Evaluation of CHW skills to recognize and manage sick neonates in the community

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BACKGROUND · 1

- **Projahnmo:** A community based cluster-randomized intervention research project in 3 sub-districts of Sylhet, Bangladesh
- **Projahnmo Objectives:**
  - To improve newborn care and recognition and management of serious infections in neonates by mothers and trained first-line health workers
  - To evaluate the impact of a package of obstetric and neonatal care interventions including management of serious neonatal infections
- Community-based health workers (CHW) are the core element of one of the two service delivery models being tested
- The CHWs are female residents of the same community, with at least tenth grade education and each CHW responsible for an area of about 4,000 population
- **CHWs trained on:**
  - counselling and education skills
  - the use of a IMCI-type "Clinical Algorithm" to recognize, classify and manage sick neonates in the community

OBJECTIVES · 2

We present findings from a post-training assessment of CHWs skills in assessing, classifying and managing sick newborns in low-resource community settings

CHW TRAINING · 3

- Essential Maternal and Newborn Care
  - 3 weeks
  - Didactic sessions, role-playing (dolls)
- Advanced Newborn Care
  - 2 weeks
  - Didactic sessions, videos, role-plays, clinical skills (e.g., case assessment in hospital, injection administration)

POST-TRAINING EVALUATION OF CHW SKILLS - METHODS · 4

- Evaluation in two phases:
  - Hospital Based Evaluation:
    - At Sylhet Medical College Hospital
    - 10 neonates (sick) assessed by each CHW
  - Community Based Evaluation :
    - 8 neonates (usually healthy) in the community assessed by each CHW
- CHWs neonatal assessments compared with that of trained physicians who served as the 'gold standard'
- Decision rules:
  - Must pass both hospital- and community-based tests
  - Must pass hospital-based test to proceed to community-based test
- Evaluation components:
  - Clinical assessment to identify signs
  - Classification of illness
  - Plan for management of illness
  - Administering intra-muscular injections

