


BMJ Open Quality Establishing the practice of birth companion in labour ward of a tertiary care centre in India – a quality improvement initiative

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ABSTRACT

Background Birth companion is a key component for providing respectful maternity care and has been recommended by WHO and Government of India. It is a low-cost beneficial intervention that is vital in improving quality of care during labour and delivery.

Local problem Despite the available evidence on benefits of birth companion, there was no policy on allowing birth companion at our hospital in the past.

Methods and interventions We aimed to establish the practice of allowing birth companions in all eligible women in labour ward from existing 0% to 50% in 6 weeks' duration. This study was conducted in the Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi. A quality improvement (QI) team was formed, and after obtaining the baseline data, problems were analysed using fish bone chart. A new policy of allowing birth companion was made and efforts made to sensitise and train the doctors and nurses posted in labour ward. Changed ideas were executed in multiple plan-do-study-act (PDSA) cycles. Simple interventions such as dress code for birth companions, curtains for ensuring privacy, display of posters and frequent reminders on WhatsApp groups were planned.

Results The median value of women accompanied by birth companion marginally increased to 25% after the first PDSA cycle. Implementation of further changed ideas led to increase in median, which reached 66.6%. Thereafter, there was a decline, but by the end of 6 months, it was possible to attain the goal and sustain it.

Conclusions Simple steps of QI methodology can be used to address the prevalent problems in our healthcare. Implementation of any new practice comes with major challenges, but we could achieve our goal because of a motivated team working together on multiple changed ideas applied sequentially in PDSA cycles.

INTRODUCTION

A positive childbirth experience is the right of every woman. Quality care includes good communication, respectful care of the woman in labour, and providing her emotional and social support the way she wants.¹ Across all cultures, women have always been attended to and cared for by other women during childbirth in the past. With advancements

in healthcare, most women now deliver in healthcare facilities, and with this, the concept of birth companion has almost disappeared.² The institutional delivery rate in India has increased in the last decade, leading to an increase in safe delivery and decrease in maternal and perinatal mortalities. However, the increase in institutional delivery has led to isolation of labouring women away from their families.

Women benefit from the presence of a companion during labour as they get both physical and emotional support.³ A birth companion can be any person of a woman's choice who will provide one-to-one continuous support during labour. They can be any one from family (partner/friend/female relative) or society (community worker/doula), preferably someone who has gone through the process of labour and childbirth. The companion can also have a role in helping her communicate her choices and preferences to the healthcare provider; she may also keep the woman well informed about her progress of labour, help her cope with the labour pains by suggesting various non-pharmacological methods, provide back massage and help her in decision-making.²

Birth companion is an evidence-based low-cost beneficial intervention recommended by WHO⁴ and Government of India (GOI)⁵ for all women during labour and delivery. This will be an important step in achieving Sustainable Developmental Goals. According to the updated guidelines for the COVID-19 pandemic by the GOI, birth companion can be allowed in green zones, which are areas with zero COVID-19 cases.⁶

PROBLEM DESCRIPTION

In our labour ward, birth companion during labour and delivery was not a routine practice in the past, and there was a felt need to take



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this initiative to improve the quality of maternity care and to ensure positive pregnancy outcome for every woman.

Available knowledge

It is now well established that continuous support during labour improves the health and well-being of women and their babies. There have been two Cochrane reviews,^{2 7} strengthening the importance of a birth companion. Despite the known benefits, allowing birth companions is not in practice in government set-ups and in most private healthcare facilities in India. Although there are multiple studies providing evidence on the advantages of birth companion,^{8 9} there is a dearth of literature focusing on the method of implementation of a birth companion, which is a major challenge in busy labour and delivery wards. To the best of our knowledge, there is no study from India on the method of implementation of birth companionship.

Rationale

Our aim was to establish a practice of allowing a companion during labour and delivery by using the principles of quality improvement (QI), which included analysis of the problem and implementation of plan-do-study-act (PDSA) cycles for a step-by-step approach to provide quality care. The idea behind taking up the project was that the companion would provide not only emotional support but also other benefits like providing comfort (eg, massage), promoting adequate hydration, facilitating communication between labouring woman and healthcare provider, and decreasing caesarean rates and chances of postpartum depression.

