

# Lesson learned from the experience of mobilizing community volunteers for real-time identifications of stillbirths and < 5 child deaths in a child health program in rural Bangladesh.

Abdullah Al Masud<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Md Saiful Islam<sup>1,4</sup>, Muhammad Faruq Hussain<sup>1</sup>, John Blevins<sup>3</sup>, Sanwarul Bari<sup>1</sup>, Qazi Sadeq-ur Rahman<sup>1</sup>, Atique Iqbal Chowdhury<sup>1</sup>, Kyu Han Lee<sup>2</sup>, Abu Mohammad Saleheen<sup>1</sup>, Palash Mutsuddi<sup>1</sup>, Probin Kumer Dey<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Shahana Parveen<sup>1</sup>

<sup>1</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>2</sup>John Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>3</sup>Rollins School of Public Health, Emory University, Atlanta, GA, United States, <sup>4</sup>University of New South Wales, Australia

## Background:

- The Child Health and Mortality Prevention Surveillance (CHAMPS) has been implementing minimally invasive tissue sampling (MITS), a post-mortem procedure, at 3 sentinel facilities and in the community in a rural sub-district *Baliakandi*, Bangladesh to identify the causes of stillbirths and <5 child deaths.
- Although, the MITS procedure must be conducted within 24 hours of death, previous studies found that in the local cultural and religious context, the average time to complete the burial is between 3 to 5 hours.
- The major challenge of conducting MITS among children who die in the community is receiving notification within a short time of death that enables the team to visit a household and approach the guardians to participate in the MITS procedure.
- To receive rapid notifications, we recruited 1,158 community volunteers from 261 villages across *Baliakandi* in 2018 and requested them to notify stillbirths and <5 deaths through a CHAMPS hotline number.

## Objectives:

- To review the process for mobilizing community volunteers for real-time identifications of stillbirths and <5 child deaths under CHAMPS program to identify and explain the challenges and lesson learned.

## Implementation process:

### Selection of the volunteers:

- To identify the community volunteers, we went to the center of each village, find a tea-stall or mosque where there were at least 10 people gathered and requested to-
  - Divide their village into several parts based on the size of the village.
  - Identify at least 1 person from each part of the village who aged between 18 to 60 years, resides in the community, have good relations and communication with the community people, and owned a mobile phone.
  - It took around 10 months to select community volunteers from 261 villages across *Baliakandi*.

### Orientation training to the community volunteers and involves them with the notification system:

- Orientation training among 1,158 community volunteers was provided in 2018 to introduce them with the CHAMPS activities including information about the MITS procedure and how the notification system runs.

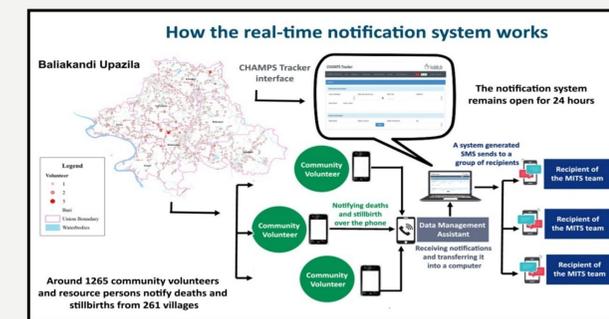
- Community volunteers were requested to report stillbirths and deaths of <5 children to a 24/7 CHAMPS hotline number.
- Besides, data collectors of the Demographic Surveillance System (DSS) of CHAMPS visit households once every two months to collect health-related information and identify stillbirths and deaths and report to the CHAMPS hotline number.
- On the other end, a web-based mobile notification system 'CHAMPS Tracker' was being developed where a designated person receives stillbirths and <5 deaths related information from the volunteers through the designated hotline number, and then inputs the noted information in the notification system.
- Once the notification is recorded the 'CHAMPS Tracker,' a system-generated SMS sends to the CHAMPS team if the death occurs within the past 24 hours.
- Community volunteers receive incentive from 50 Taka to 200 Taka (0.6 to 2.3 USD) for each notification (4 hours - 1 month) which is inversely proportionate to the elapsed time between the time of death and the notification.
- Periodically, we conduct analysis to see what proportion notified by the community volunteers among the total <5 deaths and stillbirths occurred in *Baliakandi*.

