# The Galaa Study
# Normal Labour Facility Practices
# vs
# Evidence-based Obstetrics

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# Justification

- Why study normal labour ?
- Why study hospital practices for normal labour?
- Why study normal labour at El Galaa hospital ?

# Background

## Maternal mortality in Egypt

- 49 % of births take place in facilities
- 69 % are medically assisted (by trained providers)
- Egypt's maternal mortality rate of 74 deaths per 100,00 live births is relatively high
- Postpartum hemorrhage is the leading direct cause of maternal deaths in Egypt.

(MOHP, 2001)

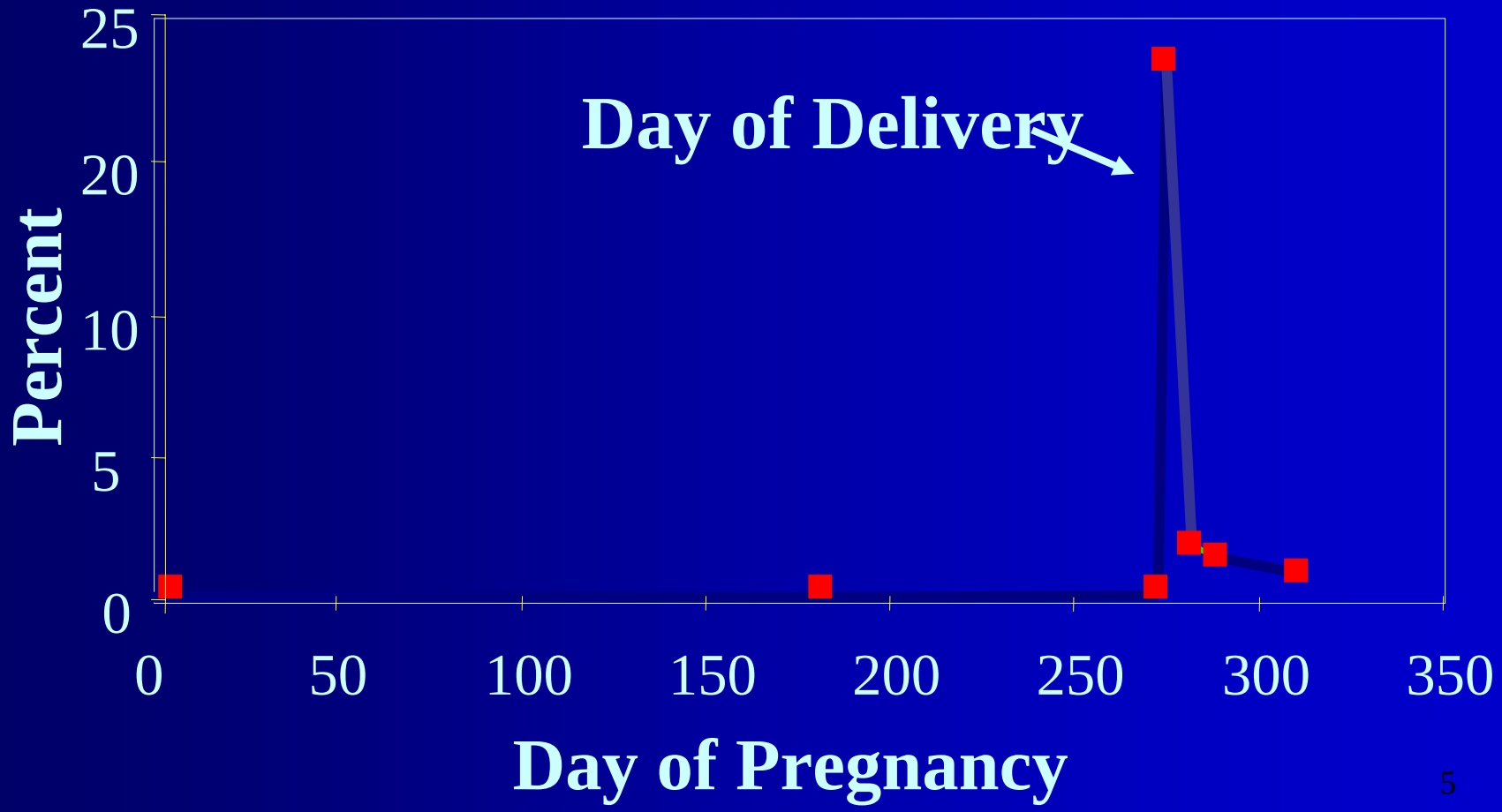
# Justification

## Why study normal labour in Egypt?

- The majority (85%) of all deliveries worldwide are normal.
- Substandard care by the obstetric team was the leading avoidable factor contributing to the maternal deaths identified by the last mortality survey. (43 % of avoidable deaths)
- 49 % of deaths occurred during delivery/within 24 hrs

(MOHP, 2001)

# Risk of Maternal Death by Day of Pregnancy, Egypt 2000 (MOHP, 2001)



- Neonatal morbidity and mortality- illness and death- can occur after normal labour and not just after complicated deliveries.
- While normal labour is the most common event, most studies focus on high risk or complicated labour and delivery.

# Why study hospital practices for normal labour?

Deliveries in hospitals are increasing.

59% of all deliveries in Egypt occur in facilities (EIDHS, 2003)

There is no documentation of facility practices for normal labour in our region.

# Why study normal labour in El-Galaa hospital?

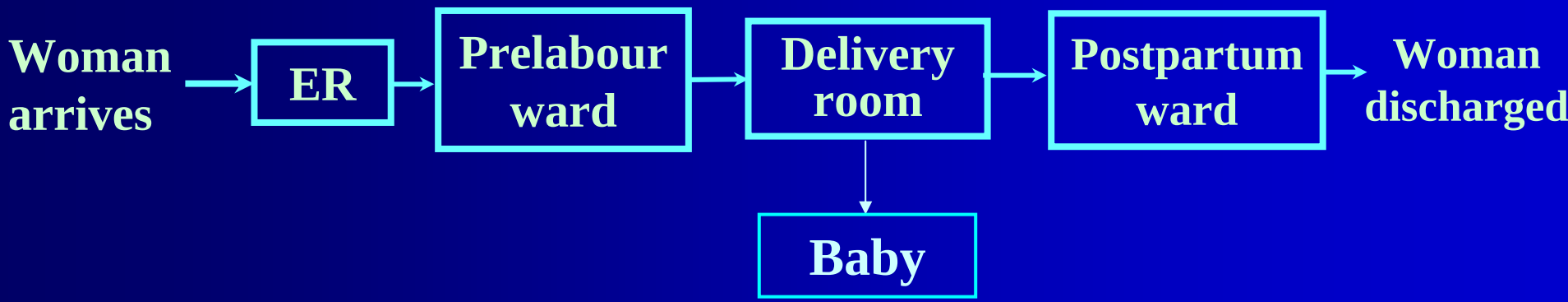
- It delivers 25,000 women per year.
- . It is an important obstetrical training center. (at least 225 young doctors are trained at El Galaa every year).

# The Galaa Study

- The research team comprehensively documented practices for normal labour at El Galaa hospital, for the first time, in 2001.
- The labours and delivery of 176 women from admission to discharge were individually observed using a multifaceted observational methodology.
- Data was collected quantitatively and qualitatively by directly observing women for their entire labour and delivery; by documenting ward activities, interviewing the delivered women and sharing the findings with the providers.

# Our study documented:

Every practice for which there is evidence for a role or an effect during normal birth.



# This involved:

a) Observation of one woman and neonate at a time using a 165-item observational checklist. 672 continuous hours of observation

b) Observation of ward activities

c) A postpartum interview exploring women's perceptions of their experience.

d) Feedback from providers.

e) Lessons from the pilot study.

We were not able to identify any other studies that quantified facility procedures comprehensively for normal labour.

