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Stillbirths preventable by interventions of the Unified Health System: a cross-sectional study

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ABSTRACT

Aim: To describe the epidemiological characteristics and health care characteristics of stillbirths and classify them according to the Brazilian List of Preventable Causes per interventions of the Unified Health System. **Method:** A cross-sectional study carried out in Recife (PE) in 2014, whose sources of data will be the research records of Infant and Fetal Death Surveillance and the Mortality Information System. The basic causes will be analyzed and classified according to the Brazilian List of Avoidable Causes. Pearson's chi-square test will be used to evaluate the association between avoidable stillbirths according to weight range. **Expected results:** It is intended to detect the circumstances and avoidable factors for fetal mortality, besides delivering data for the discussion and planning issues related to the qualification of care processes in health.

Descriptors: Fetal Death; Infant Mortality; Health Care; Information Systems; Vital Statistics; Epidemiological Surveillance.

INTRODUCTION

Fetal mortality is a sensitive indicator of the living conditions of a given population. It reflects aspects of reproductive health and the access and quality of resources available during the obstetrical care that are often allied to socio-economic disparities[1].

Annually, it is estimated that there are approximately three million fetal deaths. In Brazil, the Fetal Mortality Rate (FMR), expressed per thousand total births, went from 13.4 in 1996 to 10.0 in 2012 (a reduction of 22.9%). The northeastern region showed greater regional disparity, when in 2012 the FMR (12.1/1000) was 57.6% above the rate of the southern region (7.7/1000)[1].

Despite the magnitude of fetal deaths, the indicator was not included by the United Nations as one of the Millennium Development Goals. This hampered public investment in natimortality reduction programs, contributing to the invisibility of mortality events, which sometimes are potentially preventable[2].

In Brazil in 2007, the first version of the Brazilian List of Avoidable Causes was published (in Portuguese, LBE). In 2010, it was proposed to update this list for children less than five years of age, emphasizing the neonatal period. The deaths were then organized into the following categories: preventable causes (reducible per vaccine prevention actions, appropriate care for women during pregnancy and childbirth and newborn care, appropriate actions for diagnosis and treatment and appropriate actions to promote health, linked to adequate actions of health care); ill-defined causes; other causes (not clearly avoidable)[3].

Among the strategies adopted to detect the real causes and circumstances of fetal mortality, it was established by Decree No. 72/2010 of the Ministry of Health that the Infant and Fetal Death Surveillance (in Portuguese, VOIF) would be mandatory in health services that integrate the Unified Health System (in Portuguese, SUS). The VOIF guidelines are based on the identification of fetal deaths and the deaths of infants under one year old, the realization of epidemiological research, discussion and conclusion regarding the deaths, analysis of avoidable factors and drawing up preventive proposals[2].

To describe the profile of fetal mortality, according to avoidable causes, allows the identification of the most vulnerable social groups, as well as health inequities, in addition to providing support for the planning and direction of actions that promote adequate attention to perinatal health.

GUIDING QUESTION

What are the epidemiological characteristics and health care characteristics of stillbirths and their preventability according to LBE by SUS interventions?

AIM

To describe the epidemiological characteristics and health care characteristics of stillbirths and classify them, according to the LBE by SUS interventions.

METHOD

This is a cross-sectional study to be conducted in Recife (PE), located in the northeast of Brazil. The population will consist of all stillbirths from mothers residing in the municipality, which occurred in the year 2014. The data sources

are the VOIF research records and the Mortality Information System (in Portuguese, SIM).

SIM recorded 227 stillbirths in 2014, of these, 161 have triggered the research process, making it object of study of this article. Excluding 63 deaths that were not in accordance with the recommendations of the LBE (birth weight equal or above 1,500 g)[3], as well as the existence of severe or lethal congenital malformations (in this case, the investigation is considered optional because of the lowest prevention potential). Thus, the analysis will have a total of 98 deaths.

Data from the VOIF investigation forms were coded and double entered in EpiInfo software version 7.0. The underlying causes of death will be analyzed and classified according to weight range at birth (1500-2499 g, ≥ 2500 g)[3].

Inferential statistics will be used to assess the association between the preventability of fetal deaths by weight range, and Pearson's chi-square test will be used, adopting a 95% confidence interval. The calculations will be performed in the R version 3.2.2 software for Windows®.

The research project has been approved by the Ethics in Research Committee of the Research Center Aggeu Magalhães of the Oswaldo Cruz Foundation (CAEE: 07336313.6.0000.5190) and obtained approval of the Recife Health Department.

EXPECTED RESULTS

We expect to detect the circumstances and avoidable factors for fetal mortality and provide subsidies to assess the qualification of the care processes in the healthcare system, given the possibility of intervention, which concentrates increasingly on SUS surveillance and the effectiveness capacity.

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CONTRIBUTIONS OF AUTHORS

All authors participated in the phases of this publication in one or more of the following steps, according to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial participation in the planning or preparation of the manuscript or the collection, analysis or interpretation of data; (B) preparing the work or performance of critical review of the intellectual content; (C) approval of the submitted version. All authors declare for any purposes that are their responsibilities related content to all aspects of the manuscript submitted to OBJN. They ensure that issues related to the accuracy or completeness of any part of the article have been properly investigated and resolved. Absolving, so the OBJN of any joint participation in any imbroglios on the matter at hand. All authors declare that they have not conflict of interest, whether financial or relationship, to influence the drafting and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available at http://www. objnursing. uff.br/normas/DUDE_final_13-06-2013.pdf