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Session-NIC-3

The Morang Innovative Neonatal Intervention (MINI) Program

Increased Access Through Innovation: Community Based Management of Neonatal Infections In Nepal

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Outline of the Presentation

- Partners
- Background and Rationale for the Program
- Intervention
- Summary of Findings
- Conclusions
- Current Program Direction



MINI is a partnership among:

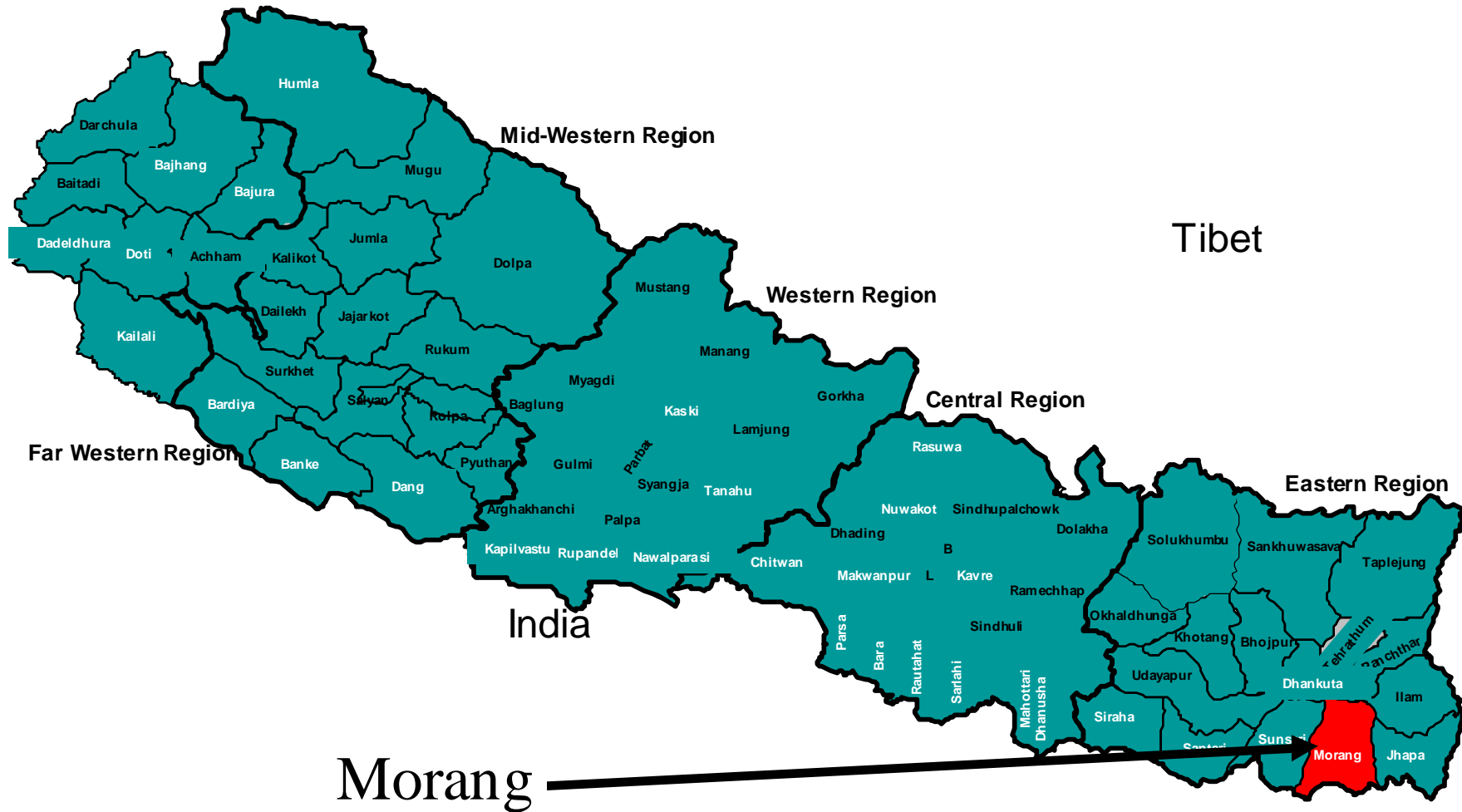
- District Public Health Office Morang
- JSI R&T, Nepal
- SC/US/SNL, Nepal
- Nepal Family Health Program (NFHP)

With support from:

- Ministry of Health and Population(MoHP)/ GoN
- SNL/SC/US (Bill and Melinda Gates Foundation)
- USAID/Nepal through NFHP



Nepal





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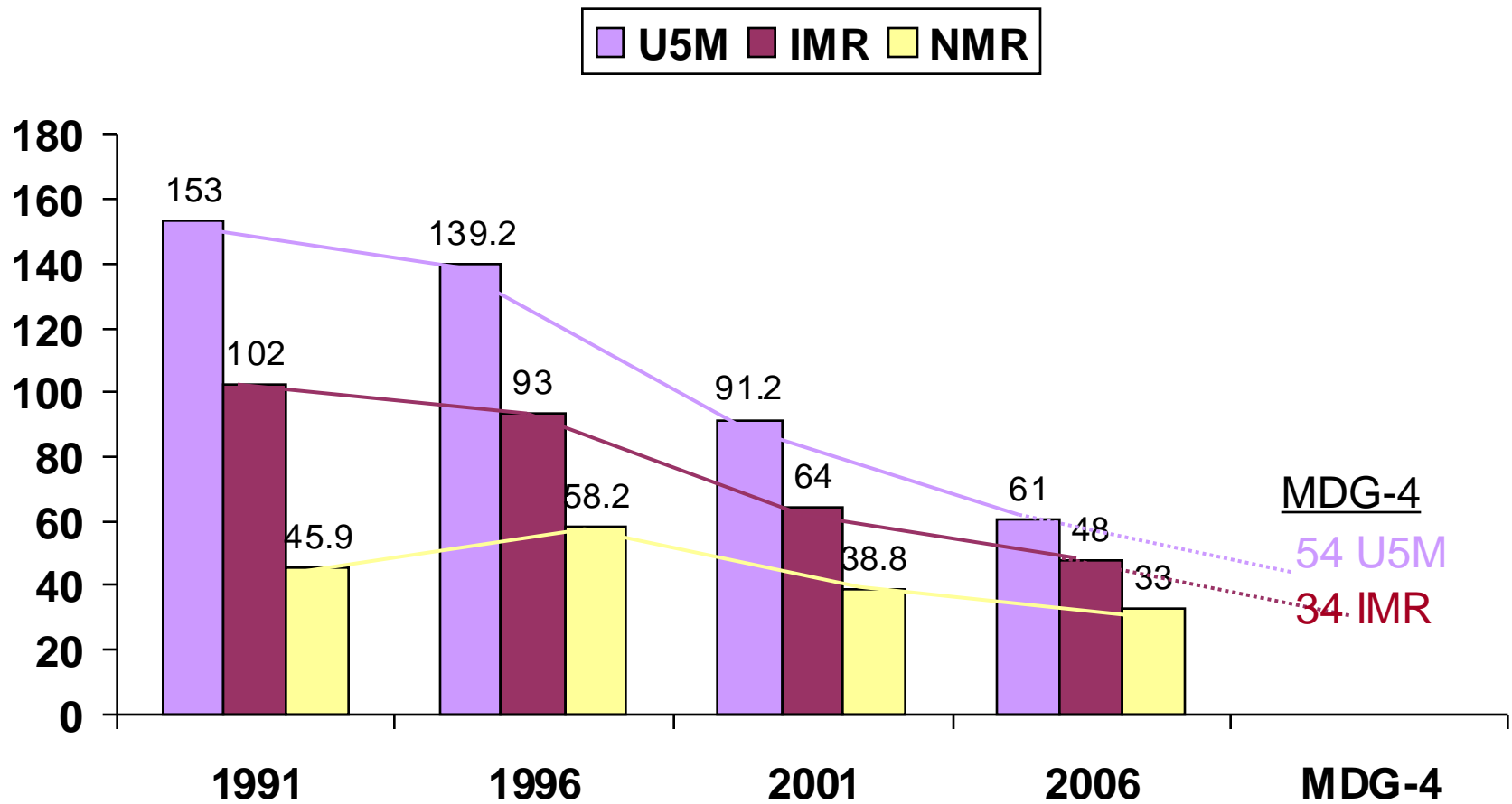