# Main Findings

# 18 Main issues were identified:

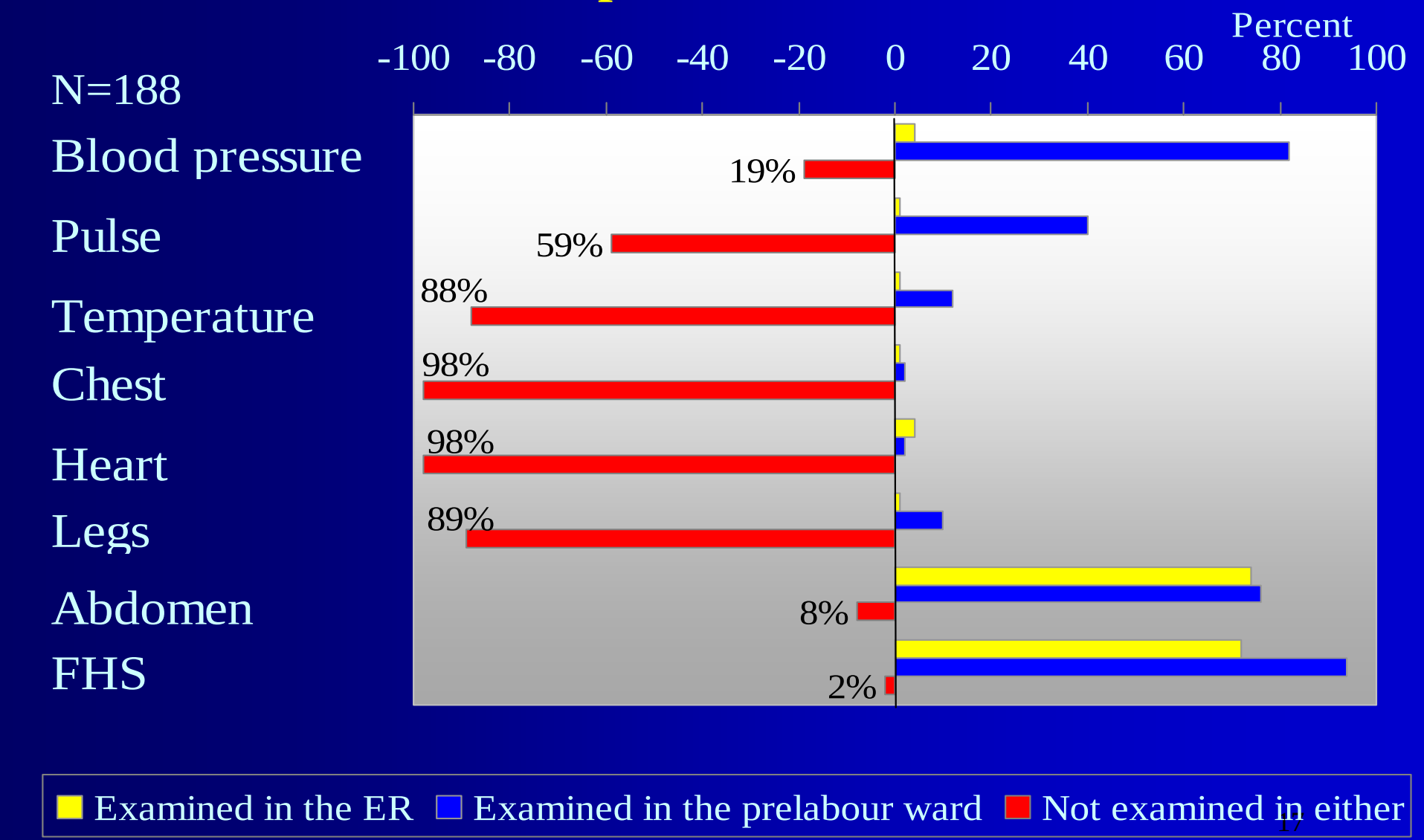
1. Demographic variables
2. Caseload
3. Facility preparedness
4. Initial assessment
5. Recording
6. Management of the 1st stage
7. Management of the 2nd stage
8. Management of the 3rd stage
9. Immediate postpartum care
10. Neonatal care
11. Postpartum care
12. Discharge procedures
13. Supervision of doctors in training
14. Communication
15. Continuous monitoring
16. Infection control
17. Pain relief
18. Hospital policies from the woman's perspective

# Main General Findings

- Many practices were acceptable and followed evidence-based obstetrics.
- Facility preparedness was good.
- Some practices were observed for which insufficient evidence exists.
- However  many observed practices were not in line with evidence-based obstetrics.

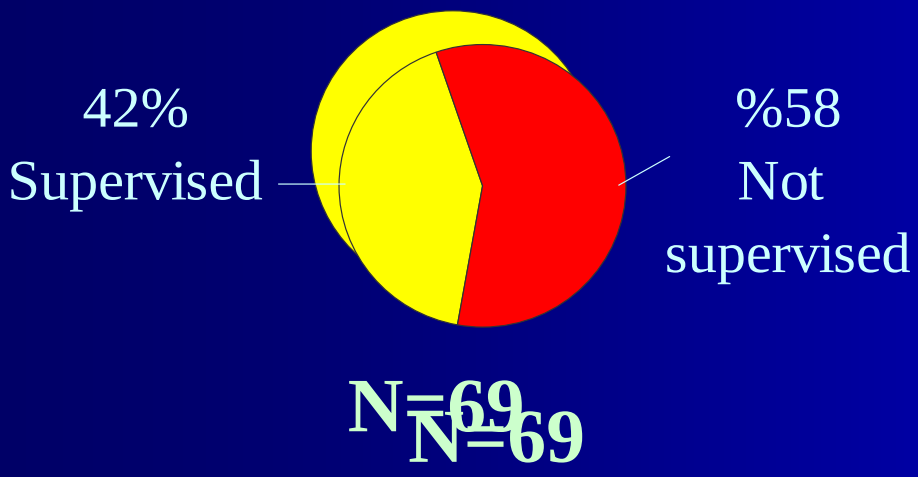
Were the women assessed properly on arrival?

# The general examination in the ER & the prelabour ward

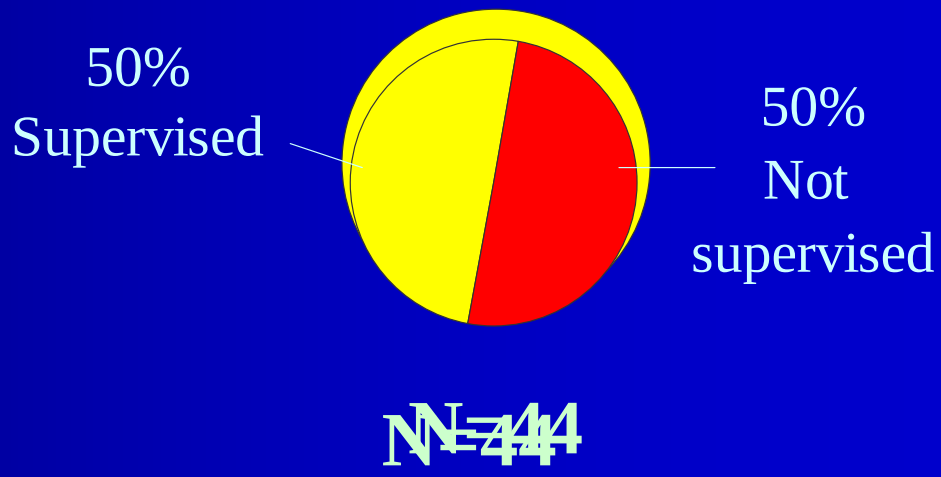


# Supervision of house officers

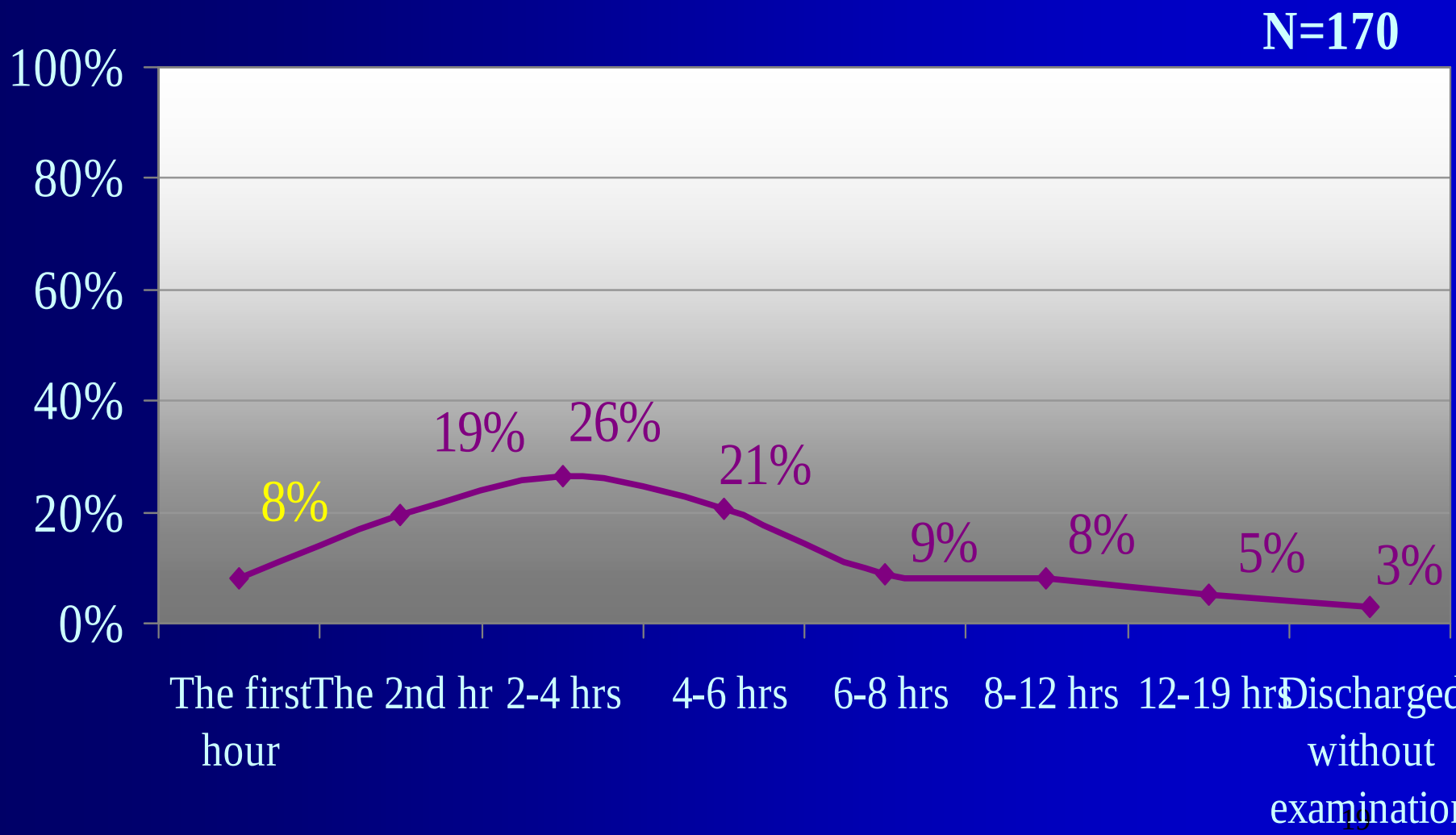
A house officer conducted the delivery in 69 deliveries



