

Training and mentorship of medical officers to improve MCH care in public health facilities: Lessons learned from eastern Uttar Pradesh

Harish Chandra Tiwari¹, Reena Srivastav², Saim Mohd Khan³

Departments of ¹Community Medicine, and ²Obstetrics and Gynaecology, BRD Medical College, Gorakhpur, Uttar Pradesh, ³Specialist-FRU Strengthening/RRTC BRDMC, IHAT, UPTSU, Uttar Pradesh, India

ABSTRACT

Introduction: To improve the quality of MCH services in high priority districts of eastern Uttar Pradesh, Regional Resource Training Center (RRTC) has been established in BRD Medical College Gorakhpur. Medical College faculties empanelled at RRTC Gorakhpur carried out the training and mentoring of medical officers of public health facilities. **Aims and Objectives:** To study the role of training and mentoring of medical officers in terms of quality improvements of MCH services at public health facilities. **Materials and Methods:** The present study was carried out in women hospitals of seven districts and one of their respective CHCs of eastern Uttar Pradesh from December 2017 to October 2018. Data was collected by direct observation and review of records of OPD/IPD, labor room, operation theaters, blood bank, and blood storage facilities by mentoring team. Findings of these observations were recorded in predesigned 50 point quality assurance, and facility score was calculated. Technical score was calculated from data collected during one-to-one interaction of mentor and mentees in a predesigned and tested proforma. **Result:** Technical scores of medical officers showed marked improvement after mentoring visits in majority of facilities. Mentoring visits build the confidence of medical officers to deal with the complications like severe anemia, eclampsia, and postpartum hemorrhage as per latest guidelines and protocol. It also helped in the initiation and augmentation of LSCS at certain facilities. Technical scores at few facilities showed little improvement (DWH Sant Kabir Nagar, CHC Colonelganj). Mentoring visit also helped in overall facility improvement at these centers. **Conclusions:** The whole training and mentorship program was found effective to improve the knowledge and skills of the medical officer with few exceptions of opposition/resistance. It was found useful in overall facility improvement up to some extent.

Keywords: Child health, maternal health, mentoring, quality of care

Introduction

Quality improvement of health services is a complex task and requires strengthening of health system components such as available human resources, supplies, and infrastructure. It involves strengthening of routine health services, timely action in case of complications and satisfaction of both provider and client.

Address for correspondence: Dr. Reena Srivastav, Department of Obstetrics and Gynaecology, Nodal Officer- Regional Resource Training Centre, BRD Medical College Gorakhpur, Uttar Pradesh - 273 013, India. E-mail: dr.reenaritika@gmail.com

Received: 15-07-2019 Revised: 22-08-2019 Accepted: 30-08-2019

Additional considerations include the respect for patient dignity while minimizing unnecessary interventions and harmful practices.

Improving the quality of MCH services around the time of birth could have the greatest impact resulting in triple returns in terms of saving lives of mothers and newborns, preventing stillbirths and disabilities.^[1] In addition, women who perceive the quality of facility-based care to be poor may choose to avoid facility-based deliveries, where life-saving interventions could be available.^[2] Therefore, adequate focus on improving quality of MCH services remains a central issue.^[3]

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Tiwari HC, Srivastav R, Khan SM. Training and mentorship of medical officers to improve MCH care in public health facilities: Lessons learned from eastern Uttar Pradesh. J Family Med Prim Care 2019;8:3202-6.

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/jfmpc.jfmpc_543_19

In the context of improving the quality of MCH services in high priority districts of eastern Uttar Pradesh, Regional Resource Training Center has been established in BRD Medical College Gorakhpur. The purpose of establishment of RRTC was to improve the MCH services in high priority districts of eastern Uttar Pradesh by bridging the gaps of knowledge and skills of medical officers of health facility regarding identification and management of maternal and child health complications by mentoring of medical officers by medical college faculties.

RRTC has successfully completed the training of medical officers and specialists from these centers. Three rounds of their on-site mentoring visits have been done by medical college faculties to enhance their knowledge and skill. The present study explores the findings of work done during these three rounds of mentoring visits of medical officers with the objective to find out the achievements in terms of quality improvements of MCH services as it's lessons can be replicated to other facilities and hence could contribute substantially for improvement of primary health care.

Materials and Methods

The present study was carried out in seven district women hospitals and one of CHCs of these districts. These districts and their respective CHCs were Mahrajganj and CHC Partawal, Sidharthnagar and CHC Mithwal, Shrawasti and CHC Ikauna, Santkabir Nagar and CHC Khalilabad, Gonda and CHC Colonelganj, Balrampur and CHC Tulsipur, and Bahraich and CHC Kaisarganj.

