماسي ثديي شكلاً أولاً .

\* يكون لقم الطفل قاذي صحيحاً حين يستند بقلبه على ثديي و يكون أفقه بعداً عن ثديي قداماً .

## أول يوم فى العودة الى العمل وانت ترضعين طفلك الدكتورة / شروق الهيتى استشارى دولى فى الرضاعة الطبيعية

هذه بعض النصائح الموجهة الى الامهات العاملات المرضعات ان شاء الله ستجعل هذه العودة سهلة باذن الله.

### اولا :اعملى يوم تجربة قبل العودة الفعلية الى العمل

حضرى كل ما تحتاجيه خلال اليوم لرضعات اليوم كل المعصورة بالشفاط. اجعلى طفلك يذهب الى الحضانه لنصف اليوم فقط فى يوم التجربة لتجربى لفترة قصيرة اولاً. اذهبى الى المنزل وتصورى انك فى العمل وشفطى ثديك فترات الراحة فى العمل او فترات الصلاة. واستعملى ما اعدتلى فى شنطة العمل فقط حتى تذكرى ما يمكن ان تكونى نسيتيه. فى نهاية اليوم، قيسى الكمية التى انتجتها بالشفاط وقارنيها بالكمية التى احتاجها طفلك. واسالى فى الحضانه ان كان المسئولة عن الطفل الحث عليه فى اخذ كمية من الحليب كبيرة ام لا وستعرفى ان كنتى تحتاجى تشفطى اكثر من ذلك. ستكون هذه التجربة مفيدة لك باذن الله. لو كنتى لن تستطيعى التعصير فى العمل عصرى فى المنزل بين الرضعات. ابدأى باسبوع قصير. رتبى العودة الى العمل يوم الاربعاء مثلاً. اول الايام تكون متعبة فيكون ذلك افضل. وسيكون عندك فرصة لتجربة ما سبق والتمرن عليه. لو استطعتى العمل نصف الاسبوع فقط يكون افضل.

### جدول مقترح:

6 صباحاً : استيقظى وارضعى طفلك وافطرى افطار مغذى  
جهزى نفسك فى العمل واستعملى الشفاط ان استطعتى  
السابعة والنصف : انزلى من المنزل  
الثامنة : طفلك فى الحضانه  
الثامنة والرابع : ارضعى طفلك فى الحضانه قبل ان تتركه.  
الثامنة والخامسة واربعين: ووصولك الى العمل مبكراً ربع ساعة ويمكن ان يكون وقت للتشفيط  
ثانية  
الساعة العاشرة : اول فترة راحة للتشفيط  
الثانية عشر والنصف : استراحة الغداء والتشفيط مرة اخرى  
الساعة الثالثة : استراحة للتشفيط  
الساعة الخامسة : اذهبى الى الحضانه لاختطفك  
وارضعى طفلك فى الحضانه  
الساعة 6:العشاء المغذى  
الساعة السابعة والنصف :ارضعى طفلك ونوميه  
الثامنة :نظف الشفاط وجهزى الانية لليوم التالى وجهزى طعامك لليوم التالى  
العاشرة: اذهبى الى النوم. لو طفلك ينام طول الليل شفطى قبل النوم

مقالة مترجمة:كريستين برجر

## الرضاعة الطبيعية والتوائم الثلاثة

ترجمة الدكتورة شروق الهيتى – استشاري دولى فى الرضاعة الطبيعية

أرضعت شيرى من بورت سانت لوسى بولاية فلوريدا، طفلها الأول لمدة سنتين تقريبا. وبعد ثلاث سنوات اكتشفت أنها حامل مرة أخرى، ثم وجدت أنها كانت تحمل ثلاثة توائم.

وكان بعض من مقدمي خدمات الرعاية الصحية لها سلبين جدا حول إمكانية إرضاع ثلاثة توائم. ومع ذلك أصرت على الرضاعة الطبيعية. وعلى الرغم من ان البداية لم تكن مثالية- قضى الاطفال ليلتين اعتمادا على اللبن الصناعى في حضانة المستشفى كما عانت من ألم رهيب فى الحلمة عندما وصلت المنزل – قامت شيرى بإرضاع توائمها الثلاثة رضاعة طبيعية حتى فطموا أنفسهم فى أعمار تتراوح بين عام وثلاثة.

