BJOG: an International Journal of Obstetrics and Gynaecology
September 2005, Vol. 112, pp. 1270–1276
DOI: 10.1111/j.1471-0528.2005.00710.x

Routines in facility-based maternity care: evidence from the Arab World

Choices and Challenges in Changing Childbirth Research Network[1]

Objectives To document facility-based practices for normal labour and delivery in Egypt, Lebanon, the West Bank (part of the Occupied Palestinian Territory) and Syria and to categorise common findings according to evidence-based obstetrics.

Design Three studies (Lebanon, West Bank and Syria) interviewed a key informant (providers) in maternity facilities. The study in Egypt directly observed individual labouring women.

Setting Maternity wards.

Sample Nationally representative sample of hospitals drawn in Lebanon and Syria. In the West Bank, a convenience sample of hospitals was used. In Egypt, the largest teaching hospital's maternity ward was observed.

Methods Shared practices were categorised by adapting the World Health Organization's (WHO) 2004 classification of practices for normal birth into the following: practices known to be beneficial, practices likely to be beneficial, practices unlikely to be beneficial and practices likely to be ineffective or harmful.

Main outcome measures Routine hospital practices for normal labor and delivery.

Results There was infrequent use of beneficial practices that should be encouraged and an unexpectedly high level of harmful practices that should be eliminated. Some beneficial practices were applied inappropriately and practices of unproven benefit were also documented. Some documented childbirth practices are potentially harmful to mothers and their babies.

Conclusion Facility practices for normal labour were largely not in accordance with the WHO evidence-based classification of practices for normal birth. The findings are worrying given the increasing proportion of facility-based births in the region and the improved but relatively high maternal and neonatal mortality ratios in these countries. Obstacles to following evidence-based protocols for normal labour require examination.

INTRODUCTION

Childbirth is a significant event in a woman's life, with important implications for her physical and psychosocial wellbeing. Despite considerable debate and research, facility practices for normal, non-complicated labour are not standardised. In spite of the promotion of evidence-based obstetrics, there are still large gaps between actual practices and scientific evidence both in developed and developing countries.[1] The uncritical adoption of interventions that have not been evaluated poses risks to the mother and her child as practices may be ineffective or even harmful. Furthermore, practices may yield more negative outcomes in contexts where understaffing and overcrowding pose service delivery challenges, as is often the case in developing countries.

Improving maternal health is one of the Millennium Development Goals[2] and ensuring access to skilled attendants at delivery is one of the priorities for the Safe Motherhood Initiative.[3] While it is generally assumed that facility practices for normal labour are not problematic, data on normal labour practices in maternity facilities in developing countries with high maternal mortality levels are lacking. Most studies of delivery practices in developing countries have understandably concentrated on high risk pregnancies and emergency obstetric care, in the attempt to reduce maternal mortality. The few that have documented selected practices for normal delivery, in Zambia,[4] Latin America,[5] China,[6] South Africa[7] and the Dominican Republic,[8] have all shown deviations from established best practice.

The limited data available on maternal mortality in most Arab countries suggest levels have declined.[9] For example, in Egypt, the maternal mortality ratio has declined from 174 per 100,000 live births in 1992–1993 to 84/100,000 in 2001.[10,11] The decreases in maternal mortality levels in most of these countries have mirrored increases in the proportion of facility-based births (most recently estimated at 59% in Egypt,[12] 88% in Lebanon[13] and 55.4% in Syria[14]), as well as increases in levels of skilled attendants at delivery (most recently estimated at 70% in Egypt,[12] 92% in Lebanon[13] and 97% in the West Bank,[15] 87% in Syria[14]). The health systems in the four countries are differently structured. Lebanon has a highly dominant private sector. In Egypt and Syria, both private and public sectors play

Correspondence: T. Kabakian-Khasholian, Faculty of Health Sciences, American University of Beirut, P.O. Box 11-0236, Beirut, Lebanon.
[1] List of group members can be found at the end of the article.

important roles in service delivery. In the West Bank (part of the Occupied Palestinian Territory), the public sector currently plays a more significant role than either the non-governmental organisations (NGO) or the private sector. The continuous political turmoil in the region also affects the prioritisation and the organisation within health care systems, as well as access to health care.

