Evaluation of Maternal and Newborn Surveillance in North Kivu, Democratic Republic of the Congo

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Division of Global Health Protection

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Program Director, International Medical Corps
Goma, DRC
Outline

I. Background
II. Purpose and Objectives
III. Methods
IV. Results
V. Discussion/Conclusion
I. Background

Political and Social Context In DRC

- Protracted violence for past two decades, resulting from both internal fighting and neighboring conflicts
- North Kivu province, the epicenter of war, remains the greatest challenge to stability
- > 2.8 million internally displaced persons (IDPs) (UNHCR, Dec 2014)
- Most IDPs living with and among local families
- IMC Health centers serve IDPs and local populations

http://www.unhcr.org/pages/49e45c366.html
## I. Background

### Maternal and Newborn (MN) Healthcare in DRC

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<th>DRC</th>
<th>Sub-Saharan Africa</th>
<th>More Developed Countries</th>
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<td>Total fertility rate *</td>
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<td>Infant mortality rate **</td>
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<td>Maternal deaths/100,000 births 2013</td>
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* average # children born to a woman during her lifetime  
** infant (<1 year) deaths per 1,000 live births

Population Reference Bureau 2015 world population data sheet  
IMC & Maternal and Newborn Health

• Current R2HC Research Project: Applying a QI Framework to MISP Implementation
  ▪ 12 facilities involved; all have received clinical training on Maternal and Newborn Healthcare & MISP
  ▪ Assessing the impact of a QI framework on maternal and neonatal health outcomes

• This surveillance evaluation informed sample size calculations and tool development for the R2HC project
I. Background

DRC’s National Surveillance System

Aim

• To capture standardized data on vital health events in IDP and host populations at the health centers (HC), health posts, and in communities

Focus

• Maternal and newborn (MN) vital events including maternal complications and mortality, neonatal mortality, live births and stillbirths

Purpose

• To make informed decisions and target resources for improving healthcare delivery and health outcomes.
I. Background

Stakeholders

- Democratic Republic of the Congo (DRC)
  - Ministry of Health
  - Provincial and Zonal health offices
  - Referral Health Centers and Health Centers
  - Residents of North Kivu province and DRC
- International Medical Corps (IMC)
- Centers for Disease Control and Prevention (CDC)
I. Background

Surveillance System Flowchart

Data Sharing
Data Check
Paper
Electronic

National Level

Provincial Health Office

Zonal Health Office

Health Centers / Referral Health Centers

Health Posts / Communities
Evaluation Purpose

- To assess quality of MN health indicator data collected as part of the national surveillance system in 12 IMC-supported HC in North Kivu, DRC

Evaluation Objectives

1. To systematically evaluate collection, interpretation, and use of MN health indicators
2. To develop recommendations for stakeholders to further improve record keeping and use of collected data
III. Methods

Methods

i. Develop Tools (evaluation criteria, forms)

ii. Train & Pilot

iii. Review Pilot & Finalize Tools

iv. Implement & Collect Data

v. Data Analysis & Reporting
III. Methods

Evaluation Criteria

1. Simplicity
2. Flexibility
3. Data Quality
4. Acceptability
5. Sensitivity
6. Representativeness
7. Timelines
8. Stability
9. Usefulness
Evaluation Design

- **MN data registers and reports (n=12)**
  - Health Centers (n=12)
- **Key Informant Interviews (n=20)**
  - Health Center Nurses / Birth Attendants (n=12)
  - Health Center Supervising Nurses (n=4)
  - Health Zone Chief Medical Officers (n=2)
  - Provincial data manager (n=1)
  - Provincial data supervisor (n=1)
Data Quality

Reviewed:
- 16 indicators in the birth registers
- 8 indicators in the post-natal registers
- 11 indicators in the monthly reports
IV. Results

Data Quality

Strengths
• None identified

Weaknesses
• Little of no training in record keeping and low literacy among staff
• Outdated/makeshift versions of registers in use
• Lack of health zone or provincial oversight of HC activities
• Birth registers:
  • 50% (6 of 12) HC had legible birth registers for all 3 months examined
  • 25% (3 of 12) HC register entries were “barely legible” or “illegible”
  • 46% (264 of 576) cells examined were missing entries
  • Discrepancies between register data and monthly reports
### IV. Results

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<tr>
<th>CHAMBUCHEA</th>
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- Taken from Facility Registers
- Taken from Electronic Reports
### IV. Results

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144 (40%) of 360 cells missing data
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### Results

216 (60%) of 360 cells with data
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21 (19.4%) of 108 paired cells are congruent
Partograph Findings

12 facilities x (3 partographs/month) for June, July, & Aug 2015

• 10 (83%) of 12 facilities had partographs
• 68 partographs reviewed
  ▪ 61 (90%) had ≥1 sections completed
  ▪ 48 (71%) had an identifier (# or name)
  ▪ 32 (47%) had active labor and/or delivery sections completed
  ▪ 1 (0.01%) had postpartum surveillance section completed

IV. Results
V. Discussion/Conclusion

Lessons Learned

- Ensure current MN registers and reporting forms are available
- Train all individuals that may fill out registers and reporting forms; do not assume they have been trained on previous versions
- Ensure health facilities have transportation plans for delivering reports to health zone offices on a monthly basis
- Encourage regular supervision and feedback
- Ensure all indicators that are part of register are justified and reportable
Conclusions

- MN component of DRC National Surveillance System has potential to be effective; the following challenges need to be addressed:
  - Training for staff on registers and reporting
  - Insufficient resources at facility and supervisory levels
  - Overburdened staff will prioritize patient care over data entry and reports
  - Frequent violence and resulting facility closures
  - Poor adherence to reporting deadlines
- Surveillance is a key component for transition from MISP to Comprehensive Healthcare and should be prioritized during MISP implementation
Acknowledgements

- Democratic Republic of Congo Ministry of Health
- International Medical Corps
  - Esperence Nyage
  - Tiegge Birhula Mongane
  - Alain Mikatho
  - Balla Conde
  - Janet Meyers
- Centers for Disease Control and Prevention (CDC)
  - Michelle Hynes
  - Kate Meehen
  - Susan Cookson
  - Endang Widiastuti
  - Eugene Lam
  - Tom Handzel
For more information please contact Centers for Disease Control and Prevention

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Email: aknipes@cdc.gov       Telephone: 404.498.0367
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.