



**Impact of mentoring and supervisory visits on resources and adherence of practices under dakshata program in Rajasthan**

<sup>1</sup>Dr. Savitri Kumar, Dakshata Mentor Sikar, Medical and Health Department, Jaipur, Rajasthan.

<sup>2</sup>Dr. Jinesh Saini, Dy. CMHO Rajsamand, Medical and Health Department, Jaipur, Rajasthan

<sup>3</sup>Dr. Tarun Choudhary, Project director maternal health, Govt of Rajasthan.

**Corresponding Author:** Dr. Savitri Kumar, Dakshata Mentor Sikar, Medical and Health Department, Jaipur, Rajasthan.

**Citation this Article:** Dr. Savitri Kumar, Dr. Jinesh Saini, Dr. Tarun Choudhary, “Impact of mentoring and supervisory visits on resources and adherence of practices under dakshata program in Rajasthan”, IJMSIR- July - 2023, Vol – 8, Issue - 4, P. No. 96 – 103.

**Type of Publication:** Original Research Article

**Conflicts of Interest:** Nil

**Abstract**

Maternal health refers to the health of women during pregnancy, childbirth and the postnatal period. Each stage should be a positive experience, ensuring women and their babies reach their full potential for health and well-being. But due to lack of attention at all desired pause point the condition of mothers become worse ultimately cause MMR. Although, the past quarter century has delivered progress for some women and their newborn babies. Maternal deaths globally have fallen by nearly half (44%) since 1990, and use of maternity service has increased markedly At the same time, In Rajasthan MMR used to be 388 in 2004-06 and now it reduced 164 as per SRS 2016-18. The most common direct cause of maternal injury and death are excessive blood loss, infection, high blood pressure, unsafe abortion, and obstructed labour, as well as direct causes as anaemia, malaria and other diseases. Most maternal deaths are preventable with timely management by a skilled health professional working in a supportive environment. Here many programs were introduced by Government to reduce maternal deaths like Pardhan

Mantra Surkshit Matrutva Abhiyan (PMSMA), Janani Shishu Surksha Karykarm (JSSK), and Referral transport from home to health facility, inter facility transfer, drop back from facility to home.

**Objectives**

- To find out the impact of mentoring and supervisory visits on resources and adherence of practices under Dakshata Program in Rajasthan.
- To assess the competency of providers attending childbirth through strategic skill building on high impact essential practices to be performed around the time of birth

**Material and method**

In the state of Rajasthan, Dakshata program was implemented by State government in all districts with handholding from Jhpiego, a John Hopkins Affiliate initially in 202 high delivery load facilities in 20 districts of Rajasthan in a phasic manner. Later on, the program was scaled up Pan-State. Since its roll-out in April 2018, more than 6000 mentoring visits to 1600+ facilities across 34 districts of Rajasthan have been reported through the Dakshata Mentor App by Dakshata Mentors

and other district level officials under the close supervision of Maternal Health unit. Until now, more than 900 users have been registered under the application, including district-level officials, block medical officers and NHM Dakshata mentors. The monitoring reports related to these visits were generated and taken from the Dakshata app with prior approval.

### **Results**

This report has shown the impact of mentoring and supervisory visits on resources and the awareness, knowledge attitudes and adherence of practices regarding competency of providers attending childbirth through strategic skill building on high impact essential practices to be performed around the time of birth. Also we were able to assess the impact of structured onsite mentoring and periodic performance audits on availability of essential resources and developing data system for accountability and supervision.

### **Conclusion**

These findings showed the continuous mentoring and supportive supervision leads to remarkable improvement in availability of resources and skills. This shows overall improvement in quality intra partum care in maternal health to reduce in maternal mortality ratio. This also shown in SRS 2016-18 data released in year 2019 that MMR in Rajasthan declined by 22 points and this highest in country.

