The Buddy Buddy Model

For Rapid Activation of First Referral Units

First Referral Units for reducing Maternal Mortality

Maternal Mortality Ratio (MMR) is unacceptably high in the world.
Every day, approximately

830
women die from preventable causes related to pregnancy and childbirth[1]

99%
of all maternal deaths occur in Low- and Middle-Income Countries[1] and are preventable

In Uttar Pradesh, India:

- The MMR still stands at 197[2] per 100,000 live births, despite substantial declines over the past decade.
- With close to 12,000 maternal deaths every year, Uttar Pradesh (UP) contributes to 31% of all maternal deaths in the country and 5% of all maternal deaths of the world[3].
- By 2030, as part of the Sustainable Development Goals (SDGs), the target is to reduce the global MMR to less than 70 per 100,000[1].
- The Annual Rate of Reduction in MMR needs to be accelerated for UP and India to attain the SDG target.

[1] WHO bulletin on Maternal Mortality.February, 2018
[2] SRS, 2016-18
[3] WHO, UNICEF, UNFPA, World Bank. Trends in maternal mortality:1990 to 2010. Geneva: WHO;2012

Comprehensive Emergency Obstetric and Newborn Care

Effect of activating FRU Health Facilities in preventing maternal deaths

Comprehensive Emergency Obstetric and Newborn Care (CEmONC) services are highly effective in preventing the most common causes of maternal mortality like postpartum hemorrhage (PPH), hypertensive disorders of pregnancy (HDP), obstructed labour and sepsis. The Delphi analysis by Pollard et al (2013) indicate Comprehensive Emergency Obstetric Care (CEmOC) as an intervention identified to be highly effective against deaths due to PPH, Sepsis and Antepartum Hemorrhage (90% effectiveness), against obstructed labor (95 % effectiveness) as compared to Basic Emergency Obstetric Care (BEmOC) (40% effectiveness). Caesarean section and CEmOC had the highest estimated effectiveness (effectiveness 90% and 95%, respectively), and packages of interventions such as active management of the third stage of labor (AMTSL) (70% effectiveness), BEmOC (75%), and CEmOC (90%) were highly effective against deaths. An intervention like MgSo4 which can be administered in a small health centre in the community can prevent 60% of deaths due to preeclampsia/eclampsia[4].

First Referral Units

First Referral Units (FRUs) are health facilities that provide CEmONC services that include deliveries by Caesarian section (C-section) and offer blood transfusion services.

Nine Signal Functions (SFs) form the basis for considering a health facility to be providing CEmONC services and functioning as an FRU:

- SF 1: Administration of Antibiotics
- SF 2: Administration of Oxytocic Drugs
- SF 3: Administration of Anticonvulsants
- SF 4: Manual Removal of Placenta
- SF 5: Removal of Placental Remnants
- SF 6: Assisted Vaginal Delivery
- SF 7: Newborn Care and Newborn Resuscitation
- SF 8: Caesarean Sections
- SF 9: Blood Transfusion services

These services are critical to improve reproductive, maternal, newborn and child health outcomes. Specialists, specifically Gynecologists and Anesthetists, are critical for activating Signal Function 8 and for the care and management of complicated cases and deliveries.

FRU Landscape in Uttar Pradesh

As per Government of India (GoI) norms there should be one FRU for every half million population.

In Uttar Pradesh:

Based on the GOI benchmark of a minimum five C-sections and 10 C-sections per month in Community Health Centers and District Hospitals respectively.

Population of **220 million** people requires a total of **421 FRUs**[5]

Currently Government of UP (GoUP) has designated **305 FRUs**. Of these, only **64 FRUs**[6] were considered active in April 2018.

One of the major reasons for such a low activation of FRUs in UP is due to the acute shortage of the Specialist pair – Anesthetists & Gynecologist - who together provide the "complementary skills" required for the provision of C- sections at a facility.