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Background and Rationale



Trend In Reduction of Mortality 1991-2006



Source: NDHS 1996, 2001, 2006



Context of MINI Development

- Nepal had an established cadre of true community-based health workers – FCHVs - in place since 1980's
- Strong history of role of FCHVs for distribution of vitamin A supplements and community-based management of pneumonia and diarrhea (ORS/zinc) through Community-based IMCI
- Existing model for gradual phased expansion of FCHV activities



Objective

To determine whether Community based FCHVs (Female Community Health Volunteers) and the most peripheral Government Health Workers can perform a set of activities that result in improvement in the early identification and correct management of neonatal infections

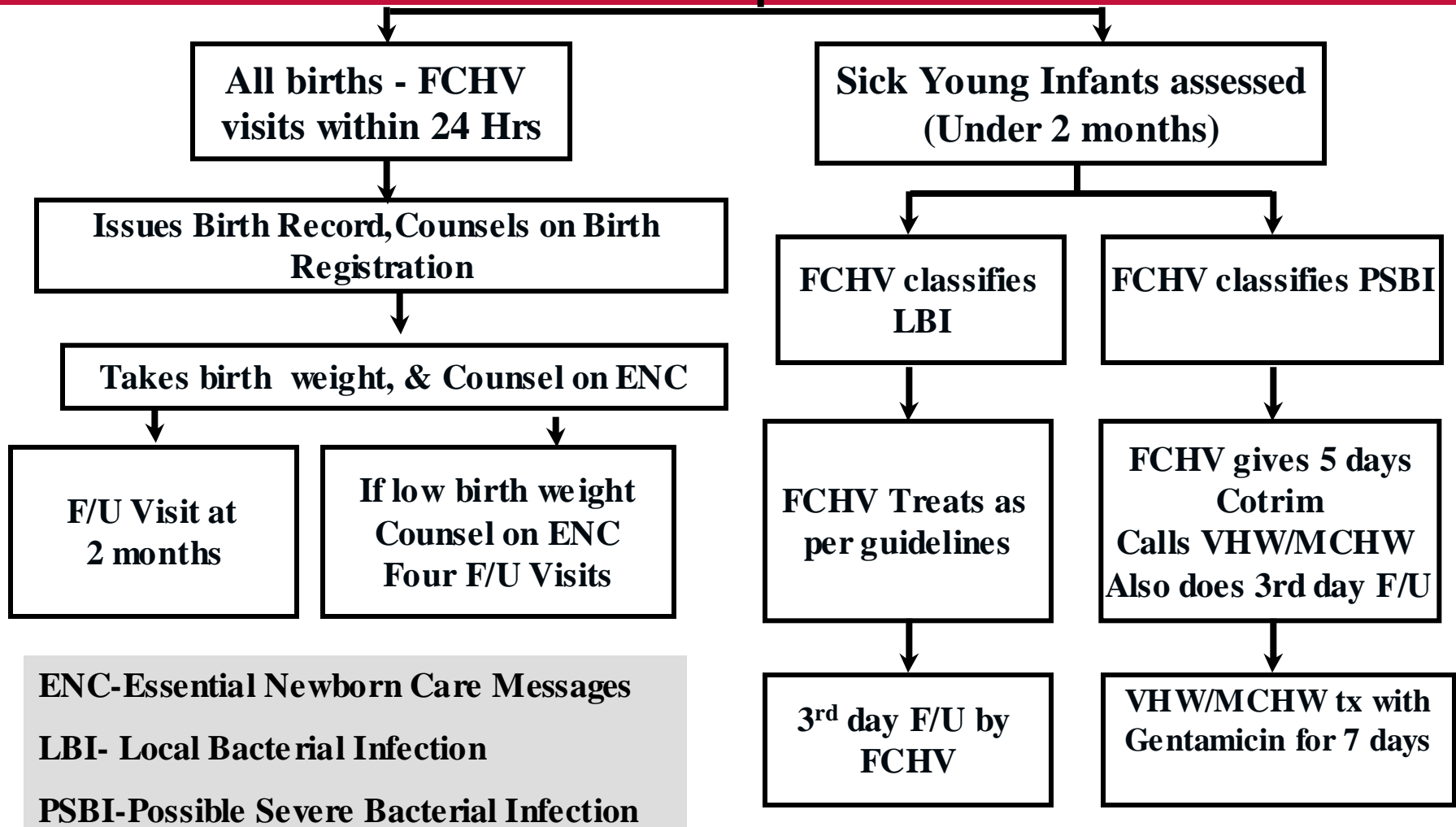
Peripheral Government Health Workers

- VHW-Village Health Workers
- MCHW- Maternal and Child Health Workers
- AHW-Auxiliary Health Workers



The Intervention

In 65 Villages (Pop. ~700,000)