Specific aims

We aimed to establish the practice of allowing birth companion during labour in all eligible women in the labour ward of our hospital from 0% to 50% within 6 weeks (16 January to 28 February 2019).

MATERIALS AND METHODS

Context

The study was conducted in the Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi. It is a tertiary care apex institute in India that caters mainly to high-risk pregnancies and deliveries, with approximately 250 deliveries occurring per month. All the labouring women are monitored and delivered by resident doctors on duty. The labour ward team changes every 2 monthly. The nursing staff are involved in administering the drugs and fluids to the labouring women. They also look after other logistics such as completing all the paper work and formalities after new admission to the labour ward, including entry of the relevant data in the admission register. Before intervention in this QI project, there was no standard policy on allowing birth companion during labour. Patients were kept isolated from their families in the labour ward, allowing the entry of one female relative at a time, once or twice during the

entire process of labour and delivery. Patients were then allowed to meet their relatives/family members after the delivery in the postpartum ward.

Intervention

A QI team was formed comprising two consultant obstetrics, one senior resident doctor, one postgraduate trainee, one staff nurse and one data operator of the labour ward. The baseline data were collected in six shift duties, and it was found to be 0%. The team used process flow charts and fish bone to analyse the prevalent problems. It helped in identification of various causes related to people, place, policy and procedure for not allowing birth companion. The team members closely looked at all the identified causes and realised that, foremost, the doctors and nurses were not fully aware of the labour companionship model and its benefits and therefore never thought of providing birth companion to the labouring women. The other causes were changing labour room team, lack of privacy, overcrowding, lack of the process of counselling, lack of identification of a birth companion and lack of protocol in case of emergencies. Another team meeting was held after 3 days to decide on the method of implementation of birth companion. The team members came up with various change ideas. [Table 1](#) shows the summary of PDSA cycles.

PDSA 1

Unanimously, the first changed idea to be tested was development of a policy on allowing birth companion in labour and sensitisation of doctors and staff nurses of labour ward about the same. The standard operating procedure (SOP) for allowing birth companion during labour and delivery was developed, and the prerequisites of birth companion in accordance with labour room QI initiative (LaQshya) GOI guidelines¹⁰ were defined. The policy was made by a team of faculty of the Department of Obstetrics and Gynaecology. The team met all the doctors and staff nurses posted in labour ward and discussed the need to bring about a change in the current scenario. They were sensitised regarding the benefits of birth companion in improving the utilisation and quality of maternity care and improved maternal and newborn health. This was done with the help of a PowerPoint presentation on respectful maternity care with special emphasis on birth companion as the need of the hour and mandate of GOI. As part of policy, it was decided to have family member as the birth companion as that would not interfere with existing human resources. A layout of plan of implementation was developed. To avoid overcrowding, it was decided to restrict the timings and allow birth companion in active labour to stay for 20 min every 2 hours for the first stage of labour. It was planned to allow birth companion to stay continuously throughout the second stage of labour. During the team meeting, the main concern raised was breach of privacy in the absence of separate cubicles for labouring women. It was decided to use the existing curtains for partition between the

Table 1 PDSA cycles for implementation of birth companion in labour ward

	Plan	Do	Study	Act
PDSA 1 (16–21 January 2019)	Development of a policy and sensitisation of doctors and nurses: <ul style="list-style-type: none"> ▶ Formulation of SOP ▶ Meetings with labour ward team ▶ PowerPoint presentations on respectful maternity care and birth companion ▶ Clear-cut prerequisites of birth companion ▶ Ensuring partition by curtains for privacy 	Implementation of change idea by QI team as planned	Median value of birth companion practice in 25% of deliveries	The idea was adapted. Lessons learnt: It was felt that one-time sensitisation is not enough.
PDSA 2 (22–31 January 2019)	More involvement of labouring women and their family members and continued reinforcement: <ul style="list-style-type: none"> ▶ Counselling by staff nurse at admission ▶ Designated dress code for easy identification of birth companion ▶ Posters ▶ WhatsApp group for daily reminder 	Cycle was carried out as per plan. An additional column was added in birth register for data recording	Data plotted on run chart (figure 2) There was a shift in the median noted after PDSA 2 Median reached 66.6%	The idea was adopted. Lessons learnt: Daily reminders and active participation of patients and their families brought the result. Sustainability needs to be assessed.
PDSA 3 (May 2019)	Modification of SOP in consultation with senior faculty: <ul style="list-style-type: none"> ▶ Sharing of SOP with entire department ▶ Resensitisation of new labour ward team 	Reinforcement by QI team	The percentage of birth companion subsequently declined, but it picked up after PDSA 3 (figure 1)	The idea was adopted. Lessons learnt: Sustainability is difficult with frequent change of labour room teams. Inputs from senior faculty are vital.
PDSA 4 (June 2019 to February 2020)	Sustainability: <ul style="list-style-type: none"> ▶ Policy of giving overs to new labour room team ▶ Regular team meetings ▶ Monthly data review 	Cycle was carried out as per plan	Median value reached 65, and hence the goal of 50% was achieved	Adopted. Lessons learnt: Despite challenges, sequential steps helped in attaining the goal within existing resources