Provincial Medical Health Services cadre workers:

With only 221 Anesthetists and 198 Gynecologists working as a part of Provincial Medical Health Services cadre, the State had more than 80% vacancy in these two specialist posts, as of 2018[7]. This is primarily attributable to the fact that while Specialist doctor posts are created, the service rules only allowed for the department to ask for under graduate (MBBS) as minimum qualification during recruitment leading to availability of post graduate (specialists) only by chance. Moreover, Specialist doctors were recruited at the same pay and same level as MBBS doctors leading to reduced motivation for specialists to join government health services. An amendment of the service rules in December 2020 paved the way for the creation of a 'Specialist cadre'.

However, in the short and medium term, there is a need to design and implement strategies that address the human resource shortage and skills deficit to ensure that women receive essential life-saving CEmONC services. To address short-term gaps, GoUP has tried some innovative models

[4]Pollard et al.Estimating the impact of interventions on cause-specific maternal mortality: a Delphi approach. BMC Public Health 13, S12 (2013). DOI:10.1186/1471-2458-13-S3-S12
[5]Maternal and Newborn Health Toolkit, Ministry of Health and Family Welfare, Government of India, 2013 (http://nhsrcindia.org/sites/default/files/Maternal%20%20Newborn%20Health%20Toolkit.pdf)
[6]Uttar Pradesh Health Management Information System (UPHMIS)
[7]Manav Sampada, Government of Uttar Pradesh's Human Resource Management System, 2018

such as "bidding model", reemployment of retired specialists, walk-in hiring, empanelment of private sector specialist, among others, with limited success.

GoUP has been proactive in leveraging GoI's strategy on Task Shifting[8], to train MBBS doctors in Life Saving Anesthetic Skills (LSAS) and Comprehensive Emergency Obstetrics and Neo-natal Care (CEmONC) to supplement Specialists in FRU activation. Though GoUP had trained 205 MBBS doctors on Life Saving Anesthetic Skills (LSAS) and 140 MBBS doctors in Comprehensive Emergency Obstetrics and Neo-natal Care (CEmONC or EmOC) as per GOI guidelines[7], they were not effective in activation of FRUs as intended. Hence as a medium term measure, GoUP with support of Uttar Pradesh Technical Support Unit (UP TSU) - a Unit implemented by India Health Action Trust (IHAT) in partnership with University of Manitoba, analyzed the reasons for their low effectiveness in activation and created a sustainable pathway to activate FRUs in the State.

UP TSU's role in activation of FRUs using the Buddy Buddy Model:

- It was found during analysis that only a small proportion of these doctors were able to perform tasks required to support FRUs, based on the training received.
- Literature[9] search revealed that both in India and globally, reduced effectiveness of task shifted functionaries may be due to multitude of reasons including issues with posting and deployment, inadequate policy, regulatory, service delivery, management support, and incentive support amongst others which leads to "suboptimal utilization of the skills acquired during such training and suboptimal delivery of public health services"[10]
- Global evidence[11] and studies on task shifting suggest that for the provision of emergency obstetric care, task shifting led to an increase in services without significant increase in adverse outcomes.
- A Stakeholder consultation conducted in January 2019, identified the following reasons for non-performance of EmOC and LSAS trained doctors:
    a. Non-availability of Complementary Skill sets required (EmOC and LSAS trained doctors posted independently, rather than as a complementary pair, therefore reducing the likelihood of performance of critical functions such as C-sections.
    b. State transfer policy not taking LSAS/EmOC training into consideration
    c. District level managers transferring these doctors frequently from one facility to another
    d. Inadequate confidence to practice the skills due to long gap between training and performance
    e. Short duration of the training period
    f. No financial incentives to differentiate these MBBS trained doctors with plain MBBS
    g. Non-monitoring or lack of supportive supervision by program/district managers
    h. Fear of litigations
    i. Unavailability of Equipment, Drugs, Blood storage, support staff, etc.,
    j. Lack of Career progression

The Buddy Buddy Model

After analysing the reasons mentioned above, UP TSU advocated a holistic policy ("The Buddy Buddy Model") initiative for FRU activation to GoUP. The model pairs doctors trained in LSAS and EmOC skills (the Buddy Buddy pair) to ensure availability of CEmONC services at a designated but inactive FRU.

