



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1042595>Available online at: <http://www.iajps.com>

Research Article

**THE COMPLIANCE OF HEALTH PROVIDER ABOUT CARE IN
THE FIRST STAGE OF LABOUR WITH NATIONAL
GUIDELINES: AN OBSERVATIONAL STUDY IN KHUZESTAN
PROVINCE IN IRAN****Running head:** Care in first stage of labour and guidelines**Poorandokht Afshari¹, Fatemeh Ashian², Parvin Abedi^{3*}**¹MS.c in Midwifery, lecturer in Midwifery Department, Reproductive Health promotion Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran² MS.c in Midwifery, Azad University, Masjed Solaiman Branch, Iran³ PhD in Community Nutrition, Associate Professor, Midwifery Department, Reproductive Health promotion Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran**Abstract:****Objective:** The primary aim of this study was to evaluate the compliance of health provider about care in the first stage of labour with national guidelines in Khuzestan province, Iran.**Methods:** This was a descriptive and observational study. The practice of care providers against low risk pregnant women were observed in 15 hospitals affiliated to the Ahvaz Jundishapur University of Medical Sciences in Khuzestan province. Data collected through a questionnaire and a check list, which were completed by two master students in midwifery. Participants included 400 low risk pregnant women who admitted to the delivery wards in 15 hospitals.**Results:** Results of this study showed that; some interventions during labour should not be used routinely according to the national guidelines for childbirth. These interventions were including; routine establishment of an intravenous route (100%), induction and augmentation of labour (38.5%), using oxytocin (46%), forcing women to be in the particular position (93%). Most women (82.3%) not allowed eating or drinking.**Conclusion:** Results of this study showed that; the care provided in the first stage of labour was not according to the national guideline for childbirth issued by Ministry of Health. Hospital staffs especially midwives need to participate in the retraining courses about care in the first stage of labour.**Key words:** Labor first stage, Compliance, Health personnel**Corresponding author:****Parvin Abedi,***PhD in Community Nutrition,
Associate Professor, Midwifery Department,
Reproductive Health promotion Research Center,
Ahvaz Jundishapur University of Medical Sciences,
Ahvaz, Iran**E-mail parvinabedi@ymail.com**Phone No: 00989163132793**Fax No: 00986113738333*

QR code



Please cite this article in press as Parvin Abedi et al, *The Compliance of Health Provider about Care in the First Stage of Labour with National Guidelines: An Observational Study in Khuzestan Province in Iran*, *Indo Am. J. P. Sci*, 2017; 4(11).

Support: This research is a part of the master thesis of Fatemeh Ashian. All expenses of this research work were provided by Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

INTRODUCTION:

One of the goals of Millennium Development is to decrease the maternal mortality by 75% by 2015.¹ The most pregnancy related maternal mortality occurs in developing countries.² Adequate care during pregnancy, labour, delivery and postpartum can decrease the rate of maternal mortality.³

The first stage of labour contains two latent and active phases. The onset of labour may recognize by women themselves, when the contraction starts and by the means of professional confirmation about cervical dilation.⁴ Health providers should provide care in the intrapartum period to avoid any complication for mother. The standard intrapartum care is issued by National Collaborating Center for Women's and Children Health (NICE).⁵

In the third strategic program for social, economic and cultural development in Iran (1999-2003) the reduction of maternal mortality was emphasized. In early 1999, the strategic program aimed on improvement and revising of national program of safe motherhood to reduce the maternal mortality rate was started. At first, the current situation of maternal mortality was assessed. The results showed that; there were some weaknesses and threats including: lack of standard guidelines for routine care during pregnancy, delivery and postpartum, lack of standard guidelines for care of high risk pregnancy, low quality of delivery and postnatal services in hospitals and delivery facilities, lack of technical skills and knowledge of care providers and the low quality of services outside of hospitals.⁶

According to this assessment, the content of care was not clarified for midwives and medical doctors. They did not act according to the standard guidelines and just provide care according to what they learned in their universities. Since university education is not guarantee for good quality of care, and the timely action can save lives of mother and their babies, therefore the standardization of health care was started. The Iranian guidelines for care during labour and delivery issued according to the World Health Organization.⁷

