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An evaluation of the quality of care for women with low risk pregnanacy: The use of evidence-based practice during labour and childbirth in four public hospitals in Tehran

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ABSTRACT

Objective: there is a consensus that the adoption of evidence-based practice contributes to the improvement of maternity care. Iranian National Guidelines for Normal Childbirth included evidence-based practice and were disseminated to hospitals in 2006 but little is known about the success of implementation. This study investigates the provision of care during labour and childbirth in comparison with national guidelines in four public hospitals in Tehran.

Design: this was a descriptive evaluation study and investigated the provision of care during labour and childbirth using current evidence-based practice as the indicator of quality.

Participants and setting: the observational and interview data were collected using checklist and interview guide based upon standards for evidence-based care in four public hospitals in Tehran. In 24 women who were admitted in normal labour, practices were observed until the end of the third stage of labour, to determine concordance with Iranian National Guidelines for Normal Childbirth. A further 100 postpartum woman were interviewed about their care during labour and childbirth in the early postpartum period before discharge from the postnatal ward.

Findings: beneficial and lifesaving practices such as assessing mothers' well-being; removal of the placenta in the third stage of labour, as well as skin-to-skin contact and early initiating of breast feeding were recorded in most cases. However, the use of practices such as routine augmentation and induction of labour, fundal pressure, conducting routine episiotomy were noted.

Key conclusions: this evaluation study shows good practice and areas for improvement as practices fail to meet evidence based standards. Thus, there is potential for quality improvement and economic savings in Tehran maternity hospitals. However closing the gap between guidelines based on best evidence and actual clinical practice in childbirth is a challenge. Practical solutions to enable implementation of evidence-based guidelines for normal childbirth in low risk women require further studies, especially from the providers' perspective.

Implications for practice: national programs which focus on organisational framework, interventions to change provider's attitudes towards the development of a culture of birth as a normal and physiological process are more likely to be important in the Iranian context. Involving professional midwives more in the care for normal childbirth may help to improve quality of care during normal labour and childbirth in terms of evidence-based practice.

Introduction

Achieving quality of care during labour and childbirth is one of the most challenging aspects of the Fifth Millennium Development Goal (5MDG) (WHO, 2005). For many years quality improvements in developing countries have focused on increasing access to skilled

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birth attendants for all deliveries, expansion of facilities as well as access to emergency obstetric care (Langer et al., 1998; Freedman et al., 2007). However, the quality of care for low risk women (70–80% of women) has been neglected and consequently too many women have been treated as high risk cases unnecessarily (WHO, 1996).

There is a consensus that to improve the quality of maternal care during childbirth, the provision of clinical care should be based on the best evidence available (Belizan et al., 2005; Waldenström, 2007). WHO recommends implementation of evidence-based practice within guidelines and policies for labour and childbirth classifying practices as beneficial, ineffective, harmful or doubtful (WHO, 1996). Systematic reviews are encouraged and disseminated through the Reproductive Health Library (RHL, 2014).

In Iran, around one million women give birth in a year of which 96% take place in health facilities (MOHME, 2004). The trends in relation to access to maternity services and skilled birth attendants during childbirth have been favourable and the country has recently reached the 5MDG's target of 75% reduction in maternal mortality (UNFPA, 2012). However in the past four decades, there has been a sharp increase in the Caesarean Section (CS) rate. It was 3% in a maternity hospital in Tehran (Farhud et al., 1986). A report from public hospitals in Iran shows a continuous increase in the proportion of CS out of all deliveries between 1979 and 2009 (Badakhsh et al., 2012). A recent study reports CS rates of 38%, 45% and 48% in Iran and 53%, 60% and 74% in Tehran (capital city) for the years 2005, 2007 and 2009 (Bahadori et al., 2013).

The Ministry of Health and Medical Education (MOHME) and the Social Security Organisation (SSO) provide maternity care in public teaching and non-teaching hospitals. The hospitals run by the MOHME are supervised by medical universities and include teaching and a few non-teaching hospitals. These public hospitals provide free or subsidised low rate health care for women from low and middle income families. Additionally health insurance companies such as Medical Services Insurance Organization (MSIO), Social Security Organization (SSO) and a number of other organisations cover health care costs for their employees (WHO, 2006b). All obstetricians are women in public hospitals. Iranian midwives are university graduates, however, their role in maternity services is limited to being involved in care for normal childbirth in SSO as well as a few non-teaching public hospitals run by MOHME where the obstetricians are the lead caregivers and are responsible for all births. In teaching hospitals where obstetrics residents are trained, they manage all vaginal deliveries to gain experience and midwives are less involved in care for normal childbirth.

