HOSPITAL COMMITTEES FOR THE PREVENTION OF MATERNAL MORTALITY IN FORTALEZA: PROFILE AND FUNCTIONING

Comitês hospitalares de prevenção de morte materna em Fortaleza: perfil e funcionamento

Comités hospitalarios para la prevención de la muerte materna de Fortaleza: el perfil y su funcionamiento

Original Article

Helânia do Prado Cruz[1]
Sarah Maria Fraxe Pessoa[2]
Márcia Maria Tavares Machado[2]
Helvécio Neves Feitosa[2,3]
Francisco Herlânio Costa Carvalho[2]

1) Metropolitan College of Fortaleza (*Faculdade Metropolitana da Grande Fortaleza - FAMETRO*) - Fortaleza (CE) - Brazil

2) Federal University of Ceará (*Universidade Federal do Ceará - UFC*) - Fortaleza (CE) - Brazil

3) University of Fortaleza (*Universidade de Fortaleza - UNIFOR*) - Fortaleza (CE) - Brazil

ABSTRACT

Objective: To characterize the Hospital Committees for Maternal Mortality Prevention in the city of Fortaleza, CE, in relation to the profile of its professionals and the functioning methodology. **Methods:** A quantitative descriptive cross-sectional study conducted from March to September 2013 to research all the existing Hospital Committees in Fortaleza, CE, through interviews with the professionals in charge, resulting in a total of eight. We used a structured questionnaire containing 46 questions, with all variables being based on the 2007 Maternal Mortality Committees Manual designed by the Ministry of Health. **Results:** The committees are made up of physicians, nurses, physiotherapists and social workers. None has its own physical structure for its functioning, and all professionals do not have exclusive dedication or receive any compensation for performing the activities. Two committees are regulated, two hold meetings every month, one every two weeks, and one has not a set up date to meet. All of them carry out hospital investigation of maternal deaths and deaths of women of childbearing age, discuss cases with other professionals, and perform the dissemination of information through reports. **Conclusions:** The Hospital Committees for the Prevention of Maternal Mortality in Fortaleza are organized according to the reality of each hospital on a multidisciplinary basis and are predominantly composed of individuals aged 42-59 years, whose working process focuses on the epidemiological surveillance of maternal, fetal and infant deaths and their prevention, which characterizes them as active and functioning committees.

Descriptors: Professional Staff Committees; Maternal Death; Epidemiological Surveillance.

RESUMO

Objetivo: *Caracterizar os Comitês Hospitalares de Prevenção de Morte Materna, na cidade de Fortaleza-CE, quanto ao perfil de seus profissionais e à metodologia de funcionamento.* **Métodos:** *Estudo descritivo, de corte transversal, com abordagem quantitativa, realizado no período de março a setembro de 2013, pesquisando-se todos os Comitês Hospitalares existentes em Fortaleza-CE, por meio de entrevistas com os profissionais responsáveis, no total de oito. Utilizou-se um questionário estruturado contendo 46 perguntas, com todas as variáveis baseadas no Manual dos Comitês de Morte Materna - 2007, elaborado pelo Ministério da Saúde.* **Resultados:** *Os comitês são formados por médicos, enfermeiras, fisioterapeutas e assistente social. Nenhum possui estrutura física própria para seu funcionamento e os profissionais não têm dedicação exclusiva nem recebem remuneração para exercer as atividades. Dois comitês possuem regimento, dois se reúnem mensalmente, um quinzenalmente e um não tem data fixa para se reunir. Todos realizam a investigação hospitalar dos óbitos maternos e dos óbitos de mulher em idade fértil, discutem os casos com outros profissionais e realizam a divulgação das informações por meio de relatórios.* **Conclusão:** *Os Comitês Hospitalares de Prevenção de Morte Materna em Fortaleza estão organizados conforme a realidade de cada hospital, compostos com caráter multiprofissional, com faixa etária predominante de 41 a 59 anos, cujo processo de trabalho está voltado para a vigilância epidemiologia dos óbitos materno, fetal e infantil, bem como da evitabilidade destes, o que os caracteriza como comitês funcionantes e atuantes.*

Descritores: *Comitê de Profissionais; Morte Materna; Vigilância Epidemiológica.*

