

# Newborn Care Practices at Nonga General Hospital

**Dr. Veronica Kalit**

**Diploma in Child Health 2014  
School of Medicine & Health Sciences  
University of Papua New Guinea**

**Supervisor: Dr Beryl Vetuna**

# INTRODUCTION

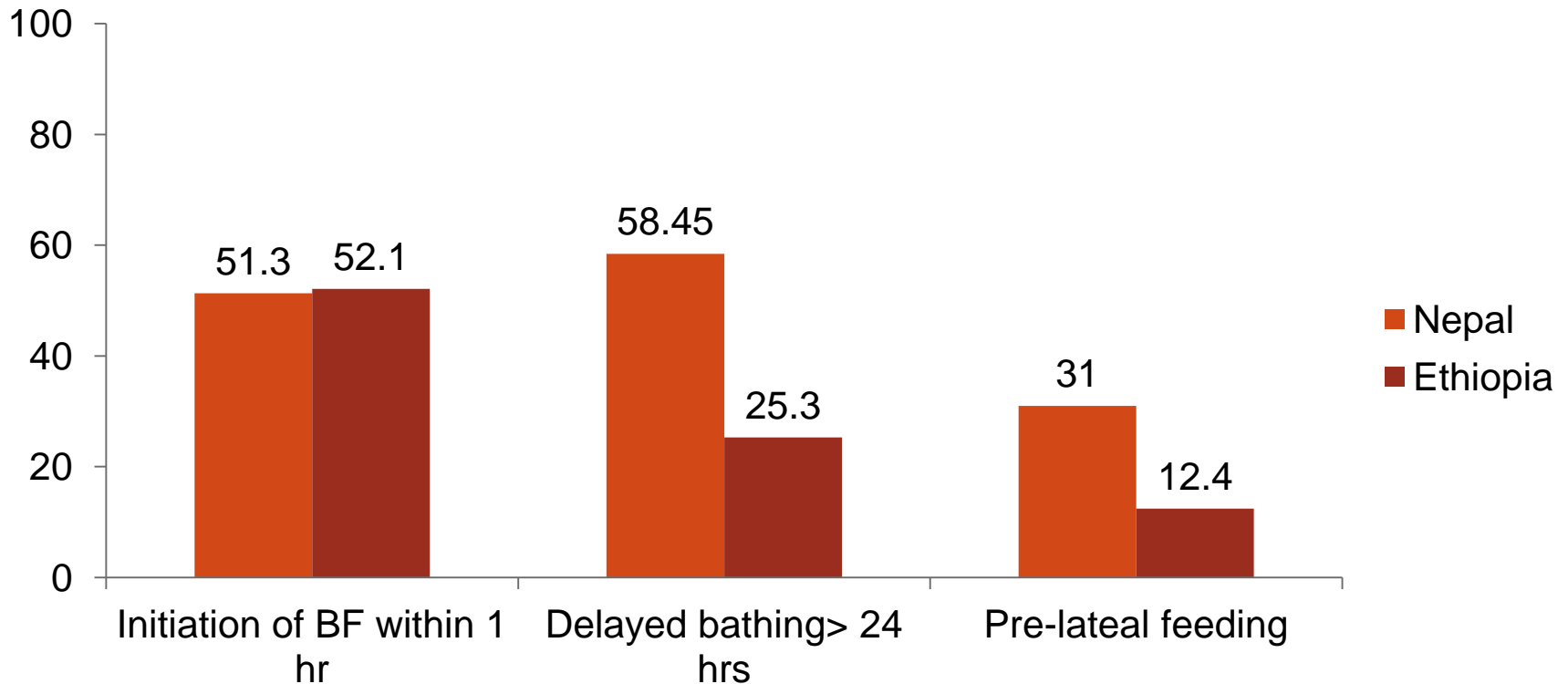
- Globally ~ 4 million newborn deaths each year
- PNG, China, Cambodia, Philippines, Laos together contributes 97% of newborn deaths in the WPR
- PNG (WHO 1990 - 2012)
  - NMR 32/1000 live births → 24/1000 live births
- NGH 2013 Neonatal deaths – 8.2%

# INTRODUCTION

- 75% of all neonatal deaths occur in the first week of life and  $\frac{1}{4}$  -  $\frac{1}{2}$  occur in the first 24 hours of life (WHO)
- WHO has identified simple interventions that, if applied routinely, reduce some of the threats newborns face - Early essential newborn care (ENC)
- ENC Includes;
  - Thermal care – immediate drying, skin to skin contact with mum, wrapping to keep warm, delayed bathing
  - Cord care – sterile instrument to cut cord, sterile cord tie & antiseptic application to cord
  - Breastfeeding support – BF initiation within 1 hr, exclusive BF, feeding colostrum
- Also important is hygienic practices, effective neonatal resuscitation, avoiding practices such as unnecessary suctioning & giving birth vaccines

# INTRODUCTION

- Frequency of recommended newborn practices varies widely between countries



- Frequency of recommended Newborn Care Practices in East New Britain and Papua New Guinea largely anecdotal & undocumented

## **HYPOTHESIS**

Newborn care practices at Nonga General Hospital are suboptimal

## **AIM**

To document essential newborn care practices in mother – neonate pairs presenting to Nonga General Hospital in the East New Britain province

## **OBJECTIVES**

1. To document common newborn care practices.
2. Identify differences in home and health facility newborn care practices
3. Identify factors that affect good newborn care practices
4. Identify newborn care practices, if any, that predispose

