

Prevention of Transmission of Infections in Labor Room by Implementing Proper Sterility Techniques and Advising to Follow.

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Abstract: Conducting deliveries in unhygienic places or not properly disinfected labor rooms increases the risk of spreading infections from mother to baby or from one person to another person. The aim of the study is to prevent spreading of infections in labor room by implementation of policies and procedures related to infection control. To assess the efficacy of infection control practices various factors were considered and analyzed before and after implementation of infection control policies and practices. Various aspects observed were environmental surveillance reports, clinically suspected or confirmed infections of patients in labor, needle stick injuries incidence, puerperal infections rate, neonatal infections, hand hygiene compliance. These infection control indicator rates were collected and analyzed. Puerperal and Neonatal infections were noted as 39% and 34% before, 17% and 13% after introducing proper infection control guidelines. Hand hygiene compliance decreased from 26% to 8% after introducing mandatory hand hygiene guidelines. 37% and 74% were using PPE according to protocol before and after implementing protocols respectively. All health care personnel are required to adhere to standard precautions and infection control guidelines and all should undergo pre employment check up to avoid transmission of infections.

Key words: Labor room, Infection Control.

I. Introduction

Infection Control is a most important field to concern in labor and delivery room as the newborn babies takes time to adapt to their surroundings, after immediately coming out of their mother womb. Neonatal infections may be acquired by trans placental transfer or during delivery in birth canal or other means during post partum [1]. Infection control is the policies and procedures used to reduce the infection transmission risk especially in hospitals and health care settings. Neonates and children are more prone to acquired infections, precautionary measures has to be taken to reduce the chances of getting infection [2]. Conducting deliveries in unhygienic places or not properly disinfected labor rooms increases the risk of spreading infections from mother to baby or from one person to another person. Mortality rate in India is 230 per 100,000 live births, accounts for nearly a fifth of all maternal deaths worldwide [3-5]. Around 36% of neonatal deaths occur due to infection in lower middle income countries [6]. Hospital are notorious sources of infection, which can be resistant to antibiotic treatment. As the antibiotic resistant bacteria are also rising, have to be cautious towards infection control guidelines. Poor infection prevention practices in labor and delivery units cause puerperal infections, neonatal infections[7]. If health care personnel and health care units authorities are not adhere to infection prevention protocols in labor room then maternal and neonatal infections rises which in turn leads to increase maternal and infant mortality rate, also economic loss to community. To reduce the spreading of infections in labor room we have tried to do this study which is focused on preventing transmission of infections by implementation of policies and procedures related to infection control.

II. Materials and methods

A prospective observational study conducted in the Department of Obstetrics and Gynecology department, ACSR Government Medical College, Nellore at Andhra Pradesh. This study is done in the year 2015 at labor room through implementation of infection control rules. Few educational trainings related to Infection Control guidelines were conducted before doing this study.

Few different policies and procedures were implemented in the labor room represented here:

1. Separate delivery stretches for infectious suspected/confirmed persons.
2. Separate units in NICU for babies born to infectious mothers.
3. Proper provision and implementation of BMW management
4. Mandatory hand hygiene policies
5. Reduce human trafficking in and out of labor room

6. Education training for safe handling and disposal of sharp objects
7. Usage of protective PPE
8. Hand wash before touching newborn babies
9. Should wear sterilized sandals in labor room
10. Visitors are not allowed
11. Strict aseptic precautions to be followed during labor
12. Regular environmental surveillance (every 15 days swabs from various places in labor room sent for sterility check)
13. Spread sheets on labor stretch should change for each patient.

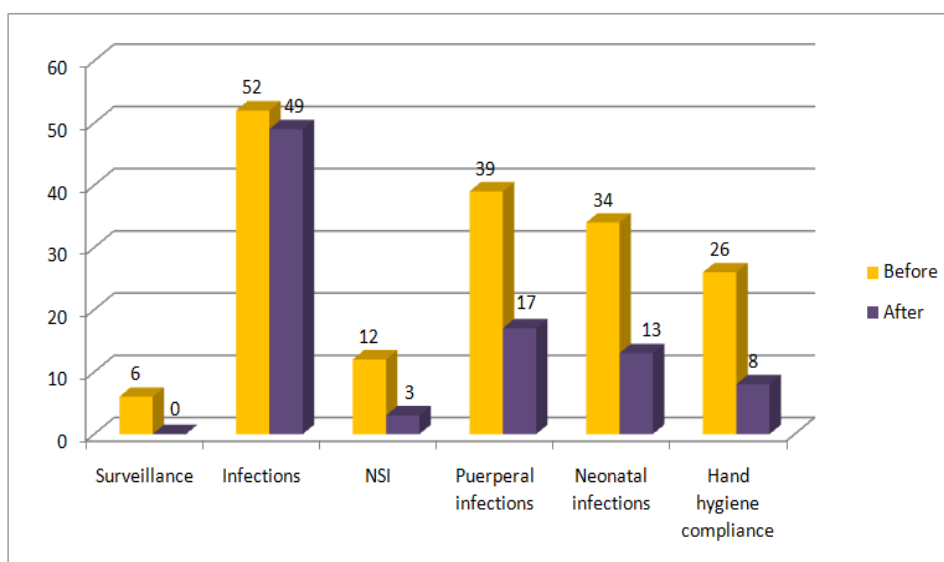
To assess the efficacy of infection control practices various factors were considered and analyzed before and after implementation of infection control policies and practices. Various aspects observed were environmental surveillance reports, clinically suspected or confirmed infections of patients in labor, needle stick injuries incidence, puerperal infections rate, neonatal infections, hand hygiene compliance. These infection control indicator rates were collected and analyzed representing in the form of percentages, histogram.