EVALUATION PROCEDURE AT THE HOSPITAL · 5
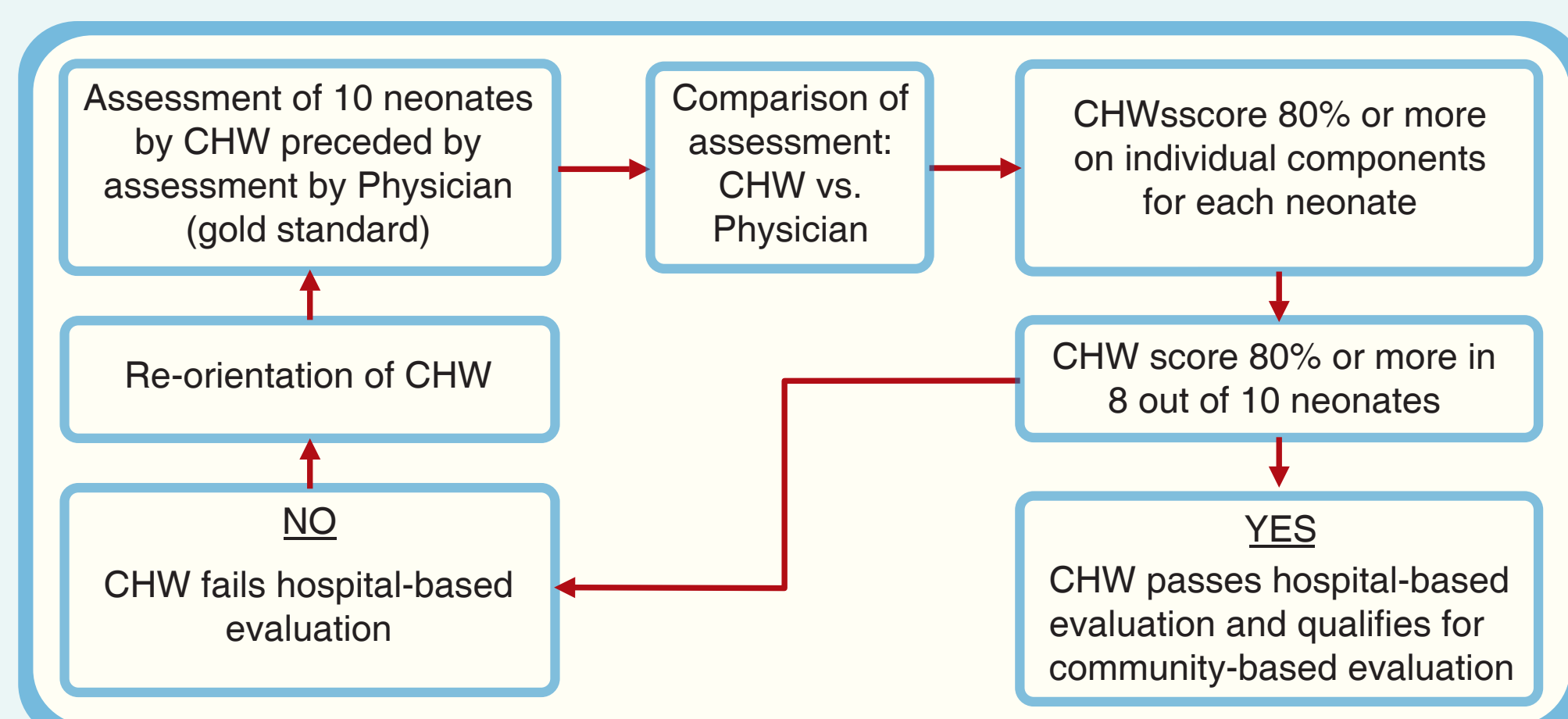
EVALUATION PROCEDURE IN THE COMMUNITY · 6
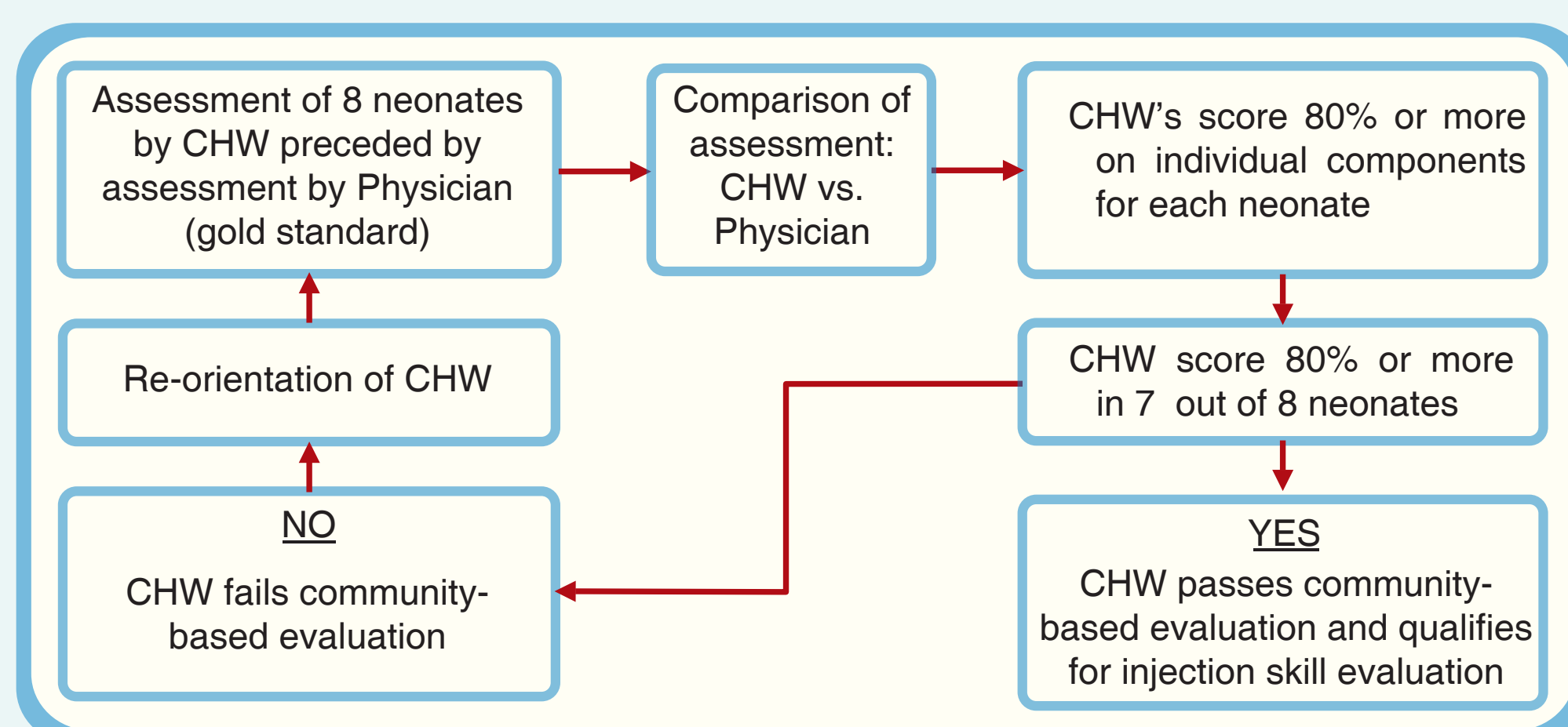
RESULTS OF CHW EVALUATION · 7

Scores achieved by the CHWs by component

	Clinical Assessment		Illness Classification		Management Plan		CHWs qualifying test
	Neonates Correctly Assessed	Score (Range)	Neonates Correctly Classified	Score (Range)	Neonates Correctly Managed	Score (Range)	
Hospital Assessment (10 neonates per CHW)	10	92-100	9-10	93-100	7-10	77-100	35/40
5 CHWs who failed hospital assessment underwent re-orientation and re-evaluation and all 5 subsequently qualified							
Community Assessment (8 neonates per CHW)	8	98-100	All 8	98-100	All 8	98-100	40/40

RESULTS OF CHW EVALUATION · 8

Scores on injection skill achieved by the CHWs

	Hospital based test	Community based test
Number of CHWs	40	40
# of injections administered	5	5
Total allocated marks	25	50
Average marks obtained (range)	24.3 (20.8-25.0)	49.0 (47.6-50.0)

CONCLUSIONS · 9

- CHWs with no prior training in health can be successfully trained to use a clinical algorithm to recognize and classify selected neonatal illnesses at the community level
- They can also be successfully trained to manage serious newborn infections in the community using injectable antibiotics

COMMUNITY-BASED SICK NEWBORN MANAGEMENT: CURRENT STATUS · 10

- CHWs are applying the Clinical Algorithm to identify, classify and manage neonates in community with suspected serious illness
- A nested validation of the clinical algorithm used by the CHWs is now being carried out
- Project physicians validate the assessment of clinical signs, illness classification and management plan of CHWs in the community