Government of Maharashtra

Child Deaths Evaluation Committee

Diagnosis :
The true magnitude of child mortality and malnutrition

First Report (August 2004)

Life counts.

So, count every birth.
And, account for every death.

Child Deaths Evaluation Committee, Government of Maharashtra

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CONTENTS

FOREWORD 5

SOME TECHNICAL TERMS AND THEIR DEFINITIONS 7

EXECUTIVE SUMMARY 10

1. THE IMPORTANCE OF THE PROBLEM OF CHILD MORTALITY 17

2. BACKGROUND 18

3. SCOPE OF WORK OF THE CHILD DEATH EVALUATION COMMITTEE 21

4. QUESTIONS AND REFERENCES FOR EVALUATION 21

5. METHOD 23

6. FINDINGS 24

A How many child deaths in Maharashtra? Where? Why? 24

B Has there been any progress in addressing the problem of child mortality? 29

C What are the major difficulties that the government faces in order to understand the problem of child mortality? 31

D Malnutrition 43

7. GRAVE FAILURE OF DUTY IN THE GOVERNMENT 49

8. SOLUTIONS AND RECOMMENDATIONS 51

Foreword

Is there a serious problem of child deaths and malnutrition in Maharashtra? If yes, how serious is it? Has the proportion of child deaths and malnutrition reduced as a result of the schemes and programs declared by the government in the last few years? What are the difficulties? What improvements need to be made? The Child Deaths Evaluation Committee was constituted to answer these and other similar questions that were being raised in the state legislature and by society. The committee is expected to submit its report to the government every six months. This is its first report.

Correct diagnosis is essential for the appropriate treatment of any disease. This report focuses on diagnosis. While admitting the relevance of social, economic causes and of education, the committee has avoided going into details of these causes, instead limiting its investigation to the immediate steps that can be taken by the health department. The thermometer (government statistics) measuring child deaths and malnutrition is itself at fault; hence an incorrect measurement has led to the faulty perception that the problem has been solved. Through correct diagnosis, this report looks at the successes and failures of the various attempts made to address the problems of malnutrition and child mortality. This diagnosis should form the baseline on which the problem is measured and addressed.

The diagnosis made in the committee's report stresses the need for solutions. A diagnosis of cancer is not welcome, but without such diagnosis, the search for appropriate solutions will not begin. The goal of preventing the deaths of hundreds of thousands of children has motivated the committee to make this unpopular diagnosis.

Every child death is a life not lived. It is a violation of the fundamental right to life and of the instinct to live. It is the responsibility of the society to save these helpless children. One child death leads to the next. Hence, ignoring one child death is like allowing more children to die. This report is being written with this conviction.

One mistake is repeated often.

"The government knows the exact nature of the problem of child deaths from the sample survey carried out in selective pockets. Then why the stress on recording every child death?" Many have this doubt. Yes, a sample survey does give pointers for policy making. However, it is not enough for managing the problem in the entire state. For treating my son's fever, I have to measure his temperature. A sample temperature measured in the city is not useful. The police department needs information about every murder, not estimates obtained from a survey of the region. Similarly, in order to manage child mortality, the government must know every event of child death. This is the basic difference between a research institute and the health directorate. The health directorate cannot function and

child mortality cannot be checked without recording, reporting and addressing every single child death. Hence the importance of recording every child death.

We hope that this report will be used by the government, people's representatives and the alert society. The committee has studied the events pertaining to the problem of child deaths of the last 6-7 years and the government's response to them. The lethargy and insensitivity of the government in responding to this problem is shocking. The government must be held accountable; unless there are clear signals within the hierarchy that the government is serious, the accountability cannot be established. And this is the government's responsibility to establish accountability.

The committee will discuss in its next report the solutions to decrease child deaths and make its recommendations.

On behalf of the committee, I thank all those who have given us information and helped us to complete this report, especially many journalists, experts and citizens. Many responsible government staff and officers, as well as the chiefs of SRS and NNMB of the central government extended full cooperation. I am thankful to all of them.

Dr. Abhay Bang
Chairperson

Some Technical Terms and Their Definitions

1 Birth Rate = Number of live children born in a year per 1000 population

2 Child Death = Death of a child before it attains the age of 5 years

3 Child Mortality Rate (CMR) = Number of deaths of children below the age of 5 years per 1000 live births in that year.

$$= \frac{\text{\# total child deaths X 1000}}{\text{\# live births in that year in that population}}$$

Depending on the age of the child at the time of its death, child death can be divided into three components:

4 Neonate death = Death of a child from its birth up to 28 days of its age.

5 Infant death = Death of a child from its birth up to 1 year of its age.

6 Toddler death = Death of a child between 1 to 5 years of its age.

Accordingly, we have three different rates:

7 Neonatal Mortality Rate (NMR) = Number of deaths of children from 0-28 days per 1000 live births in that year.

$$= \frac{\text{\# total child deaths in 0 to 28 days age}}{\text{\# live births in that year in that population}} \times 1000$$

8 Infant Mortality Rate (IMR) = Number of deaths of children from 0-365 days (one year) per 1000 live births in that year.

$$= \frac{\text{\# total child deaths in 0 to 365 days age}}{\text{\# live births in that year in that population}} \times 1000$$

9 Toddler Mortality Rate (TMR) = Number of deaths of children between 1 and 5 years of age per 1000 live births in that year.

$$= \frac{\text{\# total child deaths in 1 to 5 years of age}}{\text{\# live births in that year in that population}} \times 1000$$

10 Still Birth = Still Births are those where the foetus dies in the

mothers womb due to illness or infection or dies due to suffocation during birth. These deaths are **not** counted in the CMR but are counted separately.

11 Still Birth Rate (SBR) = $\frac{\text{Number of still births}}{\text{Total births in that year in that population.}} \times 1000$

12 Perinatal Mortality = Still births + deaths of neonate less than seven days old

CHART: Different periods in childhood and the corresponding mortality rates
(Insert – already in English)

Note:
It was not practically possible for the Child Deaths Evaluation Committee to carry out its own studies or surveys. Hence, the committee has referred to other published studies and statistics, and the reference has been mentioned. These studies have their own strengths and limitations. The fact that the committee has referred to these studies does not mean that the committee or its members subscribe to the studies. The estimates drawn from any of these studies are also therefore with their own limitations. The committee wishes to point the reader's attention to these limitations. However, in spite of these limitations, the committee has drawn from these studies because it firmly believes that to wait until correct and actual information is available (which is not possible in reality) will be irresponsible behaviour on the part of the committee, and the committee will fail to respond to the urgency of the situation.

Executive Summary

Background :

As announced by the Government of Maharashtra in the state legislature on 12th December 2003, the 'Child Deaths Evaluation Committee' was constituted (GR No. BMS/2003/PK 281/2003, KK3, dated 12/12/2003)

The Scope :

The committee, headed by Dr. Abhay Bang, has 13 members and is charged with the following responsibilities:

1. Assess the problem of child deaths and infant mortality in the state;
2. Review the situation of malnutrition among children in tribal areas.
3. Review all the ongoing schemes aimed at reducing infant and child deaths, maternal deaths and malnutrition; and to give recommendations for their improvement.

The committee is expected to submit its report every six months. However, the health minister has requested that the first report be submitted urgently for immediate action.

Focus of the First Report

On this background, the committee decided to focus its first report on the magnitude and spread of the problems of child mortality and malnutrition, and on the implementation of decisions taken by the Government of Maharashtra in this regard in December 2001. The second report will review the various schemes and make recommendations to further reduce child deaths and malnutrition. It will also review the actions taken by the state government on the recommendations in the previous report and monitor the effect.

Accordingly, this first report is being submitted. The **report focuses on the extent, importance and causes of child deaths and malnutrition in the state**. It also looks at the **implementation of various decisions earlier taken by the state government for the complete reporting of child deaths**.

Findings and Conclusions

Question 1. What is the total number of child deaths and stillbirths annually occurring in the state?

Conclusion : The three state departments of the government of Maharashtra report approximately 25,000 to 40,000 child deaths in the state every year. However, as per the central government (The Sample Registration system, SRS) estimates, this figure must be 120,000, while voluntary agencies have estimated this figure to be around 175,000. Apart from this, there are 22,000 to 66,000 stillbirths annually (these are mostly deaths occurring during delivery and can be prevented). Thus, nearly 140,000 to 240,000 child deaths and stillbirths occur in Maharashtra annually.

Question 2. Where do these child deaths occur?

Conclusion : The problem of child deaths is statewide. The estimated child deaths in different areas of the state are as follows:

	Infant Mortality Rate	**Estimated Child Deaths**
Rural Maharashtra	64	82,000
Tribal areas	80	23,500
Urban slums	68	56,000

Question 3. Why do children die ?

Conclusion : Most child deaths occur because of a combined effect of malnutrition and infectious diseases. 80% of these deaths can be ascribed to deaths in newborn babies, pneumonia and diarrhea. It is possible to take simple and yet effective measures to prevent child deaths from these causes and hence reduce the number of child deaths in Maharashtra.

Question 4. What was the improvement in the problem of child deaths in the state in the last few years?

Conclusion : The infant mortality rate (IMR) in Maharashtra reduced rapidly during the years 1980 to 1996. However, this reduction in the rate has severely slowed

down in the subsequent years. According to the central government figures (SRS), in the last 7 years, (1996-2002) the IMR has reduced by merely 3 points (from 48 to 45). During the same period, the national IMR reduced by 13.

Question 5. How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?

Conclusion : Government of Maharashtra's Population Policy (2000) has laid down the objective of bringing the infant mortality rate down to 25 in the year 2004 and to 15 in the year 2010. It is now 2004, and the infant mortality rate is 45 (as per the lowest estimate) and 66 (as per other estimate), far from the goal of 25. If the rate of reduction in the IMR continues to be the same as in the last ten years, the IMR of 15 can be reached only by 2027 at the earliest and by 2042 at the latest.

Question 6. How many child deaths will occur in the state by then ?