Studies showed that most of maternal deaths in Iran occur in hospitals and some of them are due to the lack of good health care or unstandardized health care.⁸ Also studies show that; the rate of cesarean section in Iran is much higher than that in the European countries and even more than the safe number (5-15% of all deliveries) which announced by World Health Organization (WHO). It seems that over medicalization in labour and delivery was an effective factor in increasing the rate of cesarean.⁶

In addition, studies revealed that; the quality of care provided in hospitals in Iran is not similar to other countries.⁹ The pathologic behavior toward the pregnant women during the past decade, leading to unnecessary medical interventions such as;

establishment of intravenous route, forcing mother to be in a particular position, frequent internal examinations, enema and prevent mother from fluid and food intake.¹⁰ In a study in delivery wards in Sweden, results showed that; only three out of 48 delivery wards had written policies about four criteria in delivery and there was more variety of health care in hospitals without written protocol.¹¹ Results from another study by Kvist *et al*., showed that almost all medical records contained partogram, but maternal blood pressure were measured in 54.9% cases, psychological support was performed in 2.4% and physical support performed in 3.6% of cases.¹² In a study which was conducted by Omidvar in Mashhad, Iran, the physical and psychological support was reported in the medium range.¹³ Inadequate knowledge and experiences during maternal care can cause physical and psychological damage to the mother and newborn.¹⁴ This study aimed to evaluate the compliance of health providers in care during first stage of labour with national guidelines in Khuzestan Province, Iran.

MATERIAL AND METHODS:

This was a descriptive observational study in 15 hospitals in Khuzestan Province, Iran. This study started in February and completed in July 2012. The design of this study was approved by the Ethics Committee of Ahvaz Jundishapur University of Medical Sciences, Iran. The inclusion criteria were; having single fetus, term pregnancy and cephalic presentation. Women with preeclampsia, post-term and preterm pregnancy, repeated cesarean, and medical problem in pregnancy were excluded from the study. Head of each delivery ward provided the written consent for observation and all staff was informed about observation. Also a written informed consent was obtained from each woman.

Setting: Fifteen hospitals with delivery wards were randomly selected among 37 hospitals in Khuzestan province. Khuzestan province is located in Southwest of Iran and has about 4,500,000 populations (census 2011). Considering that; during 2009, 30, 150 (79%) deliveries occurred in hospitals affiliated to Ahvaz Jundishapur University of Medical Sciences, the sample size for each hospital calculated based on the number of deliveries in 2010. Totally 400 deliveries were observed by researchers. Overall, three hospitals were educational and 12 hospitals were governmental. Educational hospitals have medical and paramedical students for training, while governmental hospitals do not have any student on training. In educational hospitals most normal vaginal deliveries are done by obstetricians and midwives do care during labour and also administrative tasks. But in the public hospitals care during labour and also delivery are done by midwives under the supervision of obstetricians.

A questionnaire and a check list were prepared for data collection. Socio-demographic data were collected by interview. The check list consisting of 63 questions was prepared according to the national guidelines for the first stage of labour issued by Ministry of health.

Two master students of midwifery were responsible for data collection. Researchers attended in the different shifts in the hospital for maximum coverage.

Statistics

Data entry and analyzing was done using SPSS version 17. Descriptive statistics was used for describing data.

RESULTS:

The total number of participants who observed in the public and educational hospitals was 308, and 92 respectively. The mean age of women was 26.1 years; most of them had high school education and were homemaker. The socio-demographic characteristics and midwifery history of participants are listed in Table 1. The national guideline for the first stage of labour was existed in 93.3% of hospitals. However, only 16.7% of staff in the public hospitals and 33.3% in the educational hospitals were trained about national guideline for the first stage of labour. Almost all decisions for parturient were taken by obstetrician (100% and 66.7% in the public and educational hospitals respectively).

In 204 (51%) of participants the criteria for admission in hospital was including uterine contraction, dilation and effacement of cervix. The least frequent measures in the admission time were respiratory rate (3.2%) and physical examination (3%). The most frequent procedures were performed in the admission time were; vaginal examination (100%), measurement of blood pressure (97.8%) and evaluation of vaginal discharge (97%) (Table 2).

