

# PERFORMANCE OF THE NURSING TEAM WHEN USING MEOWS

*DESEMPENHO DA EQUIPE DE ENFERMAGEM FRENTE AO USO DO MEOWS*

*DESEMPEÑO DEL EQUIPO DE ENFERMERÍA AL UTILIZAR MEOWS*

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## ABSTRACT

This is an experience report presenting the performance of the nursing team when using the modified obstetric early warning system (MEOWS), a recommended tool for early detection of the risk of acute deterioration in obstetric patients. Report based on the “MEOWS workshop” with the multidisciplinary team aiming to promote their immersion in the topic of maternal mortality and clinical deterioration with obstetric patients. The team's cognitive and psychomotor knowledge was worked on, allowing the identification of flaws in the processes and their correction through discussion of the cases and the handling of the tool itself. The results of the postworkshop reaction evaluation bring the concepts “good” and “excellent”. Regarding performance, the team understood the purpose and applicability. Knowledge promotes more nursing attention and proactivity in actions. The manager's perspective is fundamental for the development of the team and the identification of assertive situational diagnosis.

**Keywords:** *Maternal Death; Nursing; Continuing Education; Health Management.*

## RESUMO

Trata-se de relato de experiência em que se apresenta o desempenho da equipe de enfermagem frente ao uso do sistema de alerta precoce obstétrico modificado (MEOWS), ferramenta recomendada para a detecção precoce do risco de deterioração aguda em pacientes obstétricos. Relato baseado na “Oficina do MEOWS” junto à equipe multiprofissional, visando promover sua imersão na temática sobre mortalidade materna e deterioração clínica com pacientes obstétricas. Foi trabalhado o conhecimento cognitivo e o psicomotor da equipe, permitindo identificar falhas nos processos e sua correção por meio de discussão dos casos e do próprio manuseio da ferramenta. Os resultados da avaliação de reação pós-oficina trazem os conceitos “bom” e “ótimo”. Quanto ao desempenho, observou-se compreensão pela equipe quanto à finalidade e aplicabilidade. O conhecimento promove mais atenção e proatividade da enfermagem nos acionamentos. O olhar do gestor é fundamental para o desenvolvimento da equipe e a identificação de diagnóstico situacional assertivo.

**Descritores:** *Morte Materna; Enfermagem; Educação Continuada; Gestão em Saúde.*

## RESUMEN

Este es un relato de experiencia que presenta el desempeño del equipo de enfermería al utilizar el sistema de alerta temprana obstétrica modificado (MEOWS), herramienta recomendada para la detección temprana del riesgo de deterioro agudo en pacientes obstétricas. Informe basado en el “taller MEOWS” con el equipo multidisciplinario con el objetivo de promover su inmersión en el tema de la mortalidad materna y el deterioro clínico de las pacientes obstétricas. Se trabajó el conocimiento cognitivo y psicomotor del equipo, permitiendo identificar fallas en los procesos y su corrección a través de la discusión de los casos y el manejo de la propia herramienta. Los resultados de la evaluación de la reacción post-taller arrojan los conceptos “bueno” y “excelente”. En cuanto al desempeño, el equipo entendió el propósito y la aplicabilidad. El conocimiento promueve una mayor atención de enfermería y proactividad en las acciones. La perspectiva del directivo es fundamental para el desarrollo del equipo y la identificación de diagnósticos situacionales asertivos.

**Descriptorios:** *Muerte materna; Enfermería; Educación Continua; Manejo de la Salud.*

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## INTRODUCTION

Maternal mortality is any death that occurs during a pregnancy or after forty-two days of its termination, regardless of the location or duration of pregnancy, due to any cause related to or aggravated during pregnancy, which may be from direct or indirect obstetric causes<sup>1</sup>. This fact is closely linked to the quality of care offered by health services, the profile of patients and the level of socioeconomic development in the region.