Conclusion : By maintaining the same rate of reduction in infant mortality, the targeted infant mortality rate of 15 will only be reached by the year 2027 to 2042, i.e., in 23 to 38 more years. Until then, another 16 to 38 lakh children will die in the state.

Unless efforts to reduce child deaths are made on a war footing, a huge number of child deaths can be expected. Therefore, it is necessary to give utmost priority to this problem.

Question 7. Does the government receive true and complete information about child deaths ?

Conclusion : Though 120,000 to 175,000 child deaths occur in the state annually, only 18 to 28 % of these were being reported by the three departments in the government (1999-2000). The government is kept in dark about the true magnitude of the problem.

Question 8. Has the child death reporting improved subsequent to the decisions taken by the state government?

Conclusion : In spite of the state government's decision (2001) and assurance given in the legislative house to record 100% child deaths, there is absolutely no improvement in the reporting of infant deaths by the CRS (Civil Registration System) and ICDS in the last 4 years. There is marginal improvement in the MIS (Management Information System) of the health department in 2003-4.

Only 20-40% of the infant deaths are reported even today. Apart from these, the state health department does not compile nearly 30,000 child deaths in the 1-5 years age group.

Question 9. To what extent was the government decision to record all child deaths implemented?

Conclusion : The government decision to record 100% child deaths has hardly been implemented, since the higher officers involved did not treat this issue as important.

Question 10. What did the highest level committee to coordinate the recording of births and deaths in the state do ?

Conclusion : The committee had its last meeting on 11th September 2000. Since then, in the 3.5 years until March 2004, the committee has not met at all. We have not found any instances of the state coordination committee reviewing any information on child deaths and taking any action. And there might have been nearly 5 lakh child deaths in these 3.5 years.

Question 11. Why does the government not know of each and every event of child death?

Conclusion : The government machinery reports nearly all births, over-reports still births but under-reports only child deaths, leading us to conclude that there is an effort to selectively hide child deaths.

Question 12. What role do the health department's MIS and decision system play in the issue of child deaths?

Conclusion : The information system, which is the basis of decisions, generated misleading information and no efforts were made by the concerned officers to correct it. Due to this the government remains in an illusion regarding the situation of child deaths and the data necessary for taking correct decisions is not available. Hence, there is an immediate need to correct the health department's MIS and to ensure complete and correct information on child deaths.

It is a serious failure of the MIS and of the decision makers that child deaths do not get reported and the senior officers accepted for years this incomplete information.

Question 13. What is the extent of malnutrition in children in Maharashtra?

Conclusion : 7.2% of the children in Maharashtra are severely malnourished. Thus, the state is in the company of undeveloped regions of the country.

Question 14. What is the number of malnourished children in Maharashtra?

Conclusion : The proportion of severely malnourished children (Grade III & IV) is 5.4% as per the IAP classification, and that of moderately malnourished children (Grade II) is 21.2%. Translated into numbers, this means that nearly 8.15 lakh children in Maharashtra are severely malnourished and 32 lakh children are moderately malnourished. Out of these, 0.6% that is, nearly 1 lakh children are very severely malnourished (Grade IV).

Question 15. Is there any improvement in the situation of malnutrition in children in the state?

Conclusion : During the period 1975 to 1988, the severity of malnutrition decreased nationally as well as in the state. However, from 1988 until 2002, the proportion of severe malnutrition in Maharashtra has decreased negligibly from (Gomez classification) 7.8% to 7.2%. This is of grave concern. Indepth inquiry and appropriate decisions are needed.

Question 16. How correct is the government (ICDS) information about malnutrition?

Conclusion : The ICDS reports severe malnutrition 15 times less than reported in the standard information (NNMB). Therefore, there is a serious doubt about the ICDS figures.

Question 17. What is the extent of malnutrition in tribal areas?

Conclusion : In tribal areas, malnutrition among children is higher, with nearly 15% of the tribal children severely malnourished (Grade III & IV). This figure is double that of the rural Maharashtra.

Grave Failure of Duty in the Government

The government decisions are dependant on the information. Since this information about malnutrition and child deaths was false, the rulers remained under illusion about the reality about child deaths. Those responsible for taking actions did not take any action but pretended to do so creating a false sense of assurance. Today, there are more than a lakh child deaths and 8 lakh severely malnourished children in the state.

The government operates as per the management principle of "Command and Control". The higher authorities in the health and family welfare department are ultimately responsible for not correcting the flaws in the lower machinery. They accepted this flaw and information, failed to correct it in spite of repeatedly drawing their attention to it, and continued to table wrong information in the assembly and before the government. They also did not adequately implement government's decision to reduce child deaths.

Recommendations

The need for urgent action is obvious.

1. An accountability system should be introduced in the health and family welfare department, Directorates and the Mantralaya, for correct information on child deaths.
2. The lower levels of the hierarchy receive ideals and orders from the higher up. They must be encouraged by positive methods to collect and provide correct and complete information. Detailed suggestions are given in the report.
3. Detailed recommendations have been made in this report on evaluating the completeness of reporting of child deaths by the health department, (MIS) and CRS, and to compare the information with other parallel sources.

4. There should be a separate all-department committee headed by the Chief Secretary to ensure that each child death is recorded and the implementation of programs to reduce child deaths. This committee should report to the High Court as well as the State Assembly every quarter.
5. Failure in these two duties must be considered a serious offence and such workers and officers should be punished severely.
6. The state government should declare a mission to prevent child deaths and to make 'Child Death Free Maharashtra'. Efforts to reduce child deaths should be undertaken on a war footing and the health department, ICDS, Tribal Welfare and the Women and Child Welfare departments should take up the problem on a priority basis.

The next report will review the government programs to reduce child deaths and the solutions.

1. The Importance of the Problem of Child Mortality

1. Child mortality is a problem of the fundamental right to life, social responsibility and compassion.
2. It is an extremely painful event in the lives of the child's parents and family.
3. Every child death is a loss to the nation's human resource and wealth.
4. With the fear of child deaths, couples give birth to many children. In order to promote family planning, it is necessary to prevent child deaths.
5. Additional children are allowed to be born in order to make up for child deaths. This is a strain and additional burden on the mother's body, mind and health.
6. For the death of every child, there are ten other children who are suffering from severe illness (malnutrition, pneumonia, neonate diseases). Child deaths are thus tip of the iceberg, pointing to the larger problem of other serious diseases affecting children.
7. The children's diseases and child deaths create a financial burden on the government health services and the family.
8. Child deaths are the indicators of the success or failure of the health services and women and child welfare programs.
9. Infant mortality rate is an important indicator of a nation's / society's health. All the developed countries / regions have succeeded in controlling it. It is 3.6 in Japan and 11 in Kerala. It is an important component of the Human Development Index.

The issue of child mortality is a sensitive issue for Maharashtra state. Many newspapers, Doordarshan, political leaders, voluntary organizations and social workers and even sensitive government officers have brought this issue to the forefront, causing debates and discussions on the problem. The government has also responded with the promise to address the problem and announced various schemes for the purpose. It is clear from this that the society and political leadership in Maharashtra wishes to address the problem. The High Court and Hon Chief Justice have also taken cognizance of the issue and thus, ascertained once again Maharashtra's firm commitment the principles of justice.

2. Background

1. The State of Maharashtra is a economically, socially and educationally developed state. The State administration is considered efficient. The State's health department has performed well. For example, Maharashtra has done well in controlling polio and in popularizing immunization. According to the Central Government's Sample Registration Survey (SRS), the State's birth rate was 32 in 1971, which has been brought down to 21 in 2000. The Infant Mortality Rate of Maharashtra was 101 in 1971, and has been reduced to 55 by the year 1994. These successes must be credited to the department. However, after 1994, the rate of reduction of the Infant Mortality Rate has reduced, and in the next 10 years, it has reduced by only 10, to stand at 45.
2. On this background, the State Government was correct to set in its population and health policy the goal of reducing the Infant Mortality Rate up to 25 in 2004 and to 15 by 2010. The State of Kerala has succeeded in achieving an Infant Mortality Rate of 11. Maharashtra also has declared its aim to nearly eradicate malnutrition and child deaths.

   But some events of past few years throw doubts on this commitment.
3. The State's mindful journalism has published frequent news of the child deaths and malnutrition in aadivasi regions of the State in the last 15 years. In 1989, it was Bamni in Dhule district, in 1993, Melghat, and subsequently, Gadchiroli, Nandurbar and Thane were brought into highlight for the numerous deaths of children in these areas. The Chief Ministers – Sharad Pawar, Manohar Joshi and Vilas Dehsmukh, all visited the areas and confirmed the news to be true. They also announced their intention to address malnutrition and child deaths in aadivasi regions. The people of Maharashtra welcomed these announcements. Schemes like Navsanjeevan Yojana and Melghat pattern were started.
4. The organization "SEARCH" in Gadchiroli put three questions to the then Chief Minister (1997):
   - Why does the government always learn of the child deaths from newspapers and not from the health department?
   - Have the child deaths in aadivasi regions reduced as a result of the various schemes that were announced from time to time?
   - In order to be able to understand this, do the health department or the ICDS inform the government of all child deaths?

Chief Minister Manohar Joshi promised to look into these issues.

5. As per the Government's instruction, the Collector, Gadchiroli, surveyed the Aheri aadivasi block in 1998 for infant deaths, child deaths and still births and compared it with the health department figures of last 5 years (1992-97). It was found that while the infant mortality rate in Aheri was 118, the health department was consistently reporting it as 13.

   The report of the Collector, Gadchiroli, had some limitations, yet, it was pointing towards a serious fallacy.

6. Based on the Collector, Gadchiroli's report, the then Leader of Opposition Madhukarrao Pichad and Digvijay Khanwilkar asked questions in the State Legislature, to which the then Chief Minister, Manohar Joshi, responded by promising to take immediate and appropriate steps to reduce malnutrition and child deaths (December 1998).

7. 14 NGOs in Maharashtra came together to study this issue and formed the Child Death Study and Action Group (CDSAG). The group studied the problem over 2 years in 14 different areas covering a total population of 2,27,000 from 231 villages and 6 urban slums, and published its report "Kovli Pangal", in November 2001.