Study design

Mixed method study.

Study duration

This paper draws upon data collected over periods from December 2017 to October 2018.

Methodology of data collection

Direct observation, document review, predesigned and pretested mentoring profarma.

- i. Direct observation and document review
 - Out-door patient and in-door patient area, labor room and operation theaters, and blood bank and blood storage facilities were observed by medical college faculties. Labor room registers, OT registers, and 5–10 case sheets were reviewed to support the complication tracking and management at the facility. Findings of all these observations were recorded in predesigned quality assurance scale containing 50 points, and facility score was calculated as percentage.
- ii. One-to-one mentoring:
 - The mentoring session for Specialist/M.O. (MBBS) is decided in consultation with the mentees using simulation techniques and on-site practice on mannequins.
 - In the first round of mentoring, data was collected during one-to-one interaction of mentor and mentees

in a predesigned and tested profarma. Questionnaire was developed separately for specialist doctors and MBBS-MOs, and an average technical score had been calculated based on the mentoring score attained by mentees.

- In the next round of mentoring, the score of each doctor was analyzed. If score was less than 50%, the doctors were mentored on same topics as those in the 1st round. If their score was more than 70%, doctors were mentored on new topics.

iii. Emergency Drill:

The last 1 h was devoted for capacity building of the entire staff of labor room and OT through emergency drills on management of PPH, eclampsia, and newborn care.

All the relevant data collected was explored to find out important findings.

Result

A total of 52 doctors from 14 health facilities were trained in three trainings held at RRTC BRD Medical College Gorakhpur. A total 56 doctors were mentored onsite by medical colleges faculties, among these 29 were trained.

Facility score of district hospitals was found satisfactory in almost all the districts in the first round of visit. It showed improvement in next round of visit (2nd visit) after inputs shared by the mentoring team. A very little change was noticed in the facility score in further visits (3rd visit) [Figure 1].

Facility score of first referral units established at block levels was found 38% in first visit at CHC Partawal, 48% in CHC Khalilabad. In next visit (2nd visit), it improved to 52% in Partawal and 58% in CHC Khalilabad. Facility score was above 50% in other FRUs established at block levels and they all showed improvements in next visit [Figure 2].

Technical score of doctor posted at district women hospital Mahrajganj was 66% in first mentoring visit. In next visit (2nd visit), technical score deteriorated to 63%. Reason being was resignation of already trained and Gynaecologist posted there. Technical scores of the doctors posted at districts women hospitals of Shrawasti, Sidharthnagar, Balrampur, and Gonda showed marked improvement after successive mentoring visits, i.e. first to 2nd visit as well as from 2nd to 3rd visit. Technical score of doctors posted at district women hospital Gonda showed marked improvement after 1st mentoring visit but it deteriorated in next visit. Reason being was transfer of trained and mentored doctors from the facility [Figure 3].

Technical score of doctors in first mentoring visit was found average (i.e. between 50% to 65%) in all FRUs except CHC Mithwal (34%). In next visit (2nd visit), technical score showed marked improvement (i.e. first to 2nd visit as well as from 2nd to

3rd visit). Technical score of doctors after mentoring visits improved to a satisfactory level (i.e. from 69% to 83%) [Figure 4].

Table 1 showed the major achievements after mentoring visits. After mentoring visits, doctors of district women hospital of Bahraich started admitting and managing the patients of eclampsia. Doctors of district women hospital Balrampur, Shrawasti and CHC Kaisarganj, Mithwal started IV iron sucrose use as per protocol. AT CHC Tulsipur, episiotomy practice was started. Doctors of DWH Gonda started use of UBT for the management of postpartum hemorrhage.

Discussion

The establishment of RRTC and mentoring visit by medical college faculties supported district women hospitals and first referral units to improve the quality of services and ensure that women coming to facility receive appropriate maternal and neonatal care and complications of pregnancy are identified and managed as per protocol.

The mentoring visit by medical college faculty was accepted and welcomed at every facility and proved to be a successful strategy to improve the quality of care. The findings at 1st mentoring visits depict the gaps in recognizing and managing maternal and newborn complications. The facility score represents the manpower, supplies, and infrastructure part. The findings of facility score in 2nd visit furnish positive evidence that the majority of District Women Hospitals and FRUs shows improvement in their quality by managing infrastructure, supplies, and manpower in a better way as per the advice received from mentoring team.

In 3rd visit, facility score does not appear to improve further as these changes in quality of care was limited by factors beyond the control of SICs and superintendents and requires efforts at a higher level. The scarcity of manpower has been incriminated as a gap in present study and Jyoti Sharma *et al.* also reported that it affects the quality of services in the long run.^[4] Mentoring team tried to convey these underlying problem to responsible authorities for better action during state reviews meetings.