أكدت إينغلس وأمهات أخرى لثلاث توائم أن من أهم العوامل الأساسية في نجاح الرضاعة الطبيعية هو القراءة وجمع المعلومات قبل الولادة عن كيفية إرضاع ثلاثة توائم، وتلقي المعلومات والدعم من الأمهات الآخرين الذين أرضعوا توائمهم بنجاح. وبالرغم من أن إرضاع ثلاثة أطفال في وقت واحد أكثر صعوبة من إرضاع طفل واحد، إلا أنه ممكن وليس بمستحيل.

يعمل لبن الأم على نظرية العرض والطلب: وكلما أرضعتى أو استخدمتى شفط الثدي، فإن ذلك ينتج المزيد من اللبن. ولذلك، إذا كنتى ترضعين الأطفال الثلاثة في كل دورة، سوف ينتج الحليب الكافى للثلاثة. أما إذا أرضعتى اثنين من الاطفال وأعطيتى الثالث زجاجة من اللبن الصناعى، سوف ينتج فقط ما يكفى من اللبن لطفلين. وبعد شفط اللبن بعد الرضاعة وسيلة رائعة لزيادة اللبن، فضلا عن أنه يوفر مخزون من اللبن يمكن إعطائه باستخدام الزجاجة. وقد وجدت بعض الأمهات لثلاثة توائم أن هذه الطريقة تمكنهم من ضخ ما يصل إلى نصف لتر من اللبن في 15 دقيقة فقط! دى أهم جملة فى الموضوع ويا ريت الجميع يفهم إن اللى رضعت توائم لسه عندها لبن تعصر بعد الرضاعة.

تعتبر الأوضاع الصحيحة للرضاعة أمر هام بالنسبة لإرضاع ثلاثة توائم. بعض الأمهات يفضلن إرضاع كل طفل على حدة، بحيث يحصل كل طفل على "وقت خاص" على الأقل مرة واحدة يوميا. ولكن توفير الوقت فالكثير من الأمهات يرضعن طفلين في نفس الوقت، والطفل الثالث إما أن يحصل على لبن الأم فى زجاجة بعد شفطه أو ترضعه الأم بعد الانتهاء من الطفلين الأولين. ولأن تكوين كمية لبن الأم تتغير خلال الرضاعة فى المرة الواحدة، لذلك يجب التأكد من تبديل الأطفال على الثدي في كل مرة. إذا كان طفلك الثالث سيعتمد على الرضاعة الصناعية، فأرضعيه بيدك أو من يساعدك. لا يشجع أن يتم تغليف زجاجة اللبن بمنشفة أو أحد الأغلفة المصممة خصيصا للزجاجة وأن ترفع فوق الطفل لاحتمال اختناق طفلك بسبب التدفق المستمر للبن.

تنصح العديد من الأمهات باستخدام الوسائد المصممة للرضاعة مثل "Boppy" أو "EZ"

2 - إيجاد وضع الرضاعة الصحيح الذي يريحك ويريح أطفالك يتطلب بعض التجارب. يمكنك محاولة استخدام وضع "كرة القدم المزدوجة"، حيث يدس طفل تحت كل ذراع، وتكون رؤوس الطفلين فقط للداخل تجاه الثديين. أو يمكن تجربة وضع أن يكون طفل في وضع كرة القدم والآخر في وضع المهد أي أن باقى جسمه على صدرك (تأكدى من أن بطن الطفل على صدرك، لا تواجه السقف). يمكنك أيضا محاولة أن يكون الطفلين فى وضع "المهد المزدوج" أى أن الساقين على بعضها البعض للداخل. يعتبر النوم مع طفليك ضروريا , تقول شيري: وجدت أن وضع مرتبة في غرفة الاطفال، كان الشيء الوحيد الذي سمح لها للحصول على قسط من النوم عندما كانت لها ثلاثة توائم حديثي الولادة. "عندما يستيقظ طفل ما ليرضع كنت أضعه على الثدي وأعود إلى النوم، وعندما يستيقظ الطفل الثانى كنت أضع الأول مرة أخرى في السرير، وأضع القادم علي الثدي الآخر، وأعود الى النوم وهكذا مع الطفل الثالث . "عائلات أخرى تعمل على وضع الأطفال الرضع على نفس الجدول الزمني فيقوموا بإيقاظ الاطفال الثلاثة عندما يستيقظ الطفل الأول.

