

Successful breastfeeding: a global intervention for a physiological process

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Summary. In our perinatal unit we applied the ten steps of WHO/UNICEF for Baby Friendly Hospital Initiative and evaluated the percentage of exclusive (EBF) or complementary breastfeeding (CBF), and of formula fed (FF) healthy full-term infants (HFI) at hospital discharge (HD). HFI performing EBF at HD were 85.3%, a quite high value. At the age of 3 mths EBF percentage ranged between 59-62.4%, and at 6 mths it decreased to 51.7-37.7%. Customer satisfaction questionnaire at HD ranked "good" to "very good" in 92.8%. Causes of breastfeeding reduction with time and comparison with previous and actual situation in Italy and civilized countries are discussed. (www.actabiomedica.it)

Key words: breastfeeding; Baby Friendly Hospital Initiative; infant

List of abbreviations:

EBF = exclusive breastfeeding
CBF = complementary breastfeeding
FF = formula fed
HFI = healthy full-term infants
HD = hospital discharge
E.L.H. = Eastern Liguria Hospital

Introduction

Main targets for successful breastfeeding are to start it as soon as possible after birth, and to maintain mother's milk as the only food until the baby is 6 mths' old.

Both targets can be reached giving the mother and her baby those facilities that allow a good bonding from the beginning: skin-to-skin contact immediately after birth, breast sucking possibly within the 1st hour of life, rooming-in, regular checks by educated personnel of suction and attachment, avoidance of any non-

justified supplement of formula milk, as well support after HD.

Mother's self-esteem is important and can be improved both by birthing classes and by support after HD.

We here report the results at short and medium term of our perinatal unit after having implemented all the above cited aspects.

Characteristics of our perinatal unit

Perinatal Unit at Eastern Liguria Hospital (E.L.H.) of La Spezia is the only birth center of the Province of La Spezia, which accounts for 220,000 inhabitants. The infants born in the area are about 1,500/year and a bit more than 1,000 are delivered at E.L.H., where a Level 3A Neonatal Intensive Care Unit is present.

Percourse

When we decided to start the program for breastfeeding promotion, we understood we had to change health service personnel's global approach to pregnant women and mothers.

The first step was to organize courses of communication for the whole staff to learn how to use correctly verbal and non-verbal communication.

The second step was to organize WHO/UNICEF courses on promotion of breastfeeding to manage all the intra- and out- of hospital health service personnel involved in the program, including the Family Pediatricians, was certified and delivered the same information.

Following steps were: to draft specific protocols for breastfeeding, to implement rooming-in, to eliminate bottles and pacifiers, to introduce new topics in the birthing classes.

A last step was to open a clinic to support breastfeeding in the District 19, i.e. a sub-area of the Province (in fact it is divided in 3 sub-areas named: District 17, 18 and 19).

Patients and methods

We performed a perspective analysis of data of breastfeeding at HD to monitor the percentage of EBF, CBF, and FF infants.

Patients eligible for evaluation of breastfeeding at HD were all the HFI born at our perinatal unit and discharged from the hospital between 48-96 hrs of life without any kind of early neonatal problem from 1st Jan to 31st Dec 2014.

A questionnaire was delivered to the mothers before HD to evaluate their level of satisfaction about their perception of being taken in charge, and educated about breastfeeding and care of the infant. Besides they were asked their opinion about the comfort of the room relatively to the practices of breastfeeding and care of the neonate. The scoring system was 1 to 6, indicating 1 as the worst and 6 as the best.

Later, to evaluate how many infants were still breastfed at 3 and 6 mths, we retrospectively analyzed the infants' diet by checking data at 1st and 2nd vaccination deposited at the family counselling of Districts 18

and 19. These data included also babies born in other centers. Records were not complete for District 17 and therefore they were not taken into account for analysis.

Results (Table 1)

HFI eligible for analysis at HD were N° 719/1006 live-births.

At hospital discharge

The percentage of EBF babies was 85.3% vs. 10.9% of CBF infants, and 3.2% of FF neonates.

At 1st vaccination (about 3 mths)

District 18: records were available for N° 586/702 vaccinated infants (83.5%). Percentage of EBF infants was 62.4%, that of CBF patients was 18.4%, while FF infants increased to 19.1%.