   The report estimated that:

   - The Infant Mortality Rate was more than 60 in the 3 types of populations that were studied in Maharashtra, viz. rural, urban and aadivasi.
   - More than 2 lakh children must be dying in the State every year.
   - Maharashtra's health department records an Infant Mortality Rate of 13 in its MIS. This is only 30% when compared with the Central Government's Sample Registration Survey (SRS).
   - This hiding of child deaths is grave corruption.

8. The researchers of this report had admitted certain limitations of the study. To overcome these limitations, the researchers analyzed the data using different technique and published an essay in the Economic and Political Weekly in 1992 under the title 'Child Mortality in Maharashtra'. According to this revised estimate, the Infant Mortality Rate of Maharashtra was 66, and the number of children dying annually was 1.75 lakh.

9. 'Kovli Pangal' created havoc in Maharashtra. There were discussions and debates in newspapers and the State Legislature. The health department disagreed with these estimates. However, in a meeting with the then Chief Minister Vilas Deshmukh, Dy Chief Minister Chagan Bhujbal, Health Minister Digvijay Khanwilkar, Chief Secretary,

Health Secretary, Secretary Family Welfare and the Health Director, the Chief Minister accepted the main points in the report and took the following decisions:

- to record all child deaths (100%) in Maharashtra
- to direct the health department and family welfare department to take the necessary steps to do so
- to implement the 'SEARCH', Gadchciroli pattern to reduce child deaths in 14 districts with immediate effect.

The health department and family welfare departments were charged with the responsibility of implementing these decisions.

10. Accordingly, the mechanism to record 100% births and child deaths was announced in the government resolution dated 12th December 2001 (No. xxxx 2001/xxx 1192/21, Manrtalaya, Mumbai 400032). This resolution was issued by the Rural Development Department, with Health and Family Welfare, Women and Child Welfare and Tribal Development Departments.
11. In order to ensure 100% recording of births and deaths in the State, the State Government constituted a State-level coordination committee of senior officials in 1997. The committee was re-constituted in September 2000. The State Health Secretary is the committee's Chairperson, while the Secretary, Family Welfare is its Secretary. The committee has the responsibility to review the births and deaths in the State every six months and take necessary actions.
12. The Commissioner of Census and the Director General, Sample Registration Survey (SRS) have also directed the State Government to address the problem of incomplete recording of child deaths and expressed their willingness to extend help and support to the State Government (2002).
13. In July 2003, during the discussions in the State Legislature on the issue of child deaths in the State, the Women and Child Welfare Minister Dr. Vimal Mundada said that as suggested by Dr. Abhay Bang, the Government has taken all the steps to report and reduce child deaths.
14. Yet, news about child deaths continued. In December 2003, the Opposition Leader Nitin Gadkari and Jogendra Kavade, Hussein Dalwai, Divakar Ravate, Dr. Neelam Gorhe, Dr. Deepak Sawant, Vijay Vadttiwar and other MLAs raised the issue for discussion in the State Legislature. Responding to this discussion, the Health Minister Digvijay Khanwilkar declared that a committee will be constituted to evaluate the situation of child deaths and malnutrition in the State and of the government schemes in this regard (12 December 2003).

This is the context under which this committee has been constituted.

3. Scope of Work of the Child Death Evaluation Committee

As announced by the Government of Maharashtra in the state legislature on 12th December 2003, the 'Child Deaths Evaluation Committee' was constituted (GR No. BMS/2003/PK 281/2003, KK3, dated 12/12/2003)

The committee, headed by Dr. Abhay Bang, has 13 members and is charged with the following responsibilities:

1. Assess the problem of child deaths and infant mortality in the state;
2. Review the situation of malnutrition among children in tribal areas.
3. Review all the ongoing schemes aimed at reducing infant and child deaths, maternal deaths and malnutrition; and to give recommendations for their improvement.

Duration:

The committee is expected to submit its report every six months. However, the health minister has requested that the first report be submitted urgently for immediate action.

4. Questions and References for Evaluation

To evaluate the problem of child mortality and malnutrition, it was first essential to identify

1. The questions
2. The statistics

on the basis of which, the evaluation could be carried out.

The following questions were taken up for this evaluation:

A How many child deaths in Maharashtra? Where? Why?

1. What is the total number of child deaths and stillbirths annually occurring in the state? (Rates and actual figures)
2. Where do these child deaths occur?
3. What are the causes of child deaths? Is it because of malnutrition or disease?

B Has there been any progress in addressing the problem of child mortality?

4. What was the improvement in the problem of child deaths in the state in the last few years? (What is the decrease in the rate?)
5. How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?
6. How many child deaths will occur in the state by then?

C What are the major difficulties that the government faces in order to understand the problem of child mortality?

7. Does the government receive true and complete information about all events of child deaths ?
8. Why does the government not learn of all events of child deaths?
9. What is the responsibility of the MIS of the health department in addressing the problem of child mortality?
10. Has the child death reporting improved subsequent to the decisions taken by the state government in 2001?
11. To what extent has this decision to record all child deaths been implemented?
12. What did the highest state-level committee to coordinate the recording of births and deaths in the state do to improve recording of these events?

D Malnutrition

13. What is the extent of malnutrition in children in Maharashtra?
14. What is the number of severely malnourished children in Maharashtra?
15. Is there any improvement in the situation of malnutrition in children in the state?
16. How correct is the government (ICDS) information about malnutrition?
17. What is the extent of malnutrition in tribal areas?
18. What is the extent of malnutrition in tribal areas?

E The diagnosis of the government's problem

F Solutions and Recommendations

5. Method

The government has asked the committee to submit its first report quickly. Looking at the time at hand, it is not possible for the committee to conduct surveys and collect information about child deaths and malnutrition on its own, in spite of the committee having a wide scope of work. To find a way around this limitation, the committee decided to make use of the available information of good quality. Apart from this, the committee also visited many areas, and benefited from the information in government reports and statistics as well as discussions with various government officials and staff. Committee members also talked to people outside the government.

i) The committee met in full force four times, on 8 January (Mumbai), 10 to 11 February (Nagpur), 2 March (Pune) and 11 to 12 August (Mumbai).

ii) Five regional meetings were also conducted:

20 – 21 Januaray	Nashik
23 – 24 January	Amravati
27 – 28 January	Aurangabad
30 – 31 January	Thane
9 February	Gadchiroli (Nagpur region)

During these regional meetings, the committee members had discussions with

- Government officials (Health and Family Welfare departments, Integrated Child Development Scheme, Collector, District administration).
- People's representatives
- Journalists
- Representatives of local voluntary organizations / NGOs.

(In some meetings, it was not possible to meet with everyone).

iii) Public Hearings: Public Hearings were held in Dharni (23rd January), Amravati (24th January), Nashik (20th January), Thane (30th January) and Aurangabad (28th January). In these hearings, citizens, journalists and social workers from the region presented the difficulties and shortcomings of the government programs and records.

iv) Committee also visited PHCs, sub-centers, Aanganwadi and rural hospitals and had discussions with staff.

v) Questionnaires were sent to the following senior officers:

- Additional Director, Family Welfare, Maharashtra government, Pune
- Director General, Health and Family Welfare, Maharashtra government, Pune
- Secretary, Family Welfare Department, Maharashtra government, Pune
- Secretary, Rural Development Department, Mantralaya, Mumbai
- Commissioner, Integrated Child Development Scheme

vi) The Vital Statistics Division and Family Welfare Bureau in Pune were visited.

vii) The statistics, information and reports received from the Health and Family Welfare Department, Maharashtra and Integrated Child Development Scheme were scrutinized.

viii) Publications / information from the following reputed agencies was also referred:

- Sample Registration System, Government of India
- National Nutrition Monitoring Bureau., National Institute of Nutrition, Government of India
- International Institute of Population Sciences, Mumbai
- Child Death Study and Action Group, Maharashtra
- SEARCH, Gadchiroli

6. Findings

A How many child deaths in Maharashtra? Where? Why?

Question 1 What is the total number of child deaths and stillbirths annually occurring in the state? (Rates and actual figures)

i) There are 3 systems that document child deaths in the State.

- Civic records of births and deaths (CRS)
- The MIS of the health department
- ICDS records

However, there is doubt about the completeness of these systems.

ii) The State's health department collects information from selected villages under Survey of Cause of Death (SCD) by sampling. However, the selection of villages and the completeness and quality of information are not satisfactory.

The following surveys of reasonable quality are also available:

iii) National Family Health Survey NFHS – II

iv) Sample Registration System (SRS, of the Government of India

v) The revised article 'Child Mortality in Maharashtra' based on 'Kovli Pangal' published by the Child Death Study and Action Group in the Economic and Political Weekly in 2002.

Out of these, no single study is complete. Each has something unique and some limitations. After much deliberation, the committee decided to use the statistics of SRS and the revised article of the Child Death Study and Action Group as reference. Both the studies estimate child deaths and still births as follows:

Table 1: Child deaths and still births in Maharashtra: estimates of SRS

Death Rate	1999	2000	2001
Still Births	21,806	22,045	22,165
Still Birth Rate	11.0	11.0	11.0
Infant Deaths	94,10	95,149	89,689
Infant Mortality Rate	48.0	48.0	45.0
Toddler Deaths (deaths in 1-5 years age group)	26,864	27,158	27,306
Total Deaths (0 – 5 years)	1,20,984	1,22,307	1,16,995
Total child deaths and still births	1,42,790	1,44,352	1,39,160

Source: Estimates based on the rates in the Reports of the SRS, Registrar General, Government of India

Table 2: Annual Child Deaths and Still Births in Maharashtra: Estimates of the Child Death Study and Action Group (Average of years 1998-2000)

Death Rate	Annual figures
Still Births	69,484
Still Birth Rate	30.8
Infant Deaths	1,44,113
Infant Mortality Rate	66.2
Toddler Deaths (deaths in 1-5 years age group)	30,912
Total Deaths (0 – 5 years)	1,75,025

Total child deaths and still births	2,44,509

Source: Child Mortality in Maharashtra, EPW, 2002

Question 2 Where do these child deaths occur?

i) The news published in the newspapers gives the impression that the problem of child deaths is restricted to some of the aadivasi areas. However, according to SRS 2000 of the Central Government, the Infant Mortality Rate of rural Maharashtra is 57. In this same period, the Child Death Study and Action Group also recorded the following rates in 14 different areas:

Table 3: Child Deaths in different population groups in Maharashtra (Child Death Study and Action Group)

Rate	Rural (Non-aadivasi) Region	Aadivasi Region	Urban slums	Maharashtra State
Still Birth Rate	32.7	28.8	37.9	30.8
Total Still Births	37,279	6,804	22,724	69,484
Infant Mortality Rate	64.2	79.9	68.2	66.2
Total Infant Deaths	70,853	18,274	39,585	144,113
Child Mortality Rate (0-5 years) – CMR	74.3	102.7	96.6	80.4
Total Child Deaths	81,999	23,488	56,069	1,75,025

Source: Child Mortality in Maharashtra, EPW, 2002 – Revised figures.