على الرغم من أنه قد لا توجد تعليمات محددة للرضاعة الطبيعية، فإن إيجاد آخرين لمساعدة الأم في باقى شئون المنزل يتيح لها استخدام الطاقة الخاصة بها لإنتاج مزيد من اللبن، وليس العشاء. ساعدت حماة شيري فى أن تبقى بيتها نظيفا. وقد تلقت الأمهات الأخريات لثلاثة توائم مساعدة من الأهل والأصدقاء في كل شيء بدءا من أخذ الأطفال الأكبر سنا إلى الدروس لكرة القدم لاعداد الأوانى لتناول العشاء. وتقول شيري إينغلس: "سوف يستغرق كل وقتك وطاقتك لإرضاع ورعاية اطفالك. النوم مهم جدا وليس الغسيل! واسمحي لشخص آخر القيام بذلك!"

يساعد الاسترخاء وروح الدعابة خلال الأيام الأولى من الرضاعة، وتضيف شيري: "لا أحد يموت من الجوع إذا كان عليه الانتظار بضع دقائق لتناول الطعام". والتعليم، والمثابرة، والمرونة العقلية هي مفتاح التكيف مع الحياة مع ثلاثة توائم. يجب أن أقول أنه كان صعبا للغاية، ولكنها تجربة تستحق العناء .



## زيادة اندفاع لبن الام الدكتورة شروق الهيتى – استشاري دولى فى الرضاعة الطبيعية

زيادة اندفاع لبن الام الذى يحدث غالبا مع زيادة كمية اللبن وقد يحدث حتى لو اللبن قليل  
**أعراض الحالة :**

الطفل يبتلع الكثير من الهواء مع الرضاعة لانه يبتلع الحليب فجأة وبسرعة ويتقيأ كثيرا  
وعنده الكثير من الغازات وقد يستيقظ من النوم ويظهر الجوع الشديد رغم انه رضع  
من وقت قليل.  
يكون عصبي ومتضايق فى كثير من الاحيان . ويرفض الثدي احيانا البراز احيانا اخضر  
وصعب اقناعه بالسكون ليرضع بعد ثوانى من الرضاعة عندما يندفق الحليب يصلب  
جسمه بعيدا عن الثدي .  
وهذه الاعراض مماثلة لمن يعانى من المغص والحساسية والارتجاع .  
كثيرا ما يزيد وزنه بسرعة ويبلل الكثير من الحفاضات و يخرج براز اخضر وكثير  
ومندفع .  
والأم تلاحظ على نفسها الاحساس بدفقة الحليب عدة مرات خلال الرضعة الواحدة واثناء  
الرضاعة ينساب الحليب من الثدي الاخر . وقد تتألم عند اندفاع الحليب وقد ينزل منها  
حليب فى غير أوقات الرضاعة .  
**ما الحل؟**

