Monitoring a complex latrine intervention to improve program delivery and increase acceptance in rural communities in Bangladesh

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Introduction

- Globally, latrine interventions are being implemented on a large scale.
- Reliable components, supply chains and quality control are required for successful implementation.
- Operational and implementation problems can undermine program success.
- A systematic monitoring system can identify problems early and provide an opportunity for early solutions.

Objectives

To describe utility of a monitoring system for a latrine implementation to:

- Assess delivery and quality of latrine components and construction
- Track intervention progress
- Address operational problems

Methods

Study settings:

- 20 rural sub-districts in Gazipur, Kishoreganj, Mymensingh and Tangail districts of Bangladesh
- 270 randomly selected clusters
- 4,215 dual pit latrines (two separate pits and a movable superstructure)

Shared intervention:

- Participants: dug pits, transported components and provided labor for latrine installation
- Study: provided latrine components and technical support to install latrines free of cost

Study period:

- July 2012 to December 2013

Monitoring system:

- Developed a monitoring system when implementing the first 422 (10%) latrines, in first 6 months of program
- Refined and used the system for remaining 90% (N=3,704) latrine implementation

Monitoring tools:

- Quality assessment and latrine installation checklists
- Latrine component production planning forms
- Supply chain registers, component delivery tokens
- Hand-held metal detectors to inspect concrete ring
- Final checklist and verification report of latrine installation
- Construction and financial records
- Meeting minutes, field visit reports

Data collection:

- Quantitative and qualitative

Process indicators to track progress:

- Operational supply chains, component production
- Financial allocations, and installation activities

Output indicators included:

- Quality latrine components manufactured and purchased
- Number of latrines made ready for use

Latrine component manufacturing and quality control:

- Randomly broke 5% of the components squatting slabs, rings and lids to ensure adequate concrete reinforcement
  - Broke 3% at production sites before delivery
  - Broke 2% at household after delivery
  - Verified reinforcement in rings using metal detectors

Manufacturing problems and solutions:

- We trained 110 manufacturers and over 300 masons on quality latrine component production: 30% of manufacturers did not meet the standards of production set by the project
- 2-4% of various latrine components did not meet our quality guidelines (size, shape, strength)
- We rejected low standard products and manufacturers accepted rejections that ensured effective use of money
- Irregular fund disbursement and payments to the manufacturers during implementation were identified as drawbacks for expected progress

Results

Problems in implementation progress:

- About 3% of households continued to use their existing unimproved latrines even after receiving the new improved latrine, citing that unimproved latrines
  - Could be used by visitors and outsiders
  - Could be used by other non recipient households

Strategies to improve the implementation progress:

- Participants were explained the benefits of hygienic latrine use and the function of water seals
- They were shown appropriate squatting posture
- Technical re-adjustments were made for the footrest position on the squatting slab
- Through dialogue and visits among 65 (24%) clusters
  - Participants stopped breaking/removing the water seal
  - Participants agreed to accomplish shared responsibility along with the implementation process

Conclusions

- Driving factors behind the success of large scale shared latrine intervention include:
  - Identification of problems with water seals among the first 10% and implementation of corrective measures accordingly
  - Accomplishment of shared responsibility on schedule
- Action-oriented monitoring system emphasizing participant needs, voice, preference and insight to resolve problems
- It is important to ensure that solid financial systems are in place before engaging suppliers
- Latrine use messages and the monitoring system and tools developed for the current intervention can be used for implementation and delivery of large-scale latrine interventions in other settings

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References