Maternal death is the rarest and most dramatic event in a chain of events that can affect any woman during the pregnancy-puerperal cycle. This chain of events begins when a woman has one of several life-threatening conditions (VACP). When not properly treated, it can evolve into life-threatening conditions, in which there is dysfunction or organ failure and which are defined based on clinical, laboratory or management criteria<sup>2</sup>.

In general, potentially life-threatening conditions (VAPH) can be summarized in three major groups, namely: hypertensive syndromes, hemorrhagic syndromes, and systemic disorders that include, among others, infection or sepsis and pulmonary edema<sup>3</sup>.

Maternal near miss (MMN) is currently defined by the World Health Organization (WHO) as a woman who almost died but survived severe complications during pregnancy, childbirth, or up to forty-two days after the end of pregnancy<sup>3</sup>. This shows us that, in addition to maternal mortality, there are a number of other pathologies that can lead to an unfavorable outcome and that the importance of the care team being prepared and aligned to carry out such identifications is configured as the great differential in maternal care.

Since the beginning of the care activities of the obstetrics service studied, the recommended tool called modified obstetric early warning system (MEOWS) has been used, whose main purpose is the early detection of the risk of acute deterioration of obstetric patients. At first, MEOWS was known as an international tool indicated for use in women in the pregnancy-puerperal cycle and that, depending on the reality of each country, MEOWS adherents make modifications to the scale as they deem most appropriate, making it possible to come across a variety of types of parameters, scores and intervention proposals.

Most obstetric patients are young, healthy and have a good response to pathological mechanisms, but the physiological changes in vital signs that occur during pregnancy may hinder the early recognition of clinical decompensation<sup>4</sup>. Considering this peculiarity, since determining the severity of the pregnant woman's condition can be challenging, the Ministry of Health (MS) launched in 2021 the manual of recommendations for the care of pregnant and postpartum women in the face of the Covid-19 pandemic, which brought, in an unprecedented way, the parameters and alerts recommended for use in Brazil. This recommendation serves as a fulcrum for health professionals to use it as a decision support tool.

As for the flow of action, the manual only provides the following: Women with two or more yellow warning signs or one or more red warning signs have an increased risk of unfavorable evolution and, therefore, deserve differentiated care<sup>2</sup>. However, in care practice, considering the numerous variabilities and situations that arise on a daily basis, it is necessary to provide a directing, didactic, safe and efficient flow.

In 2022, a clinical audit of medical records was carried out, which showed a compliance in nursing care records of 80.5%. That said, it was necessary to implement the "MEOWS Workshop", an active learning methodology in which the objective was to promote an immersion of the care team in the theme, involving maternal mortality and clinical deterioration of obstetric patients.

## **METHODS**

This is an Experience Report in which the performance of the nursing team in relation to the use of the MEOWS tool is presented. The experience was developed in a hospital unit in Ceará, which provides tertiary health care and is a reference for twenty municipalities that make up the Sertão Central Health Macro-region, from May to December 2023.

The experience report, from the methodological perspective, is a form of narrative, so that the author, when he narrates through writing, is expressing an event experienced; it is a knowledge that is transmitted with scientific support<sup>5</sup>.

The present report was constructed by the multidisciplinary structuring team of the "MEOWS Workshop", a permanent education strategy that aimed to respond to and guide the results brought by the situational diagnosis of the nursing team in the obstetrics sector carried out by the managers, through empirical observations, analysis of records and indicators.

The structuring multidisciplinary team was composed of managers, professionals from the care team of the obstetrics sector of the Hospital - territory of experience - and a permanent education analyst. The MEOWS tool, used in the obstetric service studied, is based on both international and national references, based on updated clinical protocols and guidelines.

The "MEOWS Workshop" aimed to promote an immersion of the care team in the theme involving maternal mortality and clinical deterioration with obstetric patients and was structured in three main stages: the Planning stage, the Workshop stage and the Evaluation stage.

In the first stage, entitled "Planning", the structuring team, after identifying some problems related to the conduction of the MEOWS tool in the obstetrics sector, regarding knowledge of the tool, purpose, activation times and autonomy of the nursing team, discussed and understood that the best way to conduct these challenges would be through a workshop.