# METHODS

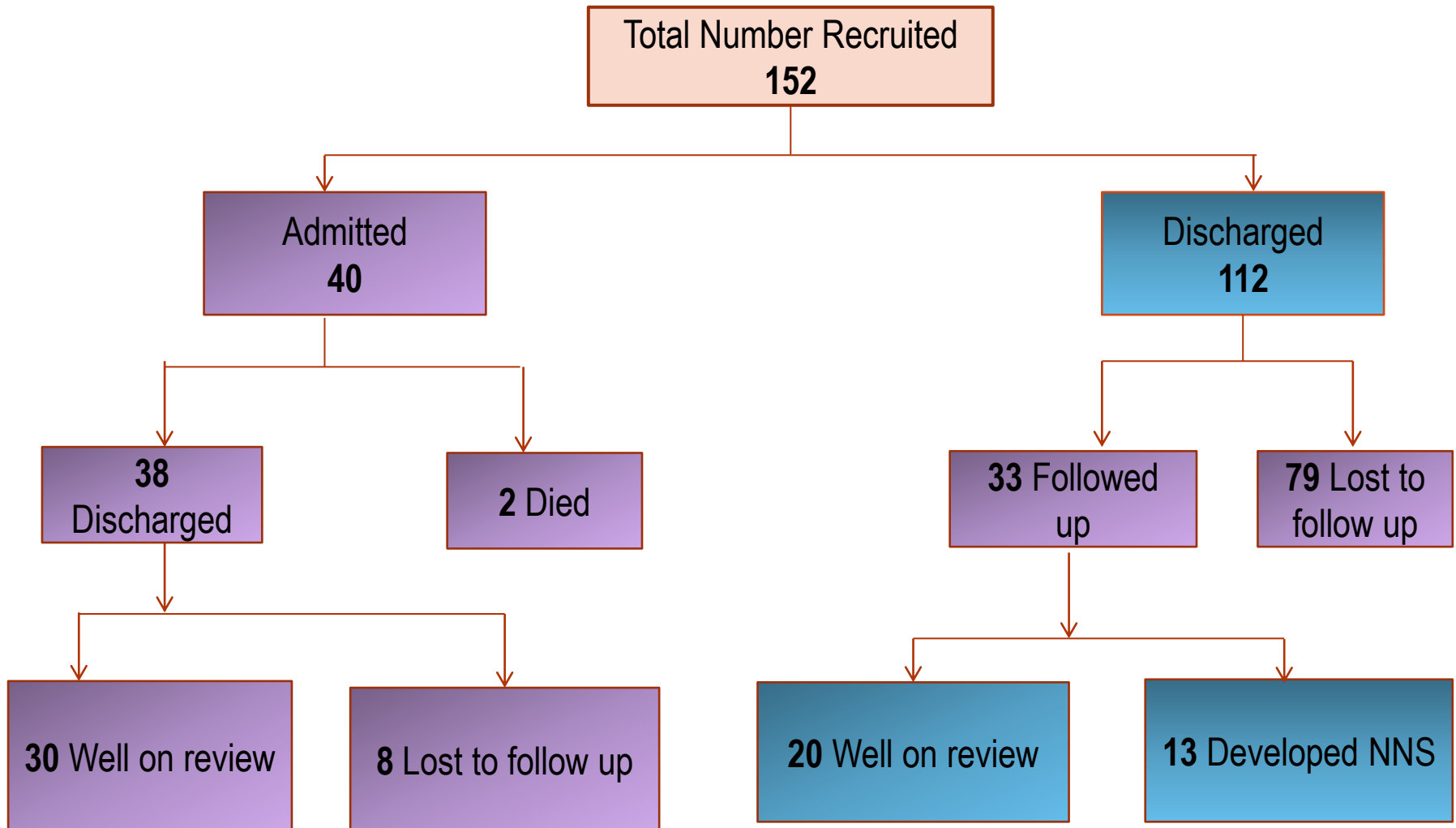
- Study Design: Prospective Descriptive study
- Study Time: March 2014 – August 2014
- Study population/setting
  - Nonga General Hospital
  - All mother – neonate pairs presenting to labour ward, postnatal ward & special care nursery
  - Aged 0 – 7 days
  - Convenience sampling

# METHODS

- Data collection method
  - A structured questionnaire with both open- ended and close-ended questions filled after informed maternal consent
    - ✓ Socio - demographic details /Antenatal history /Delivery details /Newborn care practices /Vaccinations/Vitamin K/Eye prophylaxis/Outcomes of neonates included in study
  - 2 week follow up
    - General condition of baby
- Data Entry into Microsoft excel & data analysis with SPSS 20

# RESULTS

FIGURE 1: OUTCOME OF STUDY POPULATION (N=152)





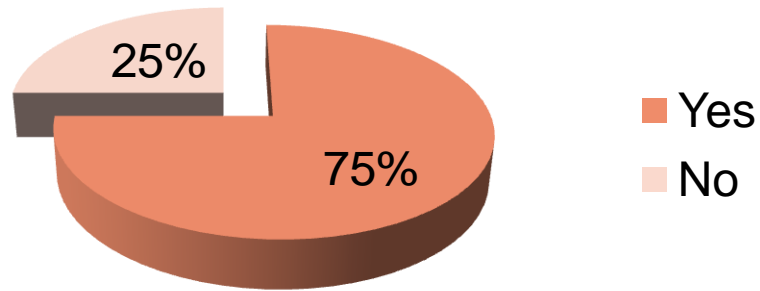
**TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS (N=152)**

|                           | <b>FREQUENCY</b> | <b>PERCENTAGE</b> |
|---------------------------|------------------|-------------------|
| <b>MATERNAL AGE</b>       |                  |                   |
| < 20 years                | 3                | 2                 |
| 20 - 35 years             | 141              | 92.8              |
| > 35 years                | 8                | 5.3               |
| <b>LEVEL OF EDUCATION</b> |                  |                   |
| illiterate                | 1                | 0.7               |
| primary                   | 67               | 44.1              |
| secondary                 | 65               | 42.8              |
| above secondary           | 19               | 12.5              |
| <b>CURRENT OCCUPATION</b> |                  |                   |
| student                   | 5                | 3.3               |
| housewife                 | 36               | 23.7              |
| subsistence farmer        | 76               | 50                |
| self employed             | 7                | 4.6               |
| formal employment         | 28               | 18.4              |
| <b>BIRTH ORDER</b>        |                  |                   |
| First                     | 43               | 28.3              |
| Second & above            | 109              | 71.7              |
| <b>SEX OF NEWBORN</b>     |                  |                   |
| Male                      | 79               | 52                |
| Female                    | 73               | 48                |