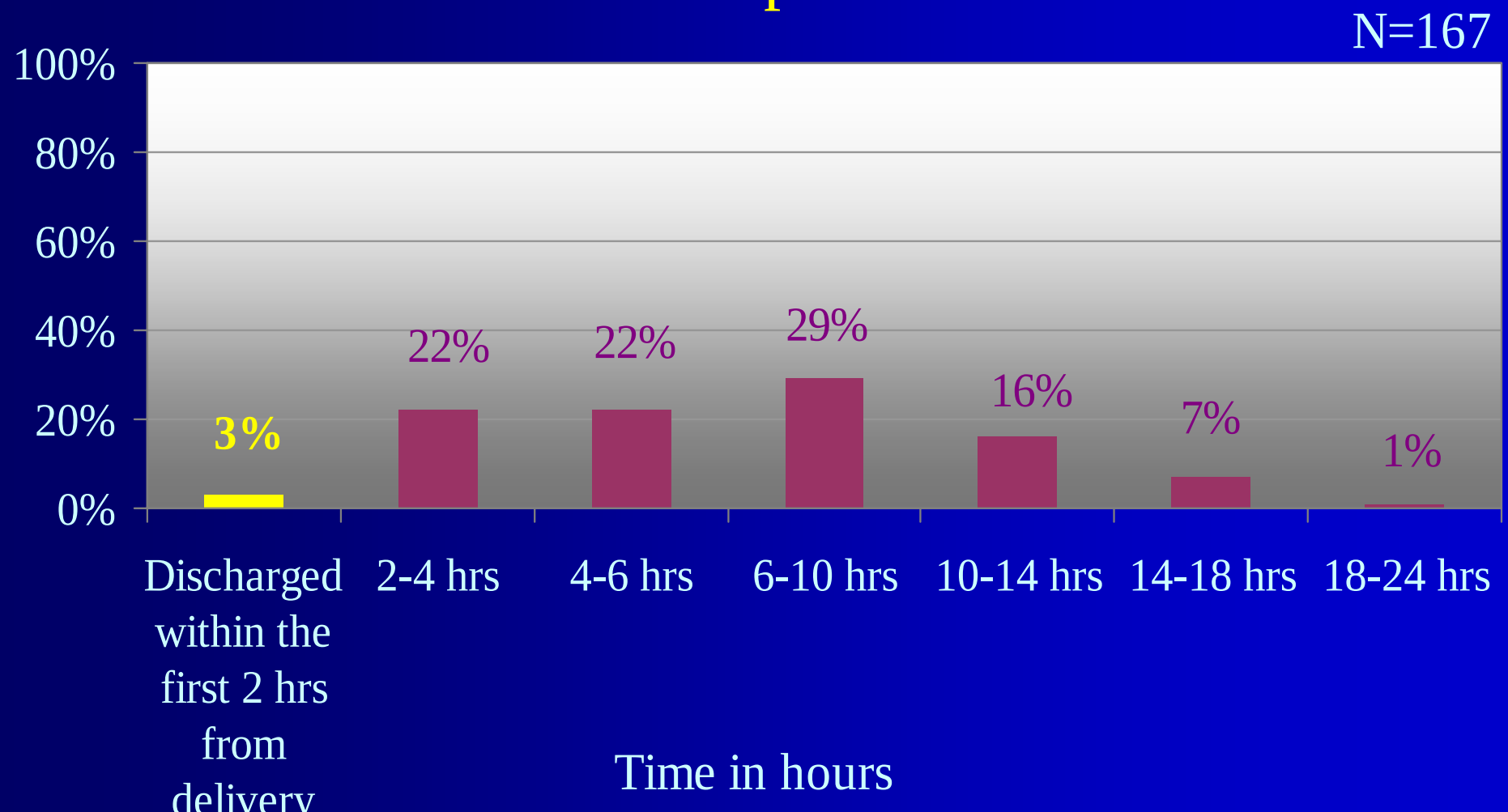

A house officer repaired the episiotomy or tear in 44 deliveries



# Duration between time of arrival to the postpartum ward until the time of the first exam



# Hours between delivery and leaving the hospital



# Some findings in detail

# Detailed examination of oxytocin usage

Oxytocin is a drug that stimulates the uterine contractions, and can be given when the progress of labour is slow.

Side-effects of oxytocin can include uterine hyperstimulation, fetal distress, fetal asphyxia and uterine rupture. (ACOG, 1995)

Oxytocin is also associated with neonatal hyperbilirubinemia. (Kruse, 1986)

"When used carefully, oxytocin is a very safe pharmacologic agent.

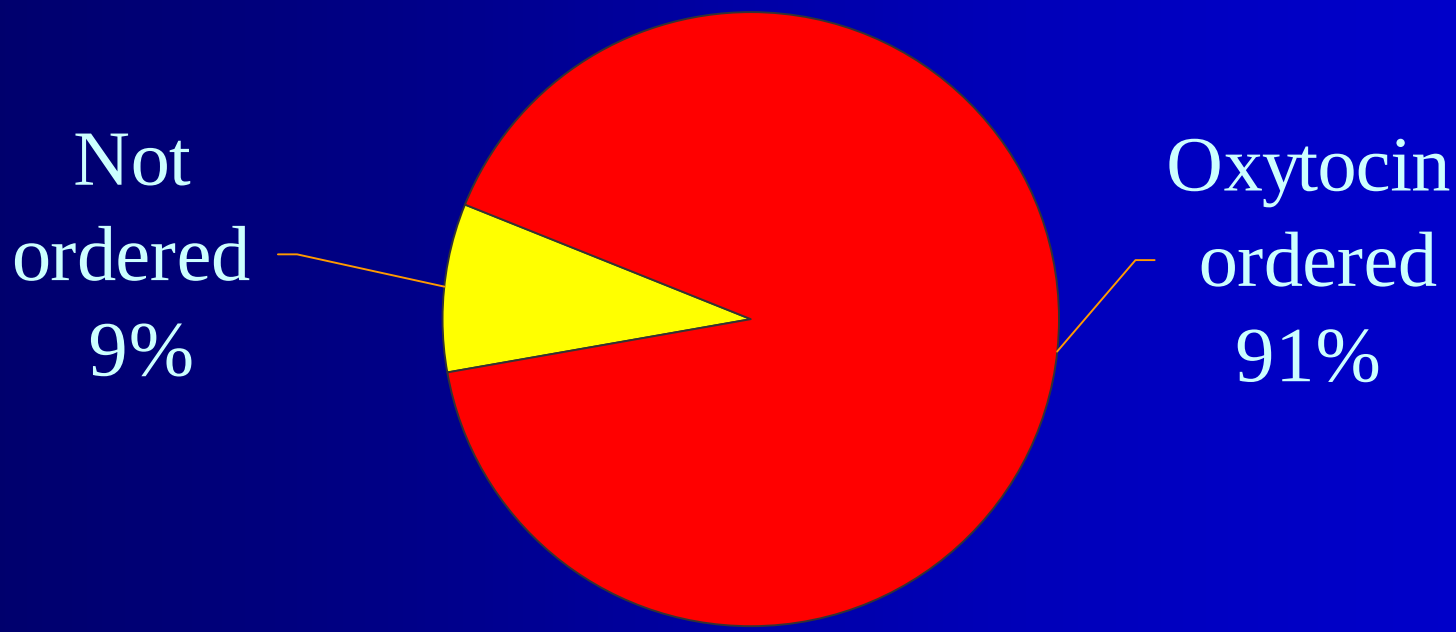
Complications caused by oxytocin are almost always due to improper doses or inadequate supervision."

(Kruse, 1986)

It is estimated that approximately 15 % of all women in labour in the United States receive oxytocin for augmentation. (Merrill et al., 1999)

There is no documentation of either the magnitude or the pattern of oxytocin usage for normal labour in Egyptian obstetric facilities.

# What proportion of our sample was given oxytocin ?



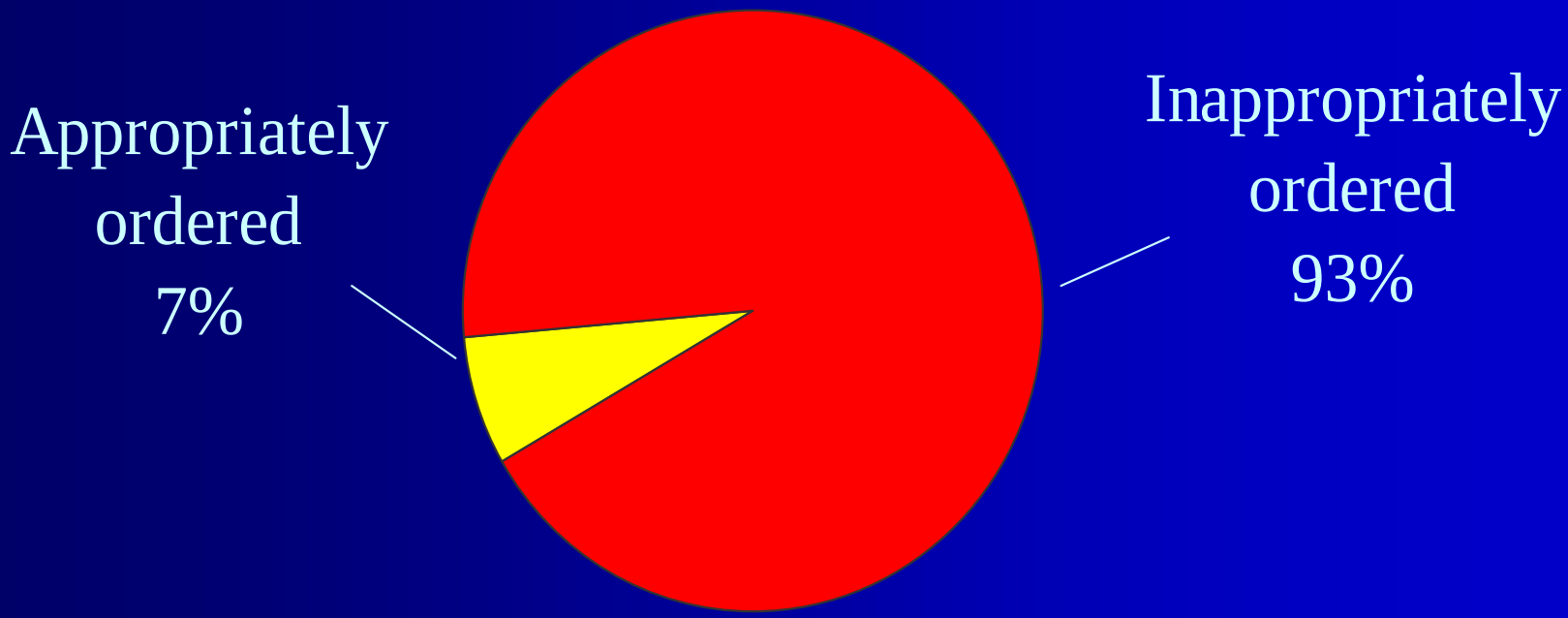

**N=181**

“When oxytocin is given continuous monitoring of the fetal heart rate is important to such an extent that if it cannot be performed, serious consideration should be given to abandoning the effort”

