

# Normal birth in Kazakhstan: Labor management practice in accordance with World Health Organization's recommendations

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**Background:** Over the last 10 years, the evidential practice has been developing in Kazakhstan. The clinical protocols of diagnostics and treatment were implemented in the country since 2007. We analyzed the normal birth practice in Kazakhstan. **Materials and Methods:** Obstetricians and midwives were subject to the questionnaire survey in four large Maternity Hospitals of Almaty. **Results:** Totally, 72 midwives and 50 obstetricians took part in the questionnaire survey. 4% of physicians indicated the regular use of enema, 11.1% of midwives and 24% of physicians — the shaving of the pubis, and the regular use of amniotomy was noted by 12% of physicians and 41.7% of midwives. At the second stage, the application of the Kristeller's method was noted by 8% of physicians and 11.1% of midwives. **Conclusion:** The noncompliance of the normal birth surveillance in Kazakhstan with the WHO's recommendations appears in the usage of routine methods at the first stage and of the Kristeller's method at the second stage of normal birth.

**Key words:** Intranatal care, Kazakhstan, normal birth, obstetrics, recommendations, World Health Organization

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## INTRODUCTION

World Health Organization (WHO) elaborated scientifically grounded recommendations on normal birth management in 1996. The recommendations provided the basis for clinical protocols of diagnostics and treatment in Kazakhstan implemented in the country since 2007. Until then, labor management in Kazakhstan included a great number of routine procedures (cleansing enema, amniotomy, and others) and did not differ from such management as applied in the times of the USSR. Having found its independence, the Kazakhstan public health service settled down to a course of reforming and improvement. Over the last 10 years, the evidential practice has been developing in the country including midwifery. A questionnaire survey was carried out in all maternity departments of Almaty. Almaty was chosen as it is a Megapolis of

Kazakhstan with the maximum number of obstetricians and midwives. Thus, according to the Statistics Digest,<sup>[1]</sup> more than 763 obstetricians and 856 midwives are currently being employed in Almaty that is higher than these indices in the other cities of the country. The questionnaire survey was voluntary and anonymous, and only those respondents were involved in the survey, who had signed an informed consent.

### Inclusion criteria

Direct physiological labor management: Physicians and midwives of the reception ward and obstetric departments.

### Exclusion criteria

Physicians and midwives of the Maternal Child Unit and the Functional Diagnostics Department, those from the administration and others, who do not participate in the labor management.

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When drawing up the questionnaire, we relied on the similar surveys of other authors (evaluation of the medical-social and economic efficiency and the introduction of protocols on diagnostics and treatment in Kazakhstan-thesis). The representativeness of the sample was confirmed subject to the extent of the general totality – in 2013, the total of obstetricians in Almaty in maternity departments was 113, of whom those, who were subject to the questionnaire survey –50 (44%), and the total of midwives –316, of whom those, who were subject the questionnaire survey-72 (22,7%).<sup>[1]</sup>

However, as the experience of some foreign countries shows, it is practically not always that one can fully succeed in the introduction of the evidential practice and the relevant WHO's recommendations. For example, in a number of both developed and developing countries, there is a low level of adherence to WHO's recommendations even in case of normal birth.<sup>[2-14]</sup>

The compliance with the protocols of diagnostics and treatment in Kazakhstan in the normal (physiological) birth management was analyzed by us.

The aim of the research is to identify the degree of the usage of WHO's recommendations on intranatal care in Kazakhstan.

## MATERIALS AND METHODS

To conduct research, we made a questionnaire particularly for obstetrician-gynecologists and midwives.

### Design

Qualitative descriptive research based on the questionnaire survey.

### Research methods

Sociological method based on the questionnaire survey, statistical analysis, analytical method.

To carry on the questionnaire survey, an approval by the local ethical commission of the S.D. Asfendiyarov Kaz NMU was received (minutes of the meeting No. 4 dated 7.04.2014).

Obstetricians and midwives were subject to the questionnaire survey conducted by us in 4 large Maternity Hospitals of Almaty. The survey was carried out by the mass observation where in all the personnel participated, who was involved in the normal birth management in the clinic (doctors, midwives, interns, trainee doctors, and hospital physicians). The evidentiary medicine principles have been introduced in the Kazakhstan obstetrics during the last more than 10 years, and this process is being carried on a planned and consistent basis supported by the Government of Kazakhstan<sup>[15]</sup> and international organizations (EuroWHO, ZdravPlus, and others).<sup>[16,17]</sup>

Some foreign and domestic specialists provided trainings of medical professionals (obstetricians and midwives) in modern scientifically proved principles of easy