**Keywords:** Dakshata, Delivery, Post Natal Care, Maternal Health, Labour room.

### **Introduction**

The Government of India (GoI) is committed to reducing maternal and newborn mortality (Millennium Development Goals 4 and 5). Based on the global evidence on importance of skilled attendance at birth and emergency obstetric and newborn care, GoI is implementing schemes such as Janani Suraksha Yojana

(JSY) and Janani Shishu Suraksha Karyakram (JSSK), to improve access to health services for mothers and newborns. This has led to a significant increase in institutional delivery rates in the country. However, while the access to health services has increased, the rate of reduction in maternal and newborn mortality is disproportionately slow and is still far from the Millennium Development Goals (MDGs).

GOI supported the implementation of the Dakshata program at almost 1200 high delivery load facilities across more than 130 districts in the states of Andhra Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Telangana. The rollout of the Dakshata program was first initiated in Rajasthan and Andhra Pradesh. Later, Other states such as Maharashtra, Jharkhand, Telangana, Assam, Jammu & Kashmir, Kerala, Meghalaya, Nagaland, Tripura and Himachal Pradesh took this initiative forward on their own covering more than 800 facilities in 60 districts. As per an independent evaluation of the Dakshata program in Rajasthan and Andhra Pradesh, conducted by Public Health Foundation of India (PHFI), the average availability of essential protocols, resources and logistics at intervention facilities, improved from 61% (baseline: Oct'17 – Feb'18) to 84% (end line: May'19 – Sep'19) in Rajasthan and from 74%(baseline: Sept'17 – Jan'18) to 87% (end line: Sep'18 – Jan'19) in Andhra Pradesh. Providers at intervention facilities were able to adhere to all the key evidence-based practices during the intrapartum and immediate postpartum period in 75% of the deliveries in Rajasthan, and in 70% of the deliveries in Andhra Pradesh. As a result, the stillbirth rate (SBR) decreased from 16 per 1000 live births (baseline) to 6 (end line) in Rajasthan, while the decline in SBR was from 11 (baseline) to 4 (end line) in Andhra Pradesh.

## **Materials and methods**

In the state of Rajasthan, Dakshata program was implemented by State government in all districts with handholding from Jhpiego, a John Hopkins Affiliate initially in 202 high delivery load facilities in 20 districts of Rajasthan in a phasic manner. Later on, the program was scaled up Pan-State. Since its roll-out in April 2018, more than 6000 mentoring visits to 1600+ facilities across 34 districts of Rajasthan have been reported through the Dakshata Mentor App by Dakshata Mentors and other district level officials under the close supervision of Maternal Health unit. Until now, more than 900 users have been registered under the application, including district-level officials, block medical officers and NHM Dakshata mentors. The monitoring reports related to these visits were generated and taken from the Dakshata app with prior approval.

## **Method**

The data was collected from Dakshata Mentor App and analysed with the help of MS-Excel. The Dakshata Mentor Application – an android based application with web-based dashboard-developed to streamline the process of data collection, reporting, management and review by mentors for ensuring facilitated actions for quality improvement in labor rooms. It envisaged to strengthen facility-level mentoring and monitoring of labor rooms by listing out the priority areas of improvement; measures to be taken to build up the capacity of the service providers; and ensuring a constant mentoring mechanism for provision of quality intra-natal and immediate post-partum care. It's a user-friendly data collection tool with provision of both online and offline data entry; inbuilt analytics; and generation of visit report with GPS stamping.

The data collection format was designed and aligned with the Dakshata Mentor Package. This format includes

Dakshata/skill lab/SBA training status of labor room staff; labor room infrastructure detail and level of intervention required; availability of 26 essential resources in labor room; adherence to 19 clinical practices by provider; information about topics covered during mentoring visit; and detail of data recording/reporting included in this format. Based on program learnings and feedback, two new modules – Provider Assessment of Competency and Knowledge (PACK) to assess competency level of clinical providers in ten critical clinical skills; and Client Feedback to understand client experience on quality of care- were included in the Mentor App. A work plan module to help mentors develop their monthly work plan and keep track of completed visits was also included in the application. All Dakshata/NHM Mentors and In-service mentors were trained on using the application. Additional virtual or hand-on trainings were organized for orientation of mentors on new modules. The App has been upgraded to cater to national mentors for documenting their visits to medical colleges and public health facilities under the LaQshya program by incorporating the facility masters of all states as per the RCH database. Provision has also been made to add additional facilities as per the requirements of national and state government officials into the Mentor App's facility master through the web portal.

