



# Completeness and compliance of the infant mortality surveillance tools: a cross-sectional study

Lays Janaina Prazeres Marques<sup>1</sup>, Conceição Maria de Oliveira<sup>2</sup>, Cristine Vieira do Bonfim<sup>1</sup>

1 Federal University of Pernambuco 2 University Center Maurice of Nassau

# ABSTRACT

**Aim:** to evaluate the completeness and compliance of research instruments for the Surveillance of Child and Fetal Death. **Method:** This is a cross-sectional census study in which all 183 Confidential Sheets and Synthese Records of the Investigation of Death Surveillance of Fetuses and Infants under one year of life in Recife (PE) in 2014 will be analyzed. The completeness of the variables on Confidential Research Records will be assessed from the proportion of ignored and/or blank fields. The Summary Sheet Research will have the agreement verified by the Kappa Index and the intraclass correlation coefficient. **Expected results:** The intention is to contribute to the improvement of surveillance, by improving the quality of care for maternal and child health, with the improvement of vital statistics and the prevention of avoidable deaths.

Descriptors: Infant Mortality; Vital Statistics; Information Systems; Epidemiological Surveillance.

# INTRODUCTION

The decree No. 72/2010 of the Ministry of Health establishes the mandatory *Vigilância do* Óbito *Infantil e Fetal* (VOIF) (Surveillance of Child and Fetal Death) throughout the country. This strategy aims to identify gaps in women and children health care services, enabling the adoption of death preventive measures. In Recife (PE), the VOIF was established in 2002 and completed in 2006. Such action aims to contribute to reducing child mortality, by improving maternal and child care and the training of Vital Statistics Information Systems<sup>(1.2)</sup>.

The VOIF research process aims to analyze the circumstances of deaths, increasing the understanding in terms of the risk factors of child deaths, focusing on the preventability. This process aims to promote reflections of managers and professionals of health services from the discussion of the cases investigated and mobilize actions to prevent similar events<sup>(1,2)</sup>.

Among the instruments used by VOIF there is a confidential sheet and a synthesis sheet for the investigation infant and fetal death. Failures related to the fulfillment of these instruments hamper policy planning and programs in the area of maternal and child health<sup>(1)</sup>. In this sense, knowing the completeness and agreement of the data produced by VOIF is essential to understanding the potential of the research instruments.

# **GUIDING QUESTION**

What is the agreement of the fulfillment of Synthesis Sheets and what is the completeness of the filling of the Research Records of Child and Fetal Death Surveillance in Recife (PE) in 2014?

### OBJECTIVE

To assess the completeness and compliance regarding the research of instruments aimed at the surveillance of child and fetal death.

### METHOD

This is a cross-sectional census study conducted in Recife (PE), located in the Northeast of Brazil. Data sources will comprise the Confidential Records and the Synthesis Records of VOIF. The study population will consist of all 183 infant deaths (younge one year) VOIF investigated by in 2014. All deaths caused by congenital malformations will be excluded.

The operationalization of VOIF is divided into four components: 1) identification of deaths: Initially, the capture of all deaths is accomplished through death certificates. Subsequently, the validation of address occurs, confirming the municipality of residence for selection of cases of residents in Recife; 2) epidemiological research: information is collected in hospitals, care units, households and autopsy services; 3) discussion and presentation of the case of recommendations: the municipal technical group of VOIF brings together managers and primary care professionals who analyze deaths and rate their preventability; 4) correction or completion of data in Information Systems on mortality (SIM) and on Live Births (Sinasc) and typing of the Synthesis Sheet in the SIM-Web module. Then there is the routing of the recommendations to health managers at all levels<sup>(2)</sup>.

The Confidential Sheet of VOIF Research is structured into nine blocks of variables related to reporting data (therefore, nine variables): identification (19), prenatal care (22), birth (21), childcare and earlier diseases (17), family characteristics (18), basic data on the occurrence of death (24), conclusions (46), and recommendations and prevention measures (9). The Synthesis Sheet for research consists of 31 variables related to synthesis, conclusions and recommendations on the case.

The variables will be coded and typed in double input for validation, automatic checking and inconsistency check through Epilnfo software version 6.04d. The completeness of these variables will be analyzed from the proportion of ignored and blank fields, considering the scores proposed by Romero and Cunha (2007): excellent (<5% incomplete filling); good (5 to 9.9%); regular (10 to 19.9%); poor (20 to 49.9%) and really poor (50% or more)<sup>(3)</sup>.

From the Synthesis Sheet for Child Death Investigation, the fields relating to the findings of the investigation, the root cause before and after the investigation and changes in death certificates and the Born Alive statements after the investigation will be selected. For the analysis of these variables, descriptive statistics will be used (distribution of absolute and relative frequencies), the Kappa index and the Intraclass Correlation Coefficient (ICC), considering the following criteria: excellent agreement (0.80 to 1.00), substantial (0.60 to 0.79), moderate (0.40 to 0.59), reasonable (0.20 to 0.39), poor (0 to 0.19) and no agreement (<0). It will be adopted the significance level of 5% (p < 0.05) using the R version 3.2.2 software for Windows°.

The research project was approved on 30 August 2016 by the Ethics Committee on Health Research of the Sciences Center of the Federal University of Pernambuco (CEP/ CCS/UFPE) (Opinion No. 1,702,600) and it has obtained approval from Health Department of Recife (PE). Such research will be developed with the financial support of the National Scientific and Technological Council/CNPq (Process 480718/2012-1) and the Foundation for Science and Technology of Pernambuco/ FACEPE (Case 2133-4.0012).

# **EXPECTED RESULTS**

To know the potential use of research instruments for the Surveillance of Child and Fetal Death in reducing preventable child deaths in Recife (PE).

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Received: 09/01/2016 Revised: 09/27/2016 Approved: 09/27/2016