Conclusion: The problem of child mortality is State-wide and not restricted to any geographical region. The Infant Mortality Rate (IMR) and annual number of child deaths in different regions of the state is estimated to be:
Rural Maharashtra IMR = 64 and total child deaths = 82,000
Aadivasi regions IMR = 80 and total child deaths = 23,500
Urban slums IMR = 68 and total child deaths = 56,000

ii) What is the IMR and CMR in aadivasi region?

No reliable statistics are available from the state government, and neither the SRS nor NFHS have separate statistics for the aadivasi region.

a. However, methodical studies carried out by the Child Death Study and Action Group, Ankur project and SEARCH, Gadchiroli in the aadivasi region in the last 5 years have collected the following statistics:

Table 4

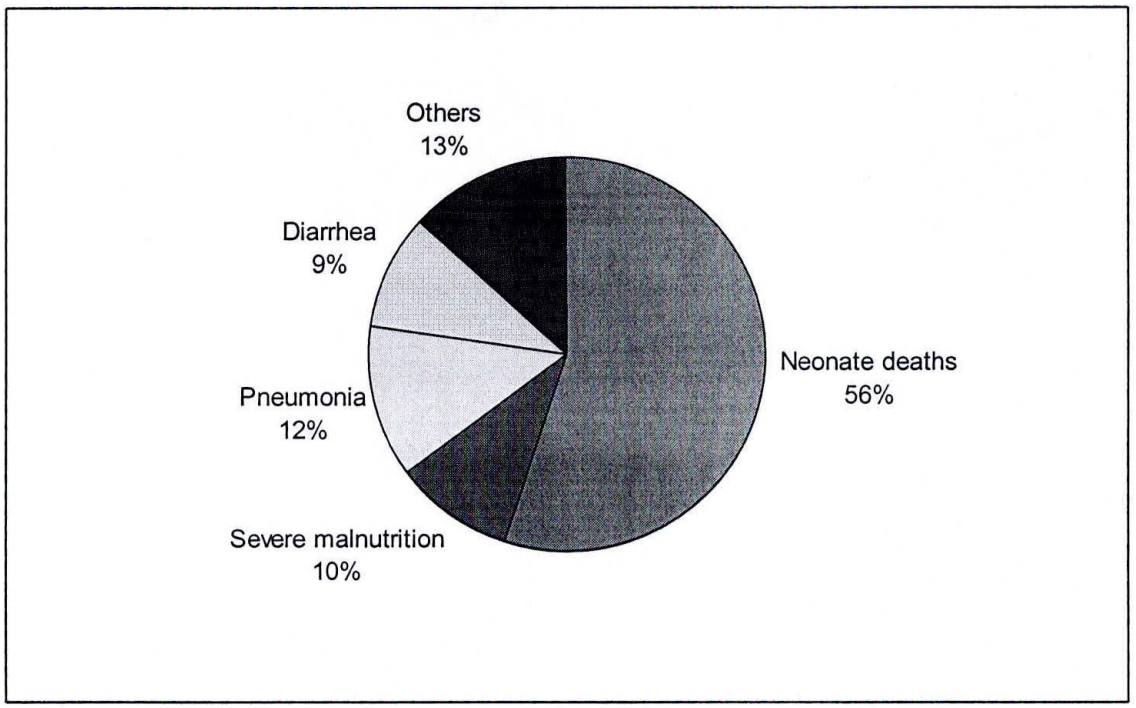
No	NGO	Block	District	Population covered X years	Year	IMR	Toddler Mortality Rate	C
1	Aamhi Aamchya Arogyasathi	Korchi	Gadchiroli	10,263 x 5 = 51,315	1998-2003	84.0	25.3	1(
2	SEARCH	Dhanora	Gadchiroli	9,067 x 1 = 9,067	2002-2003	104.5	22.4	1:
3	KHOJ	Chikhaldara	Amravati	3,290 x 2 = 6,580	1998-2000	77.3	17.2	9(
4	Melghat Mitra	Chikhaldara	Amravati	4,533 x 2 = 9,066	1998-2000	90.7	36.3	1:
5	Srujan	Pandharkavda	Yavatmal	9,801 x 2 =19,602	1998-2000	67.3	24.0	9(
6	Jivhala	Pali	Raigad	4,857 x 2 = 9,714	1998-2000	79.7	29.0	1(
	Total			41,811 x 2.3 years = 1,05,344		82.4	26.2	1(

Question 3 Why do the child deaths occur?

Every child death has many social, economic, cultural and administrative causes as well as medical reasons. Not getting health services in time is also one of the important reasons. Socio-economic causes cannot be changed instantly and are outside the scope of the health department. Therefore, this analysis is restricted to those medical causes that can be addressed immediately.

No reliable information is available about the medical causes of child deaths from across the State. The causes identified by the Child Death Study and Action Group are as follows:

Figure 1: Causes of Child Deaths



Note: More than one cause can be ascribed to some child deaths, hence the total is more than 100%.

Some key observations:

1. Maharashtra has successfully prevented those deaths that can be controlled by immunization, like Tetanus and measles.
2. Neonate deaths are one of the major causes of child deaths. 58% of the total child deaths and 75% of the total infant deaths are neonate deaths.
3. Pneumonia and diarrhea are diseases that can be easily treated.
4. The survey identified severe malnutrition as the major cause of child deaths in 10.4% of child deaths.

Do children die because of malnutrition or as a result of diseases? WHO reports that malnutrition is a supportive cause of death in nearly 55% of child deaths. Malnutrition reduces immunity of children, making them easily susceptible to infection (pneumonia, diarrhea). On the other hand, infections makes the children weak, reducing their appetite and thus causing or increasing malnutrition. Malnutrition and infection are thus closely related and form a vicious cycle.

Political leaders avoid attributing malnutrition as the cause of death as it can be interpreted as death from starvation. In reality, malnutrition is not caused only by lack of food, but many other reasons contribute to it. Similarly, child deaths are not caused by malnutrition or infection alone, but by the combined effect of both.

Conclusion:
Most child deaths are caused by the combined effect of malnutrition and diseases caused by infection. Nearly 80% of the child deaths in the State are caused by pneumonia, diarrhea and malnutrition. These 3 diseases can be easily treated and hence, it is possible to prevent child deaths caused by these 3 causes.

B Has there been any progress in addressing the problem of child mortality?

Question 4 What was the improvement in the problem of child deaths in the state in the last few years?

The SRS (Central Government) has published its statistics for the period until 2002. From this statistics, it can be seen that:

a. IMR of India was 114 in 1980 and it has come down to 65 in 2002, a reduction of 49 in 22 years.
b. In comparison, the IMR of Maharashtra has been brought down from 75 to 45, a reduction of 30 in 22 years.
c. However, if we look at the last 3 years, the IMR of India has come down from 77 to 64, a reduction of 13, whereas that of Maharashtra has come down from 48 in 1996 to 45 in 2002, a reduction of merely 3 (Refer figure 2).

Figure 2: Progress in reducing IMR in Maharashtra and India (SRS)

Insert figure

Source: Reports of the SRS, Registrar General of India

The rate of reduction of IMR has slowed down considerably. There are two reasons. Firstly, it is becoming increasingly difficult to reduce death rate. Secondly, 75% of the infant deaths are during the neonate period. The health department has no specific program to reduce the deaths in this age group as of

now. Hence, the existing programs (immunization, nutrition program) do not affect the remaining infant deaths. That the rate of reduction of infant deaths is lower than the national rate is indeed a matter of concern.

Conclusion: Though the IMR of Maharashtra reduced speedily from 1980 to 1996, the rate of reduction has slowed down considerably. According to the SRS, it has reduced by 3 from 48 to 45 in the last 7 years, while the national rate has reduced from 13.

Question 5 How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?

i) According to Maharashtra's Population policy, the state government aims to reduce IMR to 25 in 2004 and to 15 by 2010. This is a realistic aim.

ii) A look at the last few years tells us that according to the SRS figures, IMR of Maharashtra in 1994 and 1995 was 55, and it was brought down to 45 in 2001. By this same rate, the IMR will reduce to 15 by 2027.

Figure 3: Projected decline in the IMR based on SRS and CDSAG estimates in Maharashtra

Insert figure

However, reduction in IMR in the later stages is a difficult task, and so, the rate of reduction is expected to decline. By this calculation, and considering that the rate of reduction of IMR has reduced considerably in the last 7 years, it may take more than 23 years to bring the IMR down to 15.

iii) According to the Child Death Study and Action Group, the IMR in 2000 was 66. Accepting this figure and the rate of reduction in IMR in last 10 years as estimated by SRS, it is easy to calculate that the IMR will be 15 in year 2042, i.e. 38 years from now (Figure 3).

So, to achieve Maharashtra's targeted goal of IMR, it will take from 23 to 38 years.

Question 6 How many child deaths will occur in the state by then?