## **Results**

### **Availability of essential resources (Phage -1)**

During MSVs and PAs, the status of essential supplies in the labor room was assessed. Figure below represents the availability of supplies in facilities, which was assessed during the rapid assessment (April - August 2015), and in the latest PA (May - August 2019). As shown in the graph below, barring a few items, there was a notable improvement in the status of supplies across the facilities

overall. Supply of ART drugs, towels for receiving newborns, and availability of protocol posters showed remarkable improvement. This was made possible through efforts at the facilities, districts, and at the state level as well. Availability of sterile pads has been a concern; the issue was specifically targeted at the facility level. Due to supply issues from the state, the staff were advised to prepare perineal pads locally and sterilize them for use.

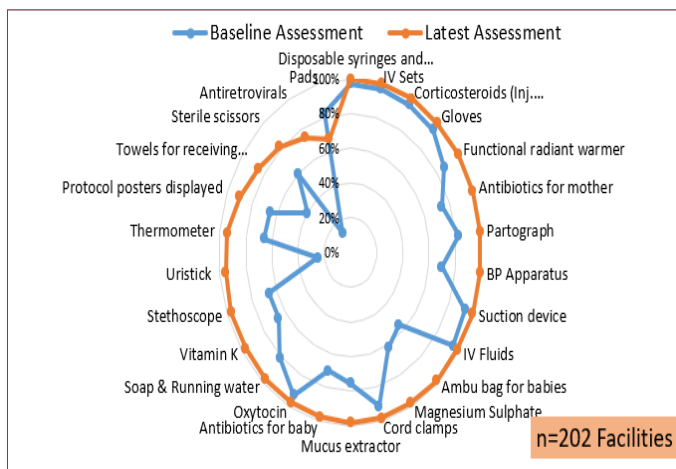


Figure 1: Resource availability status in Rajasthan (n=202) Adherence to Practices

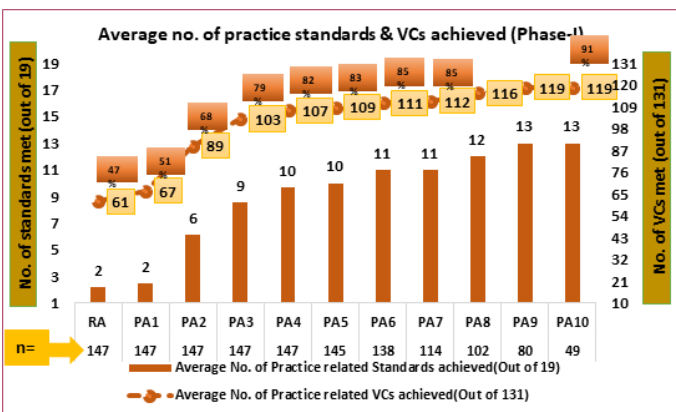


Figure 2: Adherence to Practice Standards in Rajasthan (Phase I)

It was observed that the average number of practices-related standards improved from 2 (at baseline) to 13 in the latest round of assessments in Rajasthan. A total of 131 VCs were assessed in the above 19 standards.

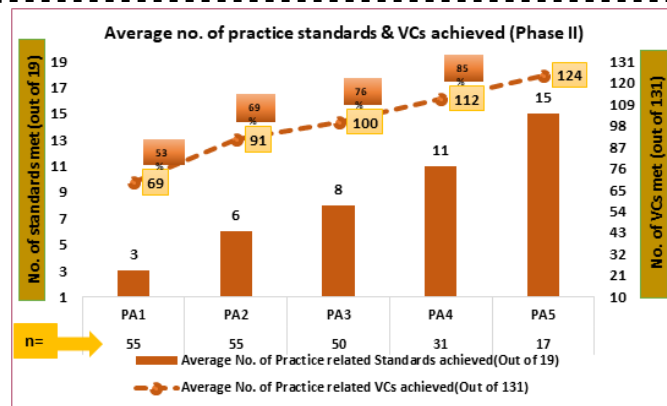


Figure 3: Adherence to Practice Standards in Rajasthan (Phase II)