(Stubbs, et al., 2000)

| | |
|---|---|
| Fetal heart sounds were heard appropriately when oxytocin was given | 20% |

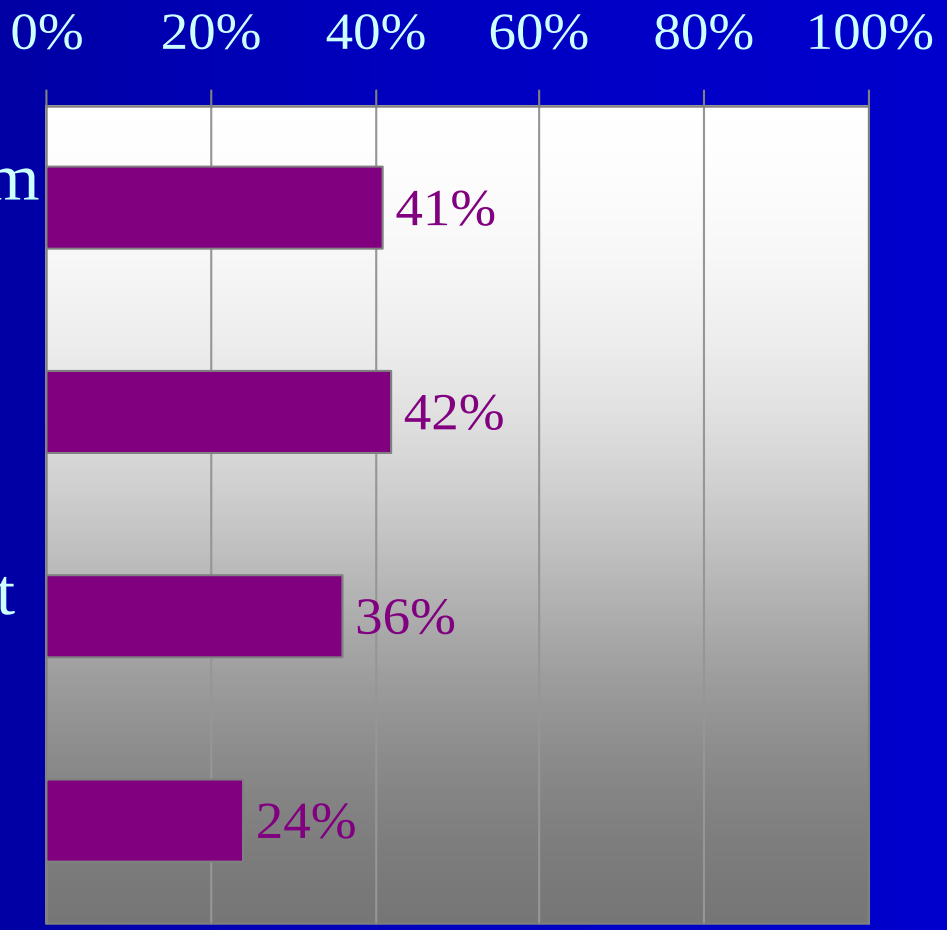
# Was the oxytocin order appropriate?




**N=165**

# Reason for categorizing the oxytocin order as inappropriate

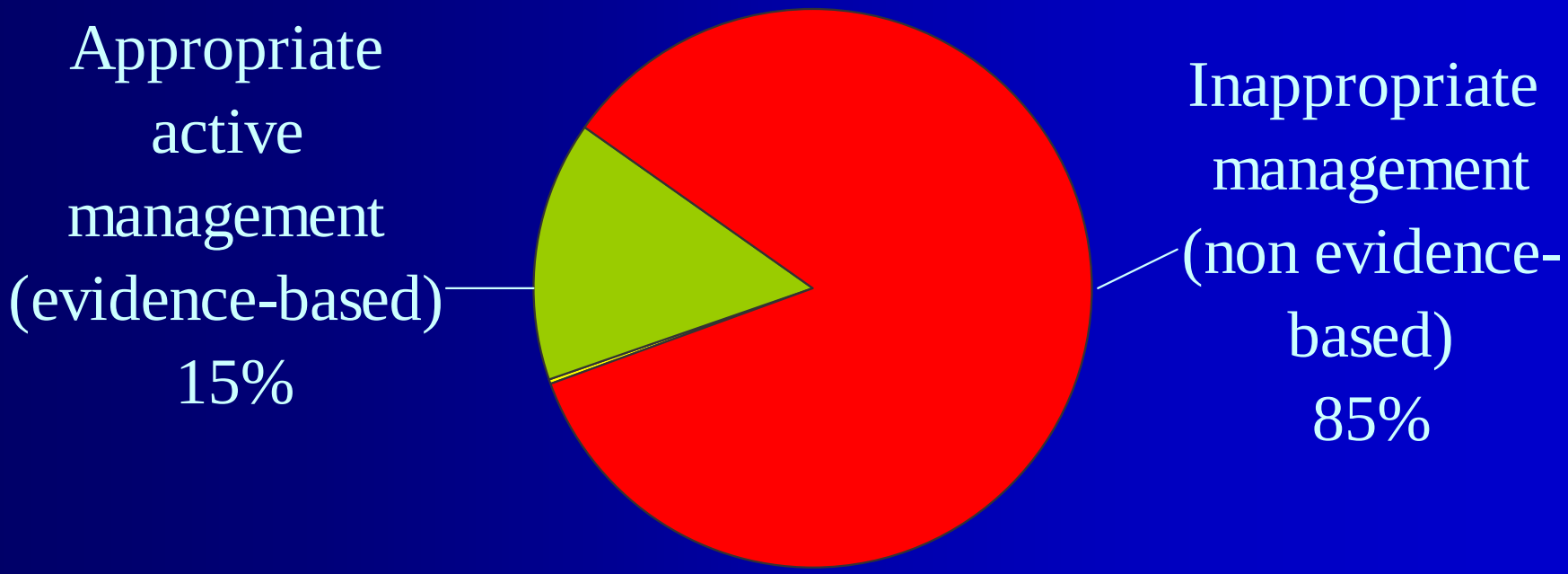
N=154




These do not add up to a 100 as there can be more than one reason (45% had 2 reasons)

Oxytocin was ordered for the majority of the women observed, and in most cases the order was both inappropriate and its use was not monitored.

# How was the 3rd stage managed ?




**N=176**

Appropriate (evidence-based) passive management = 0%

# Reason for categorizing the active management as inappropriate

N=150

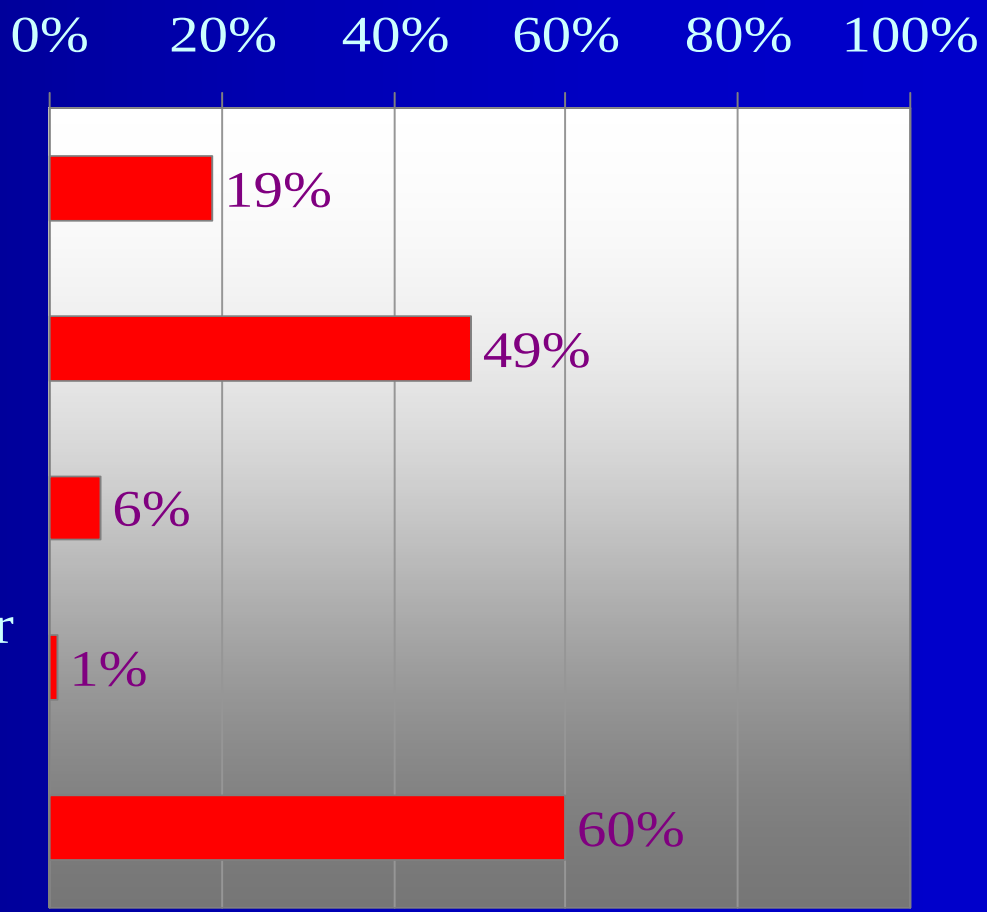
No ecbolic was given

No cord traction

No early clamping of the cord

Ecbolics more than 1 min. after delivery of baby

Ecbolics after the placenta




These do not add up to a 100 as there can be more than one reason (36% had 2 reasons)

The protective effect that active management can potentially provide against postpartum hemorrhage was lost to 85 % of the women we observed.