The workshop is a strategy based on active learning methodologies, which works on the cognitive and psychomotor knowledge of the team and allows them to identify failures in the course of the processes and correct them through discussion and the handling of the MEOWS tool itself.

The planning stage took place in May and June 2023 and included several consecutive meetings to organize the workshop. All records were described in meeting minutes and field diaries.

The case addressed in the workshop brought a situation that illustrates clinical theory and practice. Although the clinical case used was a fictitious situation, it was based

on real situations experienced by health professionals as evidenced by Brazilian epidemiology.

The second moment, the "Realization" stage of the workshop, took place on July 3rd and 4th, 2023 and included a significant number of the nursing team in the obstetrics sector. The moments of the workshop were: 1- Global Contextualization of Maternal Death; 2- Presentation of the situational diagnosis of the sector; 3- Presentation of the clinical case; 4- Follow-up of the clinical case based on knowledge of the tool, flows, opportune times and treatments. 5- Debriefing with the team, based on the main doubts and clarifications arisen.

The third stage, related to the "Evaluation" of the workshop, was divided into two moments: reaction evaluation and observational evaluation.

The reaction assessment applied right after the workshop to capture the professionals' satisfaction with the methodology, content addressed, physical space, facilitators and relevance of the theme to the professional activity was measured by the concepts: "regular", "good" and/or "excellent", having been complemented by the indication of the training to other professionals on a scale of 1 to 10 (in which 01 refers to the lowest indication and 10 points to the highest indication).

The second part of the evaluation stage took place prospectively at the workshop. It was carried out through observational evaluation in the period of August, September, October and November 2023, using a checklist as an observation guide.

## RESULTS

Regarding the participation of the team, the number of 44 professionals actively participating in the workshop was counted. Of these, 09 were directed to the professional category of "nurses" and 35 to the professional category of "nursing technicians", which represents 98% of the nursing team working in the obstetrics sector at the time.

As mentioned above, reaction evaluations were applied to measure employee satisfaction with the MEOWS workshop. The following table presents the main results of the evaluation:

**Table 1. Result of the Reaction Assessment - MEOWS Workshop.**

REACTION EVALUATION - RESULTS		
Evaluated Issues	Results with a "Good" concept	Results with a "Great" concept
Methodology	-	100%
Content covered	-	100%
Physical space	5%	95%
Facilitators	2%	98%
Relevance of the topic to professional practice	-	100%

**Source:** Form used to evaluate the reaction of the workshop participants.

As recorded in the above-mentioned table, the results of the reaction evaluation fluctuate between the concepts "good" and "optimal". According to what can be observed, of the five items evaluated, only the items "physical space" and "facilitators" obtained results with a "good" concept; to elucidate the percentages of 5% and 2%, respectively. The other items, "Methodology", "Content addressed" and "Relevance of the topic to

professional practice" reached the maximum level of employee satisfaction, which was 100%.

As an appendix to the reaction assessment, participants were asked on a scale of 1 to 10 how much they would recommend the MEOWS Workshop to other participants (where 1 represents the lowest level of referral and number 10 the highest level of referral). As answers, the following were obtained:

**Table 2. Indication of the MEOWS Workshop.**

SCORES	8	9	10
Results/Indications	9	21	14

**Source:** Form used in the training indication evaluation.

It is observed that, in terms of indication, the answers obtained ranged between values 8, 9 and 10, which represents an excellent acceptance of the method approached. We found that 9 employees responded to level 8 of indication; 21 employees responded to referral level 9 and 14 employees responded to referral level 10.

The second moment of evaluation was carried out through observational analysis, conducted by the Service Coordination, due to the understanding that, among the structuring team of the MEOWS workshop, it is the most present figure in the sector, with technical and managerial knowledge to verify the changes in the team in a greater frequency of time and in the time appropriate to what was intended in the evaluation.

To this end, a checklist was used to observe these changes. This checklist was a simple tool that evaluated: the knowledge of the team, the proactivity in the activations and the compliance with the follow-up of the flows.