In the Arab region, studies of normal delivery practices have an ethnographic orientation and have concentrated on home births and traditional practices. Little is known of obstetric practices in facilities for normal labour and delivery, and of their relationship to evidence-based obstetrics. The lack of data on routine facility practices in these countries is worrying, especially considering examples such as Egypt where 49% of maternal deaths occur within 24 hours of delivery, with provider mismanagement being identified as the leading factor contributing to maternal death.[11] This paper presents selected findings from four studies documenting routine obstetric practices in Egypt, Lebanon, Syria and the West Bank and compares these to evidence-based best practice. Other findings are presented elsewhere.[16–20]

METHODS

The four studies were carried out separately by multidisciplinary research teams based in different institutions and affiliated with the Choices and Challenges in Changing Childbirth initiative, a regional research network based at the Faculty of Health Sciences, American University of Beirut. Data collection approaches differed according to local circumstances, with modifications being made to successive instruments to improve them.

In Lebanon, a random sample of 39 hospitals was drawn, stratified by geographical area and type of hospital and included both private and public facilities. The study team contacted each hospital in the sample explaining the purpose of the study and requesting their participation. Informed consent was obtained from each interviewee. Interviews were conducted with either the general manager, the head obstetrician or the head midwife. The response rate was 100%. A structured questionnaire was used to collect information on a restricted range of normal birth practices only; a total of 42 practices were considered.

In Syria, a random sample of 57 hospitals out of a total of 235 hospitals was drawn stratified by geographical area, type of hospital and affiliation. Informed consent was obtained both from the hospital administration and the interviewee. The interviews were conducted with either the chief physician, the head midwife or the general manager of the hospital. There were no refusals. The structured questionnaire used comprised scales to measure frequency of application for all of the 78 routine practices for normal labour, delivery and postpartum described by WHO.[21] All births were considered in this study.

In the West Bank, hospital policies and practices for normal childbirth were collected from 25 out of the total

Table 1. Data collection approaches used in the four studies.

	Egypt	Lebanon	Syria	West Bank
Number of hospitals selected/hospitals with maternities	1	39/140	57/235	25/37
Sampling method	Chosen because it is the largest teaching hospital delivering 20,000 women annually	Random stratified by geographic area, type of hospital and hospital classification	Random stratified by geographic area, type of hospital and affiliation, level	Convenience sample
Total interviews	172 labouring women interviewed; 188 labouring women observed	39	57	55
Data collection tools	Observation checklist; semi structured interview; qualitative diary of ward events	Structured questionnaire with scale for frequency of implementing a specific practice	Structured questionnaire with scale for frequency of implementing a specific practice	Semi structured questionnaire
Number of questionnaire items	200	84	122	101
Practices covered	44	42	78	31
Type of birth	Normal births only	Normal births only	All births	Normal births only
Interviewees	Delivered women and providers	Head obstetrician or owner/director or head nurse/midwife	Chief physician/midwife and/or general manager	Chief obstetrician and head midwife from each hospital
Interviewers	12 female obstetricians, not on facility's staff	2 graduates in public health and one medical student	Obstetricians and public health specialists	Physician or midwife (including principle investigators at 80% of hospitals)
Time conducted	October–November 2001	October–December 1997	June–August 2000	April 2002–June 2003

Table 2. Percent distribution of practices classified as beneficial forms of care as observed in the hospital in Egypt and as reported by hospitals in Lebanon, Syria and the West Bank.