The technical score reflects the improvement required in knowledge and skills of medical officers. Technical scores of medical officers showed marked improvement after mentoring visits in majority of facilities. It was due to the reason that medical college faculties as mentors were able to effectively communicate and extend their support in such a way that medical officers did not feel threatened or blamed. The supportive, collegial tone that mentors brought to their interactions as well as the respect they showed for MOs created the basis for forming trusting relationships. Because the mentors had no supervisory authority over the medical officers, they were able to respond to them as colleagues rather than authority figures. Mentors were considered as credible resource by many of medical officers as many of mentors had already taught them in UG or PG time. Therefore, they discussed their problems without any hesitations.

Technical score of doctors posted at few facilities (e.g. district women hospital Gonda) showed marked improvement after 1st mentoring visit but deterioration in next visit. Reason being was transfer of trained and mentored doctors from the facility. Technical scores at few facilities does not showed marked improvement (DWH Sant Kabir Nagar, CHC Colonelganj). Instances of medical officers opposition/resistance to accept latest guidelines was also observed in few cases and it was found harder to promote changes in medical officers/specialist of the facility that were understaffed for the volume of patients they handled, leaving staff too busy to engage with the mentors.

Anemia during pregnancy is a major public health problem. The main cause of anemia in pregnancy and puerperium is the deficiency of iron. Management of anemia during pregnancy as per latest protocol of Government of India and start of use of IV Iron sucrose in management of anemia at these facilities was an achievement of mentoring visit. It is expected to improve pregnancy outcome significantly as anemia in pregnancy is associated with a negative impact on both the maternal and neonatal outcome.

Hypertensive disorders of pregnancy are an important cause of severe morbidity and mortality among mothers and infants^[5], and 10% of all women experience it during pregnancy.^[6] Timely use of magnesium sulfate as per protocol is clearly effective in the management of eclampsia, which is low cost medication as well.^[7,8] But the lack of knowledge of protocols of its use and various other factors were responsible for underutilization

Table 1: Facility-wise major achievements of mentoring visit

Name of Facility	Major achievements after mentoring Visit (Round 2 and Round 3)
CHC Tulsipur	Episiotomy started.
DWH Balrampur	Iron sucrose infusion started as per protocol.
DCH Shrawasti	Iron sucrose infusion and BT improved significantly
CHC Kaiserganj	Iron sucrose injection started. Number of LSCS increased.
DWH Bahraich	Admission and management of eclampsia patients improved.
CHC Colonelganj	Process of empanelment of Gynaecologist is in process and BSU establishment is in process.
DWH Gonda	Forceps and Ventouse deliveries started. UBT use started. OPD is being set up as per protocol.
CHC Mithwal	Iron sucrose administration started. One Gynaecologist is being posted.
DCH Siddharthnagar	Number of LSCS increased. Two new Gynaecologists joined. Assisted vaginal delivery being done.
CHC Partawal	1 Gen Surgeon and 1 Anesthetist have been attached at the facility after advocacy with CMO by RRTC Faculty.
DCH Maharajganj	Posting of gynaecologist is persued.

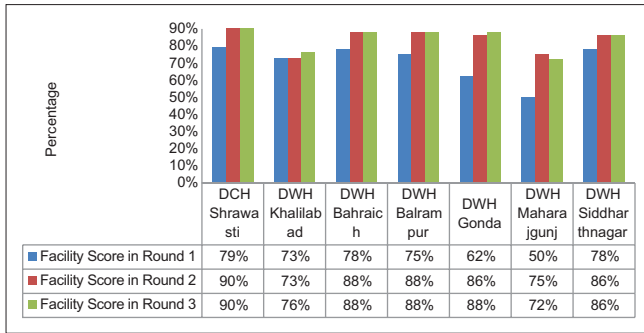


Figure 1: Change in facility scores of district hospitals after mentoring visit

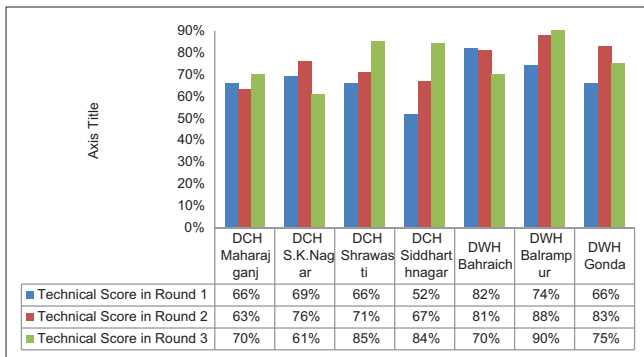


Figure 3: Change in technical score of doctors of DWH after mentoring visit

of magnesium sulfate in these facilities leading to referral of patients to a higher level health-care facility.^[9] The measures of training and confidence building by mentor visits have shown important achievement as medical officers have started to apply as per protocol what they have learnt.