**TABLE 2: PARAMETERS REPORTED ANTENATALLY & DURING DELIVERY  
(N=152)**

|                                 | FREQUENCY | PERCENTAGE |
|---------------------------------|-----------|------------|
| <b>NUMBER OF ANTENAL VISITS</b> |           |            |
| No visits                       | 4         | 2.6        |
| At least 1 visit                | 10        | 6.6        |
| 2 -3 visits                     | 29        | 19.1       |
| ≥ 4 visits                      | 109       | 71.7       |
| <b>MODE OF DELIVERY</b>         |           |            |
| Normal                          | 118       | 77.6       |
| Caesarean                       | 25        | 16.4       |
| Breech                          | 6         | 3.9        |
| Vacuum                          | 3         | 2          |
| <b>PLACE OF DELIVERY</b>        |           |            |
| Home                            | 20        | 13.2       |
| Health facility                 | 132       | 86.8       |
| <b>DELIVERY ATTENDANT</b>       |           |            |
| Doctor                          | 29        | 19.1       |
| Nurse                           | 103       | 67.8       |
| VBA                             | 16        | 10.5       |
| Relative                        | 4         | 2.6        |

**FIGURE 2 : ADVISE ON NEWBORN CARE GIVEN ANTENATALLY (N = 148)**



**FIGURE 3: TYPE OF NEWBORN CARE ADVISE GIVEN ANTENATALLY**

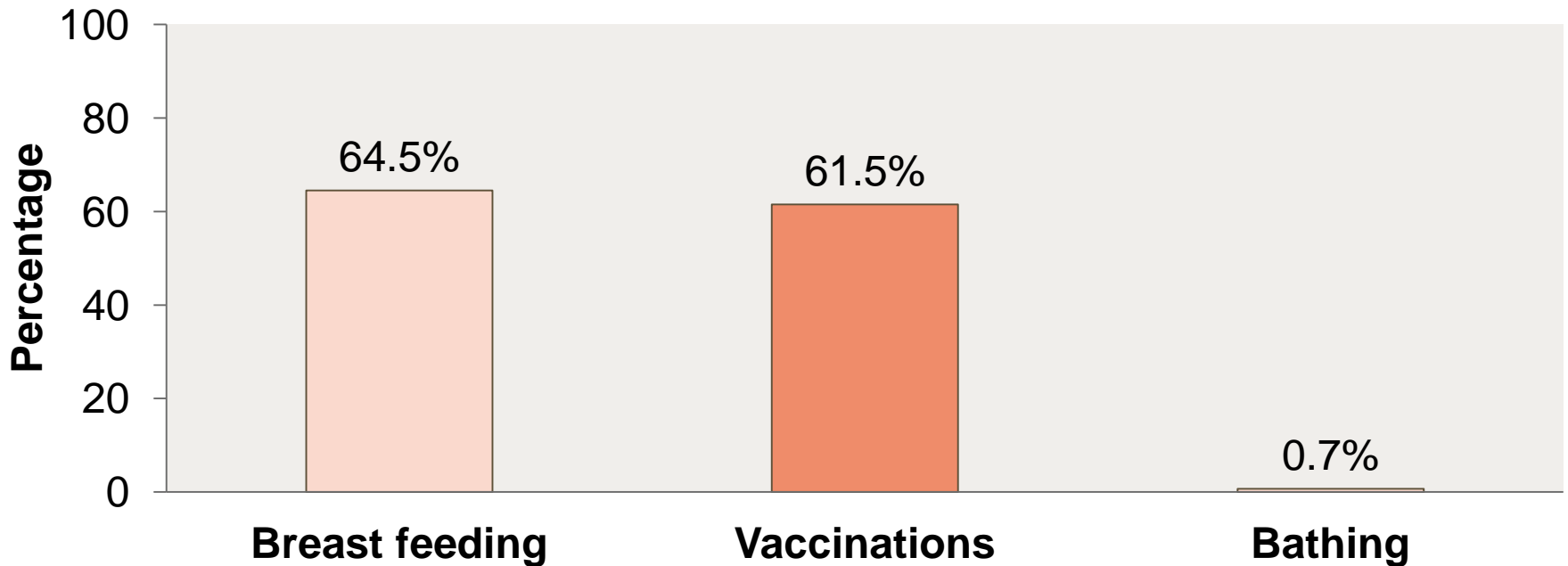
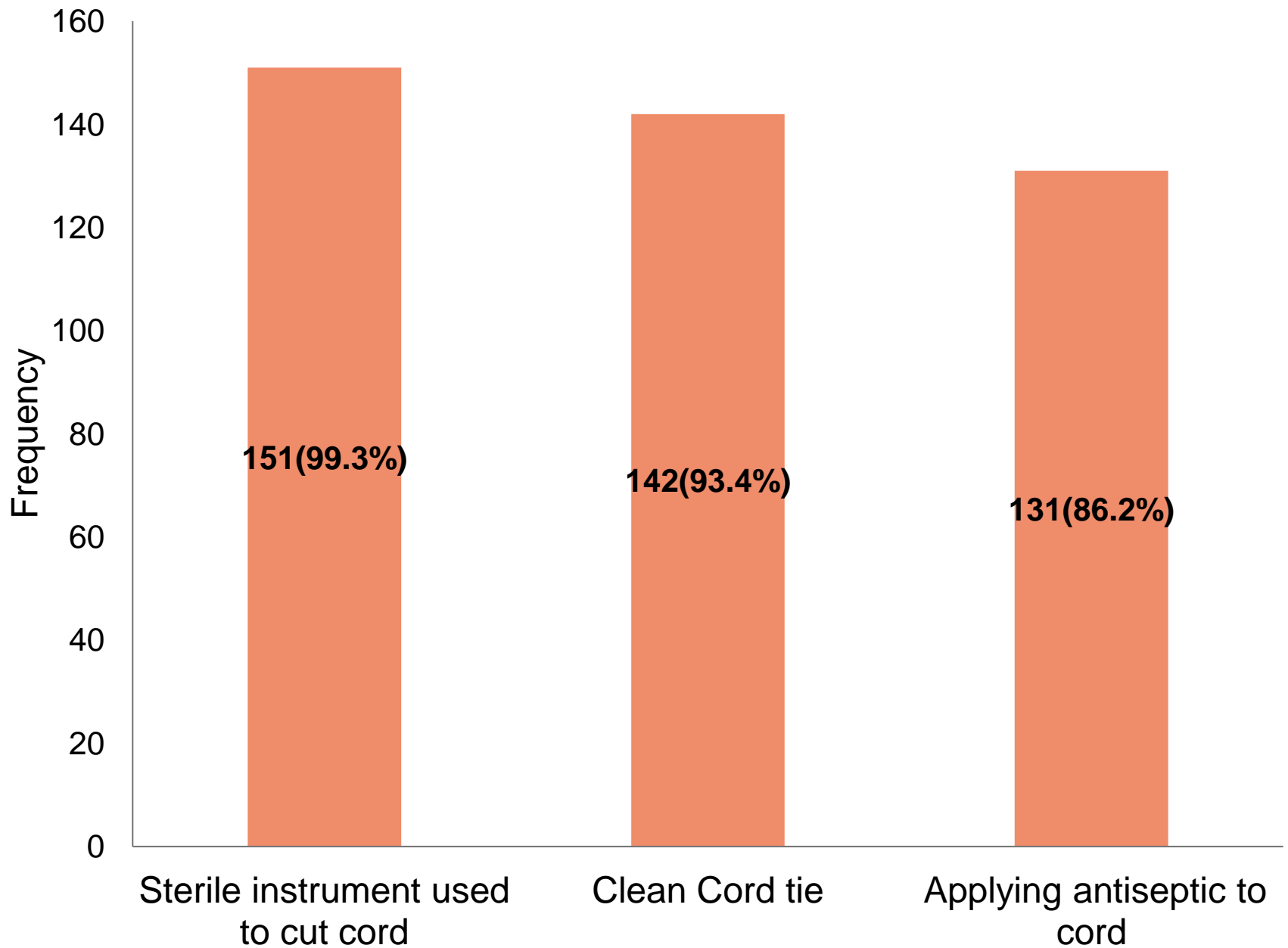
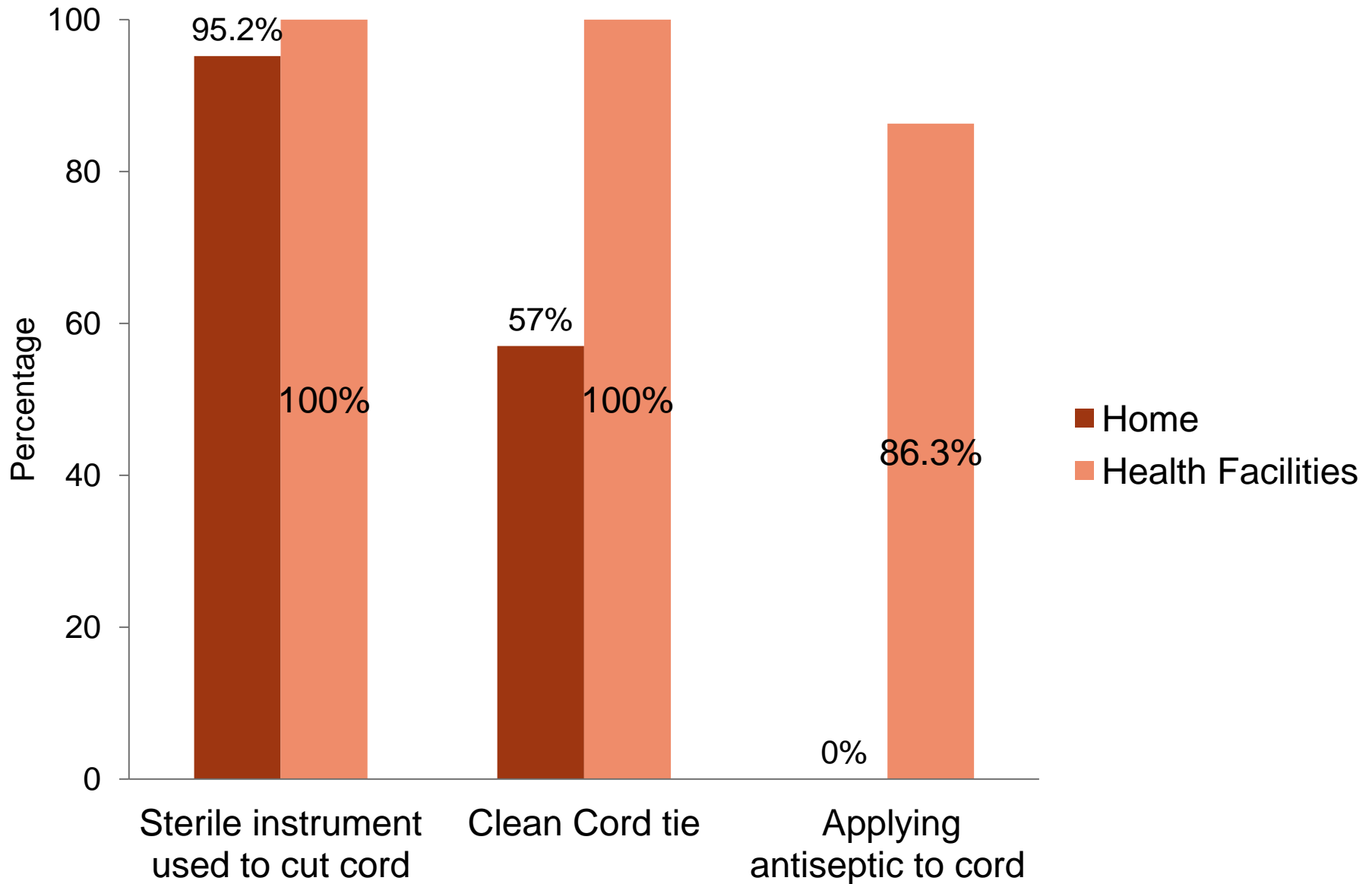