ENC-Essential Newborn Care Messages

LBI- Local Bacterial Infection

PSBI-Possible Severe Bacterial Infection



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Summary of Findings

May 2005 – Dec 2006



Births and Deaths Record

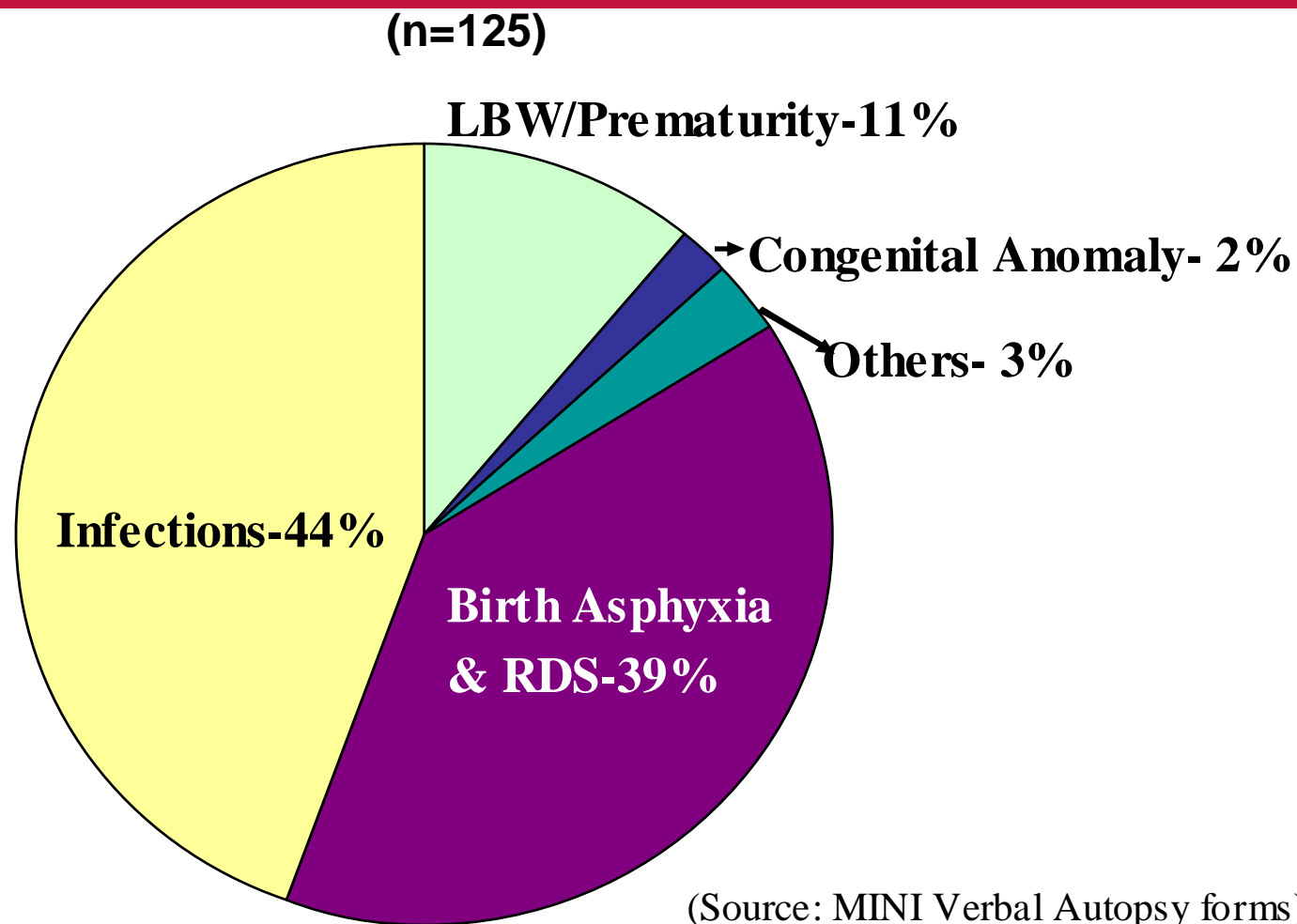
#Births recorded	9546	60%*
# 2 months follow up by FCHVs	8810	92%
Deaths within 28 days (NMR)	157	16

* Birth capture rate is likely low because census projection not adjusted

Source: MINI CHW service registers



Proximate Cause of Death from Verbal Autopsy



Sick Babies Identified by CHWs

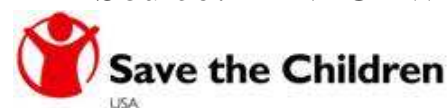
Infections (n=9546)

Total sick infants identified (< 2 mo.)	2953	31%
Local Bacterial Infection (LBI)	2040	21%
Possible Severe Bacterial Infection (PSBI)*	1286	13%

Low Birth Weight (n=5105)

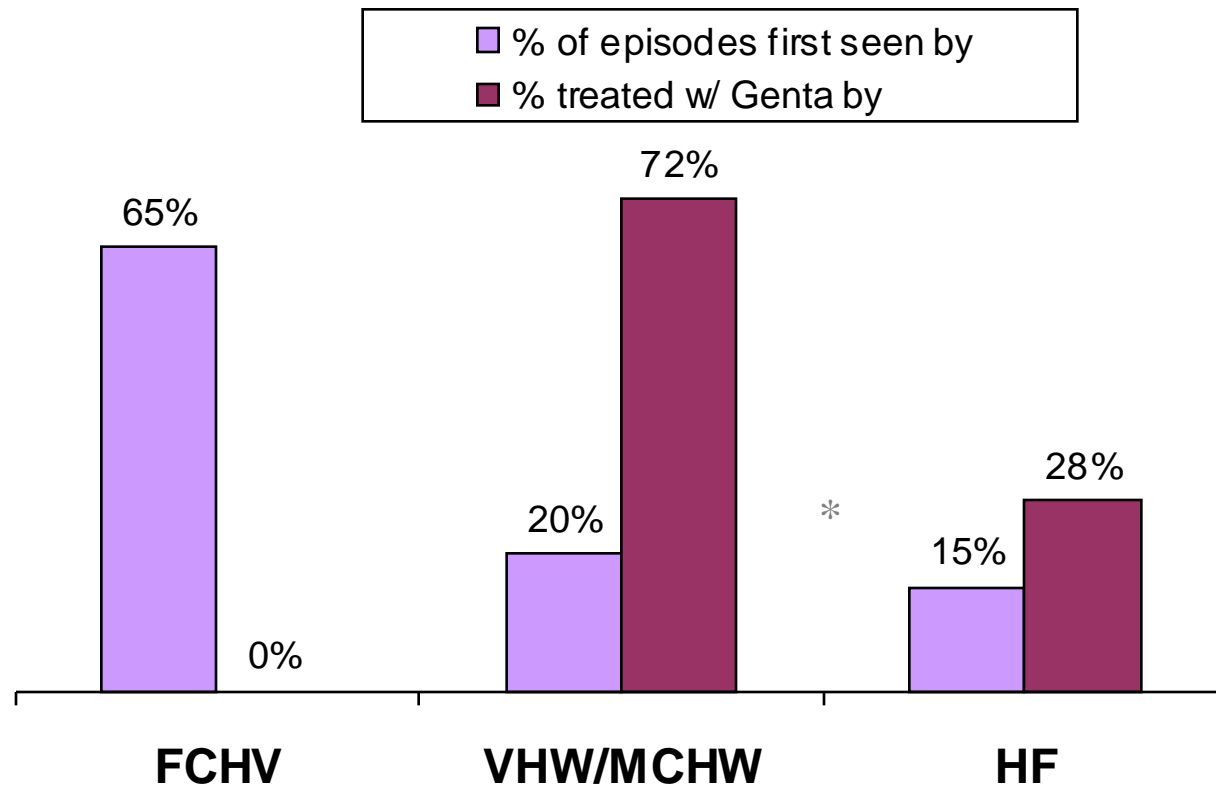
Low Birth Weight (LBW)	680	10%
% of LBW with PSBI	150	22%

Source: MINI CHW service registers



Case Management in Intervention Area

(n=1360 episodes; 1233 episodes treated with Gentamicin)