The MOHME in Iran has included EBP in guidelines which have been disseminated to all hospitals in order to improve the quality of care during normal labour and childbirth (MOHME, 2006). Therefore these guidelines can be used as a tool for assessing the quality of maternity care (Colomar et al., 2004; Garner et al., 2004). There have been some efforts to evaluate quality of maternity care in Iran using Donabedian's framework (Aghlmand et al., 2008; Simbar et al., 2009; Moosavisadat et al., 2011). This paper forms part of a larger mixed methods study which used Hulton et al.'s (2000) framework for exploring quality of care during labour and childbirth (Pazandeh, 2014). Hulton et al.'s (2000) framework stresses that quality of care should be consistent with current professional knowledge (Hulton et al., 2000). This paper aimed to investigate the provision of care during labour and childbirth in comparison with national guidelines in four public hospitals in Tehran.

Methods

Study site, population and sampling

The provision of care during labour and childbirth was investigated in two studies (one observational, one interview-based) in four public hospitals (two teaching and two non-teaching, one of MOHME and one managed by SSO) between October, 2011 and April, 2012.

Participants for the observational study were women with full-term pregnancy whose labour started spontaneously and delivered a healthy infant by normal vaginal childbirth. Thirty five non-participant observations were conducted of which 24 were completed and used for the analysis. The others were not used because four women were taken to CS because of insufficient progress of labour or irregular Fetal Heart Rate (FHR); one woman was taken to the operation room because of retained placenta; six women delivered during night shifts and the observation records were incomplete.

Participants in the interviews were women seen early post partum who were healthy and delivered a full term, singleton and healthy infant by vaginal childbirth without complication. A convenience sampling approach was used and the number of women required for interviews at each hospital was calculated according to the proportion of normal deliveries in each hospital (quota sampling). In hospitals A, B, C and D, 24, 35, 18, 23 women were recruited respectively. Hospital A and D were teaching hospitals and hospital B and C were non-teaching hospitals. Five per cent of women refused to take part in the interview because of tiredness, their infant was crying or they were discharged and wanted to leave the ward. Overall, 106 participants were recruited; of these 100 interviews were used; six interviews were excluded because four were incomplete (women were discharged and wanted to leave the ward), one woman's third stage of labour had taken longer, one woman's baby was not well at the time of childbirth.

Observation and interviews

The observational data were collected using a checklist and the interview based upon standards for evidence-based care using WHO guidelines for normal childbirth (WHO, 1996) and Iranian National Guidelines for Normal Childbirth (MOHME, 2006). The selected beneficial practices were: assessment of the well-being of the woman and baby during labour, monitoring practices to check the progress of labour, freedom to drink oral fluid, to eat light diet, freedom to walk during labour, freedom of position during labour and childbirth, early skin-to-skin contact between mother and child and Active Management of Third Stage of Labor (AMTSL) and early initiation of breast feeding. The harmful and doubtful practices included routine use of enema, routine use of pubic shaving, routine intravenous infusion, early amniotomy, routine Oxytocin augmentation, fundal pressure, routine episiotomy, and routine manual exploration of the uterus after childbirth.

The data about actual care were recorded using observations of routine care during labour and childbirth. The structured observation checklist comprised the options: 'Yes', 'No' or 'Not applicable'. The observation checklist was piloted by two observations which were conducted with a research assistant to make sure the research was feasible and well observed.

The interview schedule consisted of closed questions and collected data on demography, routine practices in admission, labour and postpartum wards which could not be recorded during the observational study. To obtain content validity, firstly, all the constructed tools were reviewed by six experts in the UK and Iran.

Organisation of the data collection

The selected routine care and practices which were performed during labour and childbirth were observed until the end of the third stage of labour and the observation ended with the transfer to the postpartum ward. Participants were recruited consecutively

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