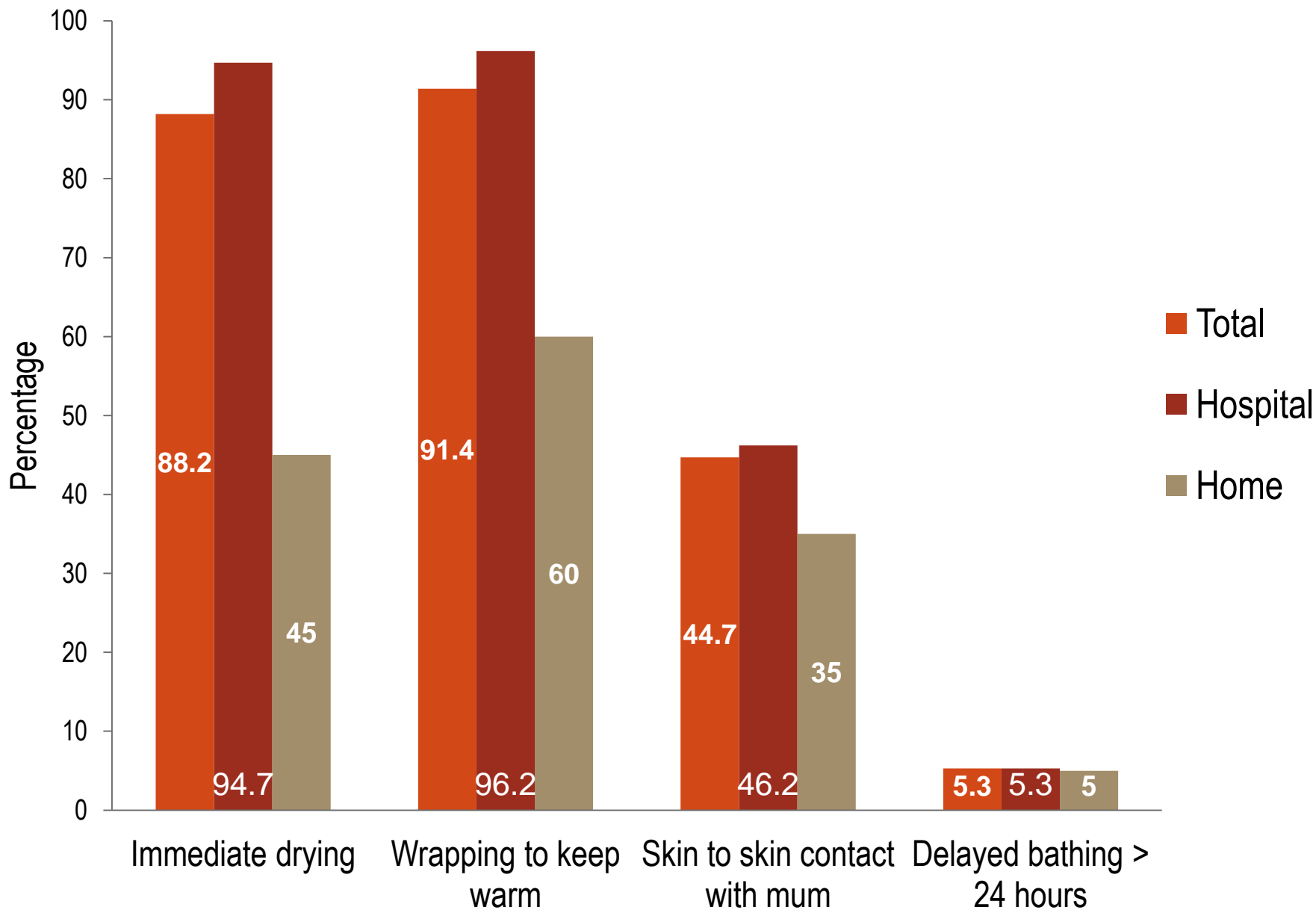
FIGURE 4: FREQUENCY OF SAFE CORD PRACTICES



