A Study on Infection Prevention Practices in delivery Points of Dindori District of Madhya Pradesh

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Introduction

- Increasingly, women in India attend health facilities for childbirth, partly due to incentives paid under government programs. Increased use of health facilities can alleviate the risks of infections contracted in unhygienic home deliveries, but poor infection control practices in labour and delivery units also cause puerperal sepsis and other infections of childbirth

- As per 2013 SRS (sample registration survey) report Maternal Mortality Rate of Madhya Pradesh is 221 and Infant Mortality Rate is 54 which are very high as compared to national targets.

- In India, maternal deaths from puerperal sepsis constitute the second most common cause after hemorrhage, accounting for approximately 11% of all maternal deaths

Literature Review

- According to the special survey of deaths conducted by the Registrar General of India (RGI), the major cause of maternal deaths in India in 2001–03 was hemorrhage (38%), which was followed by other conditions (33%). Other causes of maternal deaths were sepsis (11%), abortion (8%), hypertensive disorders (5%) and obstructed labor (5%).
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- Demographic and health surveys show that the majority of women do not receive a postnatal check and 14% of women who had a birth in the last 5 years reported very high fever in the postpartum period. There are few recent studies and little information on infections during childbirth.

Rationale

India: DHS, 2005-06 - Final Report.
[http://www.measuredhs.com/pubs/pub_details.cfm?ID=723&ctry_id=57&SrchTp=ctry&flag=sur&cn=India]

Research Question

- What are the current procedures and practices for infection control as reported by staff and through observation by researchers, in the labor and delivery areas in relation to:
  - Clean practices (hand washing, antisepsis, asepsis, surgical procedures)
  - Clean equipment (gloves, gowns and instruments)
  - Clean environment (surfaces, washing facilities)

Objectives

- The objective of this study was to assess infection control procedures and practices in health facilities

Methodology

- **Study Design**: - Descriptive Cross-sectional study.
- **Study Area**: - District Dindori, Madhya Pradesh.
- **Study Duration**: - Three months (8th February 2016 to 8th May 2016).
- **Sample Size**: – The sample was collected from all the identified L3, L2 and L1 delivery points of Dindori district. ((2 L3, 8 L2 and 30 L1 Delivery Point)). Total 40 delivery points.
- **Study Participants**: - The participants for the following study were Specialists, Medical officers, Staff Nurse and ANM (Auxiliary Nursing Midwives) of the identified level 1 level 2 and level 3 delivery points.

Data collection method: -

- In each participating facility there were two modes of data collection:

  a) A semi-structured interview with the officer in charge, and/or the health provider responsible for infection control procedures and practices.

  b) A 'walk-through' of specified delivery care units to observe infection control procedures and practices. The rooms included in the walk-through were the labor wards, any obstetric emergency evaluation areas

- **Data collection tools**: - Development of the data collection instruments was based on existing tools and guidelines of Government of India for infection control

Topic areas covered in the interview and observation tools were:

- General information: on the type of facility, procedures and other materials related to infection control, such as registers, posters, documents or charts with summary information on infections.

- Practices: hand washing, use of non touch techniques and skin preparation.