In terms of physical, psychological supports and respect to the patient's right, the least respect was due to the providing information before every medical procedure and obtaining consent before each procedure. None of pregnant women had right to have someone with her in the delivery ward. Only 20.8% of women in the public and 4.3% of women in the educational hospitals had right to chose their position according to their desire. Most of women were not allowed to take drink or food per oral during the first stage of labour (Table 3). As evident in Table 4, partogram were drawn in less than 50% of cases. Cervical stripping was performed around 50% of cases and in 50% of cases in public hospitals, health providers used medication for speed-up labour. Most women in two types of hospitals (81.8% in public and 93.5% in educational hospitals) were internally examined according to the health providers' decision (Table 4).

Table 1: Socio-demographic characteristics of women who planned gave birth in educational and public hospitals in Khuzestan

Variable	Public hospitals n=308	Educational hospitals n= 92
	N(%) or Mean± SD	
Age	26.1±5.3	25.8 ±6.3
Education		
Illiterate	51(16.6)	22(23.9)
Primary	67(21.8)	24(26.1)
High school	98(31.8)	36(39.1)
Diploma	69(22.4)	10(10.9)
University education	23(7.5)	0
Gravity	2.3±1.32	2.51±1.37
Delivery	1.06±1.2	1.32±1.3
Abortion	0.13±0.39	0.18±0.44
Live children	1±1.2	1.26±1.33

Table 2: Frequency of history taking, physical and internal examination by health providers in time of admission

Variable	Public hospitals n= 308	Educational hospitals n= 92
	N (%)	
Vaginal examination	308(100)	92(100)
History taking	94(30.5)	57(62)
Physical examination	1(0.3)	11(12)
Checking Temperature	135(43.8)	68(73.9)
Checking Blood pressure	299(97.1)	92(100)
Checking Pulse	94(30.5)	59(64.1)
Checking Respiratory	8(2.6)	1(1.1)
Estimating of fetus's weight	22(7.1)	6(6.5)
Checking of Fetal heart	305(99)	92(100)
Enema	0	0
Checking of Vaginal discharge	296(96.1)	92(100)

Table 3: The physical comfort, patient' right and psychological support for parturient in the first stage of labour

Variable	Public hospitals n= 308	Educational hospitals n= 92
	N(%)	
Respect to privacy of women	108 (35.1)	19(20.7)
Providing information before medical procedure and examination	19(6.2)	0
Obtaining consent before medical procedure	4(1.3)	4(4.3)
Having someone with her during labour	0	0
Having an adjustable bed	230(74.7)	89(96.7)
Clean bed sheet	299(97.1)	90(97.8)
Clean pillow	205(66.6)	50(54.3)
Clean draw sheet	299(74.4)	47(51.1)
Clean blanket	113(36.7)	25(27.2)
Clean dresses	288(93.5)	60(65.2)
Position of women in the first stage of labour		
Lying on side	164(53.2)	71(77.2)
Lying on back	75(24.4)	17(18.5)
According to mother's desire	64(20.8)	4(4.3)
Routine establishment of an intravenous route	308(100)	92(100)
NPO	244(79.2)	85(92.4)
Permission to eat food (fluids and smooth soup)	61(19.8)	7(7.6)

Table 4: Distribution of medical procedures during the first stage of labour

Variable	Public hospitals	Educational hospitals
	n= 308	n= 92
	N(%)	
Drawing partogram	129(41.9)	44(47.8)
Oxytocin for augmentation	146(47.4)	38(41.3)
Amniotomy	182(59.1)	64(69.6)
Fetal heart auscultation every 30 min	196(63.6)	61(66.3)
Bladder care	219(71.1)	55(59.8)
Cervix stripping	144(46.8)	43(46.7)
Using medicine to speed up labour	154 (50)	0
Vaginal examination upon the health provider' decision	252(81.8)	86(93.5)

DISCUSSION:

This study aimed to evaluate the compliance of health providers in care during first stage of labour with national guidelines. Results of this study showed that; the national guidelines for the first stage of labour is exist in almost all hospitals in Khuzestan province, but only few percentages of staff were trained regarding this guidelines. In a study by Stalhammar *et al* ., in Sweden, they found that; among 48 labour wards, only three of them had written policies regarding four main issues. Written policies about criteria for labour onset was existed in 11 wards and they concluded that; lack of policies could imply a risk for nonevidence-based labour management .¹¹ Unlike Stalhammar *et al*'s study, the problem in our study was not the lack of guidelines, and it was lack of compliance with this guidelines.