To analyze this data further, these 19 standards were divided in three parts as per progress of labor:

1. At the time of admission - 7 standard
2. During and immediately after delivery - 6 standards
3. Postpartum care - 6 standards

The below figures show the comparison in progress of providers' practices related standards in baseline and the latest PA at 202 intervention facilities in Rajasthan. Most of the practices showed a marked improvement over baseline, with pre-term delivery assessment, AMTSL Management, Immediate Newborn Care and PE/E Management showing the highest improvement. Breast feeding within one hour was ensured at 94% facilities and management of postpartum haemorrhage (PPH) was done as per protocol at 83% facilities. Some practices showed marked improvement over baseline but continued to be low, such as identification and management of infection in mothers (26%) and assessment (45%) and internal examination (44%) of mother at the time of admission.

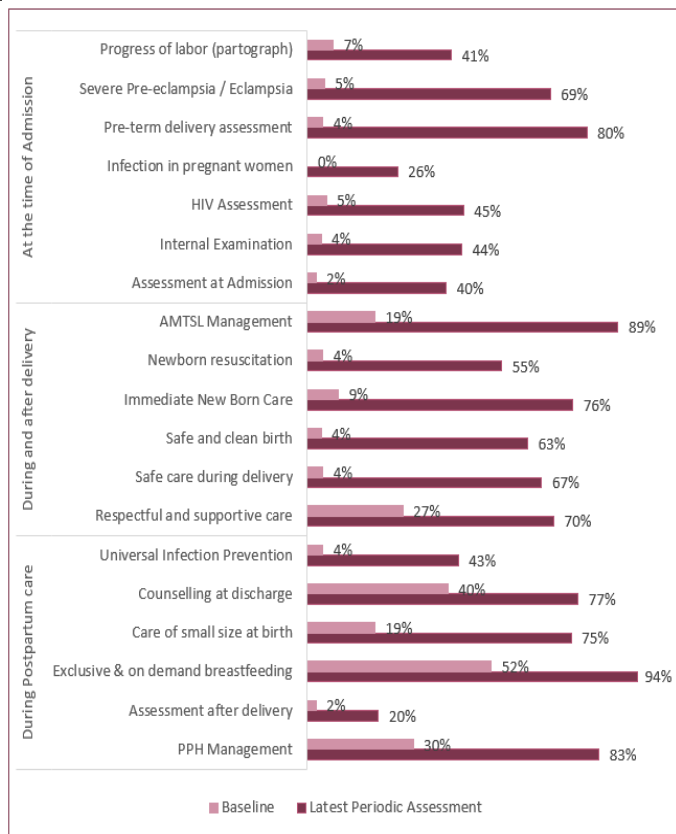


Figure 4

Since its roll-out in April in 2018, more than 6000 mentoring visits to 1600+ facilities across 33 districts of Rajasthan have been reported through the Dakshata Mentor App. Until now, more than 900 users have been registered under the application, including district-level officials, block medical officers and NHM Dakshata mentors.

Figure below presents the number of mentoring visits done in different districts reported through the mentor app since its inception in April 2018.

Maximum visits have been reported by districts with regular NHM mentor present. 598 mentoring visits were conducted and reported using the mentor app in Pali, followed by district Nagaur where 387 mentoring visits to facilities were recorded and reported through the mentor app. A substantial number of mentoring visits were also reported from districts with presence of active in-service and facility mentors. Districts where a

dedicated mentor (NHM or in service mentor) was not present reported negligible number of mentoring visits using the mentor applications.