The Buddy Buddy pair is provided supportive supervision by Specialist Mentors (Anesthetists and Gynecologists) from the District Hospital (DH) of the district in which they are posted. The Mentors guide the Buddy Buddy pair at the DH to perform elective and emergency C-sections and on other skills required for activation of FRU, for a period of six months. Once confident, they are posted to FRU for activation of CEmONC services (Figure 1, Pg. 4).

Dr Amit Tripathi - EmOC trained Buddy Buddy MBBS Doctor at District Hospital, Gonda (Uttar Pradesh) - on the day of completing 100 C-Sections

[8] Guidelines for Operationalising First Referral Units. Maternal Health Division. Department of Family Welfare. MoHFW. GoI. 2004
[9] Task shifting in maternal and newborn health care: Key components from policy to implementation. Barabara Deller et al. 2015
[10] Multiskills training of medical doctors in India: Experience from Rajasthan. Neetu Purohit et al. 2015
[11] Emergency obstetric care: Making the impossible possible through task shifting. Caroline Schneeberger et all. 2015

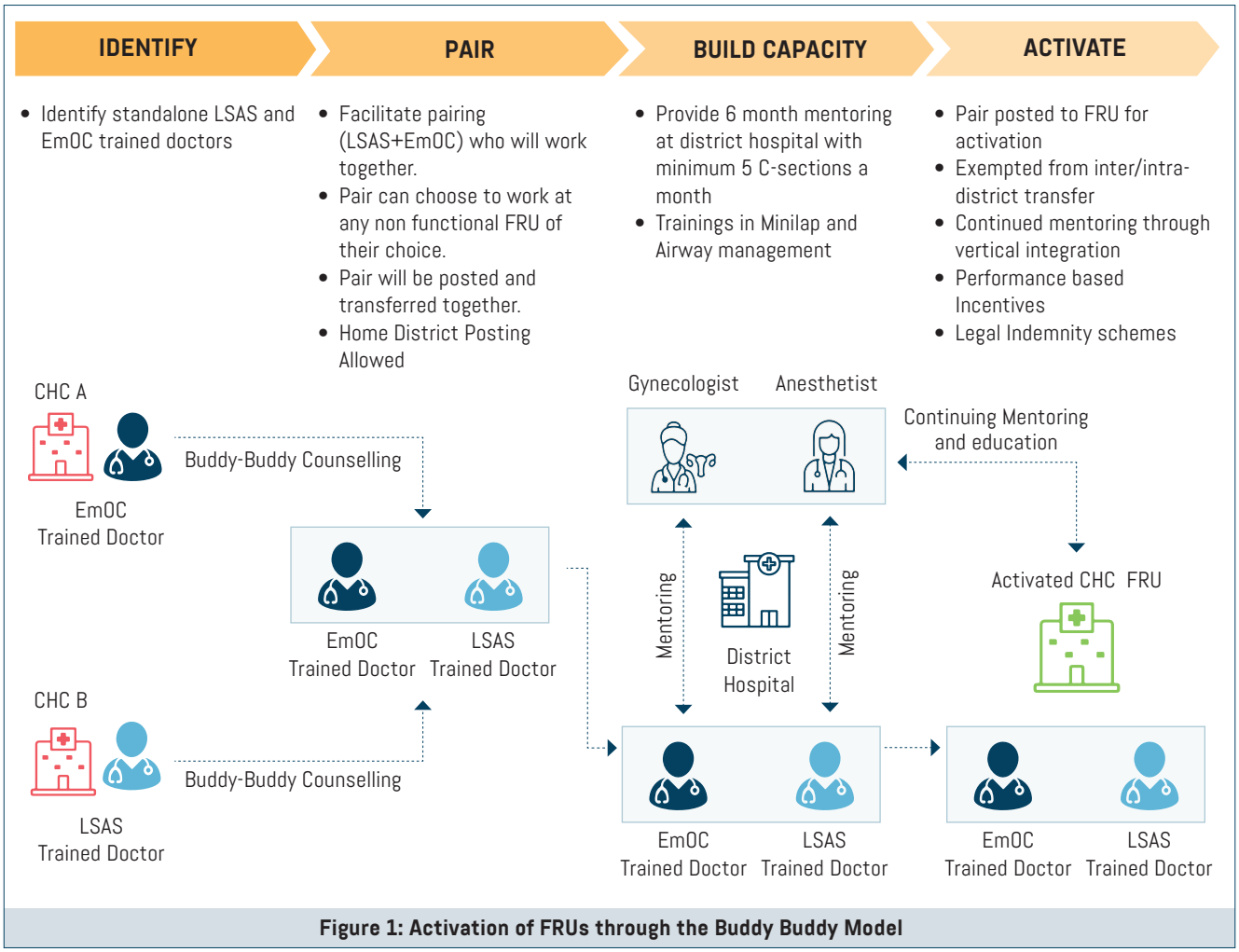

Figure 1: Activation of FRUs through the Buddy Buddy Model

Key activities for implementation of the Buddy Buddy Model

Under the keen oversight and guidance of the Principal Secretary - Health and the Mission Director, National Health Mission (NHM), Uttar Pradesh, the following key activities were implemented:

a) Identification of LSAS and EmOC trained doctors: A list of doctors trained in LSAS and EmOC (MBBS and Specialists: Anesthetists, Gynecologists) was developed. Out of the list, doctors who were not performing C-section were invited for the Buddy Buddy Counselling.

b) Identification of inactive FRUs: Inactive FRUs[12] without a pair of doctors with complementary skills were identified and enlisted for activation by the Buddy Buddy pairs.

c) Buddy Buddy Counselling: During the counselling session, doctors were briefed about the Buddy Buddy Model and questions or clarifications were addressed. All inactive FRUs identified were listed and the senior most doctor was invited to choose an FRU for activation. Subsequently, doctors with the complementary skill who were interested in working in the selected FRU were invited to establish the Buddy Buddy pair with preference given to those with higher seniority. Once a pair was established, the selected FRU was allotted to the pair.