III. Results

Among various Infection control indicator rates, we have selected indicators pertaining to environmental surveillance reports, clinically suspected or confirmed infections of patients in labor, needle stick injuries incidence, puerperal infections rate, neonatal infections, hand hygiene compliance to do this study.

Infection control indicators were analyzed before and after implementation of various rules and regulations in labor room, which are depicted in Fig No.1. Environmental surveillance was done by sending swabs from labor room to microbiology for sterility check by culture. 6 were reported as positive for bacteria before implementing policies, whereas no organisms were reported after. Needle stick injury exposure also decreased from 12 to 3 out of 100 members among staff involved in labor room works.

Number of Clinically suspected or confirmed infection patients were almost same around 50% before and after implementing policies, but the incidence of puerperal infections and neonatal infections reduced by proper following of implemented policies. Puerperal and Neonatal infections were noted as 39% and 34% before, 17% and 13% after introducing proper infection control guidelines. Hand hygiene compliance was observed randomly among different staff members including doctors, interns, nurses, students, biomedical management staff. Compliance decreased from 26% to 8% after introducing mandatory hand hygiene guidelines.



Adherence to guidelines of personal protective equipment were observed in labor room. 37% and 74% were using PPE according to protocol before and after implementing protocols respectively.

IV. Discussion

Now-a-days awareness pertaining to infections during pregnancy and labor increased among women and also due to increased health care facilities and various health education programmes in India, many women are availing the benefits of institutional delivery and neonatal care. Infections are contracting through unhygienic delivery practices at home, but poor infection control practices at labor rooms increases the chances

of puerperal infections and neonatal infections. So there is a very much need to maintain labor and delivery units with proper sterility techniques and following infection control guidelines. Infection is a common issue in the hospital setting and we tried to assess the factors of infection in the labor room. Hand hygiene compliance decreased from 26 to 8 persons after introducing mandatory hand hygiene guidelines. Adherence to guidelines of personal protective equipment were observed in labor room. 37% and 74% were using PPE according to protocol before and after implementing protocols respectively.

Many of the hospital authorities are providing enough facilities to reduce infection rate, but health care personnel were not utilizing those facilities properly because of high work load, have to finish their works within turnaround time in busy hospitals. In contrast, government hospitals facing many problems for providing better healthcare facilities due to lack of resources or funds, high patient load because of low cost and incentive benefits, unhygienic practices at hospital surroundings and less availability of faculty in rural health settings [8].

Puerperal and Neonatal infections were noted as 39% and 34% before, 17% and 13% after introducing proper infection control guidelines. Puerperal sepsis accounts for approximately 15% of all maternal deaths, which is the second most common cause after hemorrhage in India [9]. World Health Organization provides guidelines for clean practices, clean equipment, a clean environment and the availability of diagnostics and treatment [10-12]. Child survival and safe Motherhood programme has started many advantages to children and pregnant women in terms of Immunization and anemia prophylaxis, ante natal checkup, new born care at home, vitamin A prophylaxis, care at birth, promotion of clean delivery and also stated that maternal mortality can be reduced to a great extent provided adequate care is ensured to women during pregnancy and delivery. The National Rural Health Mission (2005-2012) main objective was the continued promotion of institutional deliveries [13].

V. Conclusion

Hospital authorities should provide all facilities to reduce risk of infections to community and healthcare personnel and also make sure to implement policies, mandatory that health care personnel should adhere to the protocols. All health care personnel are required to adhere to standard precautions and infection control guidelines and all should undergo pre employment check up to avoid transmission of infections. Participation in at least one Infection control education activities has to make compulsory for all health care personnel.

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