Source: MINI CHW service registers/IMCI HF register



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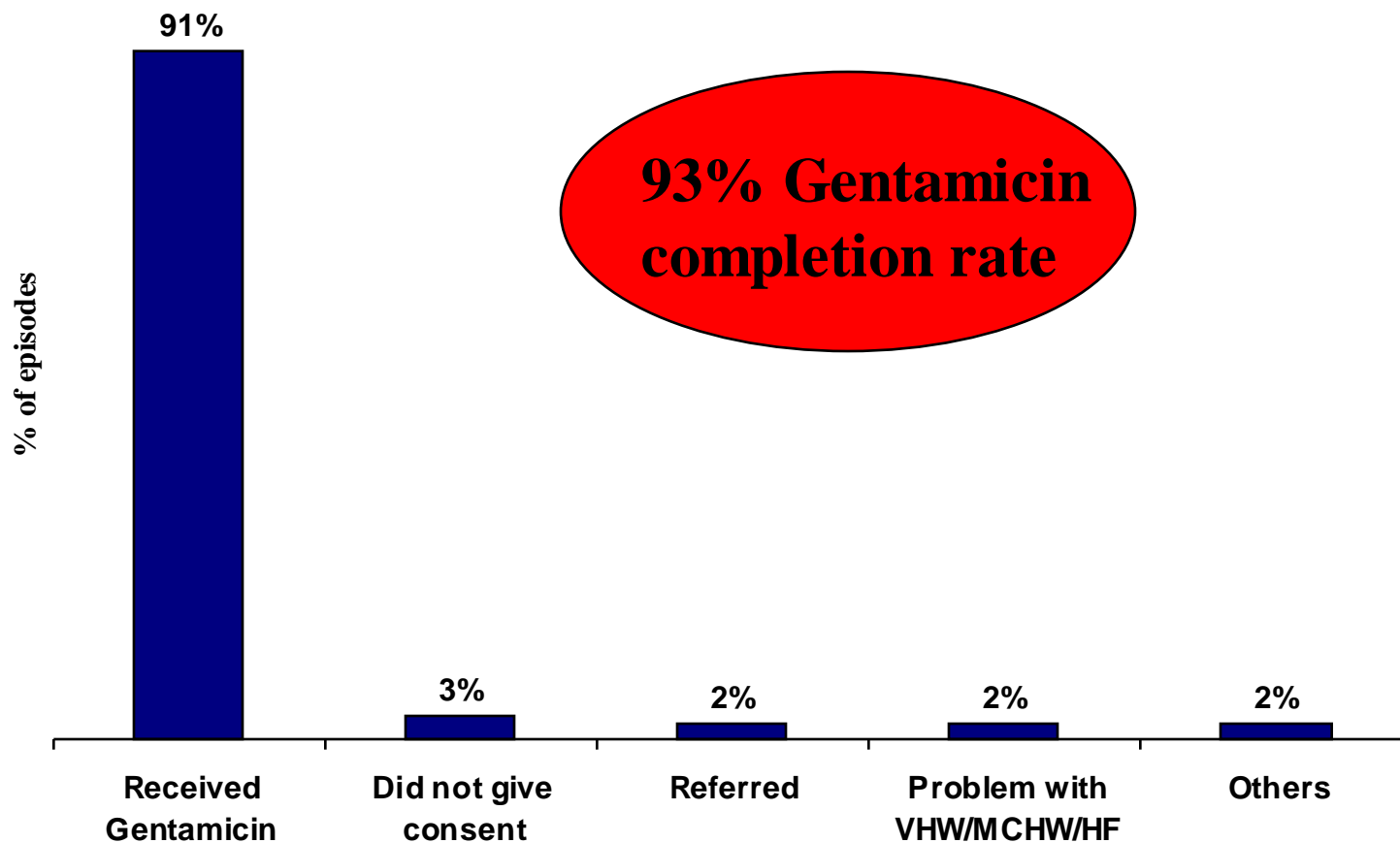


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Management of PSBI with Gentamicin Injection

(n=1360 episodes)