d) Release of transfer and posting orders: After identification of the pairs of doctors through counselling, the formal procedure for transfer and posting at the selected FRUs was undertaken. Transfer orders were released by GoUP for doctors who chose a facility other than their current posting facility, instructing them to join their allocated facilities.

[12]The critical determinants of a health facility being designated as an FRU are – (a) availability of surgical interventions (including Comprehensive Emergency Obstetric Services), (b) 24 hours' blood transfusion services and (c) neonatal care. Inactive FRUs – FRUs that do not provide the requisite human resource to conduct C-sections, 24 hours' blood transfusion services and neonatal care. They are considered to be inactive when the norm of minimum 5 C-sections and 10 C-sections per month in CHC and DH respectively, is not being followed and the abovementioned services are not available.

e) FRU gap assessment: UP TSU supported the Buddy Buddy pair in conducting a gap assessment of essential drugs and equipment[13] required for providing CEmONC services in the selected FRUs through an FRU checklist. This assessment report was shared immediately with the concerned Chief Medical Officer/ Chief Medical Superintendent with copies to Directorate General Medical Health/NHM. UP TSU worked with the respective government bodies to develop a micro plan to address gaps to ensure facility readiness for provision of CEmONC services.

f) Mentoring in District Hospitals: The identified Buddy Buddy pairs (LSAS and EmOC) were further paired up with Mentors (Specialists - Anesthetists and Gynecologists) posted in DHs who were actively conducting C-sections. The Buddy Buddy pairs who were not confident in performing C-sections were posted in the DHs of their posting district for a period of six months. During this period, the Buddy Buddy pair is expected to conduct at least five C-sections independently per month under the supervision of the Mentors. Once, the Buddy Buddy pair gains confidence in conducting C-sections independently, they join their selected facilities (inactive FRUs) to initiate provision of CEmONC services.

