

Evaluation of the implantation of breastfeeding practices incorporated in the standard of obstetric care based on a survey conducted amongst health care professionals of obstetric hospitals

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SUMMARY

Introduction. The introduction of recommendations and the update of the standard of obstetric care, which has been in force since January 1 2019, also concern patient rights to breastfeeding counselling. As one of the important aspects of care for the mother and neonate, counselling should be conducted by health care professionals: doctors, nurses and midwives. In Poland, hospitals are divided based on their referral levels into three types. The new medical standards improve obstetric care in the area of breastfeeding.

Aim. The evaluation of the standard of obstetric care of September 20 2012 regarding breastfeeding practices based on a survey conducted amongst health care professionals employed at obstetrics and neonatology wards.

Material and methods. The study involved 767 health care professionals from 42 Polish hospitals. It was a part of the project called: "Evaluation of breastfeeding practices incorporated in the standard of obstetric care in force from September 20 2012 to August 16 2018." Hospitals were divided into 3 groups based on the degree to which the standard of care was implemented. The study was conducted using the CAWI method, with a link to the survey. IBM SPSS Statistics v. 19 was used for statistical calculations.

Results. The profile of the respondents: 46% midwives, 27% nurses, 23% pediatricians and neonatologists, 7% gynecologists. The "skin-to-skin" contact directly after delivery was confirmed by 98% of the respondents. Assistance in latching the neonate on the breast in the delivery room was declared by a vast majority of health care professionals (98%). Information about benefits of breastfeeding was provided by 99% of the respondents. Employees of hospitals with a *Child-Friendly Hospital* title (group A) most often provided information about the choice of the first food (expressed mother's milk) – 93% vs 85% (group C) vs 83% (group B).

Conclusions. The level of knowledge and awareness of health care practitioners regarding the guidelines for breastfeeding counselling is high. Midwives most contribute to the implementation of this standard of care from amongst other health care practitioners. The contribution of pediatricians and neonatologists in procedures promoting natural feeding in neonates and infants is high. Health care professionals employed in hospitals with the *Child-Friendly Hospital* title most often declare the implementation of the standard of obstetric care. All health care professionals, irrespective of the hospital category, do inform mothers about benefits of breastfeeding.

Key words: lactation; guidelines; standard of obstetric care; medical staff

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INTRODUCTION

Breastfeeding is an optimal form of neonate and infant feeding. Human milk is species-specific food with variable composition that depends on individual feedings, time of the day and phase of lactation, thereby providing the child with all nutrients, immune substances, minerals and vitamins that are needed for their extrauterine development [1]. Breastfeeding is a natural right of a child [2]. The World Health Organization recommends breastfeeding as the only type of feeding for the first 6 months of life [3]. Research has shown that the duration of natural feeding may be prolonged using appropriate practices of promoting natural feeding by health care professionals during pregnancy and after delivery. Health promotion, which also incorporates breastfeeding and feeding with human milk, is the fundamental aspect of health-related programs in Europe and in the whole world [4,5].

The Convention on the Rights of the Child adopted on November 20 1989 by the United Nations General Assembly (and ratified by 191 countries, including Poland in 1991) ensured that all children have the right to appropriate feeding, including breastfeeding, and that parents and guardians have the right to receive information and support in using the knowledge on benefits of breastfeeding. In Poland, the ratification of the international initiative, called *Innocenti Declaration*, yielded the implementation of the program called *10 Steps to Successful Breastfeeding*, which is the basis for making breastfeeding more widespread [6,7]. In the

Resolution of the Minister of Health and Social Care of December 22 1998, hospitals in Poland were divided based on their referral levels, which significantly facilitated and systematized patient care. Hospitals were divided into three groups: primary hospitals, i.e. hospitals that provide health care services in four basic medical specialties, secondary hospitals, i.e. provincial hospitals, and tertiary hospitals, i.e. teaching facilities and research and development centers of the Ministry of Health [8].