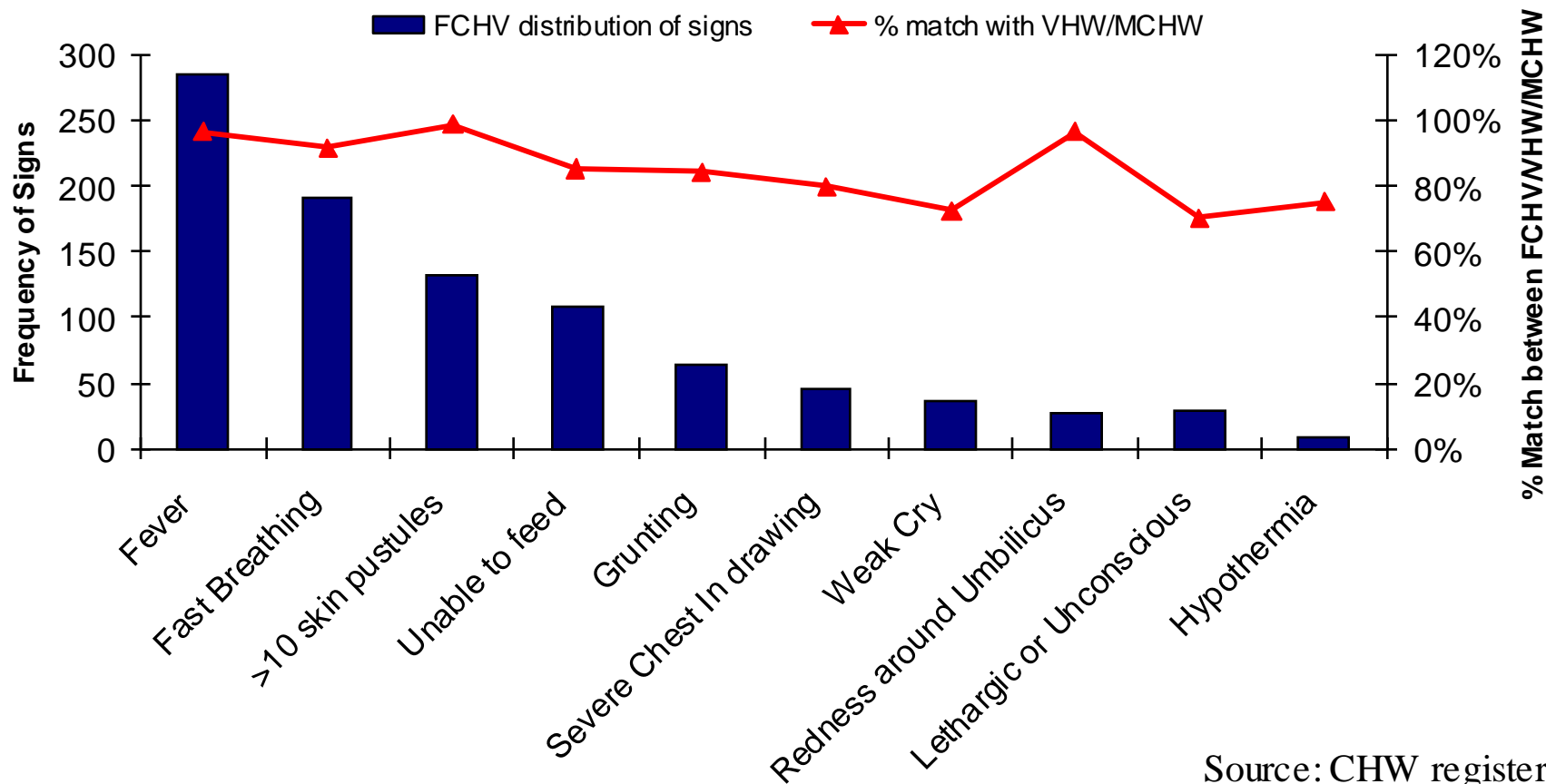


Source: MINI CHW service registers



Quality of FCHV Assessment

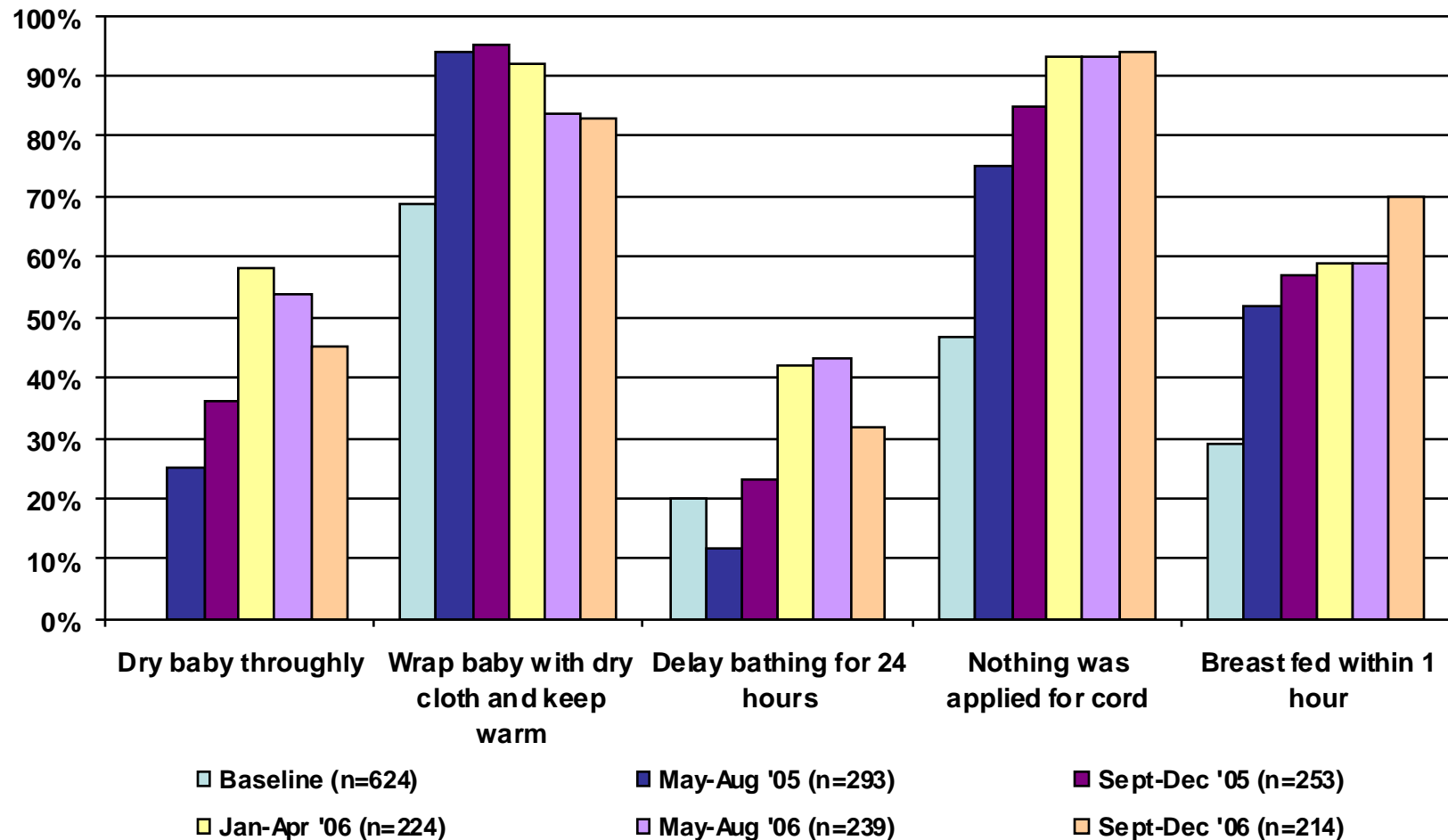
For cases seen by FCHV and VHW on same day (n=517)



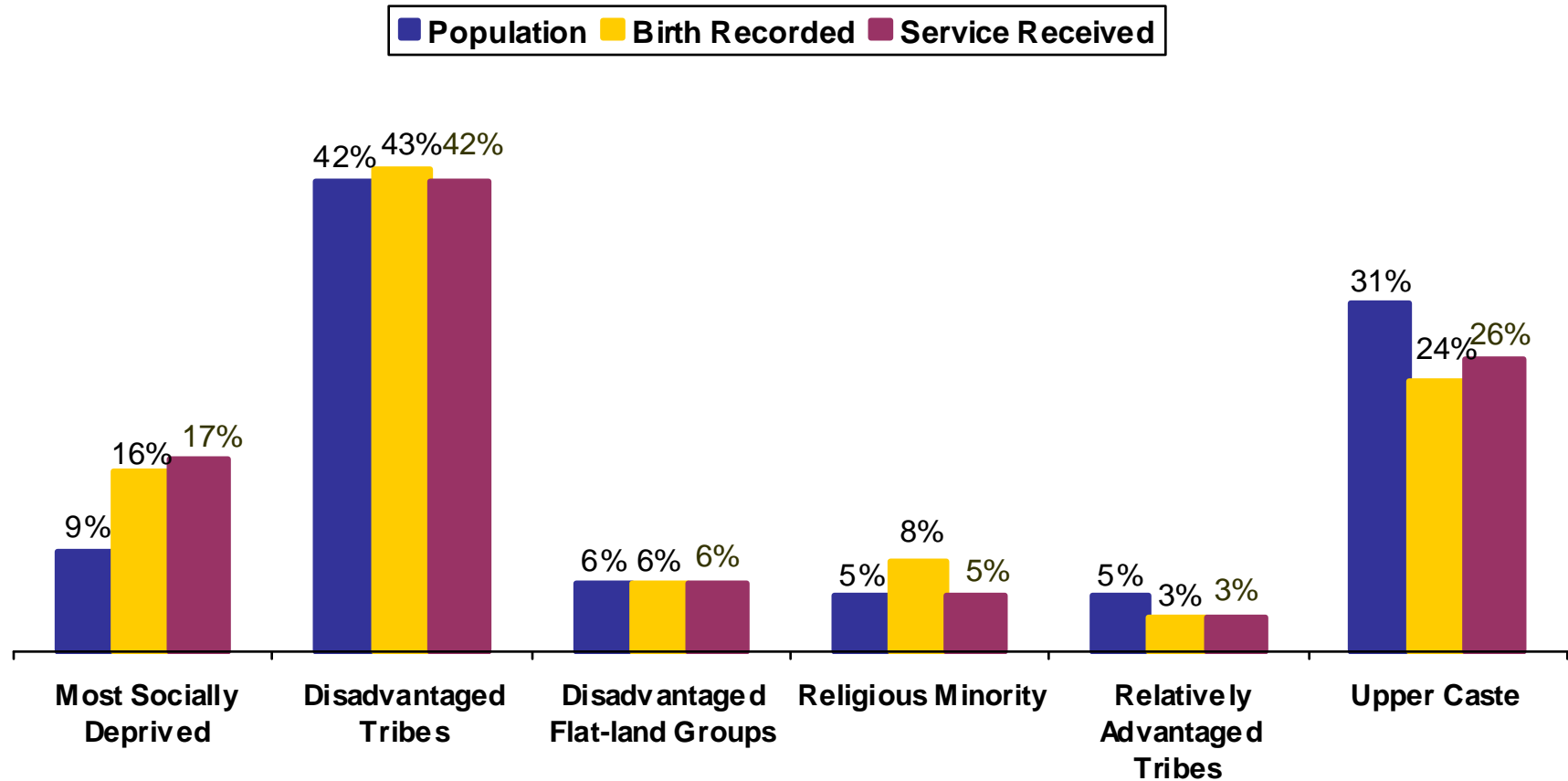
Source: CHW registers



Improvement in Caretakers' Practice on ENC



Are we Reaching the Less Privileged Groups ?