District 19: information was available for N° 322/322 vaccinated infants (100%). Percentage of EBF infants was 59%, that of CBF was 16.1%, while FF infants increased to 24.8%.

At 2nd vaccination (about 6 mths)

District 18: data was available for N° 597/634 vaccinated infants (94.2%). Percentage of EBF infants was 37.7% against 17.9% of CBF, and 44.4% of FF cases.

District 19: records were available for N° 321/321 vaccinated infants (100%). Percentage of EBF patients was 51.7% vs. 19.9% of CBF and 28.3% of FF cases.

Customer satisfaction questionnaire

N° 623 questionnaires were fulfilled. The great majority (92.8 %) of questionnaires scored "4" to "6", with prevalence of "6". Scores "1" to "3" were 6.8%.

Discussion

Many factors are involved in breastfeeding: personal motivation, health personnel education and communication, hospital design (1-5).

Table 1. Percentage of exclusive breastfeeding (EBF), complementary breastfeeding (CBF) and formula fed (FF) infants at hospital discharge, at 3 and 6 mths in the province of La Spezia divided by District (Distr) 18 and 19, compared with the Italian, European and overseas countries percentages. N/A = not available

	Exclusive breastfeeding						Complementary breastfeeding						Formula FED			
	Hospital			6 mths			Hospital			6 mths			Hospital		3 mths	
	Discharge	Distr 18	Distr 19	Distr 18	Distr 19	Distr 19	Discharge	Distr 18	Distr 19	Distr 18	Distr 19	Distr 19	Discharge	Distr 18	Distr 19	Distr 19
La Spezia	85.3	60.7	59	44.7	37.7	44.7	10.9	17.3	16.1	18.9	19.9	3.2	22.0	19.1	24.8	28.3
	62.4						51.7	18.4		17.9						
Italy 2014 (a)	76.2	49.8		24.6		24.6	16.7	22.9		31.1		6.1	27.3			44.3
France (f)	74	10		12.5		12.5	N/A	18		12.5		26	72			77
	(EBF+CBF)															
UK (l)	65	7		0		0	10	17		25		25	76			75
Ireland (i)	62	18		3		3	12	36		9		26	46			88
Denmark (e)	99	48		N/A		N/A	N/A	N/A		N/A		1	N/A			N/A
	(EBF+CBF)															
Norway (b)	92	64		8		8	6	18		72		2	18			20
Sweden (c,d)	84	53		10		10	12	15		54		4	32			36
USA (m)	52	36		16		16	22	22		28		26	42			56
Canada (h)	90	52		15		15	N/A	16		39		10	32			46
	(EBF+CBF)															
Australia (g)	80	56		14		14	8	18		42		12	26			44

Legend:

a. Tavolo Tecnico Operativo Interdisciplinare sulla Promozione dell'Allattamento al Seno – Allattamento al seno nelle strutture sanitarie in Italia. Report sulla survey nazionale 2014. Ministero della Salute, December 2014; b. Helseidrettsrådet – Rapport: Spedkøst 6 måneder 2008; c. Centre for Epidemiology at the National Board of Health and Welfare. Official Statistics of Sweden – Amning av barn födda 2004; d. Centre for Epidemiology at the National Board of Health and Welfare. Official Statistics of Sweden – Amning och föräldrars rökvanor – Barn födda 2009; e. Newcomb C – Breastfeeding and mothering in Denmark. New Beginnings 2009; 29:56-9; f. Institut de veille sanitaire (InVS) – Durée de l'allaitement maternel en France (Épifane 2012-2013); g. Australian Institute of Family Studies (AIFS) – Growing up in Australia. The longitudinal study of Australian children Annual report 2006-2007. 2008; h. Chalmers B, Levitt C, Heaman M, O'Brien B, Sauve R, Kaczorowski J; Maternity Experiences Study Group of the Canadian Perinatal Surveillance System, Public Health Agency of Canada – Breastfeeding rates and hospital breastfeeding practices in Canada. A national survey of women. Birth 2009;36:122-32; i. Health Service Executive – The national infant feeding survey. Ireland 2008; l. NHS Infant Feeding Survey 2010. Early results; m. CDC National Immunization Survey – Breastfeeding among U.S. children born 2000-2008

In our perinatal unit we applied the ten steps of WHO/UNICEF for Baby Friendly Hospital Initiative (5) and evaluated the percentage of EBF, CBF and FF at HD on HFI. The percentage of HFI that were EBF at HD was 85.3%, a quite high value. Unfortunately objective data on the percentage of EBF infants at HD before the onset of the program for supporting breastfeeding were not available, but from an Istat survey on breastfeeding in Italy in the period 2004–2005, in the North-West area the EBF infants were only 64.4% (6).