Practices	Egypt	Lebanon	Syria	West Bank
Physical, emotional and psychological support (presence of caregiver)	Data NA	Doctor/midwife/nurse present 100%	Labour: always 47%; never 35%. Delivery: always 11%; never 79%	Midwife/doctor present 88%; never 4%
Administration of antiD immunoglobulin to Rh-negative women	100%	Data NA	98%	Data NA
Prophylactic oxytocin in the third stage of labour	84%	Data NA	Always 19%; never 58%	96%
Active management of third stage of labour	15% appropriate management	Data NA	12.5%	71%
Rooming-in	100%	26%	91%	84%

number of 37 maternity hospitals. Problems of access meant that 12 (mostly small private hospitals) out of a total of 37 maternity facilities could not be included. After obtaining informed consent, both the head obstetrician and the head midwife were interviewed in each hospital. Semi-structured questionnaires were used, collecting information on hospital services and equipment, staffing and roles of different types of providers, reporting mechanisms, routine policies and practices for normal childbirth, in addition to provider's satisfaction and perceptions of the emergency situation's effect on routine birthing care. All practices listed by WHO[21] as part of the normal labour, delivery and postpartum care were used in the West Bank study. Only normal births were considered.

The Egyptian study conducted direct individual observations of 176 labouring women from admission to discharge and 12 women for portions of the process, over 28 consecutive days and nights, in Egypt's largest obstetric teaching hospital in Central Cairo, which has an average of 20,000 deliveries per year. It was chosen for its leading role in shaping obstetric practices in the country through the large number of deliveries conducted and the number of junior providers trained annually. Observations were done by non-staff female obstetricians using a 200-item checklist covering 537 variables after obtaining informed consent. One woman refused to be observed.[17,22] Ward practices were also recorded and mothers were interviewed postpartum. This study documented actual obstetric practices and

Table 3. Percent distribution of forms of practices that are likely to be beneficial as observed in the hospital in Egypt and as reported by hospitals in Lebanon, Syria and the West Bank.

Practices	Egypt	Lebanon	Syria	West Bank
Respecting women's choice of companion during labour and birth	0%	Labour: 74% always; 10% never. Delivery: 33% always; 46% never	16% always; 21% never	60% always; 40% never
Giving women as much information as they desire	Sharing vaginal exam findings or progress status: labour 17%; delivery 31%	Policy to discuss contraceptive methods: 59% yes; 33% some women. Provide family planning: 23%	88% always	Routine information: 76% always; 4% when asked; 16% no; 4% if available time. Breastfeeding advice: 92% yes; 8% no. Contraceptive advice: 16% yes; 16% when asked; 68% no
Freedom of movement	62% allowed if asked	82% all allowed; 18% some in labour	73% always	96% in labour
Choice of position in labour	0%	38% as desired	75%	96% as desired
Respecting women's choice of position in the second stage	0%	0%	54%	Data NA
Keeping newborn babies warm	34%: radiant warmer	Data NA	100%	80%: radiant warmer; 16%: dry towel; 4%: putting on mother's abdomen
Vitamin K injection	1%	Data NA	Data NA	96%
Presence of skilled person for neonatal resuscitation	Paediatrician 13%; nurse 79%	Data NA	42% always	Data NA
Encouraging early breastfeeding	6%	20% directly after delivery; 51% 1–3 hours	62% within 1 hour	68% within half hour; 20% 1–2 hours; 4% 4–6 hours
Providing skilled help with the first breastfeed	0%	23% all; 10% some	48%	Data NA

Table 4. Percent distribution of forms of care unlikely to be beneficial as observed in the hospital in Egypt and as reported by hospitals in Lebanon, Syria and the West Bank.

Practices	Egypt	Lebanon	Syria	West Bank
Obstetrician managing birth	100%	Data NA	70%	Data NA
Withdraw food and drink from women during labour	99%	18% not allowed water; 59% allowed sips of water/wetting lips	68%	28%
Routine IV infusion in labour	99%	79%	64%	56%
Frequent vaginal examination in labour	42%	7.7%	79%	60%
Routine directed pushing during the second stage of labour	36%	Data NA	9%	Data NA
Routine manual exploration of the uterus after vaginal birth	routine 11%	Data NA	9.9%	Data NA
Use of sedatives and tranquilisers	14%	98%	30%	Data NA (96% reported availability)
Routine suctioning of newborns	97%	Data NA	100%	72%
Routine measurement of fundal height postpartum	72% at least once	Data NA	98%	Data NA

explored women's and providers' perspectives as well as obstacles to adopting standardised protocols. All observable practices from admission to discharge were documented as applied to women experiencing only normal births.