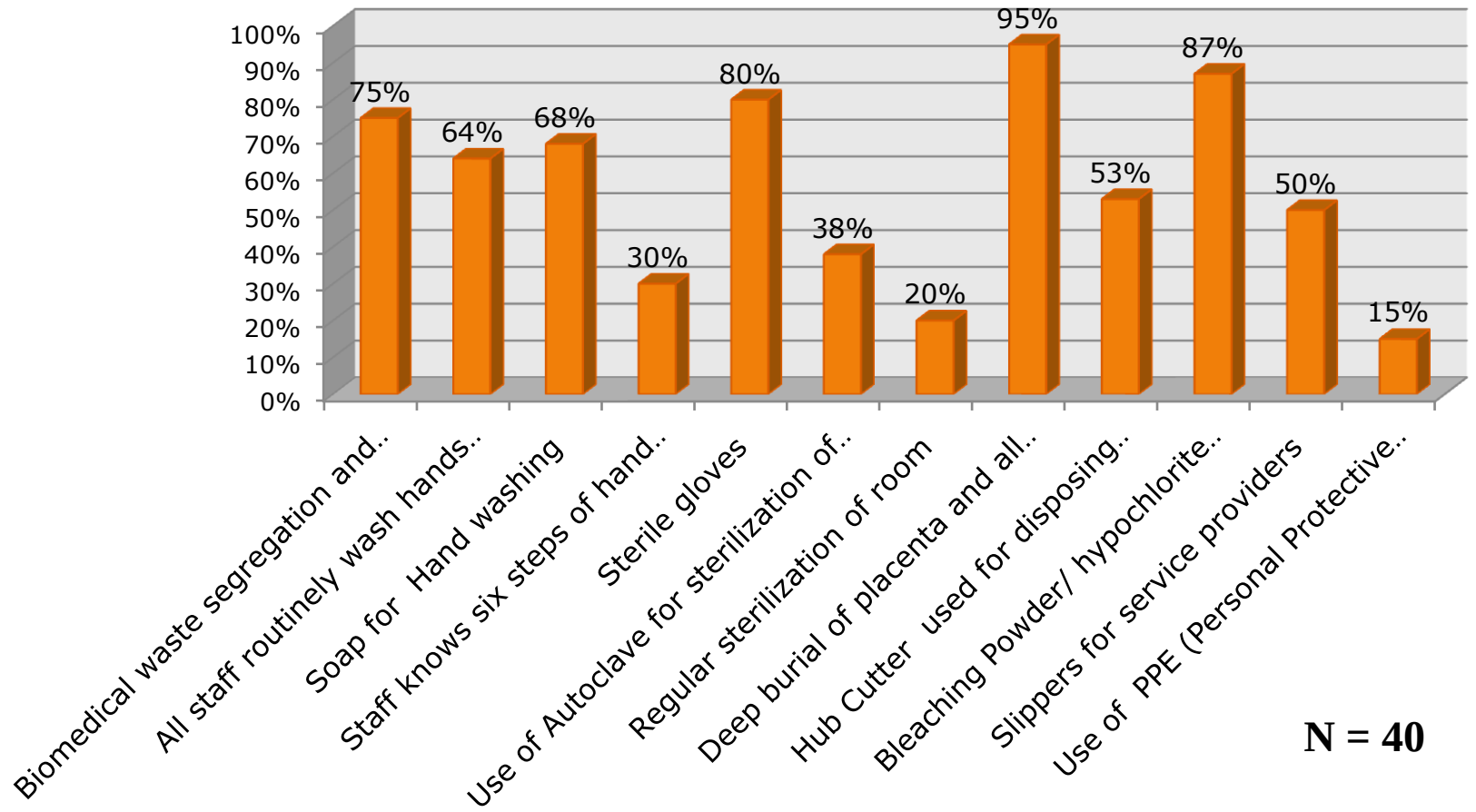
- Equipment and supplies: use and methods for sterilization of gloves, gowns and other instruments including availability and use of autoclaves, thermometers, disinfection practices and antiseptics.

- Environment: availability of running water, design of taps, sink placement and cleaning of contaminated surfaces.

- **Data analysis**:

  Data analysis was done by using MS Excel software. MS 2007 was used for graphical representation and further analysis.