A study conducted by Harvey *et al.*, in four developing countries, revealed that the competence of health providers were not according to the evidence-based standards and only 55% of staff had good knowledge about what they should perform.¹⁵ Our results indicated that; for all women in hospitals intravenous route was established and most of women had to choose their position according to the care providers' order. A study in Sweden showed that; intervention not recommended by WHO e.g. routine establishment of an intravenous route and routine amniotomy during first stage of labour are widespread in the labour wards.¹²

In Iranian educational hospitals, obstetricians are responsible for reception and treatment of low risk pregnant women and it may increase unwarranted interference in labour. In a systematic review on which 11 trials (12,276 women) recruited, results showed that; women with midwife led- care had more spontaneous vaginal birth (RR 1.04, 95% CI: 1.02-1.06) and feeling control during childbirth (RR 1.74, 95% CI 1.32- 2.30).¹⁶ Recently a

systematic review of three meta-analytic reviews showed that midwife-led care for low-risk women is better for a range of maternal outcomes, could reduce the number of interventions in labour and increased satisfaction with care.¹⁷

Our results revealed that; in most of cases physical needs of women were met; however, their psychological needs especially in terms of respect to the patients' right have been ignored. These findings are in line with Gagnon *et al*'s study in Québec that they found; the percentages of time spent in supportive care by intrapartum unit nurses was 6.1% based on 3,367 observations. Nurses with less than seven years of intrapartum experience spent 2.7% more time providing care than nurses with more than seven years. The researchers concluded that; intrapartum unit nurses spent a small amount of time providing supporting care to women in labour .¹⁸

The results of present study indicated; only less than 50% of care providers draw partogram. A study in Pakistan by Javed *et al*, showed that; after introducing partogram in hospitals, frequency of prolonged and augmented labour and vaginal examinations reduced significantly.¹⁹ Unlike the Javed *et al*'s study it seems that; many staff need to educate the critical role of partogram. A quasi-experimental study on educational program for proper use of partogram showed that; using on the job training program could sufficiently increase the competence of health providers in using partogram.²⁰

A study in Angola showed that midwives, who worked independently, believed that; partogram is an important instrument and continuous learning may act a critical role in their carrier as an autonomous midwife.²¹

A study conducted on effect of educational program on the ability of midwives to interpret antenatal cards and partograms in South Africa showed that; ability of women for interpreting

antenatal cards and the partogram improved significantly after intervention.²²

While there is no evidence to support amniotomy, about 65% of care providers in our study attempted to amniotomy in the first stage of labour. A systematic review including 14 studies, involving 4,893 women showed that; there no evidence to support amniotomy for improving the length of first stage of labour and maternal satisfaction.²³

This is the first time that we assessed the policies for management of the first stage of labour through an observational study. Other studies are based on official reports of head of maternity wards. In addition, we tried to cover all shifts in hospitals.

CONCLUSION:

Results of this study showed that; the compliance of health providers in the first stage of labour with national guidelines is not good. Hospital staffs need to be trained and have in-service training about evidence based care of the first stage of labour.

Author contribution

PA, FA and PA were involving in study concept and design. FA was responsible for acquisition of data. PA, FA and PA were involving in analysis and interpretation of data. FA was responsible for drafting of manuscript. Critical revisions of the manuscript for important intellectual content and statistical analysis were done by PA, FA and PA. Study supervision was done by PA and PA.

Financial disclosure

There is no conflict of interest. This research is a part of the master thesis of Fatemeh Ashian. All expenses of this research work were provided by Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

REFERENCES:

1. United Nations, authors. UN Millennium Development Goals Web site. Available at: <http://www.un.org/millenniumgoals/> [Accessed June 25, 2008].
2. World Health Organization (WHO), authors The World Health Report 2005: Make Every Mother and Child Count. Geneva, Switzerland: WHO; 2005. http://www.who.int/whr/2005/whr2005_en.pdf. [Accessed June 25, 2008].
3. Khat M, Ronsmans C. Deaths Attributable to Childbearing in Matlab, Bangladesh: Indirect Causes of Maternal Mortality Questioned. *Am J Epidemiol* 2009; 151(3), 300-306
4. Friedman EA. The graphic analysis of labor. *Am J Obstet Gynecol* 1954;68(6):1568-75.
5. Intrapartum care: care of healthy women and their babies during childbirth. National Collaborating Centre for Women's and Children's Health (UK). London: RCOG Press; 2007.