What factors could be contributing to the practices we documented?

- Heavy caseload

  average deliveries per day = 55
- Providers focus on high-risk cases
- Unavailability of written protocol for normal labour
- Junior providers unaware of factors contributing to maternal mortality in Egypt

# The Galaa Intervention Study

# 2004

In collaboration with the facility administration, the team designed and carried out a training program to address a selection of problematic practices

This was done as a case-control study.

# Objectives

The intervention aimed to improve:

- **The third-stage management (delivery of the placenta) as this reduces post partum hemorrhage or bleeding after delivery.**
- **Postpartum assessment and care**
- **Information-sharing**
- **Patient-provider communication**

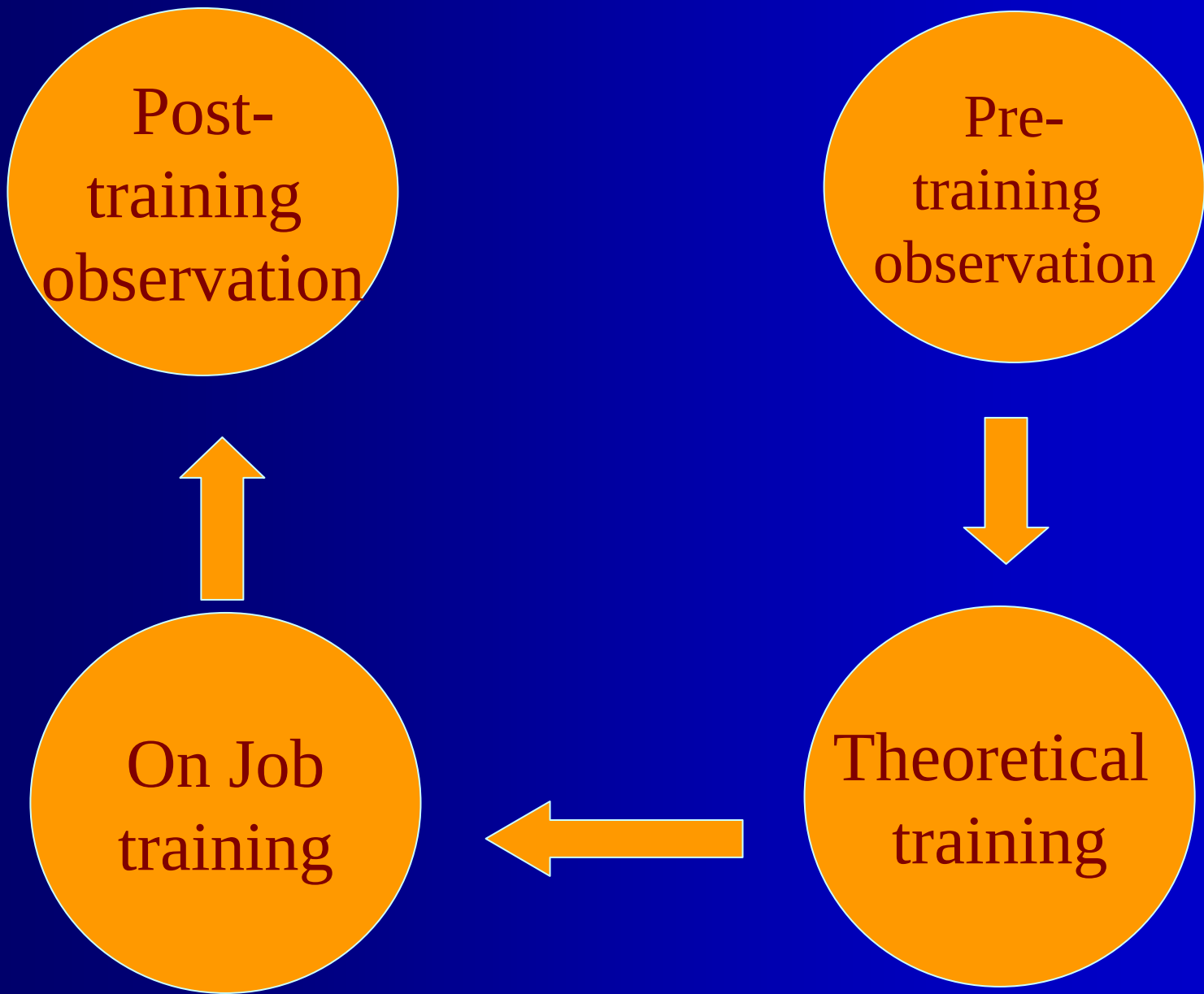
# Why did we choose these practices?

- **It is impossible to intervene in all areas and all practices at the same time.**
- **We chose practices that might contribute to the leading cause of maternal mortality in Egypt (postpartum hemorrhage).**
- **We found that the communication and the information-sharing were very deficient.**

- **We set targets we hoped were achievable:**

  **We decided to try to reduce the inappropriate clinical practices (third stage management & postpartum care) by 60% and the attitude (communication & information-sharing) by 40%.**

# Process of the intervention



There are 6 departments in the hospital.

The intervention was carried out in 3 departments (target departments).

The 3 other departments were observed as controls.

# Pre-training observation

A second pre-training observation was conducted in 2004.

Despite great improvement in the physical structure and facilities, the practices were very similar to the 2001 findings.

This similarity between 2001 and 2004 shows the need for an intervention.

# Theoretical training

- **Three days of presentations and discussions were carried out.**
- **A package of session objectives, reading materials and hard copies of all presentations were given as handouts.**
- **32 obstetricians were involved: residents, assistant specialists, specialists and heads of departments.**
- **Staff specialists were assigned as trainers for the on-job training.**
- **One social worker and all the nurses in charge of the delivery room and the postpartum ward were trained.**

# On-job training

- **Took place in the three target departments over four weeks.**
- **Providers, including doctors & nurses, were trained during the course of their scheduled shifts in the labour ward.**
- **Providers were trained on appropriate third-stage management, improving the postpartum care and assessment, and enhancing their interpersonal communication skills and information-sharing with women in the postpartum ward.**

## Intervention outcomes:

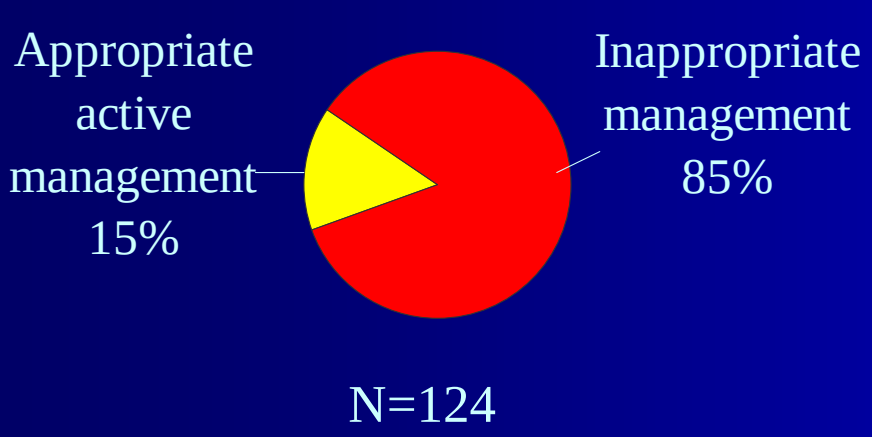
Post-training practices as compared to pre-training practices

All practices improved, although not all the intervention targets were met

# Management of the third stage of labour

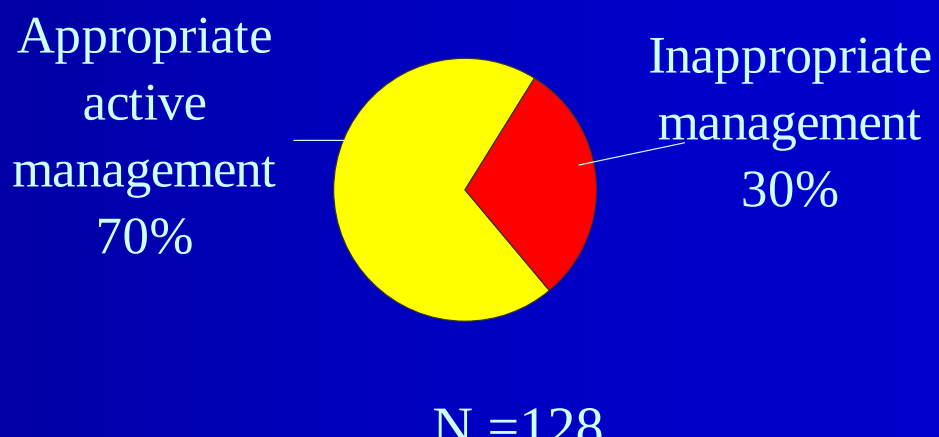
# Management of the 3rd stage showed improvement, exceeding our target.