By this rate, until the IMR is brought down to 15, there will be these many deaths:

1. As per SRS estimates, 16,68,396 until the year 2027.

2. As per the Child Death Study and Action Group, 38,45,464 until the year 2042.

Conclusion: Maharashtra cannot achieve the targeted IMR of 15 by year 2010 if the IMR continues to decrease with the same rate, but can achieve it by year 2027 to 2042, that is, in another 23 to 38 years. Until then, there will be another 16 to 38 lakh child deaths.
Unless this issue is given utmost priority and is addressed on a war footing, Maharashtra will record child deaths on a large scale.

C What are the major difficulties that the government faces in order to understand the problem of child mortality?

To address any problem (eg poverty, unemployment or AIDS), the government needs to understand its scale and its location completely and correctly. Without this information, the decision makers in the government do not understand its seriousness, cannot give it the necessary priority nor find the appropriate solutions. Also, the solutions that are implemented cannot be evaluated or managed.

For the problem of child deaths, the State Government cannot depend on the SRS or similar sample surveys, because:

- SRS collects information from nearly 3 lakh population in the State on a sample basis. This information can be used to estimate the problem at the State level, but cannot be used for management of the problem. In order to control the health programs and to address the problem of child deaths, the State Government needs information of all the child deaths from each village, Primary Health Center and district. The SRS does not give such information.
- The complete information from SRS becomes available only after 3 to 5 years. For an efficient administration, the State Government should have information immediately, within a month.

That is why the health department and ICDS use an independent MIS, which generates information about births, child deaths and other information for health management in the State every month through the reports sent by the health staff.

MIS is the eyes and ears of the health department. Unless it is functioning smoothly and correctly, the government will be deprived of necessary information.

Question 7 Does the government receive true and complete information about all events of child deaths?

Three State-wide information systems are operational to report to the State on child deaths. These systems are expected to document and report every birth and death, not by sampling method but by covering the entire State.

1. MIS of the health department
2. ICDS records
3. Civic records of births and deaths recorded under the Birth-Death Records Act (CRS)

These three systems have reported the births, infant deaths and toddler deaths as follows:

Table 5: Births and Deaths reported by the State Government in 1999-2000

Type of Information	Health Department MIS	ICDS	CRS
No. of infant deaths	25,646	20,673	27,322
No. of toddler deaths (1 to 5 years)	-	10,318	7,121
Total child deaths reported	25,646 (?)	30,991	34,443

This committee was informed that the MIS of the health department compiles information of infant deaths and not toddler deaths at the State level. Thus, the health department remains unaware of the toddler deaths in the State. Why the information is not compiled when it is collected remains unclear.

i) Comparison between the State Government's information with that of the Child Death Study and Action Group and the SRS (1999-2000)* gives a picture about the completeness of the State Government's information.

Table 6: Completeness of the Government's Information (1999-2000)*

Type of Information	Completeness of the information when compared with SRS (%)			Completeness of the information when compared with Child Death Study Group (%)		
	Health Department MIS	ICDS	CRS	Health Department MIS	ICDS	CRS
Infant Deaths	27.2	22.0	29.0	19.8	15.9	21.0
Toddler deaths (1 to 4 years)ϒ	-	31.0	26.5	-	26.0	25.6
Total deaths under 5 years ageϒ	-	24.3	28.5	-	18.3	21.8

* The CRS information is for the period Jan to Dec 1999, and that of health department and ICDS is for the period April 1999 to March 2000.

ϒ ICDS records this information for 0 to 6 years. The figures given here have been adapted for the specific age group.

Question 8 Has the child death reporting improved subsequent to the decisions taken by the state government in 2001?

On this background, the committee reviewed the decision taken by the State Government in December 2001 to record and report 100% child deaths, the actions taken and progress made. Based on the information given by the concerned departments, the following observations were made:

A. Health Department.

i. Is there an improvement in the reporting and documentation of infant deaths in the MIS of the health department?

Table 7

Year	Infant Deaths	% reported in comparison with SRS
2000-2001	31,987	33.6
2001-2002	32,271	36.0
2002-2003	28,976	31.6
2003-2004	39,527	42.3

From the above figures, it can be observed that there is no improvement up to year 2002-2003, but some improvement in 2003-2004. This is appreciable. However, a closer look reveals that this improvement is restricted to Mumbai and Pune municipal areas and is not across the State.

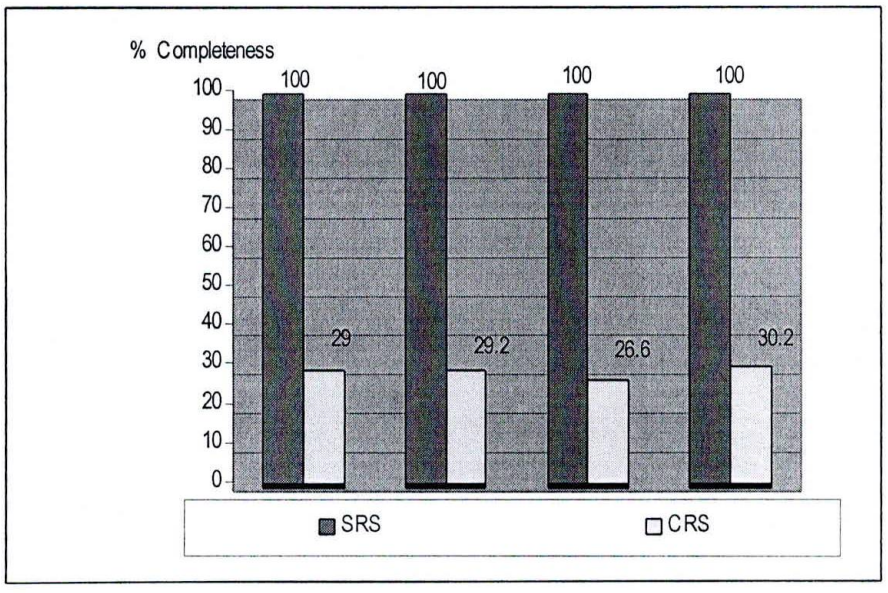
ii. Is there an improvement in the reporting and documentation of child deaths in the 1-5 year age group?

The Family Welfare department reported that the MIS information of the 1-4 year age group child deaths are not compiled at the State level, but only in those blocks where the Navsanjeevan Scheme is implemented. In these blocks, 2604 child deaths in year 2002-03 and 2896 child deaths in 2003-04 were recorded. Thus, there was an improvement of only 10% in those blocks which face a serious problem of child deaths.

B. Is there an improvement in the reporting and documentation of child deaths in the CRS?

Comparison between the reporting of infant deaths in CRS in the last 4 years with that of SRS (CRS information is available only up to 2002)

Figure 4: Completeness of infant deaths registration in CRS in comparison to SRS estimates



Source: a. SRS Report Bulletin, RGI, India. b. Vital Statistics Division, Department of Health & Family Welfare, Government of Maharashtra.

C. Is there an improvement in the reporting and documentation of child deaths in the ICDS in the last 4 years?

i. ICDS Information pertaining to infant and child deaths

ICDS recorded IMR 32 in year 2003 and 31 in year 2003, a figure that appears to be more complete in comparison with that of CRS and MIS.

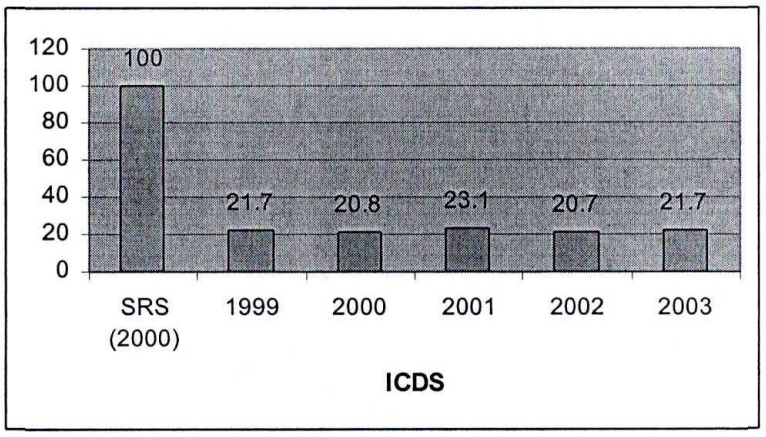
Total infant deaths recorded by ICDS in the State

Year	Infant Deaths
1999	20,673
2000	19,798
2001	21,963
2002	19,679
2003	20,612

However, these figures are less than those reported by the health department. One reason is that ICDS does not cover the entire population in the State. Another reason is that ICDS does not record births completely. These are 6,74,223 (According to SRS, there are 19 to 20 lakh births in the State annually). The IMR reported by ICDS appears to be falsely higher since live births have been under reported (IMR = No. of events of infant deaths x 1000 / live births). In reality, the total infant deaths recorded by the ICDS (20,000 to 21,000) are 22% of the infant deaths estimated by the SRS (90,000). The lower population surveyed by the ICDS also does not explain this incompleteness.

ii. The progress reported by ICDS when compared with SRS (Figure 5)

Figure 5: Comparison with SRS – Progress made by ICDS in recording infant deaths



Conclusion: There is no improvement in the CRS and ICDS systems in the last 4 years and little improvement of the health department's MIS in 2003-04 in spite of the assurance given by the State Government to document 100% child deaths in the State Legislature.

Question 9 To what extent has this decision to record all child deaths been implemented?

1. The law directs the Central Government (1969) and State Government to record all child deaths (1969). The Director General of SRS and the Census Commissioner have repeatedly correspondence with the government to ensure completing recording of child deaths. What action was taken as per the government decision (Rural Development Department, Health and Family Welfare Department and Tribal Development Department) of 12th December 2001 to know all child deaths?

   Many district officials were unaware of this directive.

   In most cases, the block and district committees did not meet or met irregularly.

   As per the government's report, out of the quarterly review meetings conducted by the District Collector and the Chief Executive Officer, Zilla Parishad, reports regarding child deaths were submitted in 42% of the meetings in 2002 and 40% in 2003.

2. In the district and divisional review meetings of government programs, the health department officials of the presiding officers do not give priority to the recording and reporting of child deaths.

3. Only two health programs are reviewed seriously: family planning and immunization. The staff in the lower hierarchy gives priority to only those programs that are taken seriously by the senior officers.