Source: MINI CHW service registers/CBS 2001



Conclusions

- MINI was initiated under supportive MOHP strategy for decreasing neonatal mortality
- MINI worked through the MOHP system, the District Public Health Office and existing community workers
- MINI followed the model established by community-based management of ARI/pneumonia program
- MINI has demonstrated that FCHVs can follow an algorithm for classification of sick neonates, initiate treatment, and facilitate referral
- MINI has shown that VHW/MCHWs can provide Gentamicin, with high treatment completion rates. This has resulted in increased rates of appropriate treatment, and likely contributed to reduction in neonatal deaths



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Current Program Direction

- District wide expansion of MINI to all villages in Morang completed (at DPHO request) with USAID support
- MINI-2, with SNL support, will define the scalable package of training, supervision, & logistics for replication in other terai districts
- MINI team will provide TA for other organizations ready to replicate the model
- MINI providing TA for addressing community-based management of neonatal sepsis in hill and mountain districts, including possible Uniject Gentamicin Design Trial
- Develop MINI as a Program Learning/Demonstration Site





Thank You



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The Millennium Development Goals

GOAL 1: Eradicate extreme poverty and hunger

GOAL 2: Achieve universal primary education

GOAL 3: Promote gender equality and empower women

GOAL 4: Reduce child mortality

GOAL 5: Improve maternal health

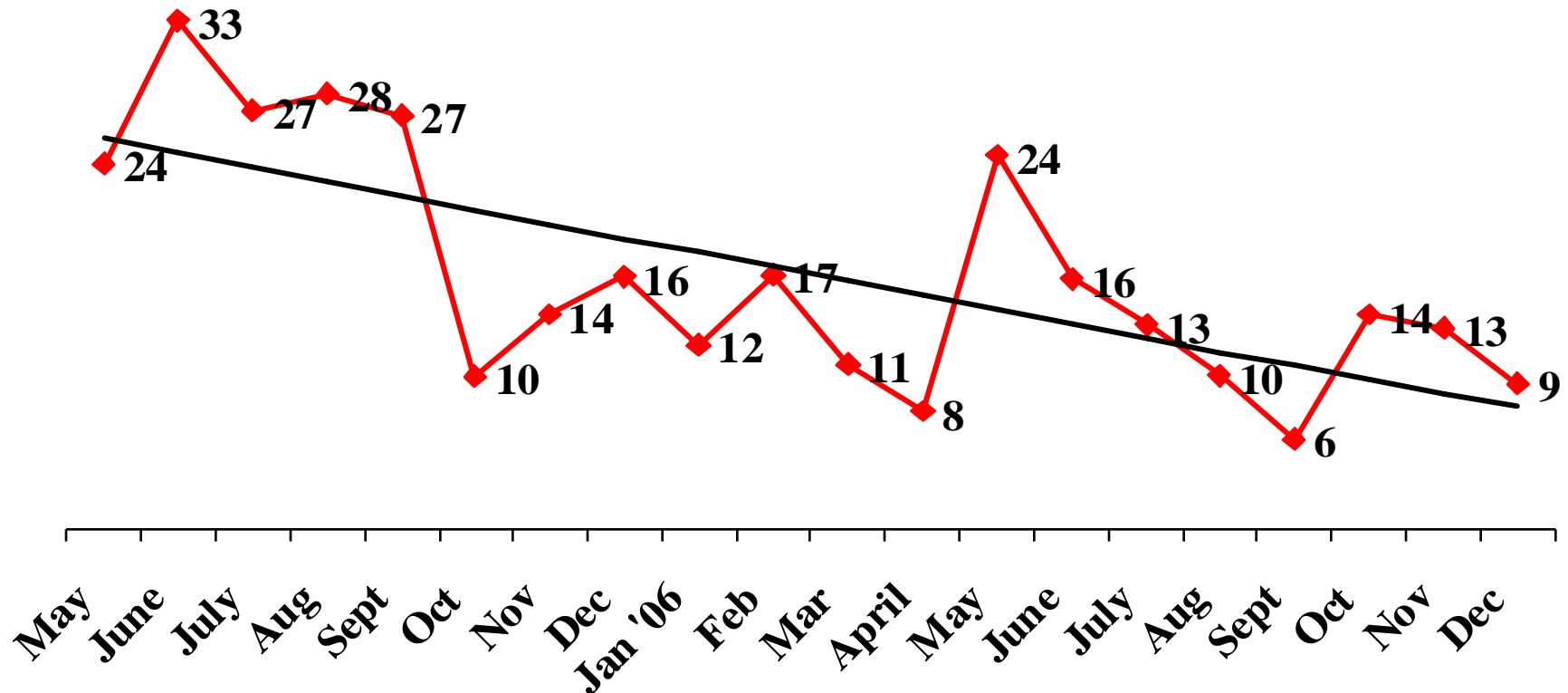
GOAL 6: Combat HIV/AIDS, malaria and other diseases