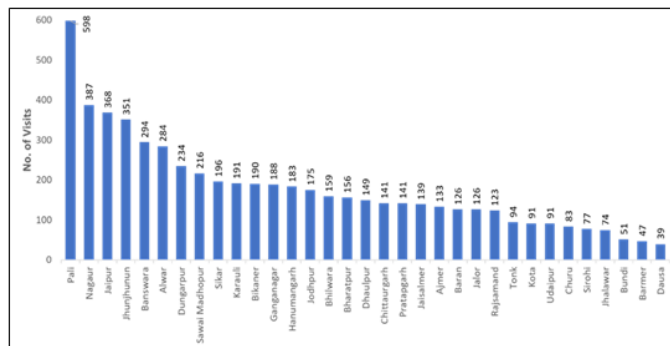


Figure 5

### District wise number of mentoring visits done

Figure below presents the distribution of mentoring visits done by different users – mentors, government officials/supervisors, in-service mentors, and other development partners of GoR. More than one quarter of total visits reported through mentor app since its inception was done by NHM mentors who carried out 16821 mentoring visits through the app. This was closely followed by in service mentors’ nurses who conducted 26 percent (1533) of total mentoring visits reported through the app. An almost equal number of mentoring visits 10 percent and 11 percent were reportedly conducted by state monitors and state/district level officials respectively. Block level officials also conducted about 16% (945) of total reported mentoring visits.

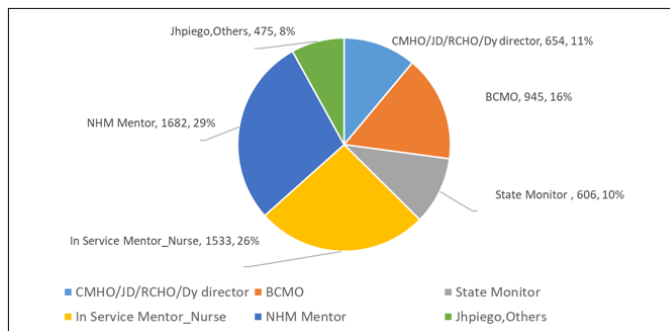


Figure 6

**Results of Phase II**

Continued utilization of mentor app for onsite mentoring, monitoring and reporting by NHM and In-service mentors and regular labor room assessment conducted by GoR officials ensured availability of real-time data on labor room resources, environment and adherence to clinical practices, leading to quick data-based decision making and implementation of corrective actions at all levels.

A substantial increase in availability of 26 essential resources under Dakshata package was noticed between the inception of application in April 2018 and towards the end. Figure below shows availability status of 26 essential resources required for safe delivery and QoC in the 2<sup>nd</sup> quarter of mentor app inception and the last quarter of 2020. An increase in availability of all resources except for antiretroviral drugs is observed. A substantial increase in availability of Inj. MgSO4 (45 percent to 90 percent) and sterile perineal pads (50 percent to 80 percent) is observed between July 2018 and November 2020.

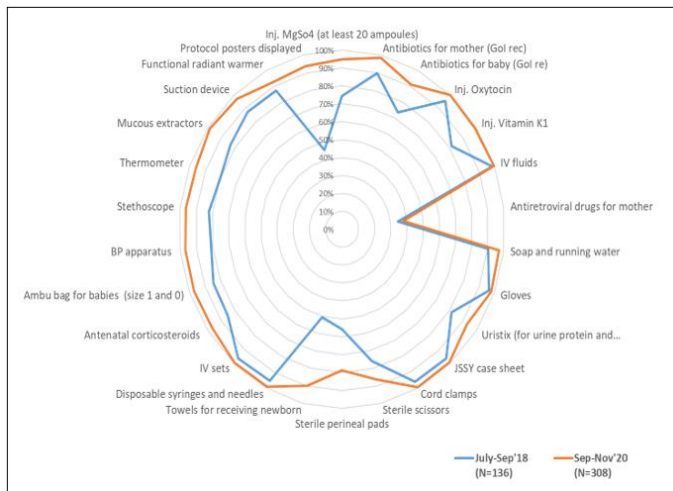


Figure 7: Change in availability of 26 essential resources. Similar improvements over time were observed in adherence to 19 clinical practices during mentoring visits reported through mentor app since its initiation in April 2018. Figure below shows the adherence to 19 clinic

practices or standards reported between July 2018 and November 2020. Almost all practices except for –