Conclusion: The directive to record 100% child deaths has been implemented very poorly, since the senior officers do not take this problem seriously.

Question 10 What did the highest state-level committee to coordinate the recording of births and deaths in the state do to improve recording of these events?

A) On 2nd September 2000, the Maharashtra government re-constituted a inter-departmental coordination committee of its public health department (GR No. xxx 2000/355/ CR 109 / xxx 3) to record births and deaths and other vital statistics.

The committee was charged with improving the quality and completeness of recording births and deaths.

In the same GR, the following directive has been given with regards to the scope of the committee:

"The committee's main duty is to ensure 100% recording of births and deaths in the State and to take the necessary action, to involve the local health staff in this task as in other states, to organize the rural registration offices for this purpose and to identify the lacunae as well as limitations of the present system and make recommendations to the government. The committee should meet twice in an year and the committee will be in existence permanently."

The State Health Secretary is the ex-officio Chairperson and the Family Welfare Secretary, its ex-officio Secretary of the committee. Thus, this State-level apex committee is constituted of senior responsible officers from the health department and other departments to address the issue of 100% documentation of births and deaths. The committee should be meeting in every six months.

Conclusion: The last meeting of the committee was on 11 September 2000. From then until March 2004, in the 3.5 years in between, the committee has

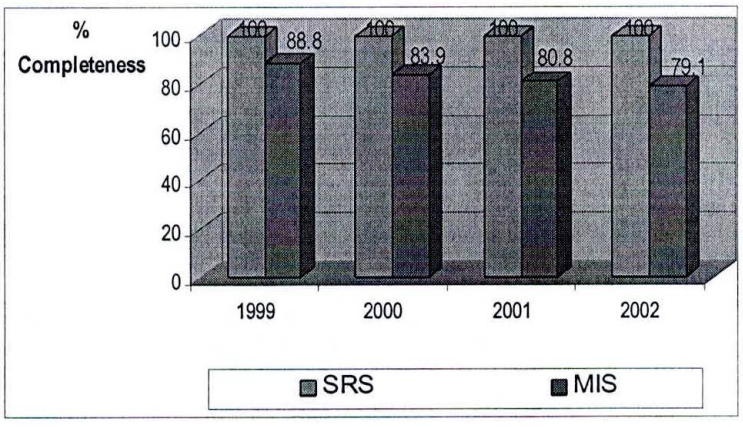
not met at all. We did not come across any records of the committee having reviewed the births and deaths records during this period.

Question 11 Why does the government not learn of all events of child deaths?

(This has been discussed by Dr. Panse in his report submitted to the committee). The committee has found the following reasons:

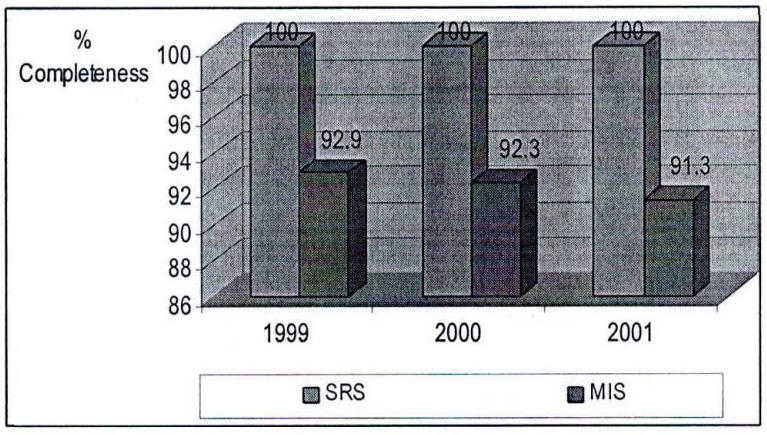
1. The child deaths are purposefully not brought into light.
   i) In the last 4 years when only 20 to 35% of the child deaths were being recorded, the MIS of the health system and CRS has succeeded in recording all (100%) births (Figures 6 & 7).

Figure 6: Completeness of Birth Records of the Health Department's MIS in comparison with SRS.



Source: SRS Reports + Dy Director, Health & Family Welfare (MIS) Maharashtra

Figure 7: Completeness of Birth Records of CRS in comparison with SRS



Source: SRS Reports + Dy Director, Health & Family Welfare (MIS) Maharashtra

ii) The natural flow of events is Pregnancy → Birth → Childhood → Child death → Growth of remaining children. The records needed for other programs of the health department and ICDS staff, such as the list of pregnant women for the mother and child care program, records of births, list of children for immunization purpose are available with the aanganwadi worker and the ANM, and these lists are almost complete. However, child deaths are not recorded. This clearly indicates that the staff avoid recording and reporting child deaths.

iii) The figures of still births further strengthen this argument. According to SRS, Maharashtra's IMR is 45 and the still birth rate is 10. The health department gives the following figures of still births:

Year	Still births SRS	Still births MIS (Health Department)	SRS in comparison with MIS
1999-2000	21,806	25,494	121%
2000-2001	22,045	40,243	182%
2001-2002	22,165	31,253	141%
2002-2003	22,633	25,329	120%

According to SRS, number of infant deaths is 4.5 times the number of still births. However, the average number of infant deaths recorded by the MIS in the last 4 years is 29,720, while the still births are 30,829. The Child Death Study and Action Group estimated still births to be 69,484.

This clearly indicates that the health staff either record an infant death as still birth or record still births but do not record all infant deaths.

Conclusion: Recording nearly all births, reporting higher number of still births but lower number of child deaths is all indicative of the

conclusion that the government machinery tries to selectively hide child deaths.

2. Fear amongst junior staff,
   i) The junior staff in the health department and ICDS is fearful of reprimand or investigation in case of reporting a child death. Not reporting a child death, however, is accepted by the senior officers without any question. In this situation, the staff naturally takes the pragmatic decision not to report child deaths. The blame lies with the system and the environment and not the staff.
   ii) The officers at the middle level (Medical Officer, District Health Officer) find it safe to report a few child deaths from their jurisdiction. They think it unsafe to report more child deaths than reported earlier.

Conclusion: Senior officers at the province level are aware that their information of child deaths is incomplete when compared with that of SRS and Child Death Study and Action Group. They are also aware that in spite of written or oral instructions given by them, their staff does not report all the child deaths. Even so,

a. They have not thought of changing this situation.

b. They have not refused to accept incomplete reports and threatened to take action.

c. **They have never taken this issue seriously.**

This behavior cannot be understood. The committee sought answers to specific questions from these officers three times, and every time, no answers were given. The questions from some of the committee members were not given satisfactory and complete answers. They have not been able to justify their non-action. The most obvious reason seems that the issue of child deaths is not taken seriously.

3. No priority to the issue of child mortality

   The health department MIS and in all the review meetings and evaluation, only two programs - family planning and immunization are given priority. No attention is given to the incompleteness of records of child deaths since it is not a priority issue.

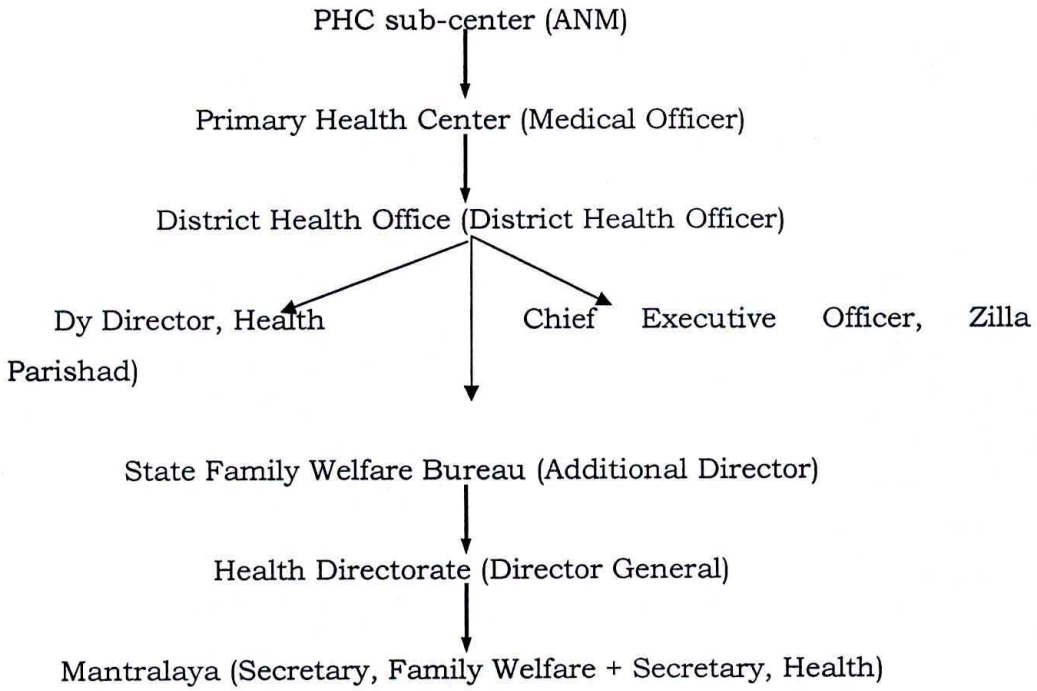
4. There is no mechanism to get information about child deaths from urban areas, private hospitals and doctors. Therefore, many child deaths are not recorded.
5. Unfilled posts or absenteeism of the staff reporting child deaths (such as Gram Sevak, ANM).
6. The door to door survey carried out by the ICDS every quarter is an excellent opportunity to find all child deaths. However, the survey does not give priority to child deaths, nor are questions pertaining to child deaths included in the quesionnaire.
7. There is no answer to the present attitude of the departments – "Why record child deaths? What is the use?" The individual reporting child death should be encouraged and failure to report should be punished. Today, the situation is exactly opposite.
8. No coordination between the 3 systems that record child deaths.
9. No support is sought from those likely to know the death of a child (traditional birth attendant, village head, active members of women's groups, members of the village Panchayat, police patil etc).
10. There is confusion in the minds of the staff about using the de-facto (all child deaths that have occurred in the village, including the death of the mother's child who has come to her maternal home for her delivery) and de-jure method (the death of a child whose mother is a permanent resident of the village) to record child deaths. CRS uses the de facto method while the health department and ICDS use the de jure method. The methods being different, it is easy to conveniently 'exclude' some child deaths.