**Pre-intervention**




N=124

**Post-intervention**

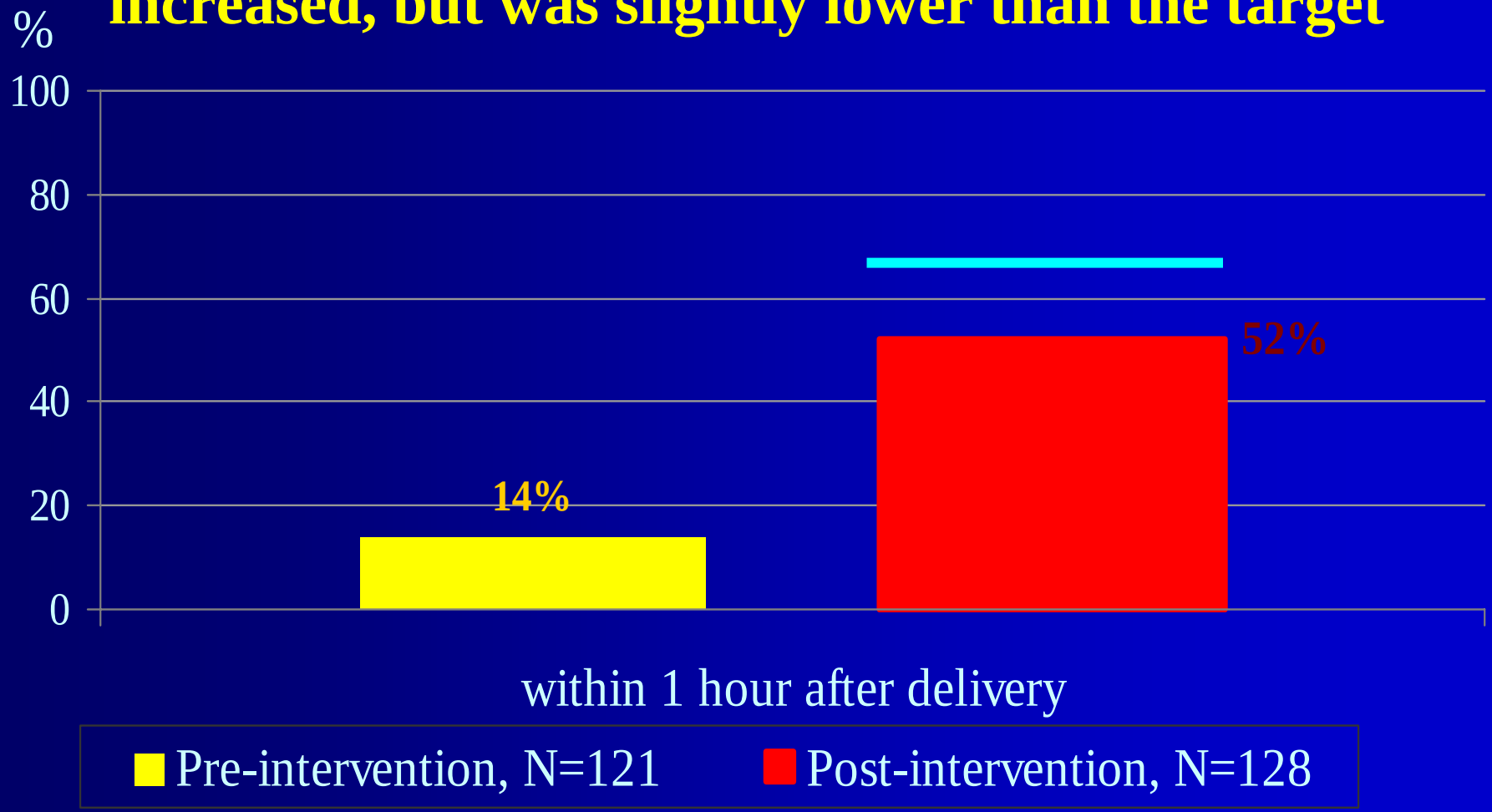



N =128

**Target = 66%** **Achieved=70%** $p<0.001$

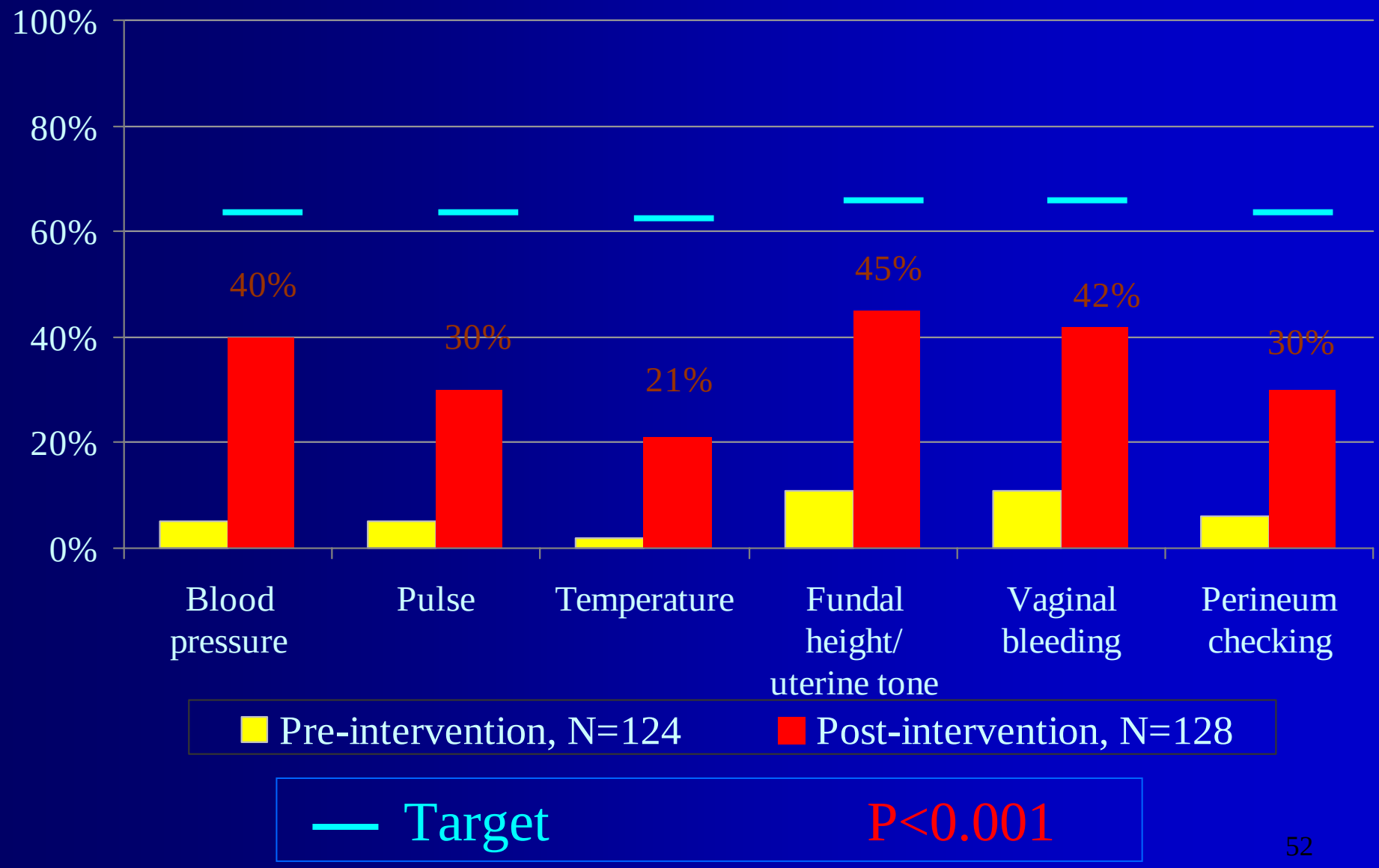
# Postpartum Care

# Percent of women examined in 1st hour after delivery increased, but was slightly lower than the target



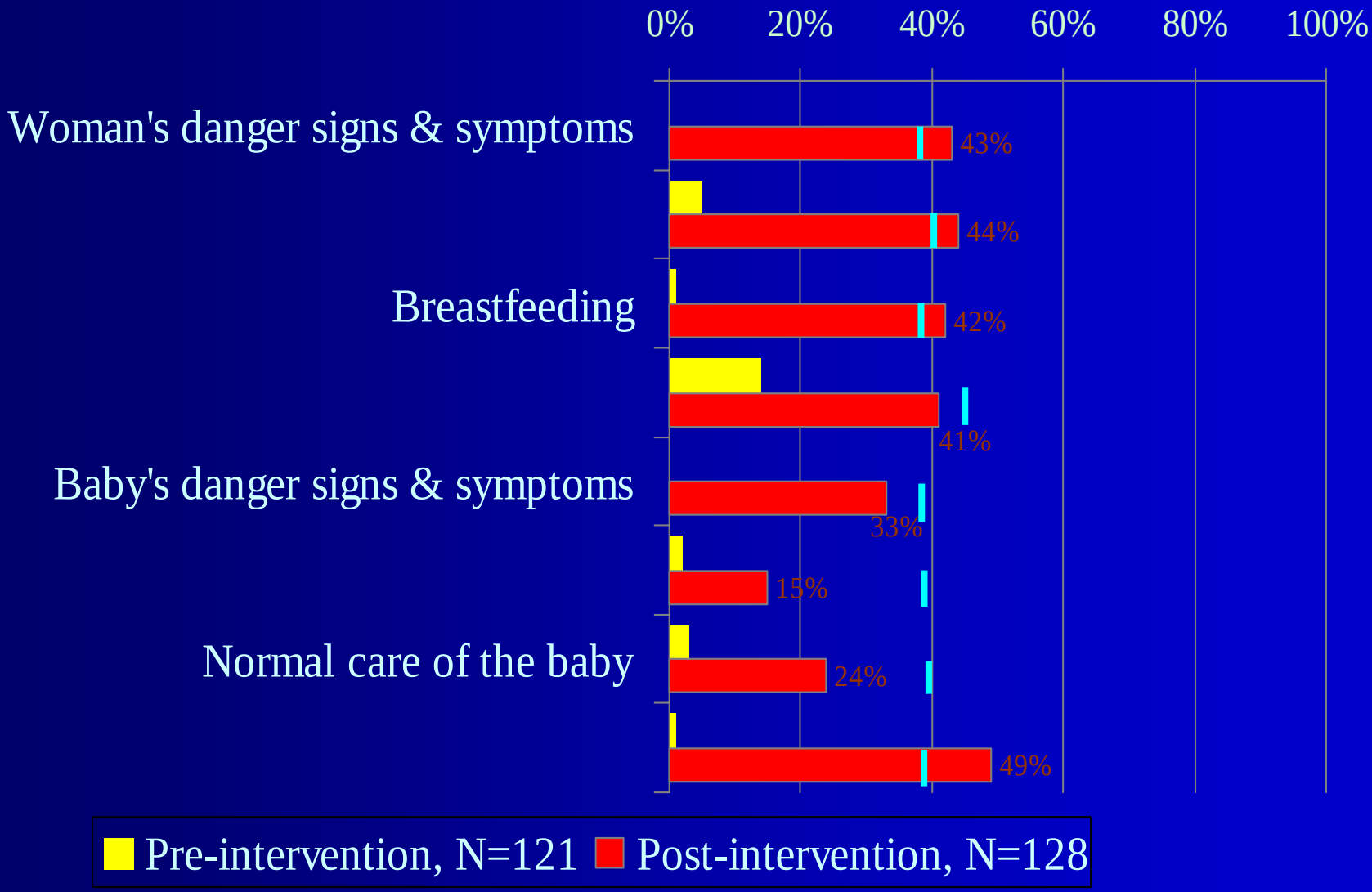