The responsibilities associated with care for the mother and neonate, including breastfeeding counselling, are fulfilled by professionals qualified for practicing the profession of a physician, nurse or midwife [9].

A Polish population-based study has shown low indices of natural feeding. A number of system-based actions have been planned with the aim to improve breastfeeding education, and they have resulted in granting the title of a *Child-Friendly Hospital* to 100 facilities. Moreover, specialist training programs with the aim to perfect and supplement the knowledge about breastfeeding and lactation have also been developed [10]. The implementation of the program of early lactation stimulation in tertiary neonatology and obstetrics units has improved education of health care professionals and provided support for mothers and their families in Polish hospitals [11].

Since 1997, no general Polish epidemiological studies on the manner of child nutrition, including breastfeeding, have been published. Local publications, representing regional or provincial data, reveal great diversity. After delivery, 97.7% of mothers begin breastfeeding, but only 50% of children receive natural milk as the only food. In the 6th month of life, 68.6% of infants are breast-fed, but only 3.7% receive breast milk as the only source of food.

In April 2011, the next stage of propagating breastfeeding began in Poland. This was a result of the Resolution of the Minister of Health on the standards of management and medical procedures associated with obstetric services provided to women during physiological pregnancy, physiological labor and puerperium and with care for a neonate. Previously, the initiative called *Child-Friendly Hospital* was a result of a good will of health care professionals and was addressed only to interested facilities. At present, thanks to the *10 Steps to Successful Breastfeeding* program, with the specified standard of obstetric care, all obstetric hospitals are obliged to follow the initiative of a child-frien-

dly hospital, which entails actions to protect, promote and support breastfeeding [12].

AIM

The aim of the study was to evaluate the implementation of the standard of obstetric care as specified in the Resolution of the Minister of Health of September 20 2012 concerning breastfeeding practices based on a survey conducted amongst health care professionals employed at obstetrics and neonatology wards (midwives, nurses and doctors).

MATERIAL AND METHODS

Of over 400 obstetrics and neonatology hospitals in Poland, 100 were randomly selected and invited to participate in the project called: *“Evaluation of breastfeeding practices as part of the current standard of obstetric care.”* Consent of directors and coordinators of 44 wards as well as approval of the Ethics Committee of the Medical University of Wrocław were obtained. Ultimately, 42 hospitals were included in the study. The research project was approved by the Nutricia Foundation, the Research Council of the Foundation (PR 10/2013Z) and the Ethics Committee of the Medical University of Wrocław (No 874/2012, 577/2013, 142/2014). The hospitals were divided based on the degree to which the standard of care was implemented into 3 groups: A: hospitals with the *Child-Friendly Hospital* title, where the preparation training for the implementation of the standard of obstetric care has been conducted; B: hospitals in which the new principles of obstetric-neonatalogical care were being implemented after a training regarding the new standard of care; and C: hospitals where no trainings have been performed and which did not have the title of a *Child-Friendly Hospital*.

The hospitals were examined by a market research company – TNS (Warsaw). The study was conducted from March 31 to May 20 2014 using the CAWI method, with a link to the survey. IBM SPSS Statistics v. 19 was used for statistical calculations.

For the purposes of the evaluation of the degree to which the standard of obstetric care (Resolution of the Ministry of Health of 20 September 2012) has been implemented, a survey was constructed with questions about the following breastfeeding procedures:

1. Ensuring “skin-to-skin” contact directly after delivery and continuing it for at least 2 hours.

2. Providing the mother with comprehensive information about benefits and methods of breastfeeding.
3. Instructing the woman how to latch and helping her to begin breastfeeding.
4. Indicating the food of the first choice for supplementary feeding of the neonate. Not giving the neonate water or a glucose solution to drink and not giving him or her infant formula unless such procedures are indicated medically.
5. Enabling the mother to stay with her child at the ward all the time.