6. Ministry of Health and Medical Education (MOHMED). Population and Family Health Office. Maternal Health Office. National maternal health in the 4th social, economical and cultural development program. 2005-2009.

7. World Health Organization, Care in Normal Birth: A Practical Guide. Report of a Technical Working Group, Department of Reproductive Health and Research, Editor 1999: Geneva, Switzerland.

8. World Health Organization (WHO). Trends in maternal mortality: 1990-2008. Geneva, 2010. Available at: http://whqlibdoc.who.int/publications/2010/9789241500265_eng.pdf

9. Tajik P. Inequality in Maternal Mortality in Iran: An Ecologic Study. *Int J Prev Med.* 2012; 3(2): 116-121

10. Ministry of Health and Medical Education (MOHMED). Maternal Health Office. The national guidelines for normal vaginal delivery and non-pharmacological methods of pain reduction during labour. 2004.

11. Stalhammar A, Bostrom B. Policies for labor management –existence and content. *Scand J Caring Sci.* 2008; 22(2):259-264. DOI: 10.1111/j.1471-6712.2007.00524

12. Kvist LJ, Damiati N, Rosenqvist J, Sandin-Bojö AK. Measuring the quality of documented care given by Swedish midwives during birth. *Midwifery* 2011; 27(6): 188-94. DOI: 10.1016/j.midw.2010.07.001.

13. Omidvar AD. Comparison of physical and spiritual care quality during labour from the prospective of nulliparous and multiparous women. *The Scientific Journal of Nursing and Midwifery Mashhad.* 2003; 5(15):73-8 (In Persian)

14. Hodnett ED, Gates S, Hofmeyr GJ, Sakala C, Weston J. Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews.* 2011; Issue 2, Art, No: CD003766. DOI:10.1002/14651858. CD003766.pub3.

15. Harvey SA, Ayabaca P, Bucagu M, Djibrina S, Edson WN, Gbangbade S, et al. Skilled birth attendant competence: an initial assessment in four countries, and implications for the safe motherhood movement. *Int J Gynaecol Obstet* 2004; 87:203-10

16. Hatem M, Sandall J, Devane D, Soltani H, Gates S. Midwife-led versus other models of care for childbearing women. *Cochrane Database of Systematic Review.* 2008; Issue 4. Art No: CD0044667. DOI: 10.1002/14651858. PUB2.

17. Sutcliffe K, Caird J, Kavanagh J, Rees R, Oliver K, Dickson K, et al. Comparing midwife-led and doctor-led maternity care: a systematic review of reviews. *J Adv Nur* 2012; 68(11):2376-86. DOI: 10.1111/j.1365-2648.2012.05998.x.

18. Gagnon AJ, Waghorn K. Supportive care by maternity nurses: a work sampling study in an intrapartum unit. *Birth* .1996; 23(1):1-6
19. Javed I, Bhutta S, Shoaib T. Role of partogram in preventing prolonged labour. *J Pak Med Assoc* Aug. 2007; 57(8): 408-11
20. Pettersson KO, Svensson ML, Christensson K. Evaluation of an adapted model of the World Health Organization partograph used by Anolan midwives in a peripheral delivery unit. *Midwifery* 2000;16(2):82-8
21. Pettersson KO, Svensson ML, Christensson K. The lived experiences of autonomous Angolan midwives working in midwifery-led maternity units. *Midwifery* 2001; 17(2):102-14.
22. Theron GB. Effect of the maternal care manual of the perinatal education programme on the ability of midwives to interpret antenatal cards and partograms. *J Perinatol* 1999;19(6): 432-5
23. Smyth RMD, Alldred SK, Markham C. Amniotomy for shortening spontaneous labour. *Cochrane Database of Systematic Review*. 2007; Issue 4. Art No: CD006167.doi: 10.1002/14651858.