- هناك نوعين من الحليب الحليب الامامى اى الاول والحليب الخلفى اى الذى  
ينزل بعده
- هذا الطفل يبتلع الكثير من الحليب الامامى هدفنا هو انه يأخذ من الخلفى اكثر  
وان نقلل من حليبها
- كبداية نجعل الطفل يرضع من ثدى واحد كل ساعتين نغير الثدي
- واذا احست الام بامتلاء الثدي الاخر تعصر منه حتى ترتاح ولا تحس بالم ولا  
تفرغه لان الهدف تقليل الحليب وافراغ الثدي يزيد الحليب
- بعد 4-7 ايام اذا لم يرتاح الطفل تقوم الام بالاعتصار على ثدى واحد لمدة اطول  
من ساعتين تجرب 3 ثم 4 او اكثر وقد تصل الى 6 ساعات فى بعض الامهات  
وتغير الى الثدي الاخر بعد عدد مماثل من الساعات.
- ملحوظة هامة :لا يجوز استعمال هذه الأساليب اذا كان نمو الطفل ليس جيدا  
ساعتها هناك اساليب اخرى
- وهناك طريقة اخرى لتقليل الحليب(اذا تاكدت الام ان السبب زيادة الحليب)تاخذ  
ربع ملعقة من عشبة المرمية 3 مرات فى اليوم(غير جرعة الفطام

• وتلاحظ الأم حليبها بدقة حتى لا تنقصه نقص شديد

والمرمية عامة امنة ولكن لا تؤخذ لمرضى التشنجات وقد تزيد الصداع النصفي ولا تستعمل فى الحمل

وقد تسبب هبوط الضغط فعلى الأم الحرص والبداية بجرعة واحدة

### اساليب اخرى لعلاج الحالة

- زيادة عدد مرات الرضاعة
- ارضاع الطفل اول ما يستيقظ من النوم لان يكون مصه اهدأ فيكون اندفاع الحليب اقل.
- تغيير اوضاع الرضاعة
- كرعى الطفل على فترات متقاربة جدا
- وقد يفقد الطفل شهيته للرضاعة بعد ذلك ويقل وزنه وقد يرفض الرضاعة تماما
- وعلى الأم الإستفادة بشدة من كل مرة يستقر الطفل ليرضع. وتضعه على جسمها بدون ملابس لكليهما أطول فترات ممكنة

ولو لاحظت انه يقل فى الوزن تعصر من ثديها وتعطيه وهناك بعض الاسباب التى تجعل احد الاطفال يستجيب هكذا اكثر من غيره:

.امراض الجهاز التنفسى

ارتخاء العضلات

صعوبة الانتظام بين البلع والنفس

الم بعد الولادة

ارتجاع بعد الولادة

امراض الاعصاب

:حلول اخرى





الرضاعة والام مائلة للخلف حتى لا يندفع الحليب بشدة(رأسه وحنجرتة أعلى من الحلمة .



او وضع الامساك بالكرة



## او الوضع الجانبي



مع مراعاة قواعد الأمان عند نوم الأم و الطفل معا فى نفس السرير  
وقد ينصح بامساك الحلمة بطريقة المقص لتقليل الحليب (هذه الطريقة القديمة لا يجوز  
استعمالها الا فى هذه الحالة فقط  
ولوحظ ان اعطاء سكاكة او حليب صناعى لا يحسن الحالة  
ولا يجب ان تجبر الأم طفلها على الامساك بالثدى بمسك راسه لأن هذا يجعله يرفض  
الثدى كليا  
وقد تستعمل الام حلمة صناعية لانها تقلل الحليب ولها طريقة معينة لاختيارها وتركيبها

د. شروق الهيتمي  
أخصائي التغذية و إستشاري دولي في الرضاعة الطبيعية

للمزيد من الموضوعات او للإستفسارات انضموا لجروبنا على فيس بوك  
<https://www.facebook.com/groups/674300849289108/>

## حقائق عن الإرضاع من الثدي

شباط/ فبراير 2014



منظمة الصحة العالمية/هـ. أننديين

إن الإرضاع من الثدي هو واحدة من أكثر الطرق فعالية لضمان صحة الطفل وبقائه.

إذا تم إرضاع جميع الأطفال في غضون ساعة من الولادة، وأعطوا حليب الثدي فقط طيلة الأشهر الستة الأولى من حياتهم، واستمر الإرضاع من الثدي حتى بلوغهم السنتين من العمر، فسيتم إنقاذ حياة حوالي 800000 طفل كل عام. إن أقل من 40% من الرضع دون ستة أشهر من العمر - على الصعيد العالمي - يرضعون رضاعة مقتصرة على الثدي فقط. إن تقديم المشورة والدعم المناسبين بشأن الإرضاع من الثدي ضروريان بالنسبة للأمهات والأسر للبدء بممارسات الإرضاع المثلى من الثدي والحفاظ عليها.