GOAL 7: Ensure environmental sustainability

GOAL 8: Develop a global partnership for development



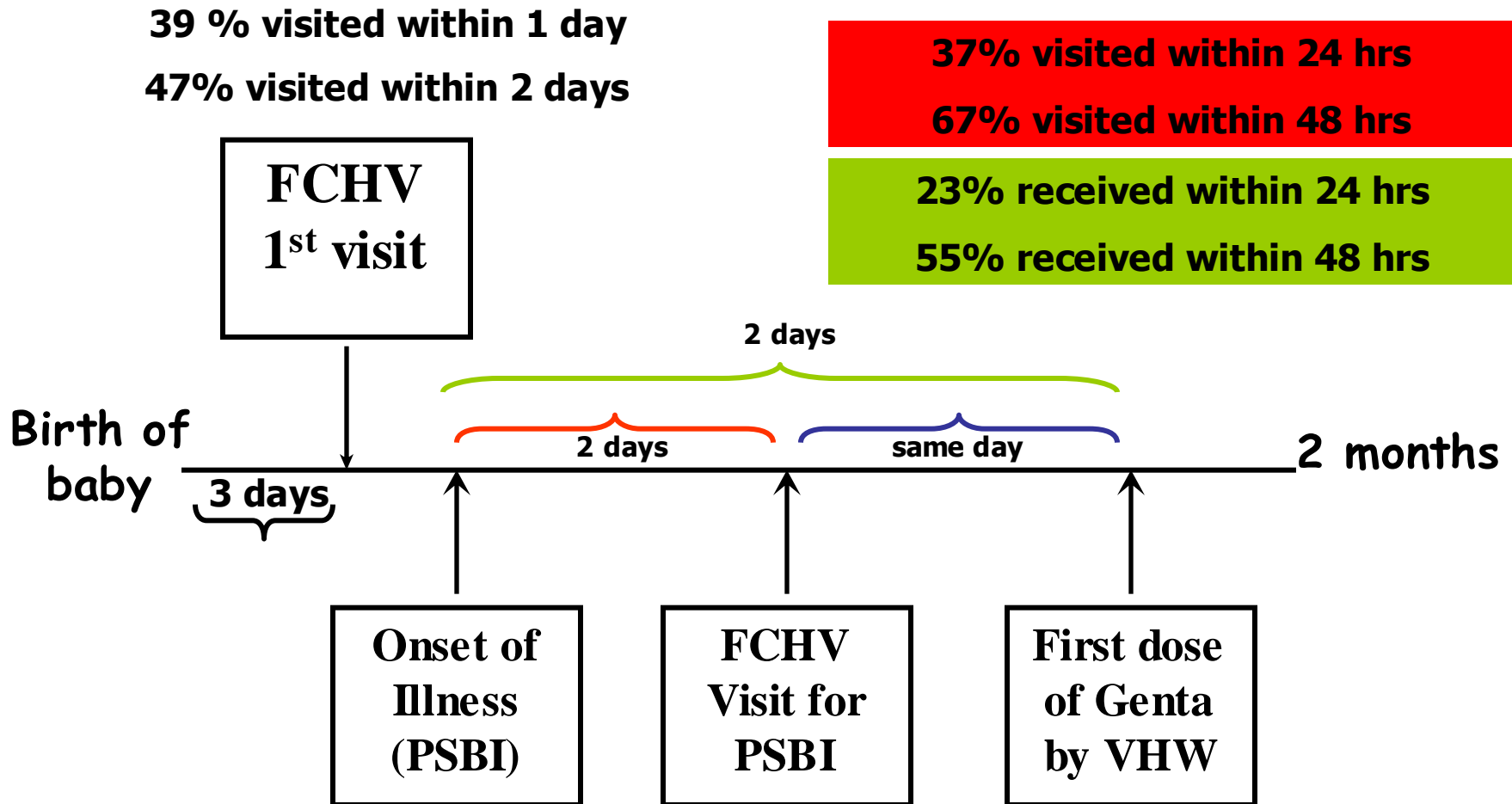
Monthly NMR Trend in Morang



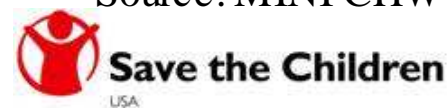
(Source: CHW registers)



Timeline for Case Management



Source: MINI CHW service registers



Algorithm for PSBI

(Any one of the following signs)

WHO - 2006

MINI - 2004

- **Not feeding well**
- **Fast breathing**
- **Severe chest in-drawing or**
- **Grunting**
- **Low body temperature
(less than 35.5°C)**

- Fever (38°C or above)
- Movement only when stimulated or no movement even when stimulated
- Convulsions
- Umbilicus red or draining pus
- Skin pustules (oral antibiotic only for skin and umbilical findings)

- Fever (37.5°C or above)
- Lethargic or unconscious
- Weak or absent cry
- Umbilical redness extending to skin
- Skin pustules (more than 10 or 1 abscess)



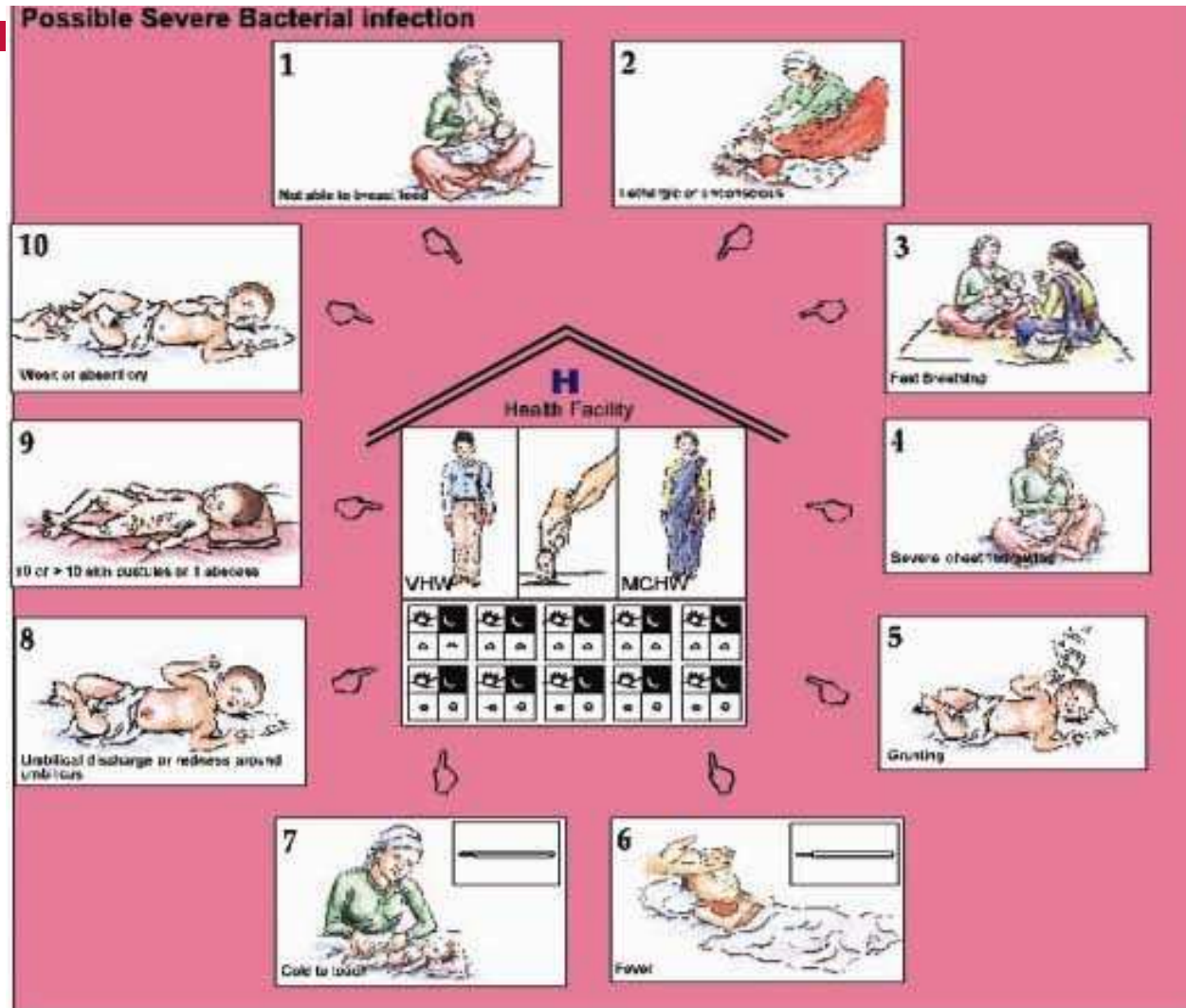
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Algorithm for PSBI