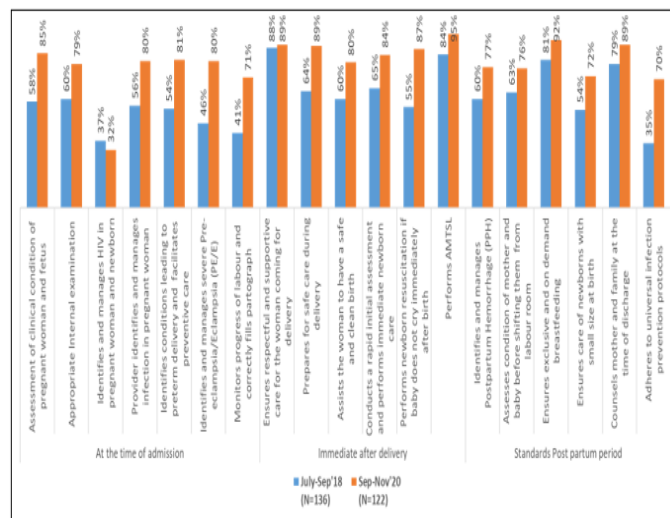


Figure 8: Change in adherence to 19 clinical standards. Identification and management of HIV in mother and child increased during the program period. While some practices such as identification and management of infection in pregnant woman, correctly filling partograph, newborn resuscitation, adherence to IPC practices, improved by 30 or more-point percentage, the remaining practices also improved by at least 10-to-20-point percentage between the two reporting timelines.

**Discussion**

In Rajasthan, a total of 1445 onsite MSVs were conducted in the 202 intervention facilities (1176 MSVs in Phase I facilities and 269 MSVs in Phase II facilities). Barring a few items, there was a notable improvement in the status of supplies across the facilities overall. Supply of ART drugs, towels for receiving newborns, and availability of protocol posters showed remarkable improvement. This was made possible through efforts at the facilities, districts, and at the state level as well. Availability of sterile pads has been a concern; the issue was specifically targeted at the facility level. Due to supply issues from the state, the staff were advised to prepare perineal pads locally and sterilize them for use. It

was observed that the average number of practices-related standards improved from 2 (at baseline) to 13 in the latest round of assessments in Rajasthan. A total of 131 VCs were assessed in the above 19 standards.

Most of the practices showed a marked improvement over baseline, with pre-term delivery assessment, AMTSL Management, Immediate Newborn Care and PE/E Management showing the highest improvement. Breast feeding within one hour was ensured at 94% facilities and management of postpartum haemorrhage (PPH) was done as per protocol at 83% facilities. Some practices showed marked improvement over baseline but continued to be low, such as identification and management of infection in mothers (26%) and assessment (45%) and internal examination (44%) of mother at the time of admission.

Results were also remarkable when Dakshata mentor app started since its roll-out in April in 2018, more than 6000 mentoring visits to 1600+ facilities across 33 districts of Rajasthan have been reported through the Dakshata Mentor App. Until now, more than 900 users have been registered under the application, including district-level officials, block medical officers and NHM Dakshata mentors. More than one quarter of total visits reported through mentor app since its inception was done by NHM mentors who carried out 16821 mentoring visits through the app. This was closely followed by in service mentors nurses who conducted 26 percent (1533) of total mentoring visits reported through the app. An almost equal number of mentoring visits 10 percent and 11 percent were reportedly conducted by state monitors and state/district level officials respectively. Block level officials also conducted about 16% (945) of total reported mentoring visits.

A substantial increase in availability of 26 essential resources under Dakshata package was noticed between

the inception of application in April 2018 and towards the end. Availability status of 26 essential resources required for safe delivery and QoC in the 2<sup>nd</sup> quarter of mentor app inception and the last quarter of 2020. An increase in availability of all resources except for Antiretroviral drugs is observed. A substantial increase in availability of Inj. MgSO<sub>4</sub> (45 percent to 90 percent) and sterile perineal pads (50 percent to 80 percent) is observed between July 2018 and November 2020.