The studies in the four countries were not conducted during the same time period.[16–20] The first, in Lebanon, completed data collection in 1997 and the last, conducted in the West Bank, was completed in 2003. All four studies analysed data using SPSS. Content analysis according to themes was determined for open-ended questions. Table 1 shows the data collection approaches used. Methodological details are published elsewhere.[17–22] The results presented here were selected from a long list of practices documented by each study. Only practices measured in at least two of the four studies are included here.

Findings were shared within the Choices and Challenges in Changing Childbirth network during the process and disseminated at local, national, regional and international levels. Sixteen individuals from the four country teams participated in a workshop to outline and draft this paper.

RESULTS

To compare findings with best evidence, the WHO categorisation of practices is followed[23] and adapted into four categories classifying practices as those known to be beneficial (Table 2), practices likely to be beneficial (Table 3), practices unlikely to be beneficial (Table 4) and practices likely to be ineffective or harmful (Table 5).

The findings reveal that a number of practices with known beneficial effects or those that are likely to be beneficial are not widely used. Systematic reviews show clear evidence of the benefit of social support during childbirth on women's physical and emotional wellbeing.[24] However, the studies found that provision of caregiver support during labour and delivery is not universal and the majority of women delivering in hospitals in these countries are not given a choice of a companion during labour or during delivery. This is all the more distressing given inadequate numbers of health providers and women's preference for not labouring alone.[25,26] Active management of the third stage of labour, another form of care proven to be beneficial,[27] is very rarely applied in Syria (12.5%) but more frequently in the West Bank (71%). However, observation in Egypt showed that while active management was frequently applied, this was appropriately applied in only 15% of cases. Rooming-in practices were shown to be common except in Lebanon (26%). Nevertheless, this practice does not necessarily help successful initiation of breastfeeding as only 26% of hospitals studied in Lebanon and 48% in Syria reported helping initiate breastfeeding, and only 6% of women observed in Egypt were encouraged to initiate early breastfeeding. By contrast 88% of the West Bank facilities reported initiation of breastfeeding during the first 1–2 hours.

By contrast, a number of practices known to be unnecessary, harmful or unlikely to be beneficial are often routinely performed in hospitals in this region. Routine use of iv infusions, routine suctioning of newborns, as well as too frequent vaginal examinations during labour were frequent in all four studies. Other unnecessary or uncomfortable practices are routinely applied in the absence of scientific evidence of their benefit. Enemas during labour[28] were reported in Lebanon and the West Bank. Pubic shaving[29] was common to all countries except Egypt, where women

Table 5. Percent distribution of forms of care likely to be ineffective or harmful as observed in the hospital in Egypt and as reported by hospitals in Lebanon, Syria and the West Bank.

Practices	Egypt	Lebanon	Syria	West Bank
Routine enema	3%	77% empty lower bowel	9%	50%
Routine pubic shaving	1%	92%	56%	32%
Routine lithotomy position during the second stage	100%	100%	93%	96%
Routine or liberal use of episiotomy	93% for primiparas	56% routine; 44% doctor decides	95%	78% for primiparas

typically remove pubic hair prior to coming to hospital. Other practices known to be ineffective or harmful that were frequently documented by the studies are routine episiotomies for primiparas[30] and delivering in the lithotomy position.[31]

DISCUSSION

This paper documents the policies and routines of normal labour and delivery practiced in maternity wards of hospitals in Egypt, Lebanon, Syria and the West Bank. The studies revealed that many common practices routinely followed are not evidence based: beneficial practices are often neglected or inappropriately applied and harmful or practices of unproven benefits are widespread.

We were unable to identify other published studies documenting facility practices for normal births in the Arab region, except for a few describing specific aspects of care, such as psychosocial support in labour or content of antenatal care[25,32]; therefore, our findings address a gap in knowledge of routine facility-based childbirth practices.

The Lebanese, Syrian and West Bank study findings rely on reported rather than actual practices. If anything, we would expect key informants to over-report practices they consider to be beneficial and underreport those considered problematic. This makes it especially worrying that a substantial number of practices that diverge from scientific evidence are reported by providers as routinely applied. Direct observation, as was determined in Egypt, overcomes such problems of reporting and the high prevalence of inappropriate practices directly observed in Egypt suggests that the effect of observation bias was minimal.