Feedback of mentors achieved rational deployment of specialist doctors at few facilities and consistent motivation and support by medical college faculties during mentoring visits also helped in initiation of LSCS/augmentation of LSCS at certain facilities.

Conclusions

Training and mentorship of medical officers of public health facilities by medical college faculties/specialist in eastern Uttar Pradesh was found effective in terms of improvement of knowledge and skills as well as performance of medical officers. After mentoring visits, they became confident in the management of complications such as severe anemia, eclampsia, and postpartum hemorrhage as per latest guidelines and protocol.

In terms of improvement of overall facilities at these centers, these mentoring visits were proved to helpful only up to some extent. Availability and rational deployment of human resource (specially Gynecologist and Anesthesiologist) requires to look after before perusing any facility for 24 × 7 emergency obstetric care.

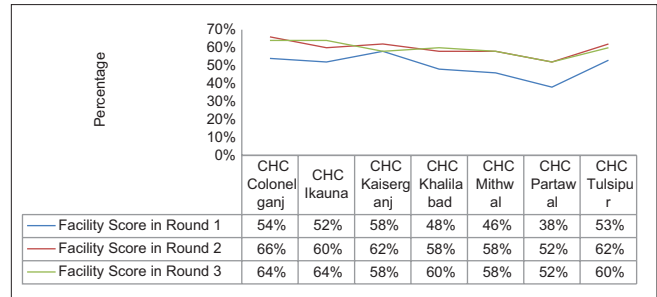


Figure 2: Change in facility score of FRUs after mentoring visit

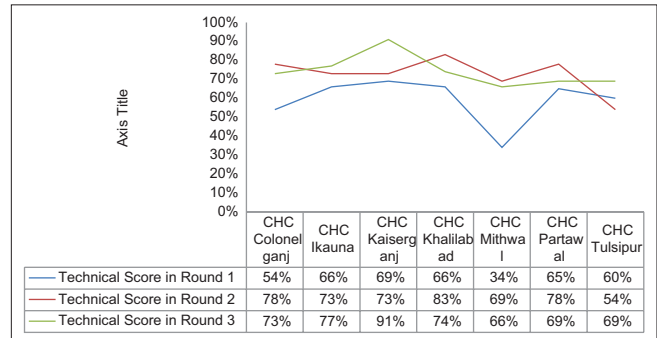


Figure 4: Change in technical scores of doctors of FRUs after mentoring visits

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- Lawn JE, Blencowe H, Oza S, You D, Lee AC, Waiswa P, *et al.* Every newborn: Progress, priorities, and potential beyond survival. *Lancet* 2014;384:189-205.
- Austin A, Langer A, Salam RA, Lassi ZS, Das JK, Bhutta ZA. Approaches to improve the quality of maternal and newborn health care: An overview of the evidence. *Reprod Health* 2014;11(Suppl 2):S1.
- Raven J, Hofman J, Adegoke A, van den Broek N. Methodology and tools for quality improvement in maternal and newborn health care. *Int J Gynaecol Obstet* 2011;114:4-9.
- Sharma J, Neogi SB, Negandhi P, Chauhan M, Reddy S, Sethy G. Rollout of quality assurance interventions in labor room in two districts of Bihar, India. *Indian J Public Health* 2016;60:323-8.
- Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: A systematic review. *Lancet* 2006;367:1066-74.
- Duley L. The global impact of pre-eclampsia and eclampsia. *Semin Perinatol* 2009;33:130-7.
- Aaserud M, Lewin S, Innvaer S, Paulsen EJ, Dahlgren AT, Trommald M, *et al.* Translating research into policy and practice in developing countries: A case study of magnesium sulphate for pre-eclampsia. *BMC Health Serv Res* 2005;5:68.
- Simon J, Gray A, Duley L; Magpie Trial Collaborative

Group. Cost-effectiveness of prophylactic magnesium sulphate for 9996 women with pre-eclampsia from 33 countries: Economic evaluation of the Magpie Trial. *BJOG* 2006;113:144-51.

9. WHO. WHO Recommendations for Prevention and Treatment of Pre-eclampsia and Eclampsia. Geneva, Switzerland: World Health Organization; 2011. [Last cited on 2015 Mar 12].