إن منظمة الصحة العالمية تشجع بفاعلية على الإرضاع من الثدي باعتباره أفضل مصدر لتغذية الرضع وصغار الأطفال. وإن ملف الحقائق هذا يستكشف الفوائد العديدة لهذه الممارسة، ويبين كيف أن الدعم القوي للأمهات يمكن أن يزيد الإرضاع من الثدي على الصعيد العالمي.

## تشجيع تغذية الرضع وصغار الأطفال بالطرق السليمة

### المشكلة المطروحة

يعد سوء التغذية، بشكل مباشر أو غير مباشر، وراء ثلث وفيات الأطفال دون سن الخامسة تقريباً. ويحدث أكثر من ثلثي تلك الوفيات، المرتبطة غالباً بممارسات التغذية غير المناسبة، خلال العام الأول من العمر.

والجدير بالذكر أنّ التغذية والرعاية أثناء الأعوام الأولى من العمر كلاهما من الأمور الأساسية للحفاظ على الصحة والعافية مدى الحياة. ولا توجد، في مرحلة الطفولة، نعمة تعلو على نعمة الرضاعة الطبيعية، ومع ذلك فلا يستفيد من تلك الرضاعة بشكل حصري خلال الأشهر الستة الأولى من العمر إلا قرابة ثلث الرضع.



توصي منظمة الصحة العالمية بالشروع في إرضاع الأطفال طبيعياً خلال الساعة الأولى من عمرهم، والاقتصار على تلك الرضاعة طوال الأشهر الستة الأولى من عمرهم والبدء، في الوقت المناسب، بإعطائهم قسطاً كافياً من الأغذية التكميلية المأمونة والمناسبة مع الاستمرار في إرضاعهم طبيعياً حتى بلوغهم عامين من العمر أو أكثر من ذلك.

وتشجيع الممارسات التغذوية السليمة من المجالات البرمجية الرئيسية التي تركز عليها إدارة التغذية من أجل الصحة والتنمية. وتشمل الأنشطة التي تضطلع بها الإدارة إصدار معلومات تقنية سليمة ومسندة بالبيّنات، وإعداد مبادئ توجيهية ودروس توجيهية، وتوفير إرشادات لحماية وتشجيع ودعم تغذية الرضع وصغار الأطفال على الصعيد السياسي وصعيدي المرفق الصحي والمجتمع المحلي، ووضع المؤشرات المناسبة، وإنشاء وصون قاعدة بيانات عالمية بشأن تغذية الرضع وصغار الأطفال.

## الاقتصار على الرضاعة الطبيعية

تمثل الرضاعة الطبيعية وسيلة منقطعة النظير لتوفير الغذاء الأمثل الذي يمكن الرضع من النمو والنماء بطريقة صحية؛ وهي أيضاً من العناصر الأساسية من العملية الإيجابية ولها آثار هامة على صحة الأمهات. وقد أظهرت عملية استعراض البيانات أن الاقتصار على تلك الرضاعة طوال الأشهر الستة الأولى من حياة الطفل يشكل، على صعيد السكان، أنسب الطرق لتغذية الرضع. وينبغي، بعد ذلك، إعطاء الرضع أغذية تكميلية والاستمرار في إرضاعهم طبيعياً حتى بلوغهم عامين من العمر أو أكثر من ذلك.

