



Correspondence

Facilitators & barriers for effective implementation of *Dakshata* programme to improve the quality of institutional maternal care in tribal blocks of Maharashtra

Sir,

India made significant progress in reducing maternal mortality in the last two decades¹. A part of the efforts focussed on promoting institutional deliveries through *Janani Suraksha Yojana* and *Janani Shishu Suraksha Karyakram*. As per recent studies, about 80 per cent of mothers in India deliver at a health facility²⁻⁴. However, the rise in institutional deliveries has not been commensurate with the fall in maternal deaths. Persistent high mortality despite a high institutional delivery rate emphasizes the need to improve quality of maternity care services³.

In order to strengthen the quality of intra-partum and immediate post-partum care, the Government of India launched the *Dakshata* programme in 2015. Its objectives are to strengthen the capacity of healthcare providers, improve adherence to evidence-based critical practices, ensure availability of essential supplies and improve data keeping and implement maternal and new-born health (MNH) tool kit³. Utilization of safe childbirth checklist (SCC), a simple tool to enhance compliance to essential practices during childbirth (on admission of mother, just before birth, immediately after birth and on discharge), is an important component of the programme. Since its launch, the programme has been rolled out in 2000 facilities in India and 290 facilities in the western State of Maharashtra. Despite this, 500 maternal deaths were reported from nine districts of Maharashtra with substantial Scheduled Tribe (ST) population⁵.

There is a paucity of data documenting the facilitators and barriers that the health system and providers face while implementing the *Dakshata* programme in tribal areas. The objective of the present study was to understand these factors in the tribal district of Palghar in Maharashtra at four public health facilities.

The study was approved by the Institutional Ethics Committee of the Indian Council of Medical Research (ICMR)–National Institute for Research in Reproductive and Child Health (NIRRH), Mumbai. It was conducted from January to August 2021 and had two components – a cross-sectional facility assessment (FA) and qualitative interviews (QIs) of healthcare providers. FA was carried out at four high delivery load public health facilities chosen purposively following consultations with the State and district health authorities. The selected health facilities cater to about 60 per cent of the district's ST population. Supervision and resource availability checklists of the *Dakshata* Programme Guidelines were used for assessing human resource, infrastructure, essential drugs and training status. Availability of essential drugs and functionality of equipments were physically verified. Adherence to critical practices was observed at four pause points – on admission, before delivery, after delivery and before discharge. Five randomly selected case records in the labour ward were assessed for completion of partograph and SCC. Using a semi-structured questionnaire, 17 interviews were conducted. Medical superintendent, gynaecologist, labour room in-charge (LRIC) and a staff nurse were interviewed at each facility. A descriptive approach was used to elicit knowledge about *Dakshata*, factors affecting the conduct of deliveries, administrative support, availability of essentials and human resource and infrastructure and laboratory facilities. This approach was preferred as it provided a direct description of the actual situation at the public health facilities under consideration.

Interviews were audio-recorded, transcribed, translated, anonymized and checked for accuracy. Emerging explanations and connotations were identified and encoded. Crucial narratives were marked

for future citations. The identified themes and coded statements were compared systematically. The FA data were entered and analyzed using Microsoft Excel (2016).

FA revealed that full-time gynaecologists were present at three while, anaesthetists were present at two facilities, respectively. Three master trainers were available across the four sites. LRICs at all the facilities had received the *Dakshata* training. Essential drugs and commodities were in adequacy at the facilities. The staffs were actively filling the partograph and followed all the critical practices. Staffs' behaviour was polite. Birth companion was allowed in the delivery room at three facilities.

Facilities had a 10-15 bed combined ward for antenatal, post-natal and post-partum care with the absence of a separate antenatal care (ANC) clinic. Limited ward space necessitated the use of floor-beds. All the facilities reported a staff shortfall (Table I). Despite of having functional ultrasonography machines, none of the facilities had a sonologist. Need analysis of resources, dashboard of indicators and facility-specific action matrices were not available. Only about 40 per cent of the SCCs were completely filled.

The maternal care providers, on an average, were in government service for 16 years (range 5-25 years). All the participants knew that *Dakshata* was related to maternal health, but a majority (about 70%) were unaware about its objectives. A nurse responded '*To improve the quality of service given to the ANC and the infants is the aim of Dakshata*' while a LRIC said '*In Dakshata, we take various trainings, maintain registers and learn how to behave with patients*'.

Staffs gave positive feedback about the training package and hands on practice using mannequins. A nurse told, '*I have attended many trainings, but Dakshata training was the best*'. Another response was '*Dakshata training refreshed knowledge. It was very helpful for me. I could do things that I never did before in the facility*'.