g) Creating an enabling environment for Buddy pairs: In order to ensure success and sustainability, GoUP rolled out various policy and process level initiatives to create an enabling environment for the Buddy Buddy pair to provide CEmONC services.

i. **Indemnity scheme:** GoI has approved a lump-sum amount towards Legal Indemnity to cover any legal costs arising out of litigation for all C-sections conducted by LSAS and EmOC trained doctors in the State.
ii. **Equipment Availability:** Centralized procurement of critical equipment and supplies was expedited through Uttar Pradesh Medical Supplies Corporation to ensure that the necessary commodities were available.
iii. **Intra-district transfers:** Buddy Buddy pairs are posted in the selected FRUs as pairs for the next five years. They are exempted from intra-district transfers as well.
iv. **Financial Incentives:** Team based financial incentives have also been approved by GoUP for C-sections performed by LSAS and EmOC trained doctors during their mentoring period as well as after joining their respective inactive FRUs.
v. **Periodic on-site mentoring at the newly activated FRU:** The Mentors are expected to visit the FRU in which the Buddy Buddy pair is posted once every quarter for continued on-site mentoring to ensure that the quality of services is maintained. They would also receive incentives for these visits based on the visit reports submitted by them to the concerned CMS and General Manager Maternal Health.

Progress

The Buddy Buddy Model is a solution for closing the gap of specialist resources for FRUs, which is scalable to any state facing similar barriers. It has been received very well by the medical community and has been critical in improving the FRU landscape in UP.

The Buddy Buddy model has progressed in UP in two phases:

1. Demonstration phase of conducting two rounds of in-person counselling, and
2. Creation of a government policy, which will continue to sustain subsequent rounds of implementing the Buddy Buddy Model, while adding the number of MBBS doctors who can be trained in EmOC-LSAS every year.

In the first round, 108 LSAS and 107 EmOC trained MBBS doctors were invited for counselling to create an LSAS and EmOC pair in February 2019. Forty-seven Buddy Buddy pairs were formed, mentored and posted in inactive FRUs in September 2019.

Figure 2 shows the significant increase in the number of FRUs activated during the period of one year, beginning from February 2019 when the first counselling of Buddy Buddy pairs was conducted, to February 2020. The number of CHC-FRUs conducting C-sections increased from 38 FRUs to 75 FRUs which is a remarkable 97 percent increase in active CHC-FRUs in a period of one year. There was also an increase from 62 DHs to 72 DHs – a 16% increase – over this same time period. The second round of counselling of buddy-buddy implementation was conducted in September 2019, however the transfers, initiation of mentoring and other processes got delayed due to the COVID-19 pandemic amongst other reasons and thus impact of Buddy Buddy counselling on FRU activation is still being assessed.

