



**BRAZILIAN COURT OF AUDIT**  
External Control Secretariat  
Government Programs Control and Evaluation Secretariat

Executive Summaries

# **TCU Evaluation of Maternal Mortality Monitoring and Prevention**

**Rapporteur**  
**Minister Walton Alencar Rodrigues**

Brasília  
2003

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## FOREWORD TO THE ENGLISH EDITION

This series of publications contains the main results of social programs audits carried out by the Brazilian Court of Audit-TCU for the purpose of evaluating the performance of the Federal Government in areas that are strategic for Brazilian society. The activities were developed within the scope of the Brazil/UK Technical Cooperation Agreement, in force since 1998.

The aim of this document is to disseminate information about TCU's actions by reporting the development of the audited programs and their main characteristics to the Supreme Audit Institutions and other pertinent international organizations.

This issue presents information on TCU audits performed in order to evaluate monitoring and prevention actions regarding maternal mortality. These actions are part of the Women's Health Program of the Ministry of Health (MS).

**Valmir Campelo**  
Minister-President

## TCU Evaluation of Maternal Mortality Monitoring and Prevention

The Brazilian Court of Audit carried out an audit to evaluate the actions of monitoring and prevention of maternal mortality coordinated by the Ministry of Health-MS. These actions are part of the Women's Health Program, managed by the Ministry of Health, and are developed by the Ministry's Technical Unit for Women's Health and by the National Health Foundation-FNS.

Monitoring and prevention of maternal mortality are activities carried out by the three levels of government: federal, state and municipal. The execution of these actions, therefore, is decentralized to the national, state, regional and municipal committees for maternal mortality, to the epidemiological surveillance system and to the health services of the municipalities, supported by the state and federal health network.

The specific units of the Ministry of Health play a role that is more related to guidance rather than end actions and there is no single coordination. The National Committee of Maternal Mortality, in turn, is responsible for overseeing the actions and the mobilization of society. The Committee is not hierarchically related to the state and municipal committees of maternal mortality.

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### What was evaluated?

Considering that access to health services and protection of maternity and pregnancy are constitutional rights, the audit proposed to evaluate the performance of the technical units of the Ministry of Health, as well as that of the National Committee and of the state and municipal committees of maternal mortality, in order to ensure these rights. The causes of the high mortality rates found in Brazil, well above international standards, were investigated.

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## Why was it evaluated?

The World Health Organization - WHO estimates that, around the world, 585 thousand women die each year as a result of complications related to pregnancy, childbirth or postpartum recovery. In Brazil, it is estimated that the annual number of deaths varies between 3 and 5 thousand, the precise figures being unknown.

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## How was the work developed?

The fieldwork consisted of visits to seven states, survey forwarded to the municipalities and interviews with experts. Health institutions that are considered a reference in the area of maternal health care were visited in order to identify good practices that might be disseminated. The data were collected in the period of September 4 to October 13, 2000.

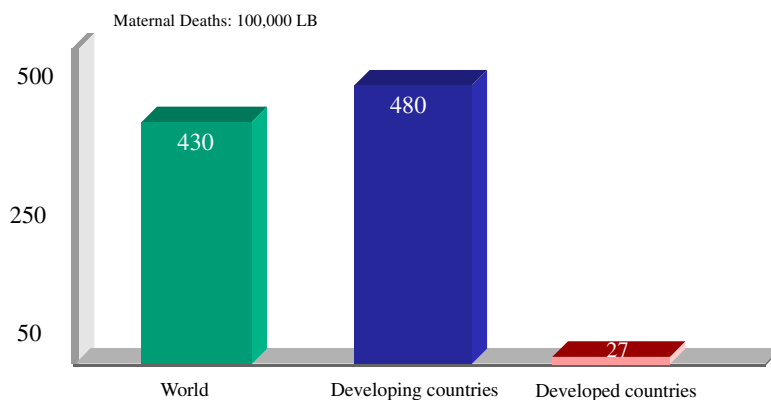
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## Maternal mortality in the world

The maternal mortality rate corresponds to the number of deaths of mothers as a result of complications related to pregnancy, childbirth or the postpartum period in each group of 100,000 live births (LB).

For the purpose of comparison, one should observe the disparity between the maternal mortality rates of countries such as Canada and the United States, where 4 and 8 deaths occur per 100,000 live births, respectively, and Bolivia, Peru and Paraguay, with 390, 300 and 270 deaths per 100,000 live births, respectively.

Figure 1 presents a comparison of average maternal mortality around the world, in the developing countries and in the developed countries.



Source: World Health Day, 1998. Maternal Mortality, WHO (exclude from graph)

Figure 1 - Average maternal mortality in the world, in the developing countries and in the developed countries

Among some Latin American countries such as Chile, Cuba, Costa Rica, and Uruguay, the maternal mortality rates are close to or lower than 30. This shows that the issue has been included in their health policies. Argentina and Mexico are situated at an intermediate level with maternal mortality rates of 44 and 48 deaths per 100,000 live births, respectively.

Chart 1 presents the mortality indicators of some countries in Latin America.

**Chart 1 – mortality indicators of countries in Latin America.**

Countries	Infant Mort. Per 1,000 LB	Newborn Mort Per 1,000 LB	Maternal Mort. Per 100,000 LB
Argentina	21	30	44
Bolivia	59	55	390
Brasil	40	45	114
Chile	13	15	25
México	23	40	48
Uruguai	17	25	19

Source: Safe Motherhood WHO Bank. Health Around the World, 1998 <http://www.paho.org> September, 1998.