Question 12 What is the responsibility of the MIS of the health department in addressing the problem of child mortality?

The MIS of the health department is an independent subject in itself. However, looking at the inefficiency of the system to record child deaths and to take necessary action, the committee thinks it necessary to make some suggestions.

The MIS of the health department is like the body's nervous system, essential to ensure the control and coordination of the health services in the entire State. When the nerve cells get a disease like leprosy, the body becomes insensitive to pain and starts loosing the fingers. The nerve cells are unable to pass the message for movement to the limbs, causing paralysis.

1. The MIS starts from the monthly report of the ANM from the PHC sub-center. The information flows in the following manner (Figure 8):



2. This information has four features:
   - The health staff looses a lot of their time. The ANM has the responsibility of maintaining 17 registers, and more than 2000 columns in her monthly report. She spends 20% of her time in collecting this information and then writing reports.
   - The quality of this information has lot to be desired. The example of child death record is ample proof.
   - The local staff (PHC, MO, DHO) do not analyze this information nor do they taken any decision or action based on this information.
   - At the State level, the Directorate or the Mantralaya do not insist on the truthfulness of this information, nor do they use this information to take any appropriate and immediate administrative decisions.

This huge exercise has become a meaningless but regular exercise to collect incorrect information. It also means that decisions of the health and family welfare departments cannot be based on this information.

The State's health minister had assured the State Legislature that he would take a review of the child deaths records along with the various departmental Secretaries. The committee has not come across any such review.

Conclusion: Correct information on the basis on which appropriate decisions can be taken is not available with the government, since the MIS produces faulty data, and the concerned officials make no attempt to correct this faulty system. There is an urgent need to improve the health department's MIS and thus, the records of child deaths.

D Malnutrition

Question 13 What is the extent of malnutrition in children in Maharashtra?

i) There are 3 accepted and popular methods to measure malnutrition based on the child's weight:
   a. Gomez classification: Mild, Moderate and Severe malnutrition.
   b. Indian Academy of Pediatrics (IAP) Classification: Grade I and II. Grade III & IV (Severe malnutrition). ICDS uses this method.
   c. Standard Deviation method.

ii) The following sources provide information about malnutrition in Maharashtra:
   a. National Nutrition Monitoring Bureau (NNMB)
   b. National Family Health Survey (NFHS – II)
   c. ICDS

iii) The surveys of NNMB are organized by the National Nutrition Institute of the Government of India and are accepted for their quality. According to the latest survey carried out by NNMB in Maharashtra as per the Gomez classification, the extent of malnutrition in 1-5 year age group children is as follows.

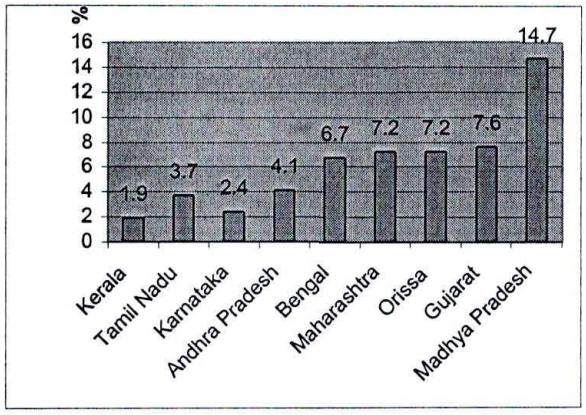
Table 9: Malnutrition in Rural Maharashtra (NNMB 2002)

Type (Gomez)	%
Normal	8.2%
Mild malnutrition	39.6%
Moderate malnutrition	45.0%
Severe malnutrition	7.2%

Source: NNMB Report (2002).

iv) The same survey also reports on severe malnutrition (weight less than 60% of normal weight) in other states:

Figure 9: Severe malnutrition in different States (NNMB 2002)



(NNMB – 2002, table 54.1)

As compared to the southern states, the condition of Maharashtra is poor. That it is comparable to that of Orissa is to be regretted.

v) The NFHS – II survey carried out in the country that uses a different method of classification (median – SD) reports the extent of malnutrition in the 0-3 years age group of children in Maharashtra as follows:

	Maharashtra	India
Severe malnutrition (-3 SD)	17.6%	18.0%
Moderate malnutrition (-2 SD)	49.6%	47.0%

An economically developed State like Maharashtra has the same moderate and severe malnutrition as the national average. Maharashtra follows the 'BIMARU' states like Bihar, Madhya Pradesh, Rajasthan, Orissa and Uttar Pradesh (NFHS – II table 7.17)

Conclusion: 7.2% of the children in Maharashtra are severely malnourished, a figure that puts Maharashtra in line with other undeveloped regions of the country.

Question 14 What is the number of severely malnourished children in Maharashtra?

According to the NNMB report, the number of severely malnourished children in Maharashtra varies depending on the classification method, since the definition of severe malnutrition changes with the type of classification.

- 3 SD method 23.2%

Gomez classification 7.2%

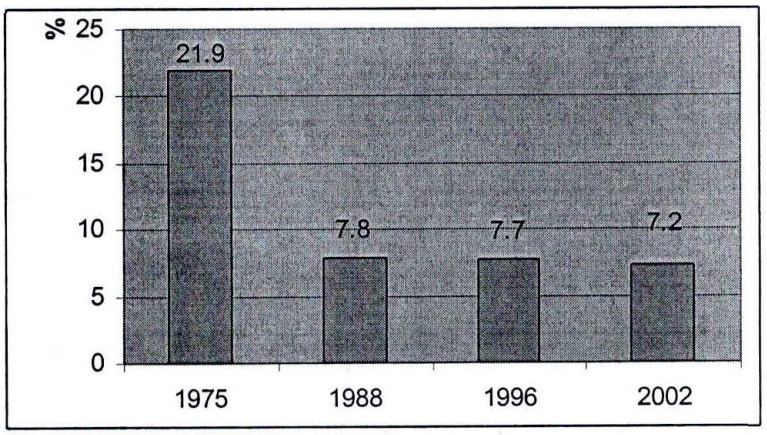
IAP classification 5.4%

If we consider the lowest figure in the above table, the number of severely malnourished children (Grade 3+4) in Maharashtra, out of the 1.5 crore children in the 0-6 year age group, must be 8,15,041 (IAP figure of 5.4%, also used by ICDS). The number of moderately malnourished children (Grade II) must be 32 lakh and that of most severely malnourished children (Grade IV) – 1 lakh (0.6%).

Question 15 Is there any improvement in the situation of malnutrition in children in the state?

According to the 4 surveys carried out by NNMB in the last 27 years, the extent of severely malnourished children in Maharashtra is as follows:

Figure 10: Extent of severe malnutrition in children in Maharashtra (Gomez) (NNMB)



Source: NNMB Reports

Conclusion: The period between 1975 and 1988 saw a decline in the levels of severe malnutrition in the country and the State. However, in the 14 year period between 1988 to 2002, severe malnutrition in Maharashtra reduced negligibly from 7.8% to 7.2%. This is a matter of grave concern.

Question 16 How correct is the government (ICDS) information about malnutrition?

i) According to the reports presented by ICDS, 48 lakh children have been enrolled in nearly 62,752 aanganwadis in the State, benefiting 36 lakh children under the scheme.

ii) ICDS adopts the IAP method of measuring malnutrition using the weight of the child. In November 2003, the extent of malnutrition was measured in 60 lakh children in the State, and the following grades were obtained:

Table 10: ICDS Figures.

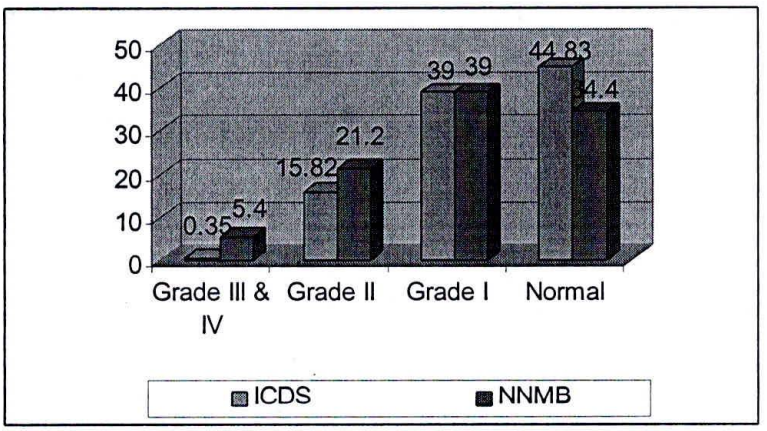
Malnutrition Grades (IAP)	%	Number of children
Normal	44.84%	27,15,690
Grade I	39.00%	23,62,659
Grade II	15.82%	9,58,507
Grade III & IV (Severe malnutrition)	0.35%	21,564

iii) The figures provided by ICDS appear to be very low. To check the reliability of these figures, NNMB carried out a survey using the same IAP classification in year 2002 among children between the age 6 months to 6 years. The findings were as follows:

Table 11: Comparison between NNMB malnutrition figures with that of ICDS Maharashtra.

Malnutrition Grade (IAP)	ICDS (Maharashtra)	NNMB (Maharashtra)
Normal	44.83%	34.4%
Grade I	39.00%	29.0%
Grade II	15.82%	21.2%
Grade III & IV (Severe malnutrition)	0.35%	5.4%

Figure 11: Comparison between malnutrition reported by ICDS and NNMB (2002)



IAP Grading

When compared with the NNMB survey, it can be observed that ICDS reports severe malnutrition at 0.35% nearly 15 times less than that reported by ICDS

(5.4%). The Grade II percentage is also under reported. Some difference may be attributed to the sample size of the NNMB survey and range ; however, the difference of 15 times certainly raises questions about the reliability of the ICDS figures.