PDSA, plan-do-study-act; QI, quality improvement; SOP, standard operating procedure.

beds in labour ward. As this was a practice that was being introduced for the first time, a policy decision to start the practice was accompanied by strategies to simplify the implementation; hence, they were tested together in the first PDSA cycle from 16–21 January 2019. After the first PDSA, the birth companion started in the labour ward in a median of 25% of deliveries.

PDSA 2

The first group of change ideas were adapted as it was felt that one-time training of doctors and nurses is not enough to help improve the percentage of birth companion. So, apart from continued reinforcement, the second change idea was more involvement of woman and her family in the whole process. This involved clear identification and counselling of the birth companion chosen by the labouring woman by the nurse on duty

at the time of admission. The details of the birth companion were also noted down. Counselling was aided by special posters with clear instructions (Do's and Don'ts) to birth companion that were displayed in the labour ward. The identified birth companion was also provided with purple gowns (different colour for easy identification), slippers, caps and masks. All these changes were again implemented together within the second PDSA, with the idea being a greater involvement of the woman and her family member in the process as drivers of change.

During this period, the first change idea of sensitisation was continued but with a reinforcement by QI team to the on-duty team by creating a WhatsApp group for sharing of ideas, daily data update, daily reminders and sharing of media files.

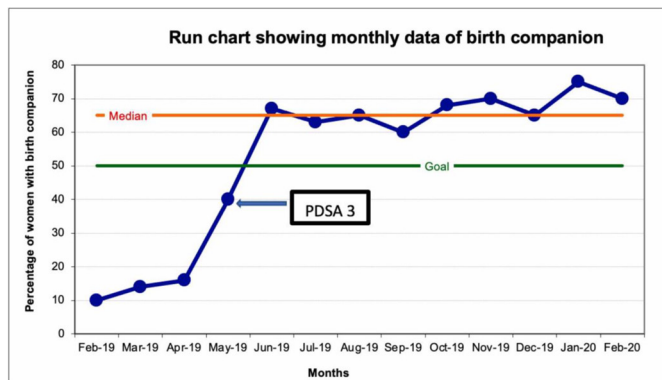


Figure 1 Run chart on monthly data of women with birth companion showing PDSA 3 and sustainability phase. PDSA, plan-do-study-act.

During this period to improve data-keeping in the long run, an additional column was added in the birth register for easy recording of data. These changes were assessed in the next 10 days (22–31 January), and birth companion could be achieved in a median of 66.6% of cases.

PDSA 3

After the initial success, there was serious fall in numbers (figure 1) due to various reasons such as administrative issues and change in labour room team due to which the project lost momentum. To give a boost to the project, the SOP for birth companion was discussed with senior faculty and inputs taken from them. There was a reinforcement on the need for such a practice from the higher authorities and also an understanding that there can be hurdles when implementing the practice in a busy labour room or in case of emergencies. The modified SOP was shared with the entire department, residents and nurses. The QI team resensitised and trained all the doctors and staff nurses in labour ward by holding meeting with the new labour ward team and reinforcing the changes that were initially implemented in PDSA 1. All the above changes were ensured.

PDSA 4

For sustainability, PDSA cycle 4 was carried out where a policy was made on briefing the new labour room team regarding the birth companion policy by the previous team. The QI team helped the new team with frequent reminders and troubleshooting. Regular team meetings were being held once a month to review the data.