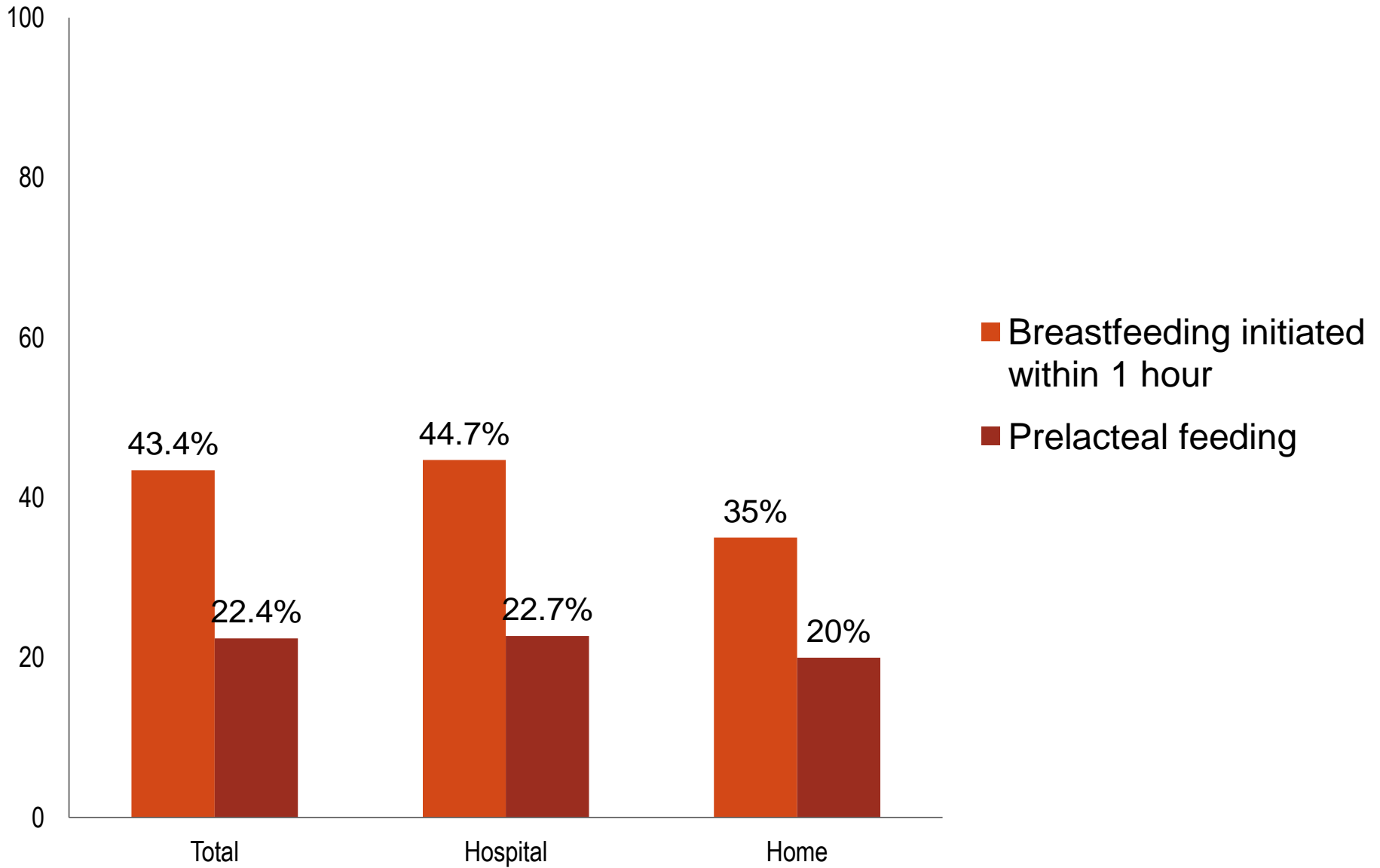
**FIGURE 5: COMPARISON OF HOME & HEALTH FACILITY SAFE CORD PRACTICES**



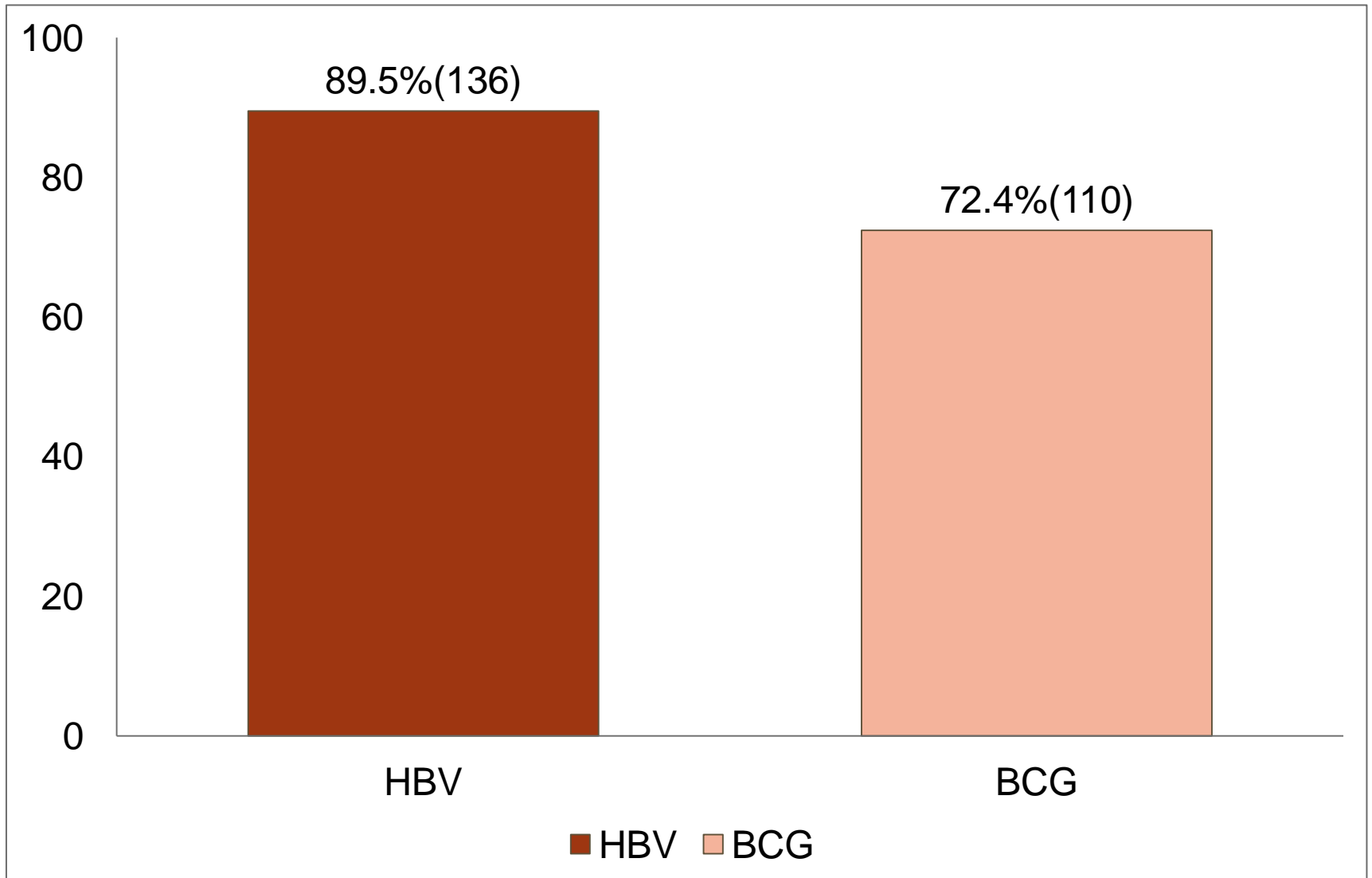
# FIGURE 6: PERCENTAGE OF THERMAL CARE PRACTICE