## Findings:

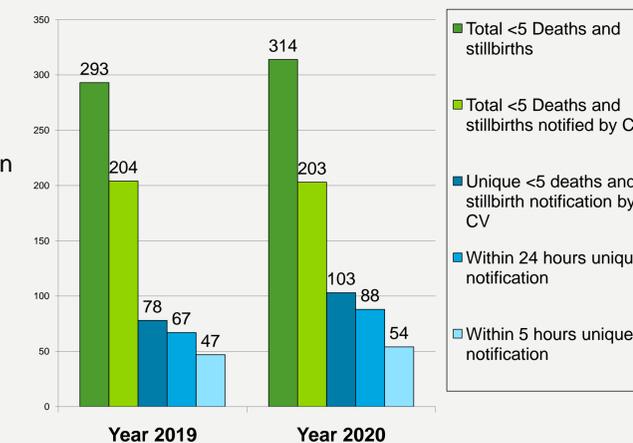
- In 2019, the number of total stillbirths and <5 deaths in *Baliakandi* were 293. Community volunteers notified a total of 204 deaths and stillbirths. After excluding the duplicate notifications for a single death, we found 78 (27%) unique notifications. Among those, we received 67 (86%) death notifications within 24 hours and 47 (60%) were received within 5 hours of the deaths.
- In 2020, the number of total stillbirths and <5 deaths in *Baliakandi* were 314. Community volunteers notified a total of 203 stillbirths and <5 deaths. After excluding the duplicate notifications for a single death, we found 103 (33%) unique notifications. Among those, we received 88 (85%) death notifications within 24 hours and 54 (52%) of these were received within 5 hours of the deaths.
- Many of the stillbirths and <5 deaths that occurred in the villages but were not notified by community volunteers and later notified by the DSS team of the CHAMPS.



Photo: Orientation program of community volunteers and community resource person



Illustrations: How the notification system works



Graph: Proportion of <5 deaths and stillbirths notified by community volunteers.

- The major reasons identified through the exploration with 296 volunteers over the phone, who missed 156 deaths in their villages from March-November 2019 were:
  - The residence of the deceased child was not nearby their house,
  - The hotline number was not saved in their mobile phone,
  - They heard about the death once the body had already been buried, and
  - The CHAMPS hotline number was unreachable due to poor network connection.
- Over the phone communication and based on the findings, we took several steps to resolve the bottleneck of the system.
- In response, we took certain actions to resolve the barriers of the system:
  - Identified 63 places in the catchment area where no volunteer was available and recruited new volunteers.
  - Included an additional hotline number from a different mobile operator with better network.
  - Arranged refresher training from October- December 2019 with 1062 volunteers where we ensured all volunteers saved hotline numbers in their mobile phones on the spot and
  - Also clarified that they should report any deaths even if the body was already buried.
- A comparative analysis between two equal durations before and after implementing the necessary actions and found that after implementing the necessary actions, overall the number of notifications rose 32%; those within 5 hours rose 15%, after addressing the barriers.

## Conclusions:

- Community volunteer driven real-time notification system identified 27% of stillbirths and <5 deaths in 2019 and 33% in 2020.
- Periodical performance monitoring is an integral part to sustain such a notification system driven by the community volunteers.
- Identifying the bottleneck of an ongoing community-based death notification system and implementing need-based actions increased the number of notifications.
- The use of community volunteers to notify deaths in real-time was shown to be a valuable approach that could be used in other public health programs.

## Contact information:

**Abdullah Al Masud**  
 Assistant Scientist,  
 Emerging Infections,  
 Infectious Diseases Division, icddr,  
 CHAMPS Bangladesh  
 almasud@icddr.org  
 Mobile: +8801627617452

See more data at  
[champshealth.org](http://champshealth.org)