Another limitation stems from the differences in the four studies in selecting hospitals or maternity wards. While the studies in Lebanon and Syria were based on a nationally representative sample of hospitals, in the West Bank a convenience sample was taken. The study in Egypt was conducted in one hospital, albeit a large teaching facility that influences obstetric practice elsewhere. Both private and public facilities or wards are included in the description of practices in these four studies, following the different roles played by each type of facility in the delivery of maternity care in these respective settings.

While the methods and settings in the four country studies differ, the shared similarities, as well as the variations, in maternity care documented in the region for the first time constitute a valuable contribution to the debate on how to translate evidence into practice. The similarities include lack of continuous caregiver support, lack of a companion in labour and delivery, lithotomy position for second stage of labour, routine use of episiotomy for primigravidae and early initiation of breastfeeding but little skin-to-skin contact. However, in addition we know that the challenges are also similar in many of the settings and include overcrowding of hospitals, high workload and limited resources. These issues raise the challenge of creating an enabling environment receptive to the use of an evidence-based approach for normal birth with limited resources.

The variations in the delivery of care documented may stem from the differences in the organisation of services. Whereas the main caregivers in the West Bank and Syria are midwives, obstetricians attend most, if not all, facility-based normal births in Egypt and Lebanon. Differences in the health sectors providing maternity care in each setting also influence the management of labour and birth. Private health care institutions dominate the provision of care in Lebanon, whereas a mix of private and public institutions is characteristic of Syria and the West Bank. These factors among others influence maternity care patterns in the region.

In addition to these studies' contribution in drawing attention to the divergence of routine obstetric practices from evidence-based care and the implications this has for maternal and neonatal mortality and morbidity, the studies have also contributed to development of tools[22] and approaches to document and quantify childbirth practices. The interview approach is a quick and relatively low-cost data collection method and is probably used more efficiently to provide information on the type of delivered care in settings where providers of services are not highly sensitised to evidence-based medicine. The observational approach, on the other hand, while constituting a thorough assessment of care as actually delivered, entails labour-intensive data collection procedures with commensurate higher cost.

CONCLUSIONS

There are a number of challenges that need to be overcome in order to change practices and implement evidence-based care in these settings. The high workload and the understaffing in hospitals, the contribution of physician's convenience factor in shaping the followed routines, the organisation of services on maternity wards, the lack or inappropriate application of standard protocols and guidelines, lack of medical training of health providers in evidence-based care for normal physiological childbirth, as well as the inappropriateness of physical structures constitute major challenges and barriers to change. For example, some facilities do not have the physical space to accommodate newborns with their mothers in postpartum wards, or to allow companions in labour and delivery rooms. Another important challenge is to find ways to sensitise providers towards evidence-based medicine, especially in settings with limited access to scientific literature. In Lebanon, where the earliest research was determined, there is little evidence of change in facility practice.

Generally speaking, normal childbirth tends to be less medicalised in developing country settings, providing more opportunity for introducing and implementing certain

beneficial practices. Effective practices such as female relative support during labour and birth, movement during the first stage, eating and drinking during labour and birth, restricted use of episiotomy and choice of position for second stage of labour could be conceivably implemented with limited resources. Unnecessary practices, even when not harmful, waste resources. Research in Argentina showed that unnecessary episiotomy cost provinces an excess of US$150,000 each year when doctors' time, suture materials and costs of degraded sutures were factored in.[33] The flexibility in patterns of care can be used to adapt evidence-based approaches if the commitment to best practices exists. It is all the more important in the context of developing countries to support physiological uncomplicated childbirth and to avoid harmful practices because the infrastructure and human resources for medicalised interventions are often not available, increasing the risks for women and newborns from routine application of such interventions in the normal process of labour and birth.