# FIGURE 7: PERCENTAGE OF BREAST FEEDING PRACTICES

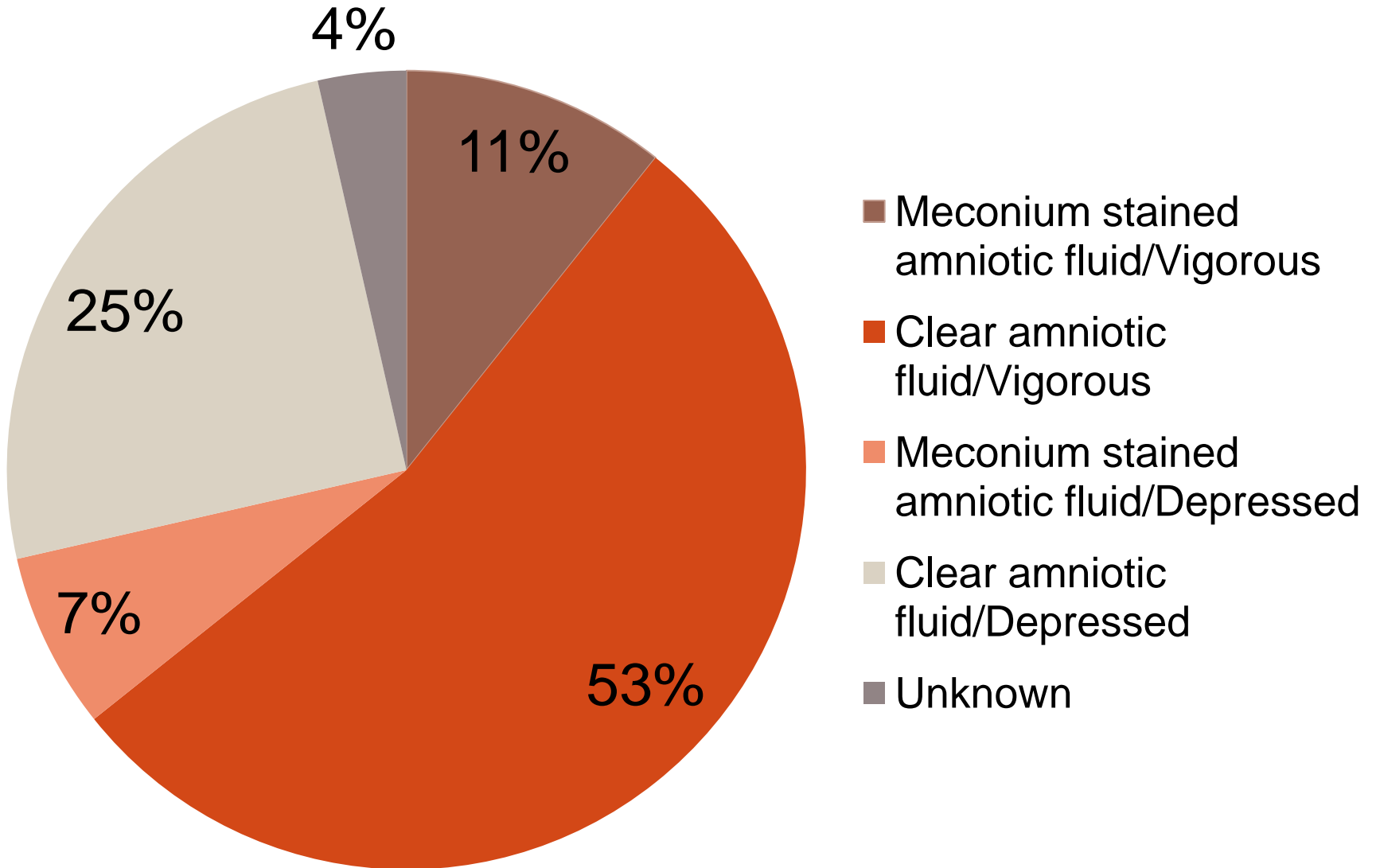


**FIGURE 8: FREQUENCY OF NEONATES THAT HAD RECEIVED BIRTH VACCINATIONS**

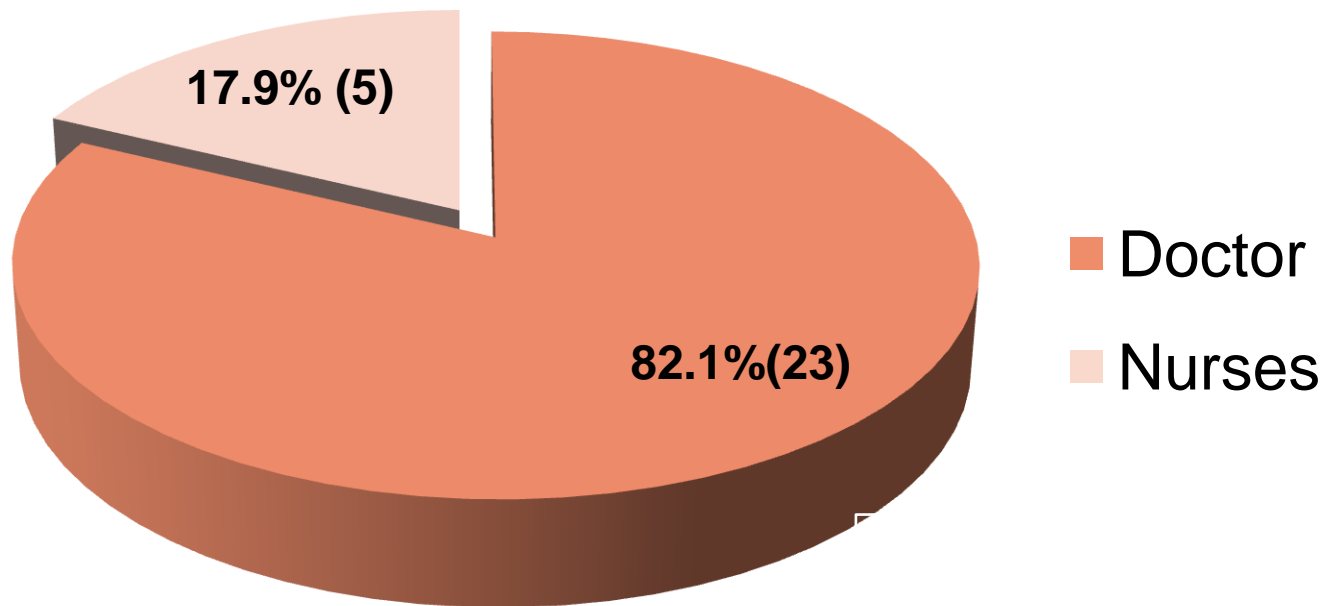




**FIGURE 9: INDICATION FOR SUCTIONING PRACTICES (N=28)**



**FIGURE 10: NEONATES SUCTIONED VERSUS BIRTH ATTENDANTS (N=28)**



**(p-value < 0.001)**

**TABLE 3: COMPARING ANTENATAL & DELIVERY FACTORS WITH NEWBORN CARE PRACTICES**

|                                  | GOOD<br>BF<br>SUPPORT | POOR BF<br>SUPPORT | P-<br>VALUE | GOOD<br>THERMAL<br>CARE | POOR<br>THERMA<br>L CARE | P-VALUE | STERIL<br>E<br>CORD<br>CARE | UNSTERIL<br>E CORD<br>CARE | P-VALUE |
|----------------------------------|-----------------------|--------------------|-------------|-------------------------|--------------------------|---------|-----------------------------|----------------------------|---------|
| <b>NEWBORN CARE ADVISE GIVEN</b> |                       |                    | 0.459       |                         |                          | 0.700   |                             |                            | 0.006   |
| YES                              | 47                    | 66                 |             | 39                      | 74                       |         | 99                          | 14                         |         |
| NO                               | 19                    | 20                 |             | 12                      | 27                       |         | 26                          | 13                         |         |
| <b>MODE OF DELIVERY</b>          |                       |                    | 0.000       |                         |                          | 0.000   |                             |                            | 0.026   |
| NVD                              | 66                    | 61                 |             | 51                      | 76                       |         | 105                         | 22                         |         |
| LUSCS                            | 0                     | 25                 |             | 0                       | 25                       |         | 25                          | 0                          |         |
| <b>PLACE OF DELIVERY</b>         |                       |                    | 0.955       |                         |                          | 0.044   |                             |                            | 0.000   |
| Health<br>facility               | 57                    | 74                 |             | 48                      | 83                       |         | 125                         | 6                          |         |
| Home                             | 9                     | 12                 |             | 3                       | 18                       |         | 0                           | 21                         |         |

**TABLE 4: RELATIONSHIP BETWEEN NEWBORN CARE PRACTICES & SEPSIS**

|                               | SEPSIS |    | P-VALUE |
|-------------------------------|--------|----|---------|
|                               | YES    | NO |         |
| <b>CORD CARE PRACTICE</b>     |        |    | 0.215   |
| GOOD                          | 27     | 98 |         |
| POOR                          | 9      | 18 |         |
| <b>THERMAL CARE PRACTICE</b>  |        |    | 0.044   |
| GOOD                          | 7      | 42 |         |
| POOR                          | 29     | 74 |         |