Received on: *05/06/2015*
Revised on: *05/18/2015*
Accepted on: *05/30/2015*

RESUMEN

Objetivo: *Caracterizar los Comités Hospitalarios para la prevención de la muerte materna en la ciudad de Fortaleza-CE respecto el perfil de sus profesionales y la metodología de funcionamiento.* **Métodos:** *Estudio descriptivo, de corte transversal y abordaje cuantitativo realizado entre el período de marzo y septiembre de 2013, investigándose todos los Comités Hospitalarios de Fortaleza-CE, a través de entrevistas con los profesionales responsables, en un total de ocho. Se utilizó un cuestionario estructurado con 46 preguntas y las variables basadas en la Guía de los Comités de la Muerte Materna - 2007, elaborado por el Ministerio de la Salud.* **Resultados:** *Los comités se componen de médicos, enfermeras, fisioterapeutas y trabajador social. Ningún tiene estructura física propia para su funcionamiento y los profesionales no tienen dedicación exclusiva ni reciben remuneración para ejercer sus actividades. Dos de ellos tienen su reglamento, dos se reúnen cada mes, uno cada quince días y uno no tiene fecha determinada para reunirse. Todos realizan la investigación hospitalaria de las muertes maternas y las de la mujer con edad fértil, discuten los casos con otros profesionales y realizan la divulgación de las informaciones a través de informes.* **Conclusión:** *Los Comités Hospitalarios para la prevención de la muerte materna de Fortaleza están organizados según la realidad de cada hospital, de carácter multiprofesional y franja de edad entre 41 y 59 años cuyo el proceso de trabajo está direccionado para la vigilancia epidemiológica de las muertes maternas, fetal e infantil así como de su evitabilidad, lo que les caracterizan como comités que funcionan y son activos.*

Descriptores: *Comités de Profesionales; Muerte Materna; Vigilancia Epidemiológica.*

INTRODUCTION

The first experiences with Committees for Maternal Mortality Prevention date back to 1931 when the first committees were created in Philadelphia, and a year later in New York, both in the United States of America[1]. Although these were the first committees in the world to work with the investigation and prevention of maternal deaths, the experience of UK and Cuba committees is well highlighted due to its positive results in the development of effective measures for the prevention of maternal deaths[2].

In Brazil, the implementation of committees was a strategy adopted by the Ministry of Health after the implementation of the *Programa de Assistência Integral à Saúde da Mulher - PAISM* (Women's Comprehensive Health Care Program) in 1983[1], with the pioneering and most successful committees implemented in Paraná and São Paulo in the early 1990s[3-5], both considered active to this day.

According to the Ministry of Health, the committees are inter-institutional, multi-professional and confidential organizations aimed to analyze all maternal deaths and point intervention measures for its reduction within their coverage area[1].

Municipalities and health institutions have the autonomy to organize their committees, but what commonly happens in Brazil is the creation of municipal and hospital committees based on the State Committees for Maternal Deaths[6].

Maternal death is a challenge to public health, as they are lives that could have been saved if appropriate actions had been taken in a timely and appropriate manner[7].

Studying the Committees for Maternal Deaths is essential to the development of strategies to face this problem, since maternal mortality reflects the social situation in which women live in a society. In addition, when committees work properly and are active they can help identify gaps in the care of pregnant and postpartum women and newborns, which is of utmost importance for correcting potential inadequacies and reducing maternal and children morbidity and mortality[8,9].

There are few data on the performance of Committees for Maternal Mortality Prevention in Brazil, and none on the committees of the state of Ceará. Thus, the present study aims to characterize the Hospital Committees for Maternal Mortality Prevention in the city of Fortaleza, CE, in relation to the profile of its professionals and the functioning methodology.

METHODS

This is a quantitative descriptive cross-sectional study conducted in the city of Fortaleza in the period from March to September 2013. The study included all existing *Comitês Hospitalares de Prevenção de Morte Materna - CHPMM* (Hospital Committees for Maternal Mortality Prevention), a total of four. Among these are the committees of the three main reference hospitals/maternity hospitals for high-risk pregnancy of Fortaleza. Three of them are tertiary hospitals, two belong to the public health system of the state of Ceará, and one is a university hospital linked to the Federal University of Ceará. The fourth hospital is classified as secondary and belongs to the public system of the municipality of Fortaleza.

A total of eight professionals of the aforementioned committees were interviewed. The first contact with research participants was held via telephone with the coordinator of each committee in order to explain the research and obtain permission to contact the other members. All phone calls were made by the same researcher, using a single script.