## DISCUSSION

According to information released in 2022 by the Brazilian Obstetric Observatory (OOBr), the data on deaths among pregnant and postpartum women in the country in the 2019 and 2021 triennium are unprecedented and worrying. The number of deaths of women between 10 and 49 years of age during pregnancy, childbirth and the puerperium is significant, which could be avoided if care for pregnant women were in fact cyclical, continuous and recurrent<sup>6</sup>.

In order to make effective the care and surveillance of the conditions of clinical problems of patients, training is necessary, generating knowledge and skills for the identification and management of these conditions<sup>7</sup>. Training prepares employees to perform their respective positions, developing their skills, contributing to changes in their behaviors, nurturing more knowledge, improving the relationship between individuals in the professional environment and, consequently, helping the company to achieve its organizational goals<sup>8</sup>.

Thus, it is evident that, broadly speaking, the results measured after the workshop were quite positive. A significant participation of the team in the workshop was obtained, which demonstrates the mobilization of managers in the perspective of guiding and, among the possibilities, solving the problem of the performance of the use of MEOWS by the nursing team in the obstetrics sector.

Women affected by clinical conditions with the potential for severity should be referred to a service that has qualified professionals and an adequate structure<sup>3</sup>. In patients

who had severe morbidity or death, it is often observed that there was a period of slow and progressive physiological deterioration that went unnoticed and/or was inadequately treated<sup>4</sup>. Based on this assumption and considering MEOWS as a predictive and prospective tool for risks and injuries to patients, aiming at the quality of care provided and the safety of patients treated in this hospital unit, the trained team demonstrates total engagement and interest in participating in the workshop.

The results of the evaluations show that the diagnosis made in the planning phase of the workshop was, in fact, assertive. Regarding the reaction assessment, the results were expressive in the concepts "good" and "excellent", with a predominance of three of the five items for the maximum level of satisfaction.

On the other hand, in the evaluation of the levels of indication of the training for other professionals, it was no different. The indication scores scored by the participants ranged in grades 8, 9 and 10, with a predominance of 21 professionals who attributed a score of 9 to the replication of the workshop at other times to other employees.

With regard to the observational, prospective evaluation of the workshop, although there was no comparative analysis of the application of the checklist, significant changes were noticed. It was observed that the team has knowledge of the tool in terms of both purpose and applicability.

It was also evidenced that the knowledge of the tool promoted more attention and proactivity of the nursing team in the actions. The team, by knowing, has become more independent, safe and agile in identifying possible patient-related problems and the flows are being followed satisfactorily with greater fluidity and speed.

It was found that assertiveness was important for the satisfaction of employees in relation to the proposal and methodology used, as carriers of the continuing education process. As important as the theme worked on was the meaning attributed to the reality of each employee participating in the workshop.

The results of the observational analysis show a more efficient, autonomous, and knowledgeable team to avoid further clinical complications. This predictive and proactive look is key to positive outcomes.

It is also added that the MEOWS workshop contributed to the improvement of the care provided, to the safety of professionals who provide care in the obstetrics sector and to the patients attended, contributing in a fundamental way to their positive experience when faced with assertive flows directed to the prevention of injuries and other complications that pose a threat to the life of the mother and child.

## CONCLUSION

It can be inferred, from the reported experience, that Permanent Education in health is a dynamic process that initiates all processes developed and related to the patient. For good practices to happen, the first step is for employees to know what the literature and the responsible bodies recommend.

Therefore, the manager's view is essential for the development of the team and for the identification of an assertive situational diagnosis, as was the case described in relation to the use of the MEOWS tool by the nursing team.

In this context, it is corroborated how crucial the MEOWS Workshop was both for the team and for the women cared for in the hospital unit, the territory of this report. The team feels safer when conducting the mother-child binomial and these patients benefit from quality care and targeted and proactive attention, contributing to the reduction of risks, complications and negative outcomes that are mostly avoidable, such as maternal and neonatal deaths.

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