Measures

The outcome measure was percentage of eligible women accompanied by birth companion during labour and delivery. It can be calculated as the total number of births accompanied by a companion divided by the total number of eligible vaginal deliveries during the same time period.

Analysis

The team meetings were done weekly to review the data. The baseline median was calculated using the first six

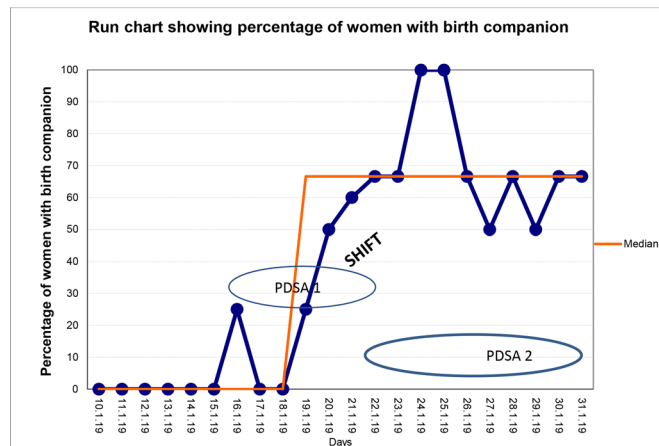


Figure 2 Time series chart (run chart) showing the percentage of women with birth companion (baseline, PDSA cycle 1 from 16–21 January 2019 and PDSA cycle 2 from 22–31 January). This shows shift with reference to the baseline data. PDSA: plan-do-study-act.

data points. Initially, during PDSA cycles 1 and 2, each data point was calculated as the percentage of women accompanied by birth companions per day. The data points were plotted on run chart (figure 2). A shift was noted with reference to the baseline median as seen to begin from 10th data point. At this point of signal (six consecutive points showing shift), a new median was calculated and drawn. Later on, team meetings were held monthly to review the data on sustainability, and monthly percentages were calculated and plotted on time series chart (figure 1).

Patient and public involvement

Counselling and education of patients and family members started from admission to labour ward. Patients were encouraged to have birth companion of their choice. The family members acting as birth companion were involved continuously throughout the labour and delivery up to the postpartum period where they also helped in maintaining skin-to-skin contact and early initiation of breast feeding.

Ethical considerations

This study was exempted from ethics review as per institutional guidelines as it was a QI activity.

RESULTS

After the first PDSA cycle, the median percentage of women who delivered with birth companion increased to 25% from being a non-existent practice. But it was realised that one-time sensitisation and training of doctors and nurses alone are not enough to bring about a change, and further change ideas were tested as outlined above (see section ‘Intervention’). After the second PDSA cycle, the median value of women accompanied by birth companion rose to 66.6%. This increase can be seen as shift of the data points above the median in figure 2. The project lost momentum in the month of February, which

picked up again from the month of May 2019 after PDSA 3. After achieving the goal of 50% in the month of July 2019, it was possible to sustain the results thereafter till the month of February 2020. The run chart in [figure 1](#) shows the upward trend initially, followed by a period of sustainability. Due to the COVID-19 pandemic declared in March 2020, the practice of allowing birth companion has been withheld at our institute.

DISCUSSION

The goal was achieved, but it took more time than initially anticipated. This highlights that at times we may not get results as anticipated because of multiple challenges faced in the implementation of any new practice. At the outset, there were concerns about overcrowding in an already busy labour ward. Healthcare workers on duty were reluctant to offer birth companion in the first week as they thought it would interfere with their functioning and decision-making.

However, gradually it was realised that having a birth companion would not only decrease the perceived anxiety and pain of the labouring woman but also decrease the number of times woman would call the healthcare workers for help. The goal could be achieved because of methodically analysing the problem and sequentially implementing change ideas on a small scale. Of course, the team had setbacks in between with significant fall in numbers and was not able to achieve the target in the desired time duration. But later, it was possible to overcome the barriers because of a highly motivated team.

There has not been any similar study on implementation of birth companion using the QI model. Spencer *et al* conducted a focused group discussion on challenges in implementing continuous support during childbirth in some selected public hospitals in South Africa. They identified challenges such as limited staff, lack of policies and guidelines, lack of space and communication barrier.¹¹ This study addresses these concerns as it was possible to implement birth companion in existing space and infrastructure using curtains for privacy. Challenges of limited staff, resources and communication barrier can be overcome by involving family members as birth companion instead of nurses or doulas.