## What the TCU found

### The situation of maternal mortality in Brazil

The maternal mortality rate considered ideal by the World Health Organization is 10 deaths per 100,000 live births; the acceptable rate is of up to 20 deaths per 100,000 live births. In Brazil, the official figures have indicated a national average, in 1997, of 51.6 maternal deaths per 100,000 live births.

All the sources consulted have unanimously admitted a sub-evaluation of the maternal mortality rate of, at the very least, two times, which would raise the rate to 103.2/100,000 live births, or ten times the ideal rate. Even in the more developed regions of the country, rates lower than 60/100,000 live births have not been registered. This number is underestimated due to sub-registration, which occurs for the following reasons: existence of clandestine cemeteries, occurrence of home childbirths in the agricultural areas, difficulty of access to the notary offices, incorrect information on the death certificates, and ignorance on the part of the parents regarding the importance of the death certificate.

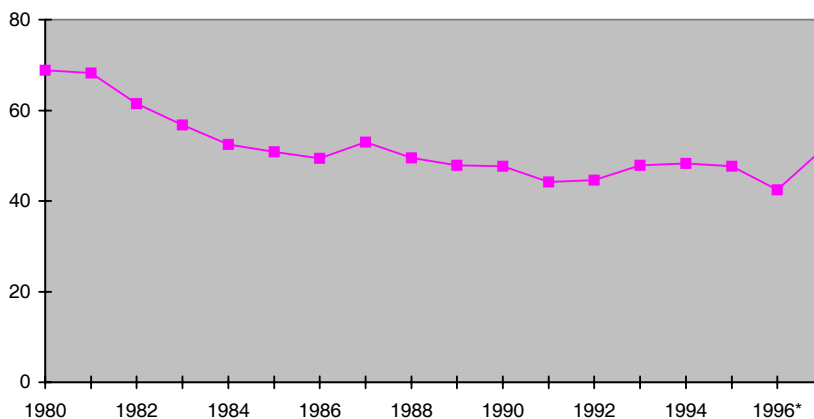
Data obtained when carrying out the audit allow us to state that the maternal mortality rates in Brazil are somewhere between 5 and 7.5 times the limit considered adequate by the World Health Organization (20 deaths per 100,000 live births), that is, 10 to 15 times higher than the ideal rate (10 deaths per 100,000 live births). Even in states located in the more developed regions of the country, such as the states of Paraná and Rio Grande do Sul, the rates registered in the capitals are 6 times higher than the ideal. In the state as a whole they are 8 times higher.

It was found that the majority of maternal deaths occurs in the families of pregnant women with low family income (less than 3 minimum wages) and low schooling (incomplete basic education). In turn, many of the deaths are preventable, being caused by hypertension, hemorrhage, and infection - all preventable occurrences in 90% of the cases.

## Evolution of maternal mortality in Brazil

The evolution of maternal mortality in Brazil, between 1980 and 1997 (latest available statistics), according to official data, can be synthesised in the following graph:

**Graph 1 - Maternal mortality rates in Brazil (\*)**



Source: SIM/CENEPI/FNS and Estimate of Live Births of IBGE.

\* The Department of Health Policies, of the Ministry of Health, after the date of execution of the audit, supplied the following data on the Maternal Mortality Rate adjusted to the CID-10: 1996=52.06; 1997=61.26; 1998=65.26.

The maternal mortality rates vary in the various states and regions of Brazil. Existing data, however, do not allow reliable comparisons since the rates are obtained based on the deaths that are notified correctly and not on the real incidence of deaths. Thus, it is possible to observe a paradoxical situation in which the states where maternal death committees are better structured and more active register higher rates than those where the committees are weak or non-existent, and present lower socio-economic indicators due to the inclusion in calculations of previously unidentified maternal deaths.

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## The work of the maternal mortality committees

The best-known strategy for investigation of maternal mortality and evaluation of the quality of women's health care has been the creation of the so called "Committees of Maternal Mortality". The implantation of this type of committee is recommended internationally, since it is a valuable tool for analysis of the maternal deaths and for intervention to reduce these occurrences.

The Ministry of Health adopted the strategy of supporting the organization of these committees in order to identify, investigate, and analyse maternal deaths and to recommend intervention measures when the epidemiological surveillance sector is not competent to do so.

Officially, 24 state committees have been established, 14 of which are effective. Thus, it was found that some committees are not functioning in several states and in the majority of the municipalities, which leads to the conclusion that the maternal mortality rates are incompletely monitored.

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## Best practices identified

Among the best practices identified, it has been concluded that the important factors in the prevention of maternal mortality are: the joint work of the committees and the epidemiological surveillance services; the fulfilment of the principle of territoriality, which establishes that access to health services must be organized by the basic health units that are responsible for a specific geographic area and are linked to the hospital institutions; the effectiveness of the family health and community health agent programs; adoption of basic pre-natal care and referral of pregnant women under reproductive risk to family planning programs, among others.

## What can be done to improve monitoring and prevention of maternal mortality?

Considering that the maternal mortality rate is an important indicator of the social reality of a country and of the quality of the health care provided to the population, the TCU recommended to the Ministry of Health the following measures, among others:

- create performance indicators to monitor the evolution of the quality of the actions of control, overseeing and prevention of maternal mortality in the country, with the establishment of a deadline for achievement of the targets;
- establish an evaluation system of the social risk of pregnancy; and
- stimulate the organization of family planning services.

It is expected that these actions will help improve the quality of prevention of maternal death as well as the quality of the information contained in the notification of maternal deaths. It is also expected that actions proposed will contribute to reduce the rates in Brazil to acceptable levels.

The Brazilian Court of Audit will monitor the implementation of the recommendations in order to ensure that the problems raised by the audit will be addressed effectively.