MAIN CAUSES OF CHILD MORTALITY AND THE STRATEGIES TO BOOST CHILDREN HEALTH IN DUMKA DISTRICT:


Abstract:

The qualitative development of a society is reflected by child mortality rate. Over the past few decades thrust of the government health department has been on controlling the child mortality rates, the result of which has been witnessed by a steep decline in the child mortality rates. Yet the number of children who dies before attaining the age of 5, is 59 per 1000 live births in Dumka equating itself with the average infant mortality rate of Jharkhand at 59 per 1000 live births. (as per population census 2011)

Yes, we have improved in this front but from worse to bad, because 59 deaths per 1000 live births of children is also bad figure considering the cost burden on child health on the government exchequer.

The pricking fact is that most of the causes of child deaths are readily preventable or could have been effectively controlled by scientific methods. It reflects that there is a research gap is identifying and proposing ways towards curbing the child mortality rates in the tribal Dumka district.

This article seeks to provide thoughtful strategy to identify the main causes of child mortality and provide thoughtful strategies of effective reduction in child mortality, with the acceptance of the problem and will provide piece meal information towards guiding the policy makers is better planning, implementation and monitoring of the welfare programs aimed at reduction of child mortality. It is only then, when the lights of hope of living in a welfare state will become a reality for the poor, innocent tribal folk of Dumka district.

Keywords: qualitative development, child mortality rates, infant mortality rate, population census, monitoring, planning, implementation.

Introduction :-

The measurement of a welfare society’s achievement is reflected by its infant mortality rate. Globally, over the past few decades the child mortality rates have declined considerably from an estimated rate of 65 deaths per 1000 live births in 1990 to 29 deaths per 1000 live births in 2017. Annual infant deaths have declined from 8.8 Million in 1990 to 4.1 Million in 2017²

Dumka is a tribal dominated district, with a huge population of rural tribal folk. The infant mortality rate of Dumka district is at par with that of Jharkhand state’s average of 59 deaths per 1000 live births according to the Govt. of India census 2010-2011, it is higher than the word average of 29 per 1000 in the year 2017.

The striking feature is that state government is spending a hefty amount of money on woman and child health welfare schemes. This shows that the benefits arising out of the costs of health welfare schemes are quite meager. Most of the causes of child death can be readily, easily and effectively curbed with cost – effective methods.

It reflects that there is a huge gap in the research in the field of maternal and child welfare in the district. This article tries to identify the main causes of child mortality and also suggest some strategies to boost children health in Dumka district, with the pious, positive thought of providing effective, cost- efficient strategies in the
better planning implementation and result oriented monitoring of the health welfare programs of the children in the tribal belt of Dumka district.

**Literature Review:-**

Quite a few articles related to the causes and strategies to boost children health in Dumka are available as there is a wide research gap in this field. Even those which are available rarely come up with new ideas.

1. “Parenting self-efficacy and parenting practices over time in Mexican American families”. written by Larry E. Dumka, Nancy A. Gongales, Lorey A. Wheeler and Roger. E Milsap Draws social cognitive theory, study used a longitudinal cross-lagged panel design and a structural modeling approach to evaluate parenting self-efficacy’s reciprocal and casual associations with parents positive control practices over time to predict adolescents conduct problem.

2. Estimation of perinatal mortality rate for institutional births in Rajasthan State, India using capture-recapture technique.

By Prem K. Money, Beena Varghese; Tinku Thomas.

The objectives of the investigation was to estimate the perinatal mortality rate among institutional births and to compare the sensitivities of different data collection methods. Concluded that accurate clinical categorization of perinatal deaths were recommended for improving the quality of care.

3. The challenge of infant mortality: Have we reached a plateau?

By : Marian F Mac Dorman and T J Mathews

The authors analyzed recent patterns and trends in U.S infant mortality with emphasis on two of the greatest challenges (1) persistent racial and ethnic disparities and (11) the impact of preterm and low birth weight delivery, and came to the conclusion that infant mortality is a complex and multi factorial problem that has proved resistant to intervention efforts. Continued increase in preterm and low birth weight present major challenges in improvement of the infant mortality rate.

**Methodology:-**

Data from various websites, newspaper, government of India health reports etc have been analyzed and compiled along with grassroots presence and observance of the problem present in the areas of Dumka district in the area of rural child health care facilities.
Brief history Dumka:-

Dumka town holds the distinction of being headquarter of Santhal Pargana Commissioner. The district of Dumka was created on 1st of June 1983 after the bifurcation of the three new district – Godda (on 17th May 1983), Sahebganj (on 17th May 1983), and Deoghar (on 1st of June 1983). It is the land of freedom fighters Sido Kanhu, who fought the British as the leaders in Santhal Revolt.

Geographical Location of Dumka:-

Dumka holds the credit of being the homeland of the ancient tribal folks like Santhals, Paharias and Lohras. It is situated at 86° 16’ North latitude and 87° 15’ East longitudes at a higher of 472 feet above the sea level, extending with an area of 3716.02 square kilometers.

It is gifted with mesmerizing nature beauty of the high mountains, hills, inland draining rivers, streams, and water-fall with abundance of natural flora and fauna.