RESULTS

Most surveys (69%) (n=533) were returned by midwives and nurses: midwives accounted for 46% (n=354) while nurses constituted 27% (n=179) of the respondents. Pediatricians and neonatologists constituted 23% (n=180) of the respondents, while gynecologists completed only 7% (n=54) of the returned surveys. The profile of health care professionals varied across the different types of hospitals. Most responses from midwives were received from hospitals B (facilities after a breastfeeding training) – 53%, compared with 41% received from

hospitals C (facilities without any training and title). Moreover, hospitals C returned most surveys from nurses (25%); for comparison, group B – 14%. Pediatricians and neonatologists from hospitals B and C were the most numerous respondents in their group, while the greatest number of responses from obstetricians (11%) was returned from hospitals A (a significant difference from the remaining hospitals B and C) (Tab. 1).

Considering work experience, the greatest number of responses was obtained from professionals working for more than 21 years (58%). This value is similar in all three hospitals. The percentage of young professionals, with work experience of up to 5 years, was the highest in hospitals B (23%) and hospitals C (16%); in both cases, the values are significant when compared to that obtained for hospitals A. The results represent the demographic situation observed in the past years in Polish hospitals, where most professionals, particularly midwives and nurses, are those with over 20-year work experience (Tab. 1). Table 2. presents the number of the responses from health care professionals depending on the hospital category. The greatest number of responses arrived from hospitals with the *Child-Friendly Hospital* title (Tab. 2).

Tab. 1. Professional profile and work experience of the respondents

	Total (N=767)	[A] Child-Friendly Hospitals (N=379)	[B] Hospitals after breastfeeding training (N=188)	[C] Hospitals with no training and no <i>Child- Friendly Hospital</i> title (N=200)
PROFESSION				
Pediatrician/Neonatologist	23% (n=180)	16%(n=61)	33%(n=62)	29%(n=58)
Obstetrician/gynecologist	7% (n=54)	11%(n=42)	2%(n=4)	6%(n=12)
Midwife	46% (n=353)	47%(n=178)	51%(n=96)	41%(n=82)
Nurse	23% (n=176)	27%(n=102)	14%(n=26)	25%(n=50)
WORK EXPERIENCE				
1-5 years	14% (n=109)	9%(n=34)	23%(n=43)	16%(n=32)
6-10 years	8% (n=65)	7%(n=27)	8%(n=15)	11%(n=22)
11-15 years	6% (n=45)	5%(n=19)	5%(n=9)	8%(n=16)
16-20 years	14% (n=102)	17%(n=64)	11%(n=21)	10%(n=20)
Over 21 years	58% (n=447)	61%(n=231)	53%(n=100)	57%(n=114)

A, B, C – statistically significant differences at 95% confidence interval

Tab. 2. The number of responses from health care professional from different hospitals

	Number of hospitals	Number of responses from health care professionals
Hospitals with the <i>Child-Friendly Hospital</i> title	18 (42,85%)	379 (49,42%)
Hospitals after breastfeeding training	11 (26,19%)	188 (24,51%)
Hospitals with no training	13 (30,96%)	200 (26,07%)
Total	42 (100,0%)	767 (100,0%)

Implementation of the “skin-to-skin” contact

Providing the opportunity for “skin-to-skin” contact directly after delivery was confirmed by 98% of the professionals. When comparing hospital categories, it is observed that confirmatory responses from hospitals B amounted to 94%, which is a significant difference compared to hospitals A and C. The “skin-to-skin” contact lasting at least 2 hours, as recommended in the standard of care, was confirmed by 91% of professionals from hospitals A (a significant difference compared to the results obtained from hospitals B and C). When comparing responses in hospitals of different referral levels, the “skin-to-skin” contact of at least 2 hours was confirmed by 85% of the professionals from primary and secondary care hospitals, while the lowest number of confirmatory responses (71%) arrived from tertiary hospitals (a significant difference).