With the declaration of the COVID-19 pandemic on 12 March 2020, the provision of allowing birth companion in labour ward was withheld due to the practical risk of transmission of the disease as social distancing could not be followed because of space constraints.

LIMITATIONS

We tried to implement birth companion within the existing space and human resources. However, there were days when we failed to provide birth companions despite the availability due to space constraints and lack of privacy on busy and overcrowded ward days as a result of a greater number of admissions. Also, it was not possible to give continuous support in the first stage due to limitations

of infrastructure. In this study, women were counselled and asked about the choice of birth companion at the time of admission to labour ward. Lack of antenatal counselling of woman regarding option of choosing birth companion sometimes led to unavailability of suitable birth companion of their choice.

Future plans

In future, we plan to increase our goal of birth companion from an existing median of 66% to 80%. We plan to achieve this by structured antenatal counselling of woman to develop a birth plan, including the choice of birth companion by 36 weeks. Providing separate cubicles for each woman in labour would help to increase the privacy and therefore increased acceptance by other labouring women and healthcare workers. A new mother and child block is under construction where we hope to achieve the desired results and overcome the limitations of space constraints. We plan to restart the birth companion as per the advisory of Ministry of Health and Family Welfare, GOI on COVID-19 pandemic, which states that birth companions are allowed in green zone (7).

CONCLUSIONS

In this study, simple steps of QI were used to establish the practice of allowing birth companions during labour at our hospital from 0% to 50%. It was a result of multiple change ideas applied sequentially in PDSA cycles. It helped to bring a change in attitude of the healthcare workers along with a system change that helped in sustainability of the project.

Sustainability of the project requires a motivated team under the able leadership of team leader. It also requires active participation of patients and their family members, and taking their feedback is essential to improve the quality. It resulted in many benefits such as improved overall patient satisfaction, reduction in anxiety, maintaining skin-to-skin contact and early initiation of breast feeding.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

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REFERENCES

- 1 Tunçalp Ö, Were WM, MacLennan C, *et al*. Quality of care for pregnant women and newborns—the who vision. *BJOG* 2015;122:1045–9.
- 2 Bohren MA, Hofmeyr GJ, Sakala C, *et al*. Continuous support for women during childbirth. *Cochrane Database Syst Rev* 2017;7:CD003766.
- 3 Kabakian-Khasholian T, El-Nemer A, Bashour H. Perceptions about labor companionship at public teaching hospitals in three Arab countries. *Int J Gynaecol Obstet* 2015;129:223–6.
- 4 World Health Organization. *WHO recommendations: intrapartum care for a positive childbirth experience*. Geneva: World Health Organization, 2018.
- 5 Health Ministry allows Birth Companions during Delivery in Public Health facilities. Press information bureau. government of India, Ministry of health and family welfare dated 25.02.2016. Available: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=136801>
- 6 Guidance Note on Provision of Reproductive, Maternal, Newborn, Child, Adolescent Health Plus Nutrition (RMNCAH+N) services during & post COVID-19Pandemic. Available: <https://www.mohfw.gov.in/pdf/EssentialservicesduringCOVID19updated0411201.pdf> [Accessed 10 Feb 2021].
- 7 Bohren MA, Berger BO, Munthe-Kaas H, *et al*. Perceptions and experiences of labour companionship: a qualitative evidence synthesis. *Cochrane Database Syst Rev* 2019;3:CD012449.
- 8 Kc A, Axelin A, Litorp H, *et al*. Coverage, associated factors, and impact of companionship during labor: a large-scale observational study in six hospitals in Nepal. *Birth* 2020;47:80–8.
- 9 Sheferaw ED, Bazant E, Gibson H, *et al*. Respectful maternity care in Ethiopian public health facilities. *Reprod Health* 2017;14:60.
- 10 LaQshya. *Labor room quality improvement initiative. National health mission, Ministry of health and family welfare*. Government of India, 2017.
- 11 Spencer NS, du Preez A, Minnie CS. Challenges in implementing continuous support during childbirth in selected public hospitals in the North West Province of South Africa. *Health SA* 2018;23:1068.