[13] Boyle's trolley, radiant warmers, cardiac and para monitors in the OTs

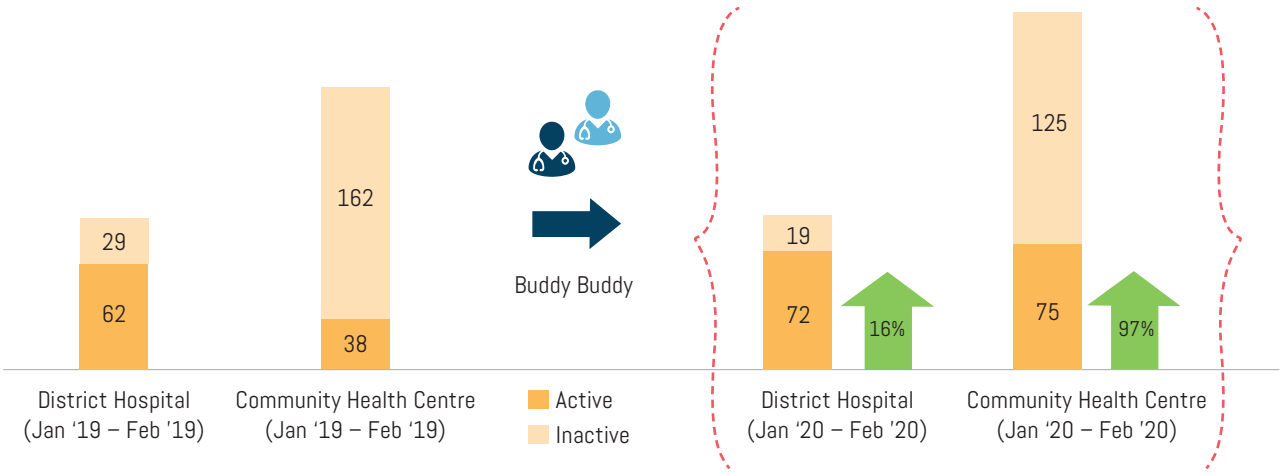

Figure 2: FRU activation status post Buddy Buddy Model Implementation

Sustainability of Buddy Buddy Initiative

In the second half of 2020, GoUP, with UP TSU's support, started working on creating a policy which could expand and sustain the Buddy Buddy Model for FRU activation. This led to the following three decisions by GoUP:

1. Expansion of Medical colleges which are accredited to conduct EmOC-LSAS training in the state from 2 to 6 and 4 to 6 respectively for EmOC and LSAS. With a batch size of four candidates per batch and a training tenure of six months, GoUP can potentially activate 48 FRUs every year.
2. Policy decision to ensure that selection of candidates for EmOC and LSAS trainings is done in pairs, that the doctors "pair-up" themselves, and the FRU that they will be activating post training is chosen by the pair before undergoing the training.
3. Policy decision that posting of "pair" of doctors at their chosen FRU will also be done before the training commences so that they join the inactive FRU before their training to avoid any delay in their posting at the FRU and activation of the FRU post completion of the training.

Recognition

The Government of India recognized the Buddy Buddy Model for rapid activation of First Referral Units at the 'National Summit on Innovations and Best Practice', held in Gandhinagar, Gujarat in December 2019.


MINISTRY OF HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA

CERTIFICATE

This Certificate is Conferred to the State/ UT of Uttar Pradesh for Oral Presentation for the Best Practice titled

Buddy Model

at the

6th National Summit on Good and Replicable Practices and Innovations in Public Healthcare System in India

held at Gandhinagar, Gujarat, 2019

AS & MD, NHM
Ministry of Health & Family Welfare
Government of India

Secretary
Ministry of Health & Family Welfare
Government of India

Way Forward

The progress indicates that the Buddy Buddy Model can be considered as a key approach for activating the FRUs in a short period of time. GoUP with support from IHAT plans to accelerate the process of accreditation of more medical colleges as LSAS and EmOC training centres in order to increase the pool of MBBS trained doctors every year in this regard. Due to the sustainability and policy decisions of 2020, 48 FRUs can potentially be activated every year, however there is scope to expand upon this number significantly over the next 2-3 years. In addition, GoUP also provided an additional incentive for career progression to doctors choosing to undergoing EmOC-LSAS trainings and activating inactive FRUs. In early 2020, GoUP revised its policy pertaining to awarding additional weightage of marks for in-service candidates (regular cadre doctors serving in government facilities) for National Eligibility Cum Entrance Test (NEET) Post Graduation examination. On the basis of this policy, additional marks will be awarded in a differential manner for each year of services depending on the location of the particular health facility. However, EmOC-LSAS trained doctors who are providing CEmONC services at FRUs may be eligible for higher additional weightage as compared to other in-service doctors for serving in the same geography.

All these efforts along with creation of "specialist cadre" have the potential to ensure availability of adequate specialists at all designated 305 FRUs within the next 2-3 years. Subsequently, GoUP can start planning towards designating additional FRUs and ensuring specialists availability at those so that the state can achieve the goal of having FRUs as per the population norms for FRU availability.

Experience Sharing by Buddies

The Mawana CHC is running successfully since the introduction of the Buddy Buddy Model. Dr Shweta and Dr Azadveer were posted in March 2019 and they have conducted more than 200 C-Sections till October 2020. Even during COVID-19 pandemic, the FRU has been functioning well and is providing delivery-related emergency services to pregnant women. The Buddies unanimously shared that the Buddy Buddy Counselling was a transparent process and they got the opportunity to select the FRU of their choice. This intervention ensured that the infrastructure and drugs in the facility are in place and well-maintained. The buddies and the staff were happy to receive the incentives as promised.