Evaluation of the correctness of the “skin-to-skin” contact

The proper mother–neonate contact directly after birth consists in placing the naked neonate on the naked mother’s breast (skin-to-skin contact, SSC). The mother and child may be

covered with a previously heated towel or blanket. This is when the neonate becomes colonized by maternal bacteria and the first feeding is possible. Apart from providing heat, SSC brings also mother–neonate emotional benefits and reduces neonatal postnatal stress. According to global recommendations, SSC should last at least two hours after birth [13].

The evaluation of the correctness of implementing this recommendation was based on the assessment of a photograph included in the survey, showing an example of incorrect skin-to-skin contact (Fig. 1). In the general group of the respondents, 97% of answers were correct, and the results were similar across all hospital categories and referral levels (Fig. 2).

Evaluation of providing direct help (right after birth at the delivery room) to mothers in latching on the breast

Assistance in latching on the breast in the delivery room was declared by a vast majority of health care professionals: 98% of all the respondents. The greatest percentage of these declarations returned from hospitals A – 99% (a statistically significant difference compared with 97% in hospitals C and 94% in hospitals B). There were no significant differences between hospitals of different referral levels: the confirmative responses amounted to 98% in all hospitals (Fig. 2).

Evaluation of the correctness of breastfeeding

Proper attachment of the neonate to the breast is characterized by widely open mouth (the angle between the upper and lower lip: at least 130°), a considerable part of the areola is in the child’s mouth, the tip of the nose and the chin are rested on the breast, the lower and upper lips are flanged out, the cheeks are filled and



Fig. 1. Incorrect skin-to-skin contact (Photo: Own materials: Barbara Królak-Olejniak)



Fig. 2. Distribution of responses of health care professionals about the evaluation of the skin-to-skin contact relative to the hospital category

round (Fig. 3) [14]. The distribution of the responses is shown in Figures 4 and 5.

Evaluation of providing the mother with information about benefits of breastfeeding

The medical professionals of all hospitals provided a confirmative answer (99%) about conveying information about benefits of breastfeeding.



Fig. 3. Correct latch position of a neonate (Photo: Own materials: Barbara Królak-Olejek)

Evaluation of the level of knowledge with regard to supplementary food of the first choice for the neonate

As the supplementary food of the first choice, the hospital staff usually recommend expressed mother's milk. This response was the most common in *Child-Friendly Hospitals* (Group A): 93%, compared with 85% for hospitals C and 83% for hospitals B. Infant formula as the preferred supplementary food was most often indicated in hospitals C (12%) and B (10%); the difference was significant in relation to hospitals A. When comparing the responses from hospitals depending on the referral level, there were no significant differences.

DISCUSSION

Positive models and attitudes concerning infant feeding significantly affect health in adulthood. Various data from the world's literature present considerable relationships between breastfeeding counselling by the medical staff and the initiation of lactation and its continuation after

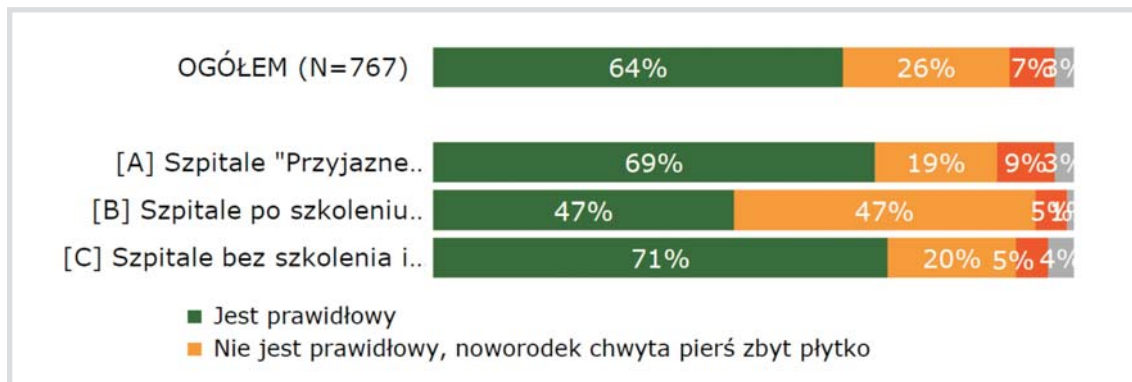


Fig. 4. Distribution of responses of health care professionals regarding the evaluation of the correctness of breastfeeding relative to the hospital category