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FCHV with All Job Aids



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Some Materials used in MINI



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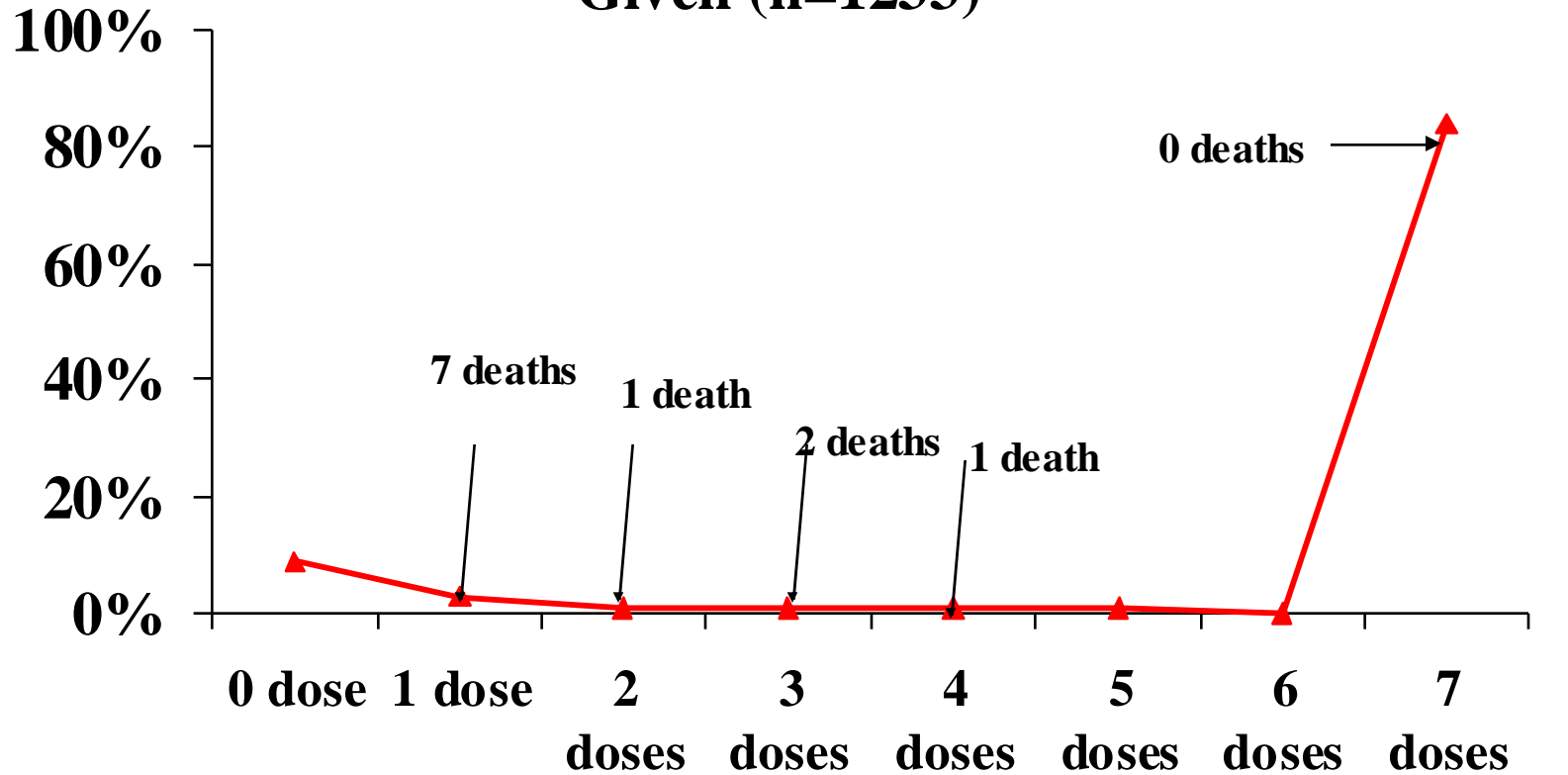
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Outcome for Gentamicin treatment

Distribution of Number of Gentamicin Doses Given (n=1233)



▲ % of episodes

Source: MINI CHW service registers



Cotrimoxazole treatment

95% who first came to FCHV Received Cotrimoxazole (n=851)

85% of them completed 5 days of cotrimoxazole(n=730)

Status of those who received Cotrimoxazole Only (n=110)

Status	3rd Day	%	2 mths	%
Improved	83	75%	104	94%
Same	7	6%		
Referred	14	13%		
Dead	2	2%	5*	5%
DK	4	4%	1	1%
	110	100	110	100

* 2 of Improved, 1 same on 3rd day died at 2 months

Source: MINI CHW service registers



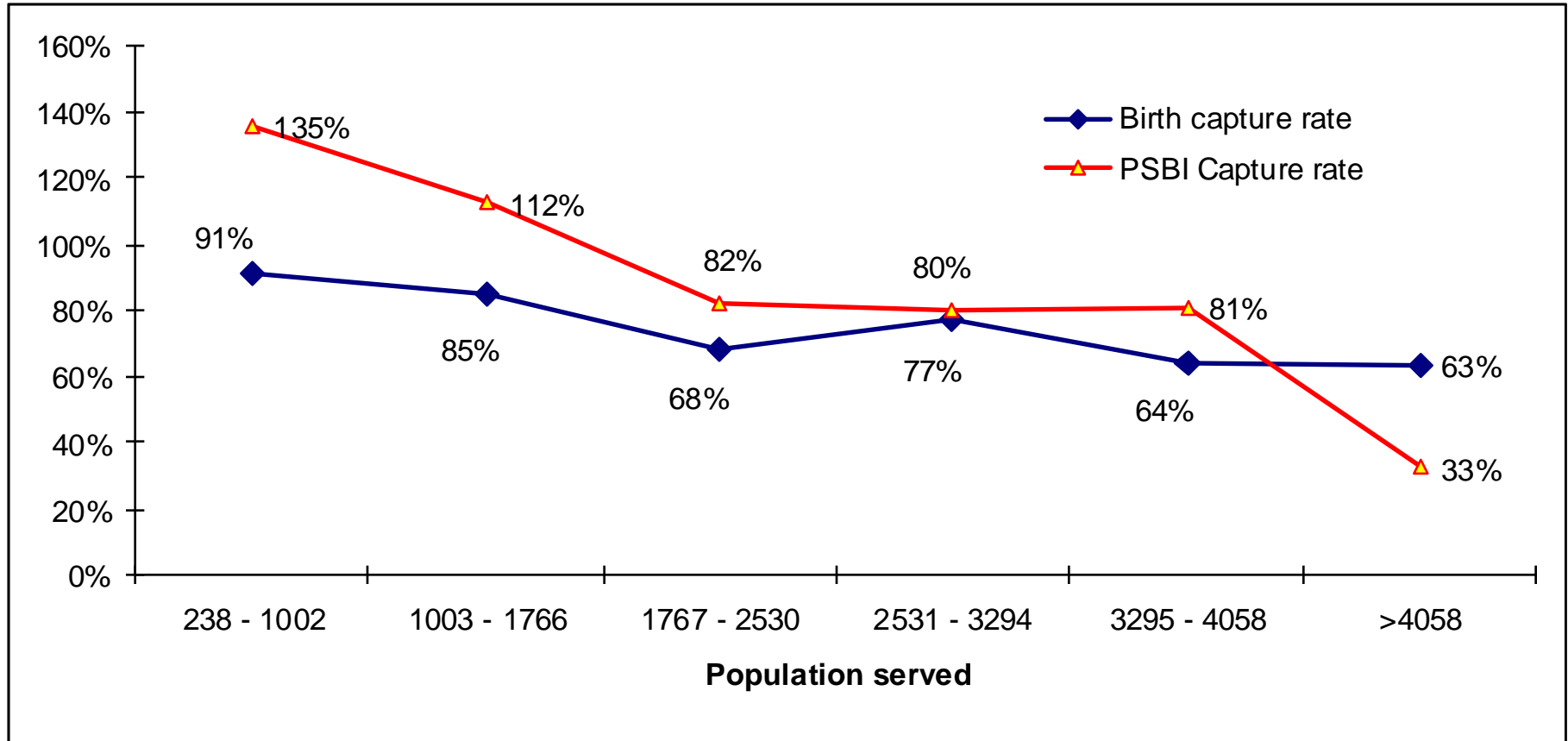
How much of Load are we adding to the CHWs?

- The Population ratio for
 - FCHVs (1:1283; Min 238, Max 7114)
 - VHW/MCHW (1:6414; Min 2673, Max 28584)
- FCHV Case Load
 - Birth (~3 per month)
 - Sick baby (~1 in 2 months)
 - LBW (1 in 4 months)
- VHW/MCHW case load
 - Sick baby (2 each per month)
- Increased responsibility towards society, sometimes even have to work on Saturdays
- Recording and Reporting

Source: MINI CHW service registers/FCHV Ward register



Population Vs Coverage for FCHVs



Source: MINI CHW service registers/Census 2001, CBS