Conclusion: ICDS figures for severe malnutrition are 15 times lower than the standard, giving scope to doubt the credibility of the ICDS figures.

Question 17 What is the extent of malnutrition in aadivasi areas?

The committee looked for information to answer this question. NFHS figures for Maharashtra do not give separate information for aadivasi areas. From the study carried out by Arun Bhatia of the Tribal Research Institute, Government of Maharashtra and the news of malnutrition and child deaths from various aadivasi areas, the extent of malnutrition must be higher in aadivasi areas than the State average. The NNMB sample survey (NNMB, Technical Report No 19, 2000) found the extent of malnutrition in aadivasi areas as follows (Table 12 & 13).

Table 12: Extent of malnutrition in aadivasi children in Maharashtra (1-5 years) (Gomez classification, NNMB 2000)

Grade (Gomez)	% aadivasi children	% in Rural Mahrashtra (For comparison)
Normal	2.9	8.2
Mild malnutrition (1)	23.5	39.6
Moderate malnutrition (2)	58.8	45.0
Severe malnutrition (3)	14.8	7.2

Table 13: Malnutrition in aadivasi children (1 to 5 years)
(SD method, NNMB 2000)

Grade	No of Aadivasi children (%)
Weight above 2 SD	17.0
Weight between 2 SD and 3 SD	40.0
Weight below 3 SD	43.0

Conclusions regarding malnutrition:

1. **As per IAP definition, the percentage of children in Maharashtra who are severely malnourished (Grade III & IV) is 5.4% and those moderately malnourished (Grade II) is 21.2%. This means that nearly 8,15,000 children are severely malnourished and 32 lakh children are moderately malnourished. And 1 lakh children (0.6%) are very severely malnourished (Grade IV).**
2. **Maharashtra falls in the list of undeveloped States as far as severe malnutrition is considered.**
3. **There is no improvement in severe malnutrition in the last 14 years.**
4. **ICDS reports 15% times less severe malnutrition, making its figures unreliable.**
5. **The extent of severe malnutrition among aadivasi children is high, with nearly 15% aadivasi children being severely malnourished (Grade III & IV). This is twice the percentage of severely malnourished children in rural Maharashtra.**
6. **The extent of malnutrition in Maharashtra has not reduced in the 14 year period between 1988 to 2002. The reasons for this need to be investigated.**

Question 18 What causes malnutrition?

Malnutrition has many causes, including poverty, lack of food and employment, illiteracy, repeated infections, malnourished and sick mother, lack of health services and so on. Therefore, to address malnutrition, wide range of actions are required. It is expected that the ICDS and health department address some of the critical issues such as nutrition for the pregnant and lactating woman, iron tablets, health education, nutrition to the children, immunization, treatment of the sick child etc. Many experiments such as the Narangwal experiment and the INCAP experiment have demonstrated that malnutrition and child deaths can be reduced by supplementary nutrition coupled with health services. However, such positive effect cannot be observed in Maharashtra; the reasons need to be investigated.

7. Grave Failure of Duty in the Government

One of the major findings of this study is that the senior officers in this democratic government have behaved in an irresponsible manner and should be held accountable for the more than one lakh children dying in the State annually.

i) The three independent government systems of recording child deaths (MIS, CRS and SRS) are directed by and in fact converge in the Health and Family Welfare Directorate. In spite of 70% under reporting of child deaths in the MIS and CRS when compared to the SRS (Central Government) for many years, and knowing of this under reporting, the Health and Family Welfare Directorate made no efforts to improve the reporting even.

ii) Action was avoided under the feeble reason that 'child deaths occur not because of malnutrition but as a result of other diseases'. In reality, malnutrition is a cause in most (55% as per WHO) child deaths. And the responsibility of preventing the 'other diseases' (such as pneumonia, malaria, diarrhea and neonate diseases) that cause child deaths lies with the health department.

iii) The directives given by the Nagpur bench of the High Court to reduce malnutrition and child deaths in aadivasi areas have not been implemented in totality.

iv) Chief Minister Vilas Deshmukh announced in December 2000 that the 'SEARCH' pattern to reduce child mortality will be implemented in the entire State. On 5 December 2001, the Chief Minister and Health Minister took the decision to implement the 'SEARCH' pattern in 14 districts. In spite of these decisions, no step was taken in the last 3 years to implement these decisions. According to the latest information, this decision was implemented in 5 blocks, but the results are yet to be implemented.

- The Chief Minister's decision (December 2001) was not implemented.
- The Chief Minister's suggestions (letter June 2002) to review the decisions and the implementation were ignored.

v) The inter-departmental coordination committee of senior officials with the ultimate responsibility of review and action for ensuring 100% recording of child deaths did not meet even once in 3.5 years during the period when there were repeated news in the media and the topic of child deaths was being discussed in the State and the State Legislature (September 2000 to March 2004).

vi) The Health Minister ignored the evidence given by the media, NGOs and opposition leaders of the incorrect information presented by his officers and instead of investigating, defended this incorrect information. In spite of giving repeated assurances, no action was taken.

The health department has demonstrated with its family planning and immunization programs that if it has the will, it can indeed implement programs effectively. The same officers who are aware and active in pursuing the priorities given by international organizations (family planning, pulse polio, AIDS) fail to act in the case of child deaths for 3 years and think it easy to fool the entire State and its government by denying the existence of the problem and their responsibility to address it.

These are all signs of the grave disease that has struck the administration. As a result, more than 1 lakh children continue to die since last 4 years.

8. Solutions and Recommendations

1. To solve any problem, it must be first measured to understand its extent and severity. By measuring it, one not only understands its priority, but also, there is a basis for the solutions. The impact of the solutions can also be measured and evaluated. The rule can be applied to any problem – poverty, rape, AIDS, SARS. The fever must be diagnosed correctly and the thermometer used to measure the temperature must also be correct.

   The first step to control and reduce child deaths is to record *all* (100%) child deaths.
2. The Civil Registration System 1969 Act puts the responsibility of reporting births and deaths on the citizens. The death of an adult is recorded because there are legal issues like the distribution of property involved. However, it is but natural for grieving parents not to report the death of their infant. That is why CRS continues to report only 30% of child deaths. Considering this natural tendency of people, it may therefore be more pragmatic to change the law rather than expect the people to change.

   The responsibility to legally report 100% child deaths (CRS) should be entrusted with the Gram Sevak, who draw a government salary. This information must be computerized and decentralized, so that immediate compilation of report is possible.
3. The Maharashrta Government should take immediate steps to ensure that the MIS of the health department and reporting of child deaths and malnutrition of the ICDS is complete and accurate. The present difficulties and possible solutions have been discussed in this report in details; to mention the important points:
   i) Reporting a child death brings censure and investigation on the person, while the report is accepted smoothly if no child death is reported. This situation must be reversed. The reporting of a child death must be encouraged, and failure to report must be punished.
   ii) An environment where child deaths can be reported fearlessly must be created. This can be done by implementing a scheme like the Voluntary Disclosure Scheme for an year, when the health staff will learn of the reality of the situation of child deaths. This year can then be used as a baseline, and progress measured against this baseline.
   iii) Help from the individuals who are likely to know of the death of a child – Dai (traditional birth attendant), Officials of women's groups, Village head, Police Patil,

members of the Gram Panchayat and Women Gram Sabha, SHGs etc. may be sought.

iv) In urban areas, information may be collected from private practitioners and hospitals on a regular basis.

v) The de-facto method to record child deaths may be adopted by the MIS of the health department and ICDS. This will ensure coordination with CRS data, while also ensuring completeness of the information.

vi) Questions related to child death may be added to the door to door survey carried out by the ICDS aanganwadi worker and the nurse of the health department. The aanganwadi worker should be encouraged on reporting every child death.

vii) The health department's MIS should be simple and small and it should enable decision-making at the local level. The quality and completeness of its data should be ensured and stress should be given on making certain that it is used for decision-making at the local level.

viii) The MIS form as well as monthly review meetings at all levels should start with the discussion on child deaths.

ix) An intelligence system should be created within the health department to report any child death immediately. Local and senior officers should take immediate action based on this information. This intelligence system should alert the government, rather than the news of child deaths in newspapers.

4. Government should give priority to the issue of child deaths over other issues such as family planning and immunization in the departmental review and evaluation of senior officers.
5. The recording and reporting of child deaths must be closely supervised.
6. Failure to report a child death is the violation of human rights and equivalent to corruption. Failure to report a child death and failure to insist on complete and accurate reporting of child deaths should be considered a serious offence and must be penalized severely.
7. The 15 times under reporting of severe malnutrition by ICDS as compared to NNMB is shocking and unacceptable. This under reporting must be investigated and corrected immediately.
8. Looking at the grave lacunae and inefficiency of the health department MIS, it is necessary to immediately restructure the decision making centers so as to make it accountable, able and responsible.

9. The District Collector and Chief Executive Officer should review the reporting of child deaths of the health department and ICDS at the district level, at the regional level, the Commissioner should review while at the sub-district level and the Chief Secretary at the province level. SRS data should be used to verify the completeness of this reporting. Experts should be appointed to help the Chief Secretary in this evaluation.
10. The Gram Sabha, NGOs, journalists and people's representatives should be requested to report any child death that they learn of. A printed post card may be published to enable them to report these deaths easily. The District Collector should verify whether these deaths are recorded by the MIS, ICDS and CRS.
11. The key reasons for child deaths in Maharashtra are a. neonate deaths, b. pneumonia, c. diarrhea and d. malnutrition. Today, 75% of the infant deaths are neonate deaths. Drawing from many successful experiments that demonstrate that these deaths can be prevented by proper care and treatment, the government should train a women in every village, hamlet and habitation as a health worker. Program to ensure that all children including neonates get immediate treatment at home or at the nearest hospital must be implemented.
12. Maharashtra Government should give first priority to the eradication of child mortality and malnutrition. It is necessary to have political willpower, administrative efficiency and an aware society to achieve the State's target of bring down IMR to 15 by 2010. A campaign to make 'Child Death Free Maharashtra' should be launched.