Infection control procedures and practices, as reported during interviews

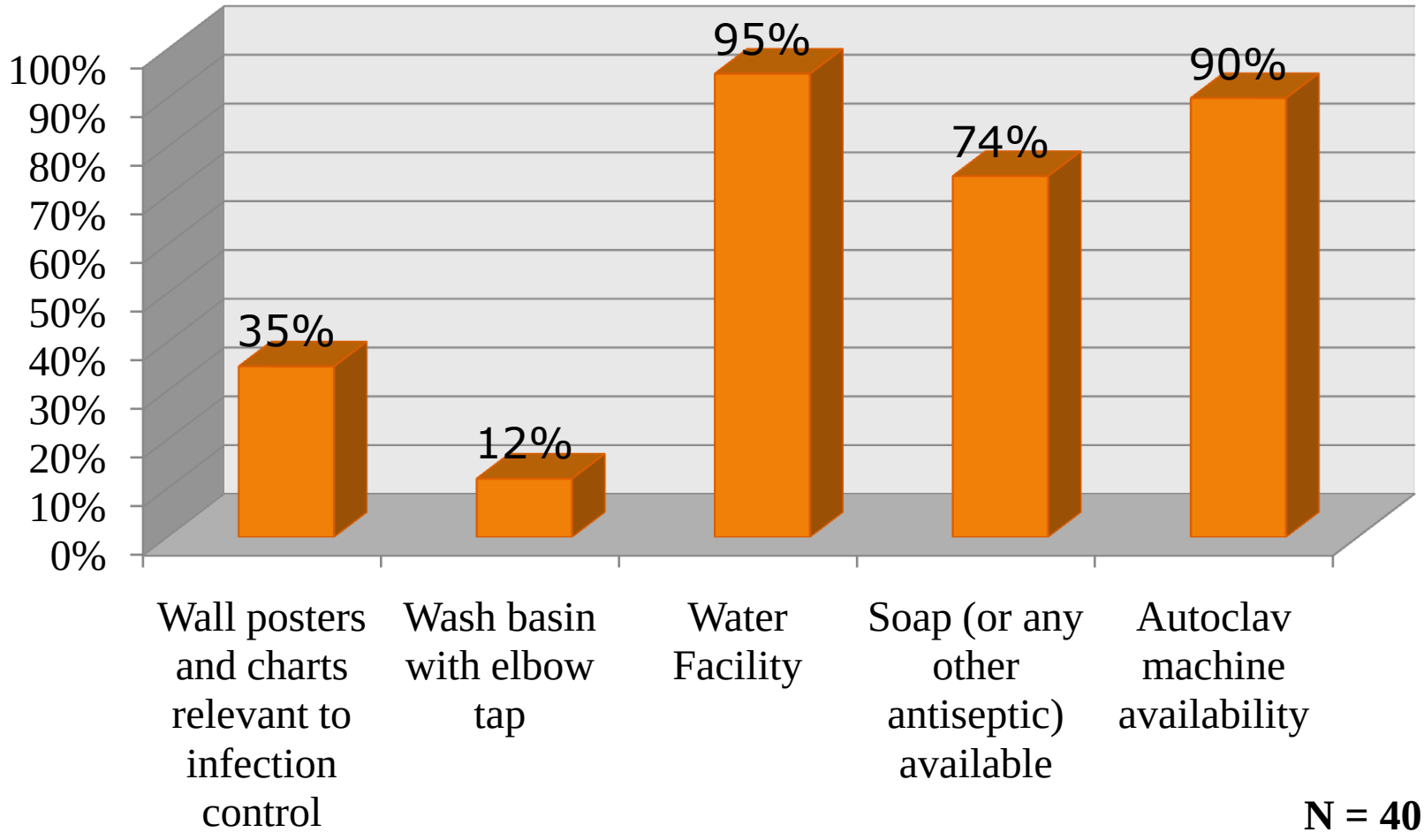


Results

- 25% of Delivery Point was not doing proper Biomedical waste segregation and disposal in color coded bins.
- 36% staff of delivery point didn't wash their hands before procedures.
- 32% staff of didn't use soap for hand washing.
- 70% of staff still don't know about proper hand wash.
- 20% staff of delivery point didn't use sterile gloves.
- 33% staff of delivery point didn't use autoclave machine for sterilization of instruments, Either because of Unavailability or its non functionality.
- Only 20% staff did regular sterilization.

- Almost in all delivery point deep buried placenta was done.
- Less than 50% staff of all delivery point didn't use Hub cutter for disposing of used needle.
- Use of personal protective equipment is very low i.e 15%.

Infection control procedures and practices observed



N = 40

- Wall posters and charts relevant to infection control were actually observed on display in 35% of facilities. Most were faded and old, and were not present in prominent places.
- Only 12 % of facilities have Elbow tap provision.
- 26% of delivery point didn't have soap available for hand washing
- 10 % Facilities didn’t have Autoclav machine for sterilization of Instrument.

Conclusion

- This study of current infection control procedures and practices during labor and delivery in health facilities in Dindori revealed a need for improved protocols and procedures, and for training and research.

- Simply incentivizing the behavior of women to use health facilities for childbirth via government schemes may not guarantee safe delivery.

Suggestions

- Based on the Govt of India guidance other infection control standards key recommendations proposed are as follows:
- Protocols for infection control measures should be prepared, standardized and adapted to local situations. The protocols should include assessment of the evidence for procedures like fumigation, reuse of items, maintaining cleanliness of the environment (especially in labor rooms) and rational use of antibiotics, adapted to resource constrained settings.
- Training to upgrade minimum skills for infection prevention should be started at pre-service level and extend to continuous training at service for staff. This should be based on assessments of staff needs. The means to create motivation and accountability at individual level should be explored.

- Community based research should be carried out to estimate the burden of infection in postnatal mothers
- To conclude contracting infections during childbirth in health facilities is a risk in Madhya Pradesh and India that is poorly documented.
- A focus on infection control during delivery and puerperal sepsis may help to improve quality of maternity care.
- Models of care which try to drive uptake of health services need to be evaluated not only in terms of increased utilization, but also from the perspective of the quality of care provided.

THANK YOU