| <b>BREASTFEEDING PRACTICE</b> |        |    | 0.037   |
| GOOD                          | 10     | 55 |         |
| POOR                          | 26     | 61 |         |
| <b>SUCTIONING</b>             |        |    | 0.422   |
| YES                           | 5      | 23 |         |
| NO                            | 31     | 93 |         |

# DISCUSSIONS

## OTHER STUDIES

## THIS STUDY

Initiation of BF within 1 hour -  
52.1%

*Callaghan-Koru et al.* Newborn care practices at home and in health facilities in 4 regions of Ethiopia, BMC Pediatrics 2013, 13:198

Initiation of BF within 1 hour -  
43.4%

Pre-lacteal feeds – 12.4%

*Callaghan-Koru et al.* Newborn care practices at home and in health facilities in 4 regions of Ethiopia, BMC Pediatrics 2013, 13:198

Pre-lacteal feeds - 22.4%

Delayed bathing 58.45%

*Kaphle et al.* Newborn Care Practices in Rural Communities of Nawalparasi District, Nepal, JHAS, 2013, Vol. 3, No. 1 P 35-39

Delayed bathing > 24 hours - 5.3%

Skin – skin care  
Health facility 25.8%  
Home 7.7%

Skin – skin care  
Health facility 46.2% Home 35%

## OTHER STUDIES

Unnecessarily suctioned 94.9%

*Howard L. Sobel et al.* Immediate newborn care practices delay thermoregulation and breast feeding initiation, *Foundation Acta Pædiatrica* 2011 100, pp. 1127–1133

Bathing practices, BF initiation & cord care practices significantly associated with **antenatal visits, newborn care advice & place of delivery**

*Kaphle et. al.* Newborn Care Practices in Rural Communities of Nawalparasi District, Nepal, *JHAS*, 2013, Vol. 3, No. 1 P 35-39

## THIS STUDY

Unnecessarily suctioned 64.3%  
Significantly more likely to be done by doctors

Good cord care significantly associated with **place of delivery & provision of newborn care advise**

**Mode of delivery** significantly associated with good breast feeding practice & thermal care

No significant association found between newborn care practices & socio-demographic factors

## **OTHER FINDINGS:**

- Poor thermal care & BF support statistically significant risks for sepsis
- Birth vaccine coverage (BCG & HBV) ~90%
- There are differences in ENC of babies delivered within health facilities compared to those delivered at home. Delayed bathing practices were the same.

## **STUDY LIMITATIONS**

- Small sample size/time limitation for study
- Recall bias
- Missing essential information on delivery hygiene & cleanliness especially in home deliveries
- Follow up difficult

# CONCLUSION

- First study to assess newborn care practices in East New Britain
- Immediate newborn care interventions at NGH are below WHO standards.
- Suboptimal newborn care practices predispose newborns to infection and death



# RECOMMENDATIONS

- Dissemination & awareness of PNGs newborn care policy to all health care providers
- Training on current newborn practices needed for health workers at Nonga General Hospital & health facilities within East New Britain province
- Standardized Newborn care advise to be given to all antenatal mothers
- Ensure availability, access & use of SBA
- All well babies born by caesarean section be kept with their mothers to enable good breastfeeding support & thermal care
- Suggest future studies to assess newborn care practices in all health facilities in the Province after appropriate training carried out

# ACKNOWLEDGEMENT

- Study participants (Mothers and babies)
- Dr Beryl Vetuna (NGH Paediatrician)
- Professor Tefuarani
- Dr J. Nuli
- Nursing staff

# REFERENCES

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