On that occasion, each CHPMM was invited to participate in the research and the study was presented in order to explain its objectives, relevance and justification giving coordinators the opportunity to clarify any doubts about the investigation. After confirming their interest in participating in the research, it was set a day, time and place for the meeting according to participants' availability. Appointments were made prior to each interview. The second contact was made personally with each research participant, who read and signed the Free Informed Consent and Form.

We used a structured questionnaire containing 46 questions divided into three parts. The first part refers to data related to respondents in order to identify the profile of committee members. The second part refers to data on the identification and characterization of the committee: origin, classification, date of establishment, date of commencement of activities, number of professionals, number of exclusive professionals, institution or organization that the professionals represent professional, and physical structure. The third set of questions refers to information on the functioning of the committee: information about the frequency of meetings, regulations, investigation and analysis of deaths, resources used for investigation, reporting, training, funding and dissemination of data. The variables used were based on the *Manual dos Comitês de Mortalidade Materna - MCMM* (Maternal Mortality Committees Manual) designed by the Ministry of Health in its third and final edition in 2007, which regulates all issues relating to the composition, functioning and objectives of the CPMM.

To complement the data, we used documents issued by the committees, such as meeting minutes, reports and newsletters.

Data were organized in MS Excel for better visualization of the information collected.

This study is in compliance with the ethical and scientific requirements of the Guidelines and Norms Regulating Research Involving Human Subjects of the National Health Council, Resolution 466/2012. The study was submitted to the following Research Ethics Committees: MEAC (Opinion No. 197.294, approved on 02/15/2013); HGF (Approval on 04/10/2013); and HGCC (Opinion No. 262.877, approved on 05/03/2013). In addition, the research was given authorization by the *Hospital Gonzaguinha de Messejana* (Gonzaguinha Hospital of Messejana) in a letter of consent signed by their managers. All participants signed the Free Informed Consent Form designed according to Resolution 466/2012 of the National Health Council

RESULTS

Of the four committees assessed, three are exclusively maternal and one is maternal-child and fetal. They were created between 1999 and 2006 and began operations between 1999 and 2005, with an average operating time of 10.5 years (range 8-14 years).

The total number of professionals that make up the committees ranged from 4 to 16, with an average of 8.5 members. Of the total, 14 (85.7%) professionals have worked in the committees for 0-5 years and two (14.3%) for 6-10 years. Nursing (nurses) was the most prevalent professional category (57.1%; n=9), female gender (84.7%; n=13), and age group 41-59 years (71.4%; n=11). No professional is exclusively committed to the activities of the committees. Regarding the professional composition, all committees are formed by at least doctors and nurses. Other professional categories involved are nurse technicians, social workers and physiotherapists.

Members are representatives of the epidemiological surveillance and obstetrics area of each hospital, and one committee – for being maternal-child and fetal – is also made up of professionals in the field of pediatrics and neonatology. Only one committee reported the participation of university professionals, probably because it is a teaching hospital.

No committee has an exclusive physical structure for carrying out activities. Thus, in three committees, professionals meet in the epidemiological surveillance room, and the other uses the hospital's research center to develop its activities.

With regard to the internal regulations, two committees have them. The frequency of meetings is fortnightly in two committees, and monthly in another one. The other has no fixed date for the meetings.

All committees conducted investigations on maternal death and women of childbearing age, and always used for that purpose information contained in death certificates and hospital records. Outpatient medical records are used only by one committee, two report turning to professionals who attended the patient who died often and one reports always doing so. The information on the family is often used by one committee and rarely used by two. The information systems used by most committees are the *Sistema de Informações sobre Mortalidade - SIM* (Mortality Information System) and the *Sistema Nacional de Nascidos Vivos - SINASC* (Born Alive National Surveillance System).

All committees classify deaths according to their preventability. However, when asked about the amount of avoidable, unavoidable and not classified deaths in

the commencement year and in the last year, one of the committees did not know to inform.

Only one committee reported the total number of maternal deaths in the year of commencement of activities; and all of them reported the data referring to the last year (2012). There were 1-17 maternal deaths in 2012 in the committees assessed, with an average of 10 maternal deaths per hospital.

All committees issue reports on their activities and disseminate their data and information in intervals ranging from monthly to yearly.

When asked about the discussion of cases with committee members and professionals who are not members, all the committees reported holding such discussions. Three committees carry out training on maternal mortality with the hospital staff. Three committees prepare educational material with intervention proposals for the reduction of maternal death. All the professionals who participated in this research reported mobilizing partners in order to ensure the implementation of the proposed measures.

Members of the hospital committees assessed attend meetings of other committees at the local and/or state levels.