Absence of a training centre in Palghar was reported as an issue. A gynaecologist said '*There is no proper training centre here. We have to go to Thane/Nashik and stay there for three days*'. Process of seeking approval for training was reported to be protracted. A response was '*When the letter comes from district, then only we send staff for training*'.

The informants reported staff shortage as a crucial barrier to cater to the heavy workload. A response was '*Staff is recruited as per 30-bed hospital norms. With increase in population, flow of patients has increased, but the staff is same*'. Only one facility followed the policy of non-rotation of labour room staff. Nursing staffs were supportive of rotation. A nurse responded '*If rotation is done, staff learns everything. Not just labour and delivery. If there is some kind of emergency (non-obstetric), how will she manage?*'

The need for having an obstetric intensive care unit (ICU) was emphasized by a gynaecologist, '*We do not have an Obstetric ICU in the district. There is no expert medicine consultant*'.

Absence of laboratory technicians made emergency investigations difficult.

An obstetrician said '*In emergencies, investigations cannot be done here. If the patient deteriorates, we do not have any reports to show*'

Availability of essential drugs was affected by issues related to distribution. A gynaecologist responded '*Some PHCs having 20-25 deliveries per year receive thousand vials of oxytocin and we get less in spite of high delivery load*'. The staff prioritized service provision over documenting maternal health data. A nurse replied '*If a delivery is there while we are doing paperwork, we always choose to attend to the delivery. Paperwork can be done later but not delivery*'. *Dakshata* mandates appointing mentors to aid in supportive supervision and post-training follow-up. However, such appointments were lacking. Health authorities provided help, but the staff expected more timely support. A gynaecologist told,

'Sometimes, they do not understand the seriousness. We tell them our problems; they start telling us theirs'.

The MNH toolkit provides support and guidance to doctors and nursing staff to improve the quality of maternal care services. It was reported that none of the 17 participants were aware about the toolkit.

The present study documented the facilitators and barriers to implementation of the *Dakshata* programme (Table II). Availability of skilled human resource is essential to improve the output in healthcare⁶. Shortage of doctors, staff nurses and allied staff has largely affected the quality of care delivered at these facilities⁷.

Table I. Summary of findings - Key indicators at four study sites

Parameter	SDH <i>Dahanu</i>	SDH <i>Jawhar</i>	SDH <i>Kasa</i>	RH <i>Wada</i>
Deliveries conducted (January 2020-December 2020)	2634	2197	1414	848
Stillbirths (January 2020-December 2020)	48	59	28	5
Maternal deaths (January 2020-December 2020)	2	0	0	0
Posts vacant	Staff nurse	Anaesthetist	Paediatrician	Gynaecologist and anaesthetist
Not received <i>Dakshata</i> training	4 MO; 6 SN	2 SN	2 MO; 6 SN	2 MO; 5 SN
Resource/material availability	Occasional shortage of surgical gloves	Absence of storage tank	Present in buffer stock	Adequate
Dashboard of indicators	Not present	Not present	Not present	Not present
SCC use (filled/records seen)	0/5	4/5	0/5	3/5
Partograph use (filled/records seen)	3/5	5/5	5/5	5/5
Protocol posters display	Adequate	Adequate	Adequate	Adequate
USG machine	Functional	Functional	Functional	Functional
Sonologist	Not present	Not present	Not present	Not present
Capacity to manage obstetric complications	Satisfactory	No anaesthetist	Satisfactory	Major OT non-functional
SNCU	Not present	42-bedded functional	Not present	Not present
Non-rotation of staff policy	Not followed	Followed	Not followed	Not followed
Antiretroviral for PMTCT of HIV	Present	Present	Present	Present
Birth companion during delivery	Not present	Present	Present	Present
Blood bank	Only storage	Collection and storage	Only storage	Only storage
Availability of FFP/PCV	Private laboratory	Private laboratory	Private laboratory	Private lab
Onsite training sessions (non- <i>Dakshata</i>)	Conducted	Conducted	Conducted	Not conducted

SNCU, special new-born care unit; PMTCT, prevention of mother-to-child transmission; HIV, human immunodeficiency virus; FFP, fresh frozen plasma; PCV, packed cell volume; OT, operation theatre; SCC, safe childbirth checklist; USG, ultrasonography; SN, staff nurse; MO, medical officer; SDH, sub-district hospital; RH, rural hospital; C-section, caesarean section

A study in a public hospital in Mumbai⁸ observed that about six women per 1000 deliveries require obstetric intensive care and 22 per cent of those requiring intensive care die reiterating the need for developing obstetric ICUs.