Acknowledgments

The Egypt study was conducted by the Population Council Cairo office with funding from the Ford Foundation, the Reproductive Health Working Group and the Population Council. The authors are grateful to Abdel Aziz el Shoubary for his support and encouragement in Egypt. The Lebanese study was conducted by the Faculty of Health Sciences, American University of Beirut with funding from the Mellon Foundation. The Palestinian study was conducted by the Institute of Community and Public Health, Birzeit University, with funding from the Wellcome Trust.

The Syrian study was conducted by the Ministry of Health and Departments of Community Medicine and Obstetrics and Gynecology, Faculty of Medicine, Damascus University with funding from UNFPA, Syria. This paper is part of a larger regional research project on Choices and Challenges in Changing Childbirth in the Arab Region, sponsored by the Centre for Research on Population and Health at the American University of Beirut, Lebanon, with generous support from the Wellcome Trust.

Contributors from the Choices and Challenges in Changing Childbirth Research Network

Karima Khalil, Hania Sholkamy, Nevine Hassanein, Mohamed Cherine, Amr Elnoury, Lamia Mohsen, and Miral Breebaart (Egypt). Tamar Kabakian-Khasholian, Rawan Shayboub, Rita Khayat, Oona MR Campbell, Hibah Osman, Rima Mourtada, Raghda Hafez and Dima Sinno (Lebanon). Nahed Mikki, Laura Wick, and Livia Wick (West Bank). Hyam Bashour, Asmaa Abdulsalam and Salah Sheikha (Syria).

Conflict of interest

None.

Work attributed to

Choices and Challenges in Changing Childbirth Research Network, hosted at Centre for Research on Population and Health, American University of Beirut, Beirut, Lebanon.

References

1. Dolan M, Rouse D. The need for evidence-based ob/gyn. *Clin Obstet Gynecol* 1998;**41**(2):233–234.
2. United Nations. *UN Millennium Development Goals*. New York: United Nations; c2000–2004 [cited 2005 January 13]. Available: http://www.un.org/millenniumgoals/index.html.
3. Safe Motherhood Initiative; c2000 [cited 2005 January 13]. *Priorities for Safe Motherhood*. Available: http://www.safemotherhood.org/smpriorities/index.html.
4. Maimbolwa M, Ransjo-Arvidson A, Ng'andu N, Sikazwe N, Diwan V. Routine care of women experiencing normal deliveries in Zambian maternity wards: a pilot study. *Midwifery* 1997;**135**:125–131.
5. Buekens P. Over-medicalisation of maternal care in developing countries. In: De Brouwere V, Van Lerberghe W, editors. Safe Motherhood Strategies: A Review of the Evidence. *Stud Health Serv Organ Policy* 2001;**17**:195–206.
6. Qian X, Smith H, Zhou L, Liang J, Garner P. Evidence-based obstetrics in four hospitals in China: an observational study to explore clinical practice, women's preferences and provider's views. *BMC Pregnancy Childbirth* 2001;**1**(1):1.
7. Effective Health Care Alliance Programme. *Better Births Initiative*. Liverpool: The Liverpool School of Tropical Medicine; c2003 [updated 2003 September 29; cited 2005 January 13]. Available: http://www.liv.ac.uk/lstm/ehcap/BBI/bbimainpage.htm.
8. Miller S, Cordero M, Coleman AL, et al. Quality of care in institutionalised deliveries: the paradox of the Dominican Republic. *Int J Gynaecol Obstet* 2003;**82**(1):89–103 [discussion 87-8].
9. AbouZahr C, Wardlaw T. Maternal mortality at the end of a decade: signs of progress? *Bull World Health Organ* 2001;**79**(6):561–568.
10. Egypt Ministry of Health. *National Maternal Mortality Study: Egypt 1992–93. Preliminary Report of Findings and Conclusions*. Cairo: Child Survival Project, 1994.
11. Egypt Ministry of Health and Population. *Egypt: National Maternal Mortality Study 2000. Report of Findings and Conclusions*. Cairo: Directorate of Maternal and Child Health Care, Ministry of Health and Population, 2001.
12. El-Zanaty F, Way A. *Egypt Demographic and Health Survey 2000*. Calverton, Maryland: National Population Council (Arab Republic of Egypt) and Macro International Inc., 2001.
13. Lebanon Ministry of Public Health. *Lebanon Maternal and Child Health Survey: Principal Report*. Beirut: Republic of Lebanon and the Pan Arab Project for Child Development (PAPCHILD) of the League of Arab States, 1998.
14. Syrian Central Bureau of Statistics. *The Report of the Syrian Family Survey*. Damascus: The Pan Arab Project (PAPFAM Project), 2002.
15. Palestinian Central Bureau of Statistics (PCBS). *Health Survey 2000: Final Report*. Ramallah, Palestine: PCBS, 2001.
16. Khalil K, Cherine M, Elnoury A, Sholkamy H, Breebaart M, Hassanein N. Labor augmentation in an Egyptian Teaching Hospital. *Int J Gynecol Obstet* 2004;**85**(1):74–80.