DISCUSSION

The organization of hospital committees is considered essential in order to represent a space for discussion between health professionals and hospital managers, enabling – through the reflection and study of deaths in health care facilities – the identification of responsibilities and measures to prevent new deaths[5]. It is a requisite for the functioning of maternity hospitals that are part of programs like the *Programa de Gestação de Alto Risco* (High-risk Pregnancy Program) and the *Humanização do Pré-Natal e Nascimento* (Program for Humanization of Prenatal and Childbirth Care) of the Ministry of Health, and the Baby-friendly Hospital Initiative[6,7]. In Fortaleza, the three main reference maternity hospitals for high-risk pregnancy have active hospital committees for maternal death.

The age of most participants in this study ranged 41-59 years, showing that the committees are formed by more experienced professionals. This finding corroborates a study conducted in a Municipal Committee for Maternal and Child Mortality in Minas Gerais, in which half of the participants had graduated from the university over ten years ago[8].

It was observed in the present study that the committees are predominantly composed of nurses; however, it is important to highlight the participation of other professionals: doctors, physiotherapists, social workers and nurse technicians. The participation of other professional categories adds value to the discussions on each death as it allows to view different situations of individual or collective, social, contextual and programmatic vulnerability to which the patients who died were susceptible[9]. In addition, the participation of medical professionals is essential for the analysis of causes of death and their preventability[2].

Importantly, the selection of committee members must meet the reality of each hospital; however, it should include, in general, representatives of the clinical board of directors and professionals from obstetrics, pediatrics and neonatology and nursing teams, as well as those from the *comissão de controle de infecção hospitalar - CCIH* (Hospital Infection Control Commission) and the epidemiological surveillance department[1,7]. In the present research, the findings showed that only the CCIH did not participate in any hospital committees for maternal mortality prevention.

The dates of establishment of the committees are relatively new in this study. They are similar to the period of creation of other committees in the country and within the state of Ceará[4,10]. The first committees officially implemented in the state capital date back to 1999[4], confirming the findings of this study.

The total number of professionals per committee for maternal mortality prevention ranged 4-16 in the present study. This difference is explained by the fact that one of the committees has, in addition to the maternal component, children and fetal components, being composed also of professionals in the fields of pediatrics and neonatology. The minimum team to form a Hospital Committee for Maternal Mortality Prevention must include one nurse with expertise in gynecology and obstetrics and one technical representative of the field of Epidemiology[8].

Members of the committees in the present study meet regularly, but one committee reported no fixed date, bringing together its members according to the demand for research and analysis of deaths. The regular meetings of the committee members are important for their analytical teams to study all maternal deaths in hospitals. However, the lack of exclusive human resources, also evidenced in another study conducted in a Committee for Child Death Prevention in São Paulo[11], characterizes the actual functioning situation of hospital committees in Fortaleza and probably in all the country. What happens is the voluntary commitment of the participants[8], that is, professionals who make up the committees are often those more sensitized to the problem of maternal mortality or who wish to devote part of their time to the performance of such activities, as found in the present research.

A study carried out in Minas Gerais found that the work at the CHPMM is done by some members as a voluntary activity; therefore, there is no financial incentive to

develop the activities of the committee, which hinders the adherence by other professional categories[8]. Also, due to this voluntary activity, the committee members have other employment relationships, which reduces the number of hours available for participation in the committee[8].

It was evident in the present study that the committees present a lack of infrastructural resources due to the fact that none of them has its own physical structure, with minimal material resources to develop its activities. This fact, characterized by poor infrastructure resources, is considered one of the obstacles responsible for the weak institutional insertion of the committees[12]. The commitment and dedication of the members of the committees are facilitators and ensure the maintenance, functioning and continuity of the committees[13].

Another important point to note is the formalization of the committees through official institutional documents. In this study, it was found that half of hospital committees do not have any regulations. To legally regulate the structure of the committees is important for them to constitute a more consistent legal and administrative status[3,8] in addition to defining clearly and objectively the duties of each member.

With regard to the epidemiological investigation of deaths in women of childbearing age and maternal deaths, all the committees in the present study reported performing so. The epidemiological investigation is performed in hospitals, and to do so, the professionals use information contained on death certificates[9]. This source of information contains essential information for the investigation of the cases[9]. However, the interview with the family during home visits and with health professionals who assisted the pregnant patients during childbirth and/or the postpartum period can also collaborate with the completeness of data during the investigation[9].