Subsequently we evaluated the impact of our practices on the same parameters after 3 and 6 mths. Even if the patients evaluated at 3 and 6 mths are not completely superimposable to those at HD because these cohorts contain some patients born at other centers, however the approach to breastfeeding support after HD was the same, so they can be analyzed together.

At the age of 3 mths a percentage of EBF infants between 59–62.4% was still present. This data is expected, consistent with data from Italian survey of 2014 (7), and well greater than the 17.2% recorded in Italy by Istat a decade before in the same area (6).

In any case the sum of EBF + CBF makes a total of about 80%, that is a relevant percentage of breastfeeding at 3 mths, comparable to that of Scandinavian countries that are deemed the best performers in the developed world (8).

At 6 mths the percentage of EBF infants was substantially reduced at District 18 (–39.6% vs. 3 mths), while at District 19 this decrease was much more limited (–13.5% vs. 3 mths). Besides at District 19 the number of CBF babies increased vs. 3 mths, while in District 18 it was further on reduced, meaning a loss of breastfeeding mother in this last District. Nonetheless the mean total value of EBF + CBF in La Spezia at 6 mths was 60.2%, a value a heartbeat away from that of Scandinavian countries. In the same area in Italy the mean percentage of EBF + CBF was 17.8% in 2004–2005 (6) improving to 55.7% in 2014 (7).

Why such a difference in EBF between the two Districts at 6 mths? One possible explanation is that in District 19 a clinic for breastfeeding support was activated in the family counselling together with other services as post-natal birthing classes, groups of lactating mothers (peer-to-peer or group counsellors),

courses of infant massage, and the support given by a team of psychologists.

We retain the future opening of a clinic for breastfeeding support both in District 18 and 17, implemented with the other activities present at District 19, will allow to increase homogeneously EBF at 6 mths all over the province.

If we compare our perinatal unit's results with the figures reported by a 2014 Italian survey on breastfeeding percentage in several regions (no data is reported from our region, Liguria) they are ranked within the first five positions at HD, while at 3 mths both Districts are at the top level and at 6 mths our figures almost doubles the mean results of the best centers (6) (Table 1). Even if our figures look very good, however data in Italy is still scarce, not uniform in the same area both as percentage and as method of retrieval, and collection not yet supported by a national plan that rules it.

When compared to European and overseas developed countries, our results on EBF were better than those reported in the Scandinavian area, and far and away better than those of France, UK and Ireland, in particular when one examines the duration of EBF or also of CBF that in these countries is very short (8) (Table 1). However international data collection is incomplete and not uniform, too.

Problems limiting prolongation of breastfeeding to 6 mths are: reduction in the quantity of milk produced, scarce motivation, errors in breastfeeding, scarce support to the breastfeeding mother, limited economic resources allocated by society for nursing mothers and their need of going back to work; high percentage of working women; number of pregnant women who attended an ante-natal birthing class; young age of mothers and a lower level of education; smoking habit. Fatigue tied to breastfeeding is estimated at about 22% and concerns about milk supply quotes 21% (9,10). Many of these factors can be faced with supporting programmes for breastfeeding mothers after release from the hospital while others clearly require political willingness.

A second point of our survey was to answer the question “Were mothers satisfied?”. Globally the results from questionnaires were in the range of “good” to “very good”, and especially, given that our hospital

is an old building, they were better than expected. The answers support the idea that a good approach to the patient allowed a non influential effect of the building on the final judgement of the mothers.

In conclusion, infants and mothers benefit from breastfeeding. In the actual situation in which the developed populations do not need mother's milk to survive, the development of a physiologic function as lactation requires a global approach to transform an instinctive phenomenon into a conscious situation in which educational and motivational factors are extremely important and need to be strongly supported. Our experience confirms that to apply the WHO/UNICEF policy gives the mothers the facilities for a successful and prolonged breastfeeding - opportunity for a better growth for infants - and, last but not least, satisfies customer's needs.

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