Similar improvements over time were observed in adherence to 19 clinical practices during mentoring visits reported through mentor app since its initiation in April 2018. The adherence to 19 clinic practices or standards reported between July 2018 and November 2020. Almost all practices except for – identification and management of HIV in mother and child increased during the program period. While some practices such as identification and management of infection in pregnant woman, correctly filling partograph, newborn resuscitation, adherence to IPC practices, improved by 30 or more-point percentage, the remaining practices also improved by at least 10-to-20-point percentage between the two reporting timelines.

## References

1. An Assessment of High Delivery Load Facilities under the Dakshata Program Parasher et al., *Int J Waste Resour* 2017, 7:3 DOI: 10.4172/2252-5211.1000299 Kapil Parasher<sup>1</sup>, Sanjiv Kumar<sup>1</sup>, Surendra Gupta<sup>1</sup>, Lavkush Rathore<sup>1</sup> and Satya Prakash Mehra<sup>2</sup> \* 1 Vidhan Sabha Marg, Lucknow, Uttar Pradesh, India 2 Rajputana Society of Natural History, Rajputana's Shakuntalam, Village Ramnagar, PO Malah, Bharatpur, Rajasthan, India
2. A concept Study on Improving Quality of Maternal and Newborn Health in India Fact Sheet: Jhpiego; July 2016; <https://www.jhpiego.org/wp->

- content/uploads/2016/10/MNH-factsheet\_-July-2016\_final.pdf
3. Improving Quality of Maternal and Newborn Health in India; Fact Sheet: April 2018; <https://www.jhpiego.org/wp-content/uploads/2018/05/MNH-factsheet-April-2018.pdf>
  4. Kumar S et al. Effectiveness of the WHO SCC on improving adherence to essential practices during childbirth, in resource constrained settings. *BMC Pregnancy Childbirth*. 2016;16(1):345.
  5. Varghese B et al. Does the safe childbirth checklist (SCC) program save newborn lives? Evidence from a realistic quasi-experimental study, Rajasthan, India. *Matern Health Neonatol Perinatol*. 2019; 5:3
  6. Kumar S et al. Harmonizing scientific rigor with political urgency: policy learnings for identifying accelerators for scale-up from the safe childbirth checklist programme in Rajasthan, India. *BMC Health Serv Res*. 2019;19(1):273.
  7. Katherine E.A. Semrau Outcomes of a Coaching-Based WHO Safe Childbirth Checklist Program in India, *The New England Journal Of Medicine*, December 14, 2017 *N Engl J Med* 2017; 377:2313-2324 DOI: 10.1056/NEJMoa1701075
  8. Megan Marx Delaney, et. Al; Improving Adherence to Essential Birth Practices Using the WHO Safe Childbirth Checklist with Peer Coaching: Experience From 60 Public Health Facilities in Uttar Pradesh, India *Global Health: Science and Practice* June 2017, 5(2):217-231; <https://doi.org/10.9745/GHSP-D-16-00410>
  9. Dakshata Mentor's Induction Package April 2020, NHM Rajasthan with support from Jhpiego and Children Investment Fund Foundation
  10. S Kumari, R Panicker, A Jayaram, N Dumka Evaluation of the Safe Childbirth Checklist Program in Rajasthan, India: the how and what of the evaluation efforts ... - *Journal of Public Health ...*, 2016 - [jphdc.org](http://jphdc.org).
  11. M Patabendige, H Senanayake Implementation of the WHO safe childbirth checklist program at a tertiary care setting in Sri Lanka: a developing country experience - *BMC pregnancy and childbirth*, 2015 – Springer
  1. Mishra LK, Gupta S, Pradhan SK, Baisakh MR. Lacrimal sac rhinosporidiosis *Plast Aesthet Res*. 2015;2:353
  2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8857457/>