Organization of maternity wards and the structure of working time and mother satisfaction with care

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Abstract

The rooming-in system is the practice of placing the baby in the same hospital room as the mother, where care is provided by a single therapeutic team. In Poland, the organization of work in the rooming-in system is of twofold character. These are either separate wards taking care of the mother and her baby, functioning as one maternity ward, or it consists of two organizational units – obstetric and neonatal wards. These wards have separate obstetric-medical teams and own managing staff. An attempt was undertaken to investigate which of the organizational forms provides more effective care with relation to the structure of the working time of midwives and mother satisfaction.

The study was conducted at the end of 2005 and the beginning of 2013 in obstetric and neonatal wards and in maternity wards working in the rooming-in system at 5 hospitals in the Lublin Region. Two groups may be distinguished in the population in the study. The first group were midwives working in the above-

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mentioned wards, while the second group were patients in these wards, who on the last day of hospitalization evaluated care provided for them by midwives by means of a standardised tool. The study covered a total number of 500 mothers. In order to determine the structure of the usage of working time by midwives, the method of working time measurement with the technique of snap-shot observation was applied. The level of mother satisfaction with care was evaluated by means of a standardised EUROPEP questionnaire.
It was observed that the way of organizing maternity wards did not exert any effect on the percentage of individual fractions in the structure of working time of midwives. The organization of maternity wards in the rooming-in system as one organizational structure turned out to be the optimum solution considering mother satisfaction.

Key words:

rooming-in system, obstetric care, midwife's duties, working time, patient satisfaction

Introduction

The rooming-in system is the practice of placing the baby in the same hospital room as the mother, where care is provided by a single therapeutic team. Under the supervision of a midwife or with her help, the mother takes care of an infant with respect to nursing activities and adequate breastfeeding. In this context, the task of medical staff is training mothers in an active attitude in the care of their own babies, and hospitalization is to prepare a woman for the independent care of a baby at home [1,5,10,11,12,13]. In Polish hospitals, the organization of work in the rooming-in system is manifested by the functioning of the following units:

- two separate organizational units – an obstetric ward, where after delivery women are placed together with their newborn babies, and a neonatal ward, where infants requiring intensive observation and/or treatment are placed; in the obstetric ward (and in the neonatal ward) a separate medical staff is employed – midwives, physicians taking care of mothers (and infants); these two wards cooperate with one another, and a separate managing staff is engaged in the functioning of both of them;
- one organizational unit – a maternity ward, where mothers stay together with babies, and the same therapeutic team managed by the same staff takes care of them.

Considering the trend towards the provision of high quality services, the period of care of mother and child should be adequately used by applying human and material resources. Hence, the following research question was posed: 'Which of the forms of organization of work in maternity wards provides more effective care with respect to the structure of working time of midwives and mother satisfaction?'

Material and methods

The study was conducted at the end of 2003 and the beginning of 2004 in obstetric and neonatal wards and in maternity wards working in the rooming-in system at 5 hospitals in the Lublin Region. Two groups may be distinguished among the population in the study. The first group were midwives working in the above-mentioned wards. The work of midwives was observed in order to determine the structure of their working time. The second group were patients of these wards, who on the last day of hospitalization evaluated care provided for them by midwives by means of a standardised tool. The study covered a total number of 500 mothers.

The method of measurement of working time was applied to determine the degree of the use of working time by midwives employed in obstetric, neonatal and maternity wards. The research technique was day-long observation of the work day, and Tippet's snap-shot observation. The basic technique was snap-shot observation, which consists in making, at randomly selected moments, a number of observa-

tions specified based on mathematical formula [9]. A total number of 1,800 snap-shot observations were made, 900 in the obstetric and neonatal and maternity wards each. 1,493 snap-shot observations were registered during day duties, and 307 – during night duties. This provided the representative character of the studies, as well as the qualification of 293 activities performed by midwives registered into proper fractions: direct nursing, indirect nursing, coordination and current organization of work and off-duty activities.

