Innovative software solution to fast track maternal death review (MDR) - Lessons from India -

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GMNHC 2015, Mexico
Acknowledgements

- Government of India MOHFW
  - NRHM, NHM, Maternal Health Division
  - National Informatics Cell
  - Statistics Division
- GMNHC 2015
- The Federation of Obstetric and Gynaecological Societies of India (FOGSI)
- Cognic Systems
- International Federation of Gynecology and Obstetric – Leadership in Obstetric and Gynecology for Impact and Change (FIGO – LOGIC)
India

- World’s Largest Democracy
- 1.27 Billion + population (estimated), 17.5% of world Population
- 29 States, 7 Union Territories, 675 Districts
- GDP Growth Forecast 7.5% in 2015 (Higher than World growth of 2.8%)
- 22+ Languages, 763 Pvt. Television Channels (385 news channels), 99,660 registered publications, 980 mio Mobile Subscribers, Digital India initiative, 108 mio Broadband Users

TRAI (Press Release No. 47/2015)

- 25% people between ages of 18-25 (approx), 65% below 35 yrs
Maternal Health – India

- 27 mio women deliver per year
- 15% develop complications, resulting in 44,000 maternal deaths/year
- MMR is 167/1,00,000 LB (MMR Bulletin 2011-13)

MMR Reduction Goals - MDG 5 - 150 by 2015 and 12th plan - 100 by 2017
State averages mask wide intrastate disparities

Govt of India PPT 2013
Maternal Death Reviews - India

- Launched in 2010
- Facility Based Reviews
- Community Based Reviews
- Incorporates Surveillance and Reporting Components
Maternal Death Reviews (MDR)

Find MD and Report causes of MD

Implementation & Improvement

Action

Analysis & Feedback
MDR Software Launched

Reporting tools capture information on several items on each maternal death case (Quick Analysis across Large database)

Many Formats (FB - 8 pages, CB – 15 pages)
Repetition of information across the formats managed

Paper based Data is digitized

Timely Analysis/Reporting/Action/Surveillance/Programmatic Interventions

Development and deployment of Software is KEY
MDR Software.....Process

**Expert Group Meetings**

- MDR Software Tools developed
- Tools synchronised with MDR Guidelines Tools
- Software Compatibility with NIC Specifications
- Integration of Software with MCTS through the Mother ID
- Completion of Security Audit
- Testing of software with State Data on maternal deaths

MDR software is ready, deployed on the NIC server & Software website link is [www.nrhm-mdr.nic.in](http://www.nrhm-mdr.nic.in)
Software Highlights

- Linked to MCTS database
- User Name/Password linked - State/District
- Pre-defined level of access
- User Interface similar to paper formats
- Format dependencies (Only after filling the key formats will the other formats get activated)
Software Highlights

- Key Compulsory Fields
- Repetition is AUTO filled
- Drop down menu’s to ensure uniformity
- Auto Save every page
- Training Dummy Site
- Multiple choice parameter for reports
## PROGRESS as on 30/9/15

### NUMBER OF PERSONNEL TRAINED, MATERNAL DEATHS REPORTED AND DATA ENTRY COMPLETED

<table>
<thead>
<tr>
<th>SR No.</th>
<th>STATES</th>
<th>COMMUNITY FORM</th>
<th>FACILITY FORM</th>
<th>NUMBER OF PERSONNEL TRAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANDHRA PRADESH</td>
<td>1253</td>
<td>420</td>
<td>257</td>
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<tr>
<td>2</td>
<td>ASSAM</td>
<td>616</td>
<td>222</td>
<td>240</td>
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<tr>
<td>3</td>
<td>BIHAR</td>
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<td>25</td>
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<td>4</td>
<td>MP</td>
<td>568</td>
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<td>883</td>
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<td>5</td>
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<tr>
<td>6</td>
<td>GUJARAT</td>
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<td>RAJASTHAN</td>
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<td>8</td>
<td>CHATTISGARH</td>
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<tr>
<td>9</td>
<td>TELANGANA</td>
<td>182</td>
<td>115</td>
<td>148</td>
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<tr>
<td>10</td>
<td>ARUNACHAL PRADESH</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>3326</strong></td>
<td><strong>1785</strong></td>
<td><strong>2122</strong></td>
</tr>
</tbody>
</table>
Open MDR Link on NIC

Login with Secure Name/Password Page Opens to Allow Data Feeding

Select FB or CB case and Feed MOTHER ID of MCTS to commence data feeding

FBMDR

ANNEX 1
(Data Feeding For the Registered Pregnant Mother is facilitated)

ANNEX 4
(Auto Fill from Data fed in Annex 1)

ANNEX 4
(Auto Fill from Data fed in Annex 1 & 6)

CBMDR

ANNEX 4
(Data Feeding For the Registered Pregnant Mother is facilitated)

ANNEX 2
(Auto Fill from Data fed in Annex 4)

ANNEX 5
(Auto Fill from Data fed in Annex 4, 2 & 3)

ANNEX 3
(Auto Fill from Data fed in Annex 4 & 2)

ANNEX 6
(Auto Fill from Data fed in Annex 4, 2, 3 & 5)
Report Outputs

No. of ANC Checkups

- NIL
- 1
- 2 to 3
- >=4
- NOT KNOWN

Age at Death in years

- < 18
- 18-25
- 26-30
- 31-35
- >=36

67% deaths in Age group 15-25 years

94% of the women who died had > 2 ANC
Approx. 42% deaths occur in Level3 facilities, 16% in Private setup, 19% in Transit and 16% at Home.
Delays leading to Maternal deaths

- ANY OTHER/SPECIFY
- LACK OF ADEQUATE FUNDS
- LACK OF BLOOD EQUIPMENT DRUGS
- SUBSTANDARD CARE IN HOSPITAL
- DELAY IN INITIATING TREATMENT
- ANY OTHER
- DIFFICULT TERRAIN
- NOT REACHING APPROPRIATE FACILITY
- DELAY IN MOBILIZING FUNDS
- DELAY IN GETTING TRANSPORT
- ANY OTHER
- NON AVAILABILITY OF HEALTH PROFESSIONAL
- BELIEF AND CUSTOMS
- NO BIRTH PREPAREDNESS
- DELAY IN DECISION MAKING
- ILLITERACY & IGNORANCE
- UNAWARENESS OF DANGER SIGNS

- DELAY IN RECEIVING ADEQUATE CARE IN FACILITY
- DELAY IN REACHING THE FIRST LEVEL FACILITY
- DELAY IN SEEKING CARE
## Challenges/Learning’s

<table>
<thead>
<tr>
<th>Challenges/Learning’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Requirement (Servers/Coding/Location/Speed/Storage/Update Maintenance/Security)</td>
</tr>
<tr>
<td>Platform Requirement (Open Source/Closed)</td>
</tr>
<tr>
<td>Managing Teams</td>
</tr>
<tr>
<td>Agreement on Reporting Formats</td>
</tr>
<tr>
<td>Linking Other Databases</td>
</tr>
<tr>
<td>Last Minute Changes/New Information</td>
</tr>
<tr>
<td>Change in Leadership</td>
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</tbody>
</table>
TAKE HOME

BE THE CHAMPION

CONTEXTUALIZE

LEVERAGE WHAT YOU HAVE - AVAILABLE RESOURCE

CLARITY ON ROLE & RESPONSIBILITY

ADAPTABILITY AND FLEXIBILITY

CHALLENGES WILL BE THERE – BUT THERE ARE SOLUTIONS TOO

TEAM WORK

COMMUNICATION - SUCCESS AND FAILURE
Thank you

For more information write to us at avnihealth@yahoo.com