Target = 66%  Achieved=52%  p<0.001

# Items checked in the first hour after delivery increased



# Information-sharing with the women

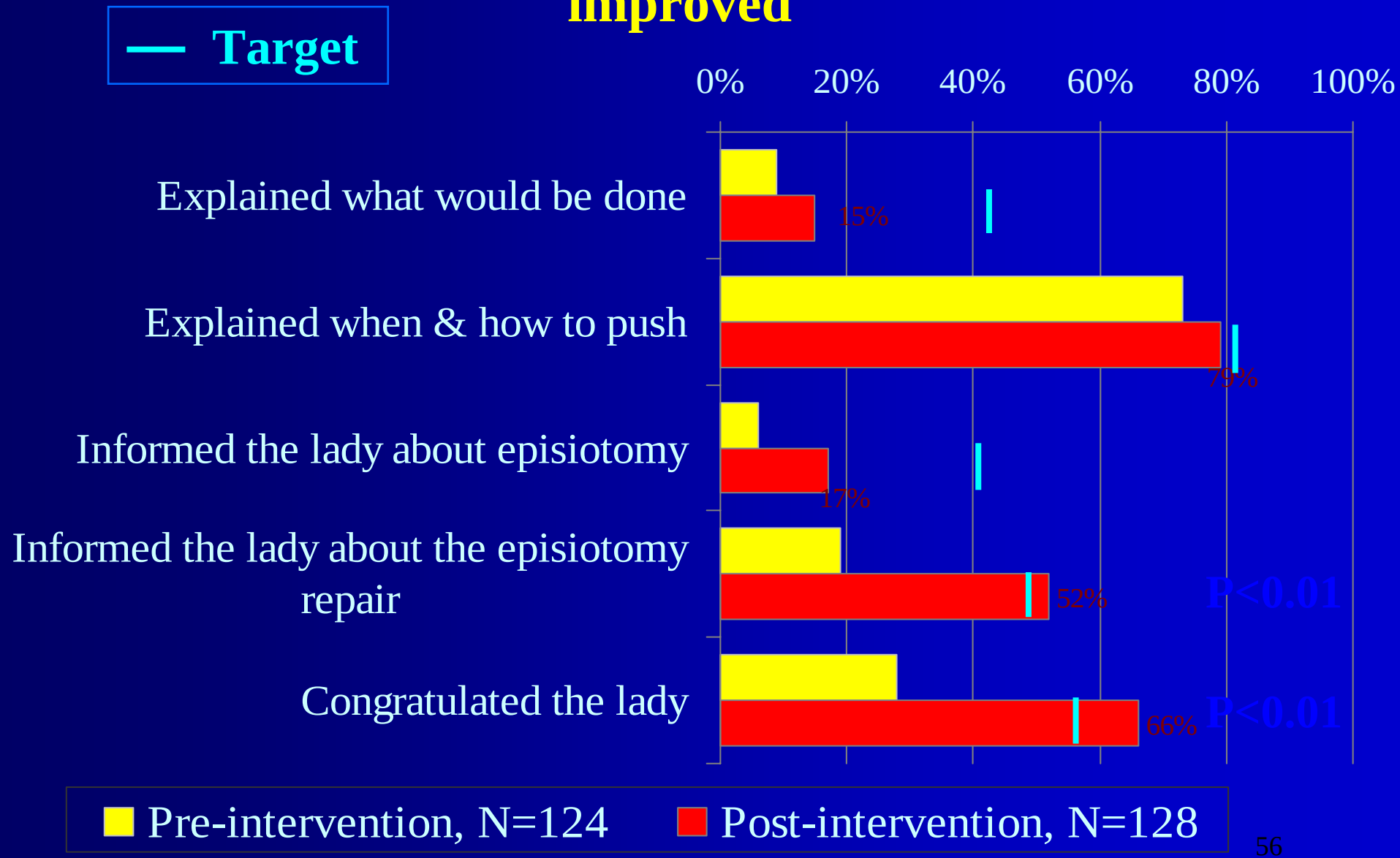
# Information given to the lady about her health and the baby's health and care increased