Dr Shweta Chauhan
(EmOC Specialist)

"I was trained on EmOC in 2013, however, couldn't contribute much as the post of Anesthetist was vacant in Amroha District Hospital, where I was working. However, the Buddy Buddy Model gave me an opportunity to hone and utilize my EmOC skills. Moreover, all the Buddies and senior staff from UP TSU and GoUP are in a WhatsApp Group; wherein, we doctors, share all the issues that we face and the response time to provide solutions is so fast. We are being heard, our problems are being empathized with and the interaction is result-oriented. Never ever we had to repeatedly request for any arrangement for any issue that we were facing at the FRU. We just have to share the problem once and within a span of few days, the issue gets addressed. This gives me a thorough sense of job satisfaction."

Dr Azadveer Singh
(LSAS Specialist)

"The LSAS training alongwith the six months mentoring from senior medical professionals, gave me the confidence to manage C-sections meticulously. The supervisory support visits have proved useful to learn new tactics of managing patients. It is so encouraging to see the FRU functioning in its full capacity. The successful functioning of the FRU can be stated with the fact that patients now prefer to be operated here, rather than visiting any private facility; owing to the quality of services with practically no medical expenses being incurred."

Kirawali CHC is one of the designated FRUs in Agra, which was inactive until the Buddy Buddy Model brought a ray of hope. Dr Anjana Singh and Dr Ajay Garg are highly motivated professionals working in Kirawali CHC. Together, they have conducted more than 50 C-sections in the Facility. The doctors shared that the Buddy Buddy Model provides incentives which is an encouraging feature and there is also an indemnity scheme that provides coverage to the doctors in case of any untoward incident during the C-section. Mentoring and supervision from senior specialist instill confidence in the Buddy doctors, which has been highly appreciated by them.

Dr Anjana Singh
(EmOC Specialist)

"I was trained on EmOC about 5 to 6 years ago; however, I never got any hands on mentoring for the same and I couldn't practice what I was trained for. After the Buddy Buddy Model was introduced, I could choose to be posted at Kirawali CHC, Agra, which is around 20 Kms from my residence; which further made it possible for me to attend to emergency cases at odd hours. Throughout my tenure here, I have received full support of all the UP TSU team members in all technical gaps that I had shared. I was privileged to conduct a successful C-section, with support from my Buddy Dr. Ajay Garg, on the very first day of my posting here and still the glimpse of the happy mother with her healthy new born, lingers in my heart".

Dr Ajay Garg
(LSAS Specialist)

"I was invited for the Buddy Buddy Counselling in 2019 and was given the opportunity to select the FRU and the Buddy of my choice. According to me, the Buddy Buddy Model is a great initiative to upskill the LSAS and EmOC specialists and provide them the platform to conduct C-sections confidently. About 8 to 9 years back, I had received the LSAS training and being posted at a Primary Health Centre, I did not get any opportunity to put to practice what I had always envisioned for. But, as it is said, better late than never, through the Buddy Buddy Model, I not only got the training and mentoring for LSAS, but I could also successfully support conduct of C-sections right from the day one of my posting at Kirawali CHC (FRU). The successful conduct of C-sections was much appreciated in the District Health Society Meeting".

India Health Action Trust
"VK Commerce"
No.8, 3rd Main Road
KSSIDC Industrial Estate, Rajajinagar
Bengaluru – 560 010
Karnataka, India

Phone: +91 80 2340 9698
Email: contactus@ihat.in
Website: www.ihat.in

Uttar Pradesh Technical Support Unit
India Health Action Trust
404, 4th Floor
Ratan Square No. 20-A
Vidhan Sabha Marg
Lucknow-226001
Uttar Pradesh, India

Phone: +91-522-4922350 / 4931777

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