A multi-country analysis reported that redistribution of human resource plays a critical role in dealing with increasing healthcare demand⁹. The MNH toolkit aims at such rational redistribution. Ignorance about the toolkit eight years after its launch reiterates the need for awareness generation for such a key resource. Utilisation of SCC has been reported to improve maternal and new-born outcomes¹⁰. Use of simple yet important job aid like the SCC therefore needs to be encouraged. It is possible that the presence

of an observing investigator would have resulted in better adherence to practices. Furthermore, the availability of essential drugs was verified just on the day of the visit and past shortages, if any, would have been missed. To the best of our knowledge, this is the first study in India to document the facilitators and barriers pertaining to *Dakshata* programme in a tribal setting. This study addresses top research priorities ascribed by ICMR-INCLIN collaboration for research prioritization in maternal health for the decade 2016-2025¹¹.

To conclude, *Dakshata* programme aims to improve the quality of maternal care at public health facilities. Prioritizing training of staff, adherence to SCC, development of obstetric ICUs, availability

Table II. Summary of facilitators and barriers to effective implementation of *Dakshata* programme

<i>Dakshata</i> objective ³	Goal	Action	Facilitators	Barriers
To strengthen the competency of providers of the labour room, including medical officers, staff nurses and ANMs to perform evidence-based practices as per the established labour room protocols and standards	Improve competency of health providers	Training health providers including ToT Use of mannequins for hands on practice Adherence to high impact making practices in LR	Master trainer available at three facilities Mannequins distributed to facilities Essential practices followed at four pause points - admission, before birth, after birth, before discharge Good use of partograph for quick action SCC present in all case files Gynaecologists acting as mentors to staff nurses	Training centre not present in Palghar Staff nurse shortage Heavy work load causing quality compromise COVID pandemic since 2020 <i>Dakshata</i> merged with LaQshya so not a priority
To implement enabling strategies to ensure transfer of learning towards improved adherence to evidence-based clinical practices	Translation of skills to practice	Utilization of SCC and partograph Supportive supervision and mentorship Half-day sensitization programme for administrative leaders Non-rotation of staff		SCC still new for untrained staff Case records filled retrospectively No sensitization programme conducted Staff rotation due to shortage
To improve the availability of essential supplies and commodities in the labour room and the post-partum wards	Ensure uninterrupted supply and availability of essential drugs, materials and functional equipment	Resource need analysis Facility specific action matrices Implementing action matrices	Resource adequacy in general All equipment functional Local purchase for crisis management	No civil hospital in Palghar district Need for better coordination between district and State Facility specific action matrices not available Resource need analysis not conducted Problem of distribution
To improve accountability of service providers through improved recording, reporting and utilization of data	Better accountability of health providers and their work	Development of dashboard of indicators Weekly monitoring of health indicators Standardization of data recording templates Evidence-based decisions	Data recording templates ready Monthly data submission District-level monthly data review meetings	Dashboard of indicators not present No facility-based data review Backlog of data No follow up missing data Data recorded in registers first then entered online
Implementation of the MNH toolkit at the delivery points	Implement MNH toolkit	Strengthening LR infrastructure Rational redistribution of human resource Hiring additional human resource as per need	-	No awareness regarding toolkit Staff recruited as per number of hospital beds Private doctors not willing to join

ANMs, auxiliary nurse midwives; ToT, training of trainers; LR, labour room; SCC, safe childbirth checklist; MNH, maternal and new-born health

of human resource and emergency laboratory investigations and promotion of coherence between various levels of healthcare can aid the providers in delivering quality maternal care. These findings are relevant for policymakers to strengthen the implementation of the *Dakshata* programme in the underserved tribal areas.

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**Hrishikesh Munshi¹, Anushree Devashish Patil^{1*},
Ragini Nitin Kulkarni², Chauhan L. Sanjay²,
Reeta Rasaily⁶, (Late) Anil Thorat⁴,
Deepti Tandon¹, Shahina Begum³,
Suchitra V. Surve¹ & Neha Salvi⁵**

Departments of ¹Clinical Research, ²Operational Research, ³Biostatistics, ICMR-National Institute for Research in Reproductive and Child Health, Mumbai 400 012, ⁴Directorate of Health Services, Government of Maharashtra, Mumbai 401 404 & ⁵Model Rural Health Research Unit, Dahanu 401 601, Palghar District, Maharashtra, ⁶Division of Reproductive Biology, Maternal & Child Health, Indian Council of Medical Research, New Delhi 110 029, India

*For correspondence:
patila@nirrh.res.in

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