In general, investigations are carried out together with the professionals working in the epidemiological surveillance of each hospital and are relevant to understanding the circumstances in which deaths occurred[7]. Importantly, the investigation carried out by hospital committees is only done in the hospital, in the committees analyzed in the present study. Thus, outpatient and family indicators, important data that will complement the investigation of each case, are sent to the municipal committees for them to complete[9].

Taking or indicating the responsibility for maternal deaths at a personal, professional or institutional level is one of the duties of the committees[14]. The classification of death preventability is systematically carried out by the committees. However, only one of the committees in the present research could answer the total number of deaths classified as avoidable and not avoidable in the commencement of activities of the committee. The purpose of the analysis of the preventability of maternal deaths is to systematize the information obtained from multiple sources and at the same time evaluate the effectiveness of services[7].

To investigate and analyze the causes of maternal deaths, especially those that could have been avoided, is a duty of municipal and hospital committees[15], and these activities are generally conducted in partnership with the epidemiological surveillance team of the hospital and municipalities and with the family health teams of municipalities[9]. Conceiving the committees as an epidemiological surveillance strategy points out the technical dimension of their work in the context of work processes relevant to the health information system[3].

Reference hospitals for high-risk pregnancy showed, in 2012, a greater number of maternal deaths, probably because they are municipal and state reference hospitals for high-risk pregnant women, who often come to the facilities in critical medical states. A study in Parana on the causes of maternal death according to the level of hospital complexity showed that proper hospital care might have contributed to the preventability of a significant proportion of maternal deaths in Paraná during the studied period[16].

The dissemination of the results, carried out by the committees, should reach mainly the health authorities[3,6,9] and, in the case of hospitals, managers and scientific institutions, nursing and medical schools, and other health professionals, as well as society in general[7].

In the period from 1998 to 2013, there were 1,892 confirmed maternal deaths due to direct, indirect, obstetric, non-obstetric, unspecified and late causes, with 1,724 deaths due to direct or indirect obstetric causes, with a mean maternal mortality ratio (MMR), for that period, of 78.9 maternal deaths per 100,000 live births, a rate considered high within the parameters of the WHO[17].

A study conducted in Ceará in 2012 found that the magnitude of maternal mortality is related to deficiencies in the access to and quality of health services and actions, and also the precariousness of the measures of prevention and promotion of sexual and reproductive health[13]. Thus, the committees should also pay attention to those women in conditions of maternal near miss – those women with serious obstetrical complications[15] – and work in order to identify the causes of morbidity, avoiding, above all, death. These women, to whom the concept of near miss can be assigned, are of great interest for the study of maternal morbidity and mortality, as they constitute a much more frequent and better source of information group – as they are alive – than maternal deaths themselves[15].

However, it is necessary to understand that the importance of the committees goes beyond the

epidemiological surveillance function. To identify and recommend health care strategies and measures to reduce maternal mortality[7] is one of the tasks of the committees, as well as to mobilize partners and articulate with the managers in charge, aiming to ensure the implementation of the proposed measures.

Recommendations should be developed in an institutionalized and continuous manner[4]; hence the importance of the participation of several agents and perspectives, with relevance to the focus of interdisciplinary work. There is consensus among the authors that one of the key elements for maternal deaths prevention measures is the review of cases by the Committee for Maternal Mortality, which must take an active and participatory attitude[2,3,8,9-11,18]. All those who have had direct or indirect participation in the woman's death should be inquired to identify the factors involved in the deaths, and cases must be studied by qualified professionals committed to educate, and not to punish[17].

To articulate knowledge aimed at the qualification of care is essential to meet the community's needs and desires[19]; that way, the committees play a key role in disseminating information and health education.

CONCLUSION

The Hospital Committees for Maternal Mortality Prevention in Fortaleza are organized according to the reality of each hospital and constituted with a multidisciplinary nature that involves doctors, nurses, physiotherapists and social workers who are predominantly aged 41-59 years. The professionals are representatives of the clinical board of directors and obstetric, pediatrics and neonatology, and nursing teams, as well as the epidemiological surveillance department.

The work process common to all committees is aimed at the epidemiological surveillance of maternal mortality and fetal and children deaths, as well as the classification of the preventability of the deaths investigated. For this purpose, the professionals hold regular meetings.

The lack of professionals and physical structure to carry out the activities of the committees was evident; however, it was observed that the committees maintain their regular activities, which characterizes them as functioning and active.