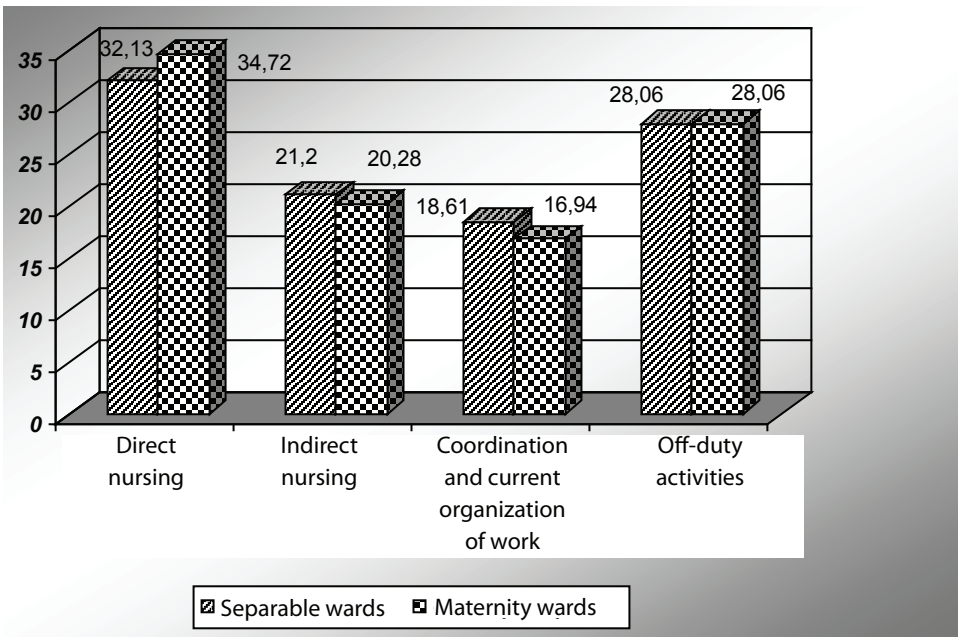
The level of mother satisfaction with care was evaluated by means of a standardised EUROPEP questionnaire consisting of 5 modules of care, with 23 specified elements of care evaluated and the Likert Scale. The source version of this questionnaire was designed for the patients of family physicians [2,3,10]; therefore, selected detailed elements of care have been modified to adjust them to the specificity of tasks of a midwife working in a rooming-in system. A division into 5 modules of care has been preserved: A – Relations midwife-patient and her family; B – Medical-technical care; C – Informing and supporting the mother; D – Availability and accessibility of a midwife; and E – Organization of medical services, and 23 detailed elements of care were grouped within these modules. The patients evaluated each element of care according to the Likert Scale from 1-5, i.e. 1 – 'I am very dissatisfied' to 5 – 'I am very satisfied'.

The results obtained were subject to descriptive and statistical analyses. The significance of the differences between the traits examined was investigated by χ^2 test. In order to compare more than 2 groups, a one-way analysis of variance was used, after the previous testing of the uniformity of variance by the Fischer test. A 5% level of significance was adopted, and associated with it the level of significance $p<0.05$.

Results

The analysis of the material collected started from the determination of basic fractions in the structure of working time of midwives: I – direct nursing; II – indirect nursing; III – coordination and current organization of working time; IV – off-duty activities.

Midwives in separable obstetric and neonatal wards devoted 32.13% of working time to direct nursing, while those in maternity wards – 34.72%; and similarly, to indirect nursing – 21.20% and 20.28% respectively; activities associated with coordination and current organization of working time – 18.61% and 16.94% respectively; while the percentage of off-duty activities in separable wards (obstetric and neonatal) and maternity wards was the same – 28.06%. The differences in the percentage contribution in the structure of working time between the wards were not significant statistically (p=0.36) (Fig. 1).



Level of significance of differences $\chi^2=1.72$; $p<0.63$

Fig. 1.
Percentage of individual fractions in the structure of working time of midwives and the way of organization of wards

Subsequently, an attempt was undertaken to investigate whether the way of organization of the wards exerts an effect on the level of mother satisfaction with care (Table 1).

Mothers hospitalized in maternity wards evaluated care in more positive terms (men evaluation 3.98) than those in obstetric wards (mean evaluation 3.62). The data obtained were statistically significant ($p<0.000001$. In addition, within the individual modules of care, a difference was observed in the evaluation of each of them, with the following level of significance for the modules: Module A ($p=0.0005$; Module B ($p=0.003$); Module C ($p=0.0004$; Module D ($p=0.0001$); Module E ($p=0.000001$, in favour of mothers in maternity wards.