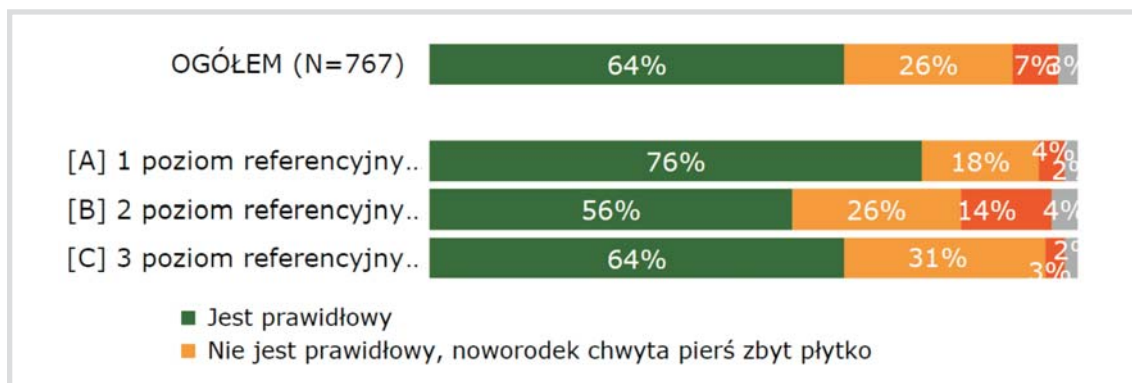


Fig. 5. Distribution of responses of health care professionals regarding the evaluation of the correctness of breastfeeding relative to the hospital referral level

discharge. No intervention within professional breastfeeding counselling by medical practitioners (midwives, general practitioners, pediatricians, gynecologists), who are familiar with the updated recommendations regarding infant feeding, leads to low indices of breastfeeding continuation after delivery. A survey conducted among women from the same hospitals was the first study concerning breastfeeding and infant nutrition in the first 12 months after birth [12,15].

Based on both mothers' declarations and on the responses of health care professionals, the level of implementation of the standard of obstetric care was the highest in hospitals with the *Child-Friendly Hospital* title. The results of surveys do not seem to be surprising as health care professionals of these facilities should be implementing the *10 Steps to Successful Breastfeeding* program, in accordance with their hospital's title. Only 25% of Polish hospitals have been awarded this title, and only few have been re-awarded and still hold it [16].

As for the remaining hospitals (those after breastfeeding training and without training or *Child-Friendly Hospital* title), the level of standard implementation is lower. It has been observed that health care professionals of all types of hospitals evaluate the level of standard implementation as high. Health care professionals of all the examined hospitals more often declared the implementation of individual recommendations.

Professionals more often than mothers declare that they provide mothers with information about benefits of breastfeeding as well as about available forms of counselling and breastfeeding support [12,16]. The recommended counselling and breastfeeding support, as specified in the latest standard of obstetric care valid from January 1 2019, should significantly improve the awareness of the society in terms of infant feeding and health-related consequences of premature termination of breastfeeding [17].

CONCLUSIONS

1. The level of knowledge and awareness of health care practitioners concerning the guidelines for breastfeeding counselling is high. Midwives most contribute to the implementation of this standard of care from amongst other health care practitioners. The contribution of pediatricians and neonatologists in procedures promoting natural feeding in neonates and infants is high.

2. Health care professionals employed in hospitals with the *Child-Friendly Hospital* title most often declare the implementation of the standards of obstetric care.
3. All health care professionals, irrespective of the hospital category, do inform mothers about benefits of breastfeeding.

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