Demography of Dumka district:-

According to the population census 2011, Dumka has a population of 1321442, out of which, 668514 was the male population and 652928 were females as on 31th March 2011. Sex ratio stood at 977 females/1000 males. Urban population of 6.8% and rural population stood at 93.2% earmarking it as a rural dominated district.

The district of Dumka has one sub-division viz. Dumka sadar over 10 C.D. Blocks, 4 towns and 2925 villages.
Status of children health care in Dumka district :-

According to the national family health survey-4 (2015-16) conducted by ministry of health and family welfare of the Govt. of India, some of the key indication of Dumka regarding child health are:

NFHS-4 (2015-16)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Rural %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Children born at home who were taken to a health facility for check-up within 24 hour of birth (%)</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>2. Children who received a health check-up after birth from doctor/Nurse/LHV/ANM/Midwife/other health personal within 2 days of birth (%)</td>
<td>24.9</td>
<td>26.1</td>
</tr>
<tr>
<td>3. Institutional births (%)</td>
<td>52.6</td>
<td>54.3</td>
</tr>
<tr>
<td>4. Children age (12-23) months fully immunized (BCG, Measles, and 3 doses of polio and DPT each)</td>
<td>75.6</td>
<td>76</td>
</tr>
<tr>
<td>5. Children age (12-23) months who have received 3 doses of hepatitis’s B vaccine.</td>
<td>67.1</td>
<td>67.7</td>
</tr>
<tr>
<td>6. Children are (9-59) months who received a vitamin A dose in last 6 months</td>
<td>50.0</td>
<td>50.1</td>
</tr>
<tr>
<td>7. Prevalence of diarrhea (reported) in the last 2 weeks preceding the survey.</td>
<td>4.3</td>
<td>4.7</td>
</tr>
<tr>
<td>8. Prevalence of symptoms of acute respiratory infection (ARI) in the last 2 weeks preceding the survey.</td>
<td>2.2</td>
<td>2.4</td>
</tr>
<tr>
<td>9. Children under age 3 years breast fed within one hour off birth</td>
<td>30.9</td>
<td>31.4</td>
</tr>
<tr>
<td>10. Children under age 6 months exclusively breast fed</td>
<td>70.8</td>
<td>71.8</td>
</tr>
<tr>
<td>11. Breast feeding children age (6-23) months receiving adequate diet</td>
<td>16.6</td>
<td>17.2</td>
</tr>
<tr>
<td>12. Total children age (6-23) months receiving adequate diet</td>
<td>16.4</td>
<td>17.1</td>
</tr>
<tr>
<td>13. Children under 5 years who are stunted (height for age)</td>
<td>44.6</td>
<td>43.8</td>
</tr>
<tr>
<td>14. Children under 5 years who are wasted (weight for height)</td>
<td>42.1</td>
<td>41.4</td>
</tr>
<tr>
<td>15. Children under 5 years who are severely wasted</td>
<td>22.2</td>
<td>21.8</td>
</tr>
<tr>
<td>16. children under 5 years who are under weight wasted (weight for age)</td>
<td>54.3</td>
<td>53.5</td>
</tr>
<tr>
<td>17. Children age 6-59 months who are an anaemic (&lt;11.0g/dl)</td>
<td>76.0</td>
<td>74.9</td>
</tr>
</tbody>
</table>

Source: National family Health Survey-4 (2015-16)
Main cause of child mortality in Dumka:-

<table>
<thead>
<tr>
<th>Diphtheria</th>
<th>Pertusis</th>
<th>Tetanus Neonaturam</th>
<th>Tetanus other</th>
<th>Polio</th>
<th>Measles</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>320</td>
</tr>
</tbody>
</table>

**Diarrhea and Dehydration**

<table>
<thead>
<tr>
<th>Number admitted with Respiratory Infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2786</td>
</tr>
<tr>
<td>2316</td>
</tr>
<tr>
<td>61</td>
</tr>
</tbody>
</table>

Source: Jharkhand – Dumka – National Health System Resource centre

<table>
<thead>
<tr>
<th>Jharkhand - Dumka - Mortality - Major causes Group - April 2011 to March 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death Groups</td>
</tr>
<tr>
<td>Communicable Diseases, Maternal and Perinatal</td>
</tr>
<tr>
<td>Non-communicable diseases</td>
</tr>
<tr>
<td>Injuries</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

Source: Jharkhand-Dumk-National Health Systems Resource centre
Jharkhand – Dumka – Mortality – major causes Group April 2011 to March 2012:

### Cause of death | Risk factors | Prevention | Treatment
--- | --- | --- | ---
**Pneumonia, or other acute respiratory infections** | Low birth weight, malnutrition. Non-breast fed, children, overcrowded condition. | Antenatal care visits for mother, adequate nutrition, exclusive breast feeding, Reduction of household pollution | Appropriate care by trained health provider, antibiotics oxygen for severe illness. |
**Childhood diarrhea** | Unsafe drinking water and food, poor hygiene, practices, Malnutrition | Safe food and water, adequate sanitation and hygiene, adequate nutrition vaccination | Low – osmolarity rehydration salts (ORS), zinc supplements |