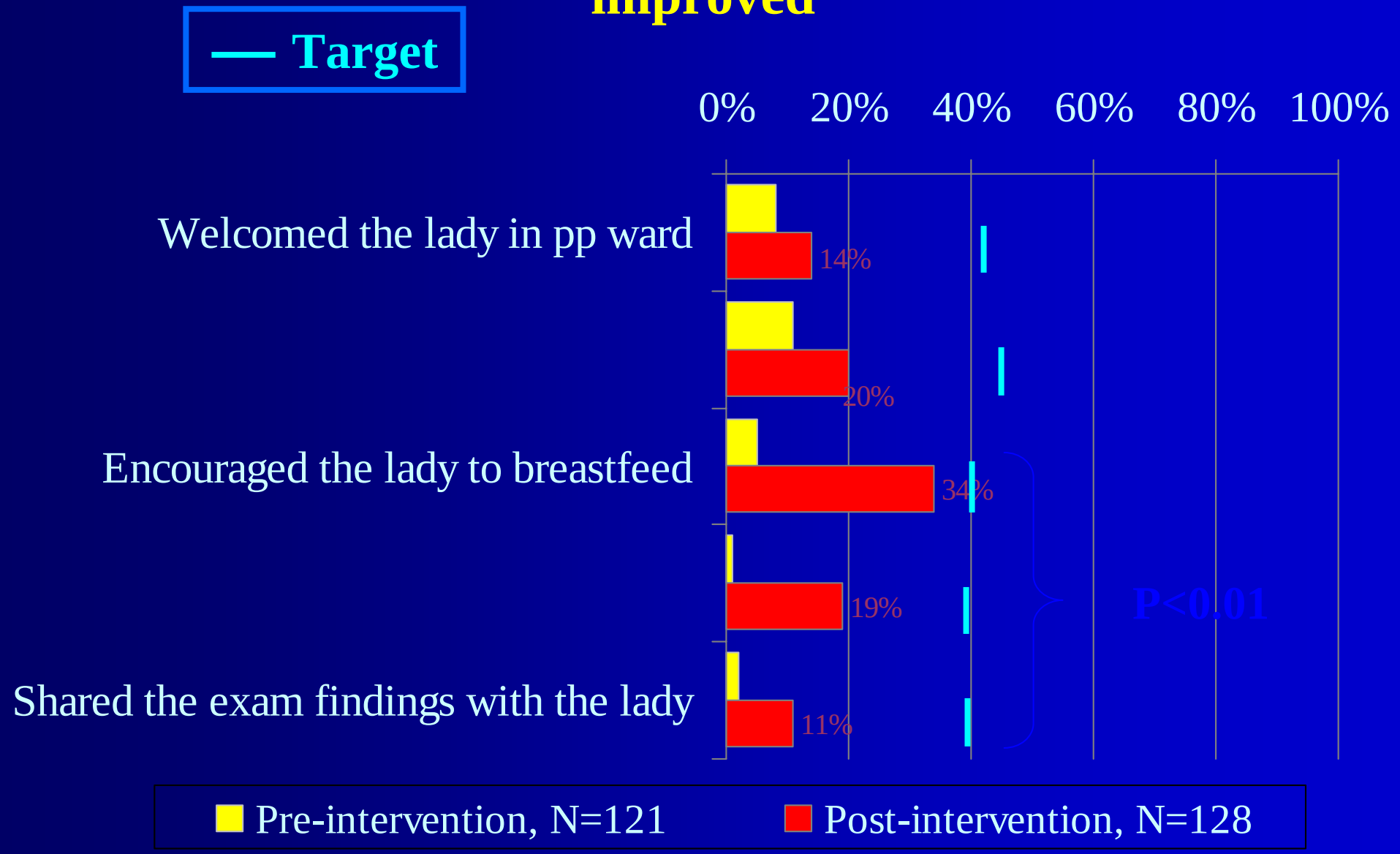

— **Target** **P<0.01**

# Communication

# Communication in the delivery room improved



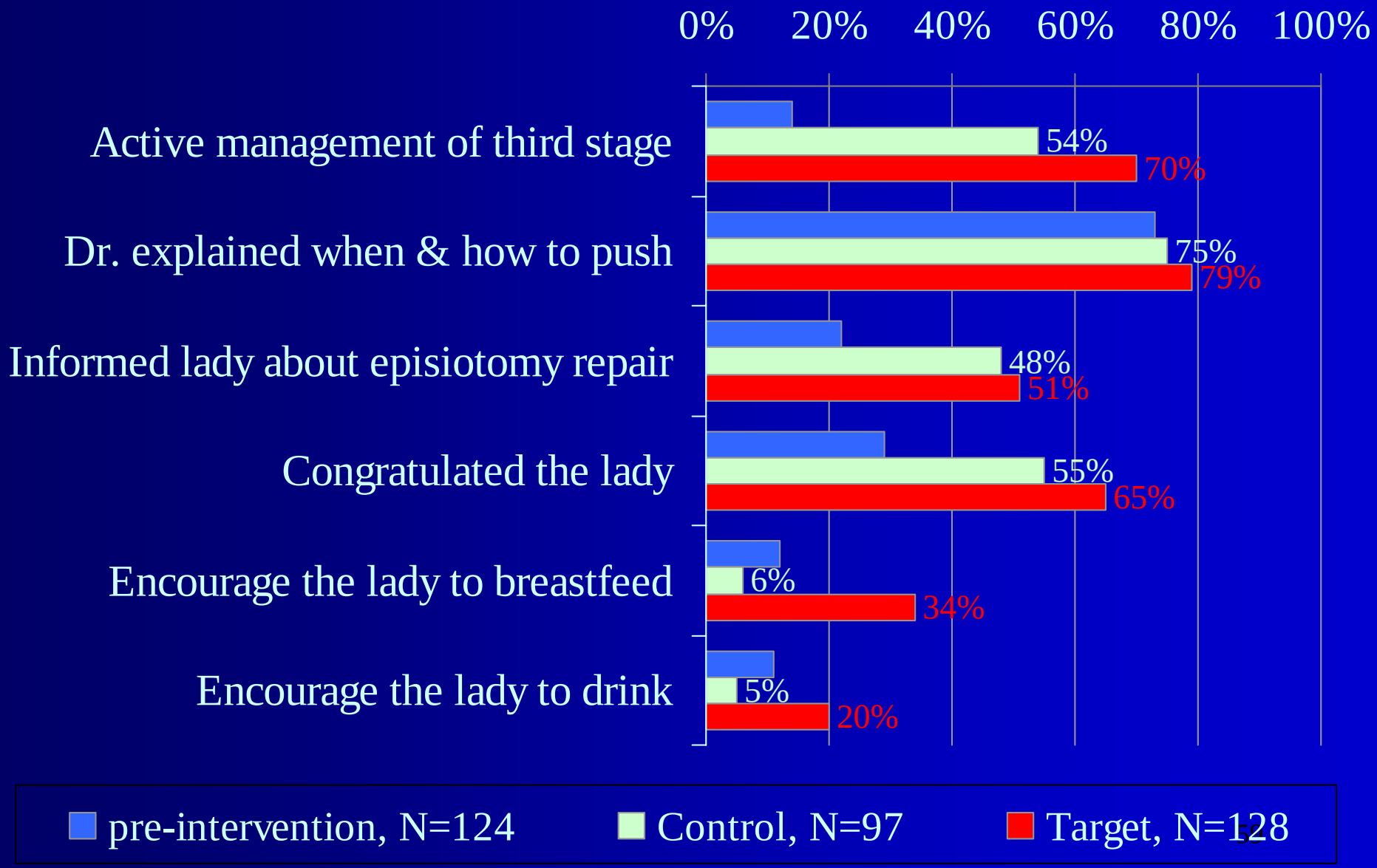
# Communication in the postpartum ward improved



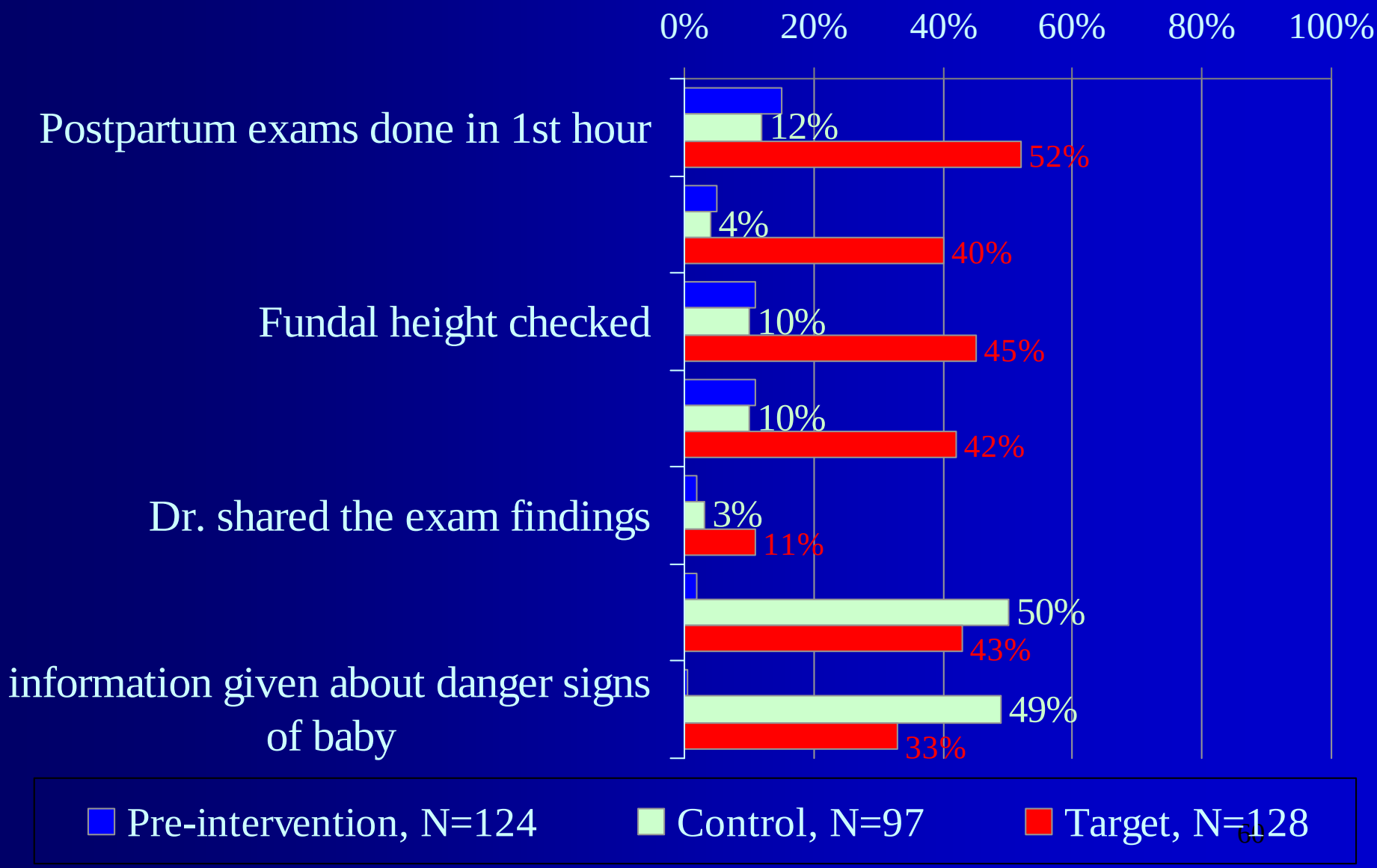
You have seen improvements in the target groups.

What about the departments that were controls and did not receive training?

# Practices observed in the control and target departments



# Practices observed in the control and target departments



Why did some of the practices improve in the control group?

# Reasons for improvement of the control groups

- **The most remarkable improvement happened in information-sharing which depended mainly on nurses. They were part of both the control and target groups -this could not be avoided for staffing reasons.**
- **There were some doctors from the target departments who also served in the control departments due to shortage of staff.**
- **There was a poster in the delivery room demonstrating the steps of appropriate management of the 3rd stage which the control group shared.**

# Overall conclusions

- Directly observing practices using a specially developed checklist is the only way to accurately record actual practices.
- Direct observations revealed a divergence between actual practices and evidence-based medicine
- Short, targeted training can improve both intrapartum and postpartum facility care.

- Practices did not change between 2001 and 2004 despite great improvements to the facility's physical infrastructure.
- This indicates that interventions in the form of regular provider training and assessment are much needed as well.
- Trained departments showed improvement after the intervention

- Some practices did not meet the targets we set but significantly improved (e.g. postpartum assessment and care)
- Communication items were the most difficult to change (e.g. explaining when and how to push)
- Control departments also improved and showed improvement due to contamination

# Points for discussion

- Need for another observation at a later time to check the sustainability of the intervention.
- Need for more or repeated trainings to sustain the improvement over time
- Regular, in-house training should be included in all facilities, with periodic assessments of provider performance.

The study was supported by:

- The Reproductive Health Working Group
- The Ford Foundation
- The Population Council
- The Social Research Center, American University in Cairo

# For further information please refer to these Galaa study publications:

- Sholkamy H, Khalil K, Cherine M, Elnoury A, Breebaart M, Hassanein N. An observation checklist for facility-based normal labor and delivery practices: The Galaa study. *Monographs in Reproductive Health* No. 5. Cairo: Population Council, 2003.

- Khalil K, Cherine M, Elnoury A, Sholkamy H, Breebaart M, Hassanein N. Labor augmentation in an Egyptian teaching hospital. *Int. J Gynecol Obstet* 2004, 85:74-80.

- Cherine et al. Management of the third stage of labor in an Egyptian teaching hospital. *Int. J Gynecol Obstet* 2004; 87:54-58.

- Hospital practices vs. Evidence-Based medicine: Categorization of normal birth practices in an Egyptian Teaching Hospital. K Khalil, A Elnoury, M Cherine, N Hassanein, H Sholkamy, M Breebaart and A Shoubary. *Birth: Issues in Perinatal Care* 2005; 32: 284-291.

- Choices and Challenges in Changing Childbirth Research Network.. Routines in facility-based maternity care: Evidence from the Arab World. *British Journal of Obstetrics and Gynecology* 2005; 112:1-7.