17. Cherine M, Khalil K, Hassanein N, Sholkamy H, Breebaart M, Elnoury A. Management of the third stage of labor in an Egyptian teaching hospital. *Int J Gynecol Obstet* 2004;**87**(1):54–58.
18. Khayat R, Campbell OMR. Hospital policies and practices for normal childbirth in Lebanon. *Health Policy Plan* 2000;**15**(3):270–278.
19. Wick L, Mikki N. *Childbirth in Palestine: Reported Practices and Evidence-Based Guidelines*. Birzeit: Institute of Community and Public Health, Birzeit University, 2004.
20. Abdulsalam A, Bashour H, Cheikha S, et al. Routine care of normal deliveries as applied in Syrian maternity wards. *J Arab Board Med Spec* 2004;**6**:134–140.
21. World Health Organization. *Care in Normal Birth: A Practical Guide* [report of a technical working group]. Geneva: World Health Organization, 1999.
22. Sholkamy H, Khalil K, Cherine M, et al. An observation checklist for facility-based normal labor and delivery practices: the Galaa Study. *Monographs in Reproductive Health No.5.* Cairo, Egypt: Population Council, 2003.
23. World Health Organization. *The WHO Reproductive Health Library No. 7.* Geneva: World Health Organization, 2004.
24. Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth [Cochrane review]. *The Cochrane Library,* Issue 3. Chichester, UK: Wiley, 2004.
25. Mosallam M, Rizk DE, Thomas L, Ezimokhai M. Women's attitudes towards psychosocial support in labour in United Arab Emirates. *Arch Gynecol Obstet* 2004;**269**(3):181–187.
26. Kabakian-Khasholian T, Campbell O, Shediac-Rizkallah M, Ghorayeb F. Women's experiences of maternity care: satisfaction or passivity? *Soc Sci Med* 2000;**51**(1):103–113.
27. Prendiville WJ, Elbourne D, McDonald S. Active versus expectant management in the third stage of labour [Cochrane review]. *The Cochrane Library,* Issue 3. Chichester, UK: Wiley, 2004.
28. Cuervo LG, Rodríguez MN, Delgado MB. Enemas during labour [Cochrane review]. *The Cochrane Library,* Issue 3. Chichester, UK: Wiley, 2004.
29. Basevi V, Lavender T. Routine perineal shaving on admission in labour [Cochrane review]. *The Cochrane Library,* Issue 3. Chichester, UK: Wiley, 2004.
30. Carroli G, Belizan J. Episiotomy for vaginal birth [Cochrane review]. *The Cochrane Library*, Issue 3. Chichester, UK: Wiley, 2004.
31. Enkin M, Keirse M, Neilson J, et al. *A Guide to Effective Care in Pregnancy and Childbirth*, *3rd edition*. Oxford: Oxford University Press, 2000:430.
32. Piaggio G, Ba'aqeel H, Bergsjø P, et al. The practice of antenatal care: comparing four study sites in different parts of the world participating in the WHO Antenatal Care Randomised Controlled Trial. *Paediatr Perinat Epidemiol* 1998;**12**(Suppl 2):116–141.
33. Borghi J, Fox-Rushby J, Bergel E, Abalos E, Hutton G, Carroli G. The cost-effectiveness of routine versus restrictive episiotomy in Argentina. *Am J Obstet Gynecol* 2002;**186**(2):221–228.

Accepted 10 May 2005