Discussion

While approaching the mother and newborn baby as an 'inseparable unity' it seems right to integrate the staff teams in obstetric and neonatal wards. From the aspect of the organization of work, a rational cooperation leads to a better usage of working time and enables a more specialised surveillance. Hence, the realization of the care of mother and infant by the same midwife should facilitate the functioning of the rooming-in system. Although the results obtained showed that the way of organization of wards had no significant effect on the structure of working time ($p<0.63$), mothers in maternity wards were more satisfied with care than those in obstetric wards ($p<0.000001$). This may be associated with the fact that in the case of separable wards (obstetric and neonatal) midwives from obstetric ward do not feel competent in providing guidelines for the mother, or performing other activities connected with care of an infant, and similarly of the mother. This is justifiable to the degree that in the evaluation of Module C of care – Informing and supporting the mother, significant differences were observed in favour of maternity wards ($p=0.0004$). Moreover, there may occur a situation in which the mother cannot differentiate which midwife is taking care of her and her baby. This is alarming, as the identification of the medical staff is a patient's right which should be respected [4]. Although Kędzia et al. [6] and Iwanowicz-Palus [4] reported that the knowledge of medical staff and recipients of services provided by them concerning patient rights is incomplete and non-uniform, and its dissemination takes place with a poor contribution from medical staff, but in efforts to provide the highest possible level of care this should in no way be a justification.

While analysing the effectiveness of care from the aspect of patient satisfaction, it seems right to organize maternity wards as one organizational unit, where care is provided by a uniform therapeutic team managed by the same managing staff. The results of studies by Koper et al. [7] concerning office organizational bonds indicate that nurses and midwives are often subject to a double subordination which, in turn, causes conflicts and disorganizes work. Therefore, it should also be considered that the functioning of obstetric and neonatal wards as two separate organizational units is associated with giving orders to the employees who do not identify themselves with a given ward, but are to cooperate with it. According to Stoner et al. [14], the differences in attitudes and style of work occurring in a natural way among members of various organizational units may hinder the coordination of their activities. Considering the above from the aspect of obstetric care, the consequence of this situation may be the lack of complexity and continuity of care of a woman and her family [5,9]. This may be another point in favour of the organization of integrated maternity wards contributing to the provision of a higher quality of care provided.

A relatively important problem which also cannot be omitted is the assessment of the costs of care, which are higher in the case of two organizational units [8].

Conclusions

1. The way of organization of wards functioning in the rooming-in system had no significant effect on the contribution of individual fractions in the structure of working time of midwives ($p<0.63$).

Table 1. Evaluation of care and the way of organization of wards

LNo.	Evaluation of care in individual modules	Way of organization of wards	
		Obstetric wards	Maternity wards
		Mean evaluation	Mean evaluation
1.	A – Relations midwife-patient and her family **Mean evaluation – 3.51**	3.38	3.69
2.	B – Medical-technical care **Mean evaluation – 4.20**	4.11	4.33
3.	C – Informing and supporting the mother **Mean evaluation – 3.52**	3.39	3.71
4.	D – Availability and accessibility of care **Mean evaluation – 3.86**	3.72	4.07
5.	E – Organization of medical services **Mean evaluation – 3.84**	3.65	4.14
General evaluation		**3.62**	**3.98**

Level of significance of differences **(t= –5.23; p<0.000001)** in the general evaluation of care between mothers hospitalized in the maternity wards and separable wards
Level of significance of differences **(t= –3.50; p=0.0005)** in the evaluation of care in **Module A – Relation midwife-patient and her family**, between mothers hospitalized in the maternity and separable wards
Level of significznce of the differences **(t= –2.91; p=0.003)** in evaluation of care in **Module B – Medical--technical care**, between mothers hospitalized the maternity and separable wards
Level of significance of the differences **(t= –3.52; p=0.0004)** in evaluation of care in **Module C – Informing and supporting the mother**, between mothers hospitalized in the maternity and separable wards
Level of significance of the differences **(t= –3.83; p=0.0001)** in evaluation of care in **Module D – Availability and accessibility of care**, between mothers hospitalized in the maternity and separable wards
Level of significance of the differences **(t= –6.68; p<0.000001)** in evaluation of care in **Module E – Organization of medical services**, between mothers hospitalized in the maternity and separable wards

2. Mothers in maternity wards were more satisfied with care than those in obstetric wards.
3. From the aspect of the effectiveness of care and the costs of its functioning, the organization of maternity wards proved significantly to be the optimum solution with reference to the evaluation of the level of mother satisfaction with care (p=0.000001).

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