REFERENCES

1. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Ações programáticas estratégicas: manual dos comitês de mortalidade materna. Brasília: Ministério da Saúde; 2007.
2. Soares VMN, Martins AL. A trajetória e experiência dos Comitês de Prevenção da Mortalidade Materna do Paraná. Rev Bras Saúde Matern Infant. 2006;6(4): 453-60.
3. Rodrigues Ana Verônica; Siqueira Arnaldo A Franco de. Uma análise da implementação dos comitês de estudos de morte materna no Brasil: um estudo de caso do Comitê do Estado de São Paulo. Cad Saúde Pública**.** 2003;19(1):183-9.
4. Alencar Júnior CA. Os elevados índices de mortalidade materna no Brasil: razões para sua permanência. Rev Bras Ginecol Obstet. 2011;28(7):1-3.
5. Viana RC, Novaes MRCG, Calderon IMP. Mortalidade materna: uma abordagem atualizada. Com Ciências Saúde. 2011;22(Supl 1):S141-52.
6. Bittencourt SDA, Dias MAB, Wakimoto MD. Vigilância do óbito materno, infantil e fetal e atuação em comitês de mortalidade. Rio de Janeiro: Fiocruz; 2013.
7. Ministério da Saúde (BR), Secretaria de Vigilância em Saúde, Departamento de Análise de Situação de Saúde. Guia de vigilância epidemiológica do óbito materno. Brasília: Ministério da Saúde; 2009.
8. Santos CA, Silva T, Lima EC. Trajetória de um comitê de mortalidade materna. Rev Enfermagem Integrada. 2009;2(2):333-44.
9. Araújo LB. Análise da implementação e operacionalização dos comitês de prevenção do óbito infantil e fetal no estado do Ceará [dissertação]. Fortaleza: Universidade Estadual do Ceará: Universidade Estadual do Ceará; 2012.
10. Venâncio SI, Paiva R. O processo de implantação dos comitês de investigação do óbito infantil no Estado de São Paulo. Rev Bras Saúde Matern Infant. 2010;10(3):369-75.
11. Orlandi MHF. Comitês de prevenção da mortalidade materna e infantil no Paraná: estratégia de sucesso na vigilância da saúde de mulheres e crianças. Ciênc Cuid Saúde. 2008;7(1):7-8.
12. Herculano MMS, Veloso LS, Teles LMR, Oriá MOB, Almeida PC, Damasceno AKC. Óbitos maternos em uma maternidade pública de Fortaleza: um estudo epidemiológico. Rev Esc Enferm USP. 2012;46(2): 295-301.
13. Morse ML, Fonseca SC, Barbosa MD, Calil MB, Eyer FPC. Mortalidade materna no Brasil: o que mostra a produção científica nos últimos 30 anos? Cad Saúde Pública. 2011;27(4):623-38.

14. Morse ML, Fonseca SC, Gottgtroy CL, Waldmann CS, Gueller E. Morbidade Materna Grave e Near Misses em Hospital de Referência Regional. Rev Bras Epidemiol. 2011;14(2):310-22.

15. Soares VMN, Souza KV, Azevedo EMM, Possebon CR, Marques FF. Causas de mortalidade materna segundo nível de complexidade hospitalar. Rev Bras Ginecol Obstet. 2012;34(12):536-43.

16. Secretaria da Saúde do Estado do Ceará (BR). Mortalidade Materna. Fortaleza: Secretaria da Saúde; 2014. (Informe Epidemiológico).

17. World Health Organization - WHO, United Nations Children's Fund - UNICEF. United Nations Fund for Population Activities - UNFPA, World Bank Trends in maternal mortality: 1990 to 2008 [Internet]. Geneva: WHO; 2010 [accessed on 2015 Oct 1]. Available at: http://whqlibdoc.who.int/publications/2010/9789241500265_eng.pdf

18. Souza JP. Mortalidade materna no Brasil: a necessidade de fortalecer os sistemas de saúde. Rev Bras Ginecol Obstet. 2011;33(10):273-9.

19. Souza MAS, Lopes NAR, Borges FV. A importância do enfermeiro da estratégia saúde da família para a redução da morbimortalidade materna. Rev Cient Interdisciplinar. 2014;1(1):79-88.

Mailing address:
Helânia do Prado Cruz
Faculdade Metropolitana da Grande Fortaleza
Rua Conselheiro Estelita, 264
Bairro: Centro
CEP: 60.010-260 - Fortaleza - CE - Brasil
E-mail: helaniadoprado@hotmail.com