Source: reference number 5

60.7% of the early child deaths are preventable or can be treated with simple, affordable intervention on part of institution health welfare programs to curb communicable diseases maternal and perinatal, through intensive immunization, adequate nutrition, safe drinking water, fresh non-contaminated food, and appropriate care as well as awareness drive for personal health and hygiene practices by trained health provider as and when needed.
Strategies to boost children health in Dumka district:-

The institution maternal and child health welfare programs are no doubt striving hard to reduce the maternal as well as child mortality rates. But the cost-benefit ratio is quite discouraging. For example the cost of initiating and conducting malaria controlling programs have run into hundreds of crores, but the diseases born by mosquitoes like malaria, filaria, dengue etc are thriving in leaps and bounds. Just opening the mouth of govt. Exchequer doesn’t meet the requires goals of controlling the spread of diseases, what is needed is an integrated all out approach with proper on the ground monitoring and set up accountability on every shoulder who are involved in implementing and running the health welfare schemes.

Here are some suggestion which may be quite fruitful in grassroots level implementation of maternal and child health welfare schemes:-

- **Initiating school health program:**
  
  A result oriented health program in Jharkhand could be to merge the primary health care unit in the school. During the school time a doctor, nurse and an attendant should be appoints, so as to give proper treatment to the needy children with medicines or proper medical advice. Health education should be imparted to all the children as compulsory subject of the curriculum in the conventional class rooms as well as in practical demonstrations in first aid. An year long health exhibition, yoga exercise, health quiz, demonstrations to prepare cheap, nutritious food etc should be a part of regular school activities of children.

- **Possible benefits:**
  
  Just like free and compulsory education for children up to the age of 14 years a free and compulsory health facility will be provided to all the school going children.

  - School time will be utilized to prepare a vast population of health conscious, health literate and healthy future of the nation.
  - Health club of medical staff, teachers and students will boost the health care activities and programs to be launches at the grass-root level.
  - The cost of monitoring the primary health centers and sub-centers would be reduced.
  - Last but not the least primary health care will be extended directly in to the doorsteps of schools.

- **Disease preventive services:**

  A nurse and two nodal teachers (one male and female each) may be entrusted with the day of medical care regarding ailments of the children in school. After preliminary medical check-up of all the students, a health record of all the students should be prepared regarding timely medical referral, type of disease, ailments, height, weight, nutritional and medicinal requirements etc.
A multi-speciality medical mobile unit should visit each school at least once a year, with specialities such as dermatologist, dentist, ophthalmologist and gynaecologist. The record of treatment and medical screening should be referred for future mop-up treatment of the children.

- **Providing a nutritional meal twice in schools.**

  The mid-day scheme should be further extended to providing nutritious breakfast with the start of the school time and mid-day meals to be served at the end of the school time and mid-day meals to be served at the end of the school timing so as to meet the daily nutritional requirement of the children.

A breakfast to the poor children is an essential requirement as most of children remain hungry till noon until the mid-day meals are prepared and served.

Medical equipment kits for school:

All the schools should be provided with a package of medical equipment kit consisting of essential medical requirements like stethoscope, thermometer, blood-pressure check-up apparatus, height and weight measuring scales basic medicines and first aid boxes. This will be helpful in providing quick medical assistance to the needy children.

- **Display of yearly time table of health care activities:**

  In the very beginning of the school session the yearly time-table of the health care activities to be organized at the school should be displayed. Dates and timings of regular medical screening, medical camps, campaigns and awareness programmes, observation of certain important health days, should be displayed well in advance and the students as well as their guardians should be informed so that they may be prepared for those activities and their participation may be confirmed.

- **Regular health club activities:**

  The school health club comprising of a nurse, two nodal teachers and some student volunteers may organize regular activities like visiting the villages, panchayats etc and carry out cleanliness drives, health awareness my mean of picture charts, publicise the family welfare programs etc among the locals. These steps will definitely enhance the possibility of prevention of diseases and ailments.

- **Providing basic minimum health services at the school level:**

  The basic minimum health services should be provided at the school level (to all the children up to age of 14 years), so as to deliver primary health care in a whole some manner. The main focus of which may be prevention, and promotion of health services, routine curative services, and health rehabilitation. For this medical infrastructure ought to be established in schools which would render health services, such as maternal and child health services, immunization of mothers and children, control and eradication programs by providing curative services. All the schools of secondary level would have the facilities of a primary schools have the medical facilities of the sub centre.
Conclusion: If the performance and participation rate of rural health care programmes of woman children ought to be enhanced, then the health care infrastructure should be tagged to the schools. It will be more effective in implementing, monitoring, preparing health profile, and thus prevention and promotion of health services of the children. The school being the pivot for social change in awareness and education of health care among children who are our future. Thus a healthy army of students equipped with basic medical and health awareness and literate future can be raised who will further fight for prevention and control of diseases.

References:

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3. Jh_Factsheet_362Dumka(1).pdf (page-3,4)
4. Nhsreindid.org>default>files>hmis>Jharkhand_Dumka_Apr11_Mar12