ولتمكين الأمهات من الأخذ بالرضاعة الطبيعية والاستمرار فيها طيلة ستة أشهر يوصي كل من منظمة الصحة العالمية واليونيسيف بما يلي :



- الشروع في إرضاع الطفل طبيعياً في غضون الساعة الأولى من الولادة.
- الاقتصار على الرضاعة الطبيعية- وذلك يعني أن الطفل لا يتلقى إلا لبن الأم دون أية أغذية أو مشروبات إضافية، بما في ذلك الماء؛
- إرضاع الطفل بناء على طلبه- أي كلما يرغب في ذلك، في النهار وأثناء الليل
- عدم إعطاء القارورات أو المصاصات أو اللهايات

ولبن الأم هو أول غذاء طبيعي يتناوله الرضع، وهو يوفر كل ما يلزم للرضيع من طاقة وعناصر مغذية في الأشهر الأولى من حياته، كما يستمر ذلك اللبن في تغطية نحو نصف احتياجات الطفل التغذوية أو أكثر من ذلك خلال الشطر الثاني من العام الأول، ونحو ثلث تلك الاحتياجات خلال العام الثاني من حياته.

ويسهم لبن الأم في النماء الحسي والمعرفي وفي حماية الرضع من الأمراض المعدية والمزمنة. ويسهم الاقتصار على الرضاعة الطبيعية في الحد من وفيات الرضع الناجمة عن أمراض الطفولة الشائعة، مثل الإسهال أو الالتهاب الرئوي، ويساعد على الشفاء من الأمراض بسرعة. ويمكن قياس تلك الآثار في المجتمعات الشحيحة الموارد والمجتمعات الميسورة (كرامير وزملاؤه، التدخل التجريبي الرامي إلى تعزيز الرضاعة الطبيعية: (PROBIT) وهو عبارة عن تجربة عشوائية أجريت في جمهورية بيلاروس. مجلة الرابطة الطبية الأمريكية، 2001، 420-413: 285(4)

وتسهم الرضاعة الطبيعية في تعزيز صحة الأمهات وعافيتهن، كما تساعد على تباعد الولادات وتحد من مخاطر الإصابة بالسرطان المبيضي أو سرطان الثدي، وتزيد من الموارد الأسرية والوطنية، كما أنها من السبل التغذوية المأمونة التي لا تضر بالبيئة .

وعلى الرغم من أن الرضاعة الطبيعية هي من الممارسات الطبيعية، فإنها تمثل أيضاً سلوكاً يُكتسب بالتعلم. فقد بنيت مجموعة شاملة من البحوث أن الأمهات ومقدمي الرعاية الآخرين بحاجة إلى دعم نشط للأخذ بممارسات الرضاعة الطبيعية المناسبة والاستمرار فيها. وقد أطلقت منظمة الصحة العالمية واليونيسيف مبادرة "المستشفيات الصديقة للرضع"، التي تشتمل على عشر خطوات لضمان نجاح الرضاعة الطبيعية تكمن، حسب البيان الصادر عن المنظمتين، في حماية تلك الرضاعة وتشجيعها ودعمها. وتم تلخيص البنات على فعالية تلك الخطوات العشر في وثيقة من وثائق الاستعراض العلمي.

وتم تنفيذ تلك المبادرة في قرابة 16000 مستشفى في 171 بلداً وقد أسهمت في تحسين نسبة الأخذ بمبادئ الاقتصاد على الرضاعة الطبيعية في جميع أنحاء العالم. وفي حين تساعد خدمات الأمومة المحسنة على زيادة معدلات الشروع في الرضاعة الطبيعية والاقتصار عليها، فإن الدعم على جميع مستويات النظام الصحي من الأمور الضرورية لمساعدة الأمهات على الاستمرار في تلك الرضاعة.

وقد أعدت منظمة الصحة العالمية واليونيسيف الدرس التدريبي المُنون "إرشادات الرضاعة الطبيعية في 40 ساعة"، وهو درس لتدريب مجموعة من العاملين الصحيين القادرين على توفير خدمات الدعم الماهرة للأمهات المرضعات ومساعدتهن على التغلب على المشاكل التي يواجهنها. كما أعدت المنظمتان دورة تدريبية تدوم خمسة أيام بعنوان "الإرشادات الخاصة بتغذية الرضع وصغار الأطفال"، وذلك لتدريب العاملين الصحيين كي يصبحوا مؤهلين وقادرين على الترويج لأهمية الرضاعة الطبيعية المناسبة، والتغذية التكميلية، وتغذية الرضع في سياق فيروس الإيدز. كما تدخل المهارات الأساسية لدعم الرضاعة الطبيعية في إطار الدورة التدريبية الموجهة، على مدى 11 يوماً، للعاملين الصحيين من المستوى الأول بشأن التدبير العلاجي المتكامل لأمراض الطفولة، والتي تجمع بين المهارات الخاصة بالتدبير العلاجي المناسب للحالات المرضية وبين الرعاية الوقائية. وقد أظهر تقييم الإرشادات المتعلقة بالرضاعة الطبيعية التي قدمها مهنون صحيون مدربون وعاملون مجتمعون أن تلك الإرشادات من التدخلات الفعالة لتحسين معدلات الاقتصاد على الرضاعة الطبيعية.

وتتورد الاستراتيجية العالمية لتغذية الرضع وصغار الأطفال التدخلات الأساسية لتشجيع الرضاعة الطبيعية وحمايتها ودعمها.

مطبوعات

• [الاستراتيجية العالمية لتغذية الرضع وصغار الأطفال](#)

روابط

• [تشجيع تغذية الرضع وصغار الأطفال بالطرق السليمة](#)

• [التغذية التكميلية](#)

• [الاستراتيجية العالمية لتغذية الرضع وصغار الأطفال](#)

• [توصية منظمة الصحة العالمية الخاصة بتغذية الرضع](#)

[http://www.who.int/nutrition/topics/exclusive\\_breastfeeding/ar/](http://www.who.int/nutrition/topics/exclusive_breastfeeding/ar/)

# الأسبوع العالمي للرضاعة الطبيعية

7-1 آب/أغسطس 2015

يُحتفل بالأسبوع العالمي للرضاعة الطبيعية في الفترة بين 1 و7 آب/أغسطس في أكثر من 170 بلداً من أجل تشجيع الرضاعة الطبيعية وتحسين صحة الرضع في جميع أنحاء العالم.

ويُحتفل بهذا الأسبوع تخليداً لذكرى إعلان إينوتشينتي الصادر عن مسؤولي منظمة الصحة العالمية واليونسيف في عام 1990 والداعي إلى حماية الرضاعة الطبيعية وتشجيعها ودعمها .

إنّ الرضاعة هي أحسن وسيلة لتزويد الولدان بالعناصر المغذية التي يحتاجونها. وتوصي منظمة الصحة العالمية بالالتصاف على الرضاعة الطبيعية بدءاً من الساعة الأولى بعد الولادة حتى يبلغ الرضيع ستة أشهر من عمره. ينبغي بعد ذلك إضافة الأغذية التكميلية مع الاستمرار بالرضاعة الطبيعية حتى يبلغ الطفل سنتين من العمر أو أكثر .



صقات لدعم الأم العاملة المرضع صادرة من منظمة الصحة العالمية ومنظمة العمل الدولي





صقات لدعم الأم العاملة المرضع صادرة من منظمة الصحة العالمية ومنظمة العمل الدولي





صقات لدعم الأم العاملة المرضع صادرة من منظمة الصحة العالمية ومنظمة العمل الدولي

الرضاعة الطبيعية في أماكن العمل  
فلنحقق ذلك

منظمة الصحة العالمية منظمة العمل الدولية

ما يمكنك لواضعي القوانين القيام به

ضمان السماح بإجازة أمومة مدفوعة الأجر لمدة ٤ أشهر على الأقل

مطالبة أرباب العمل بتوفير الأماكن والوقت المحدد للأمهات للقيام بسحب الحليب بالمضخة في العمل

الحيولة دون التمييز ضد النساء والأمهات في أماكن العمل

دعم الرضاعة الطبيعية في العمل يساعد على بناء مجتمع سليم

ملصقات لدعم الأم العاملة المرضع صادرة من منظمة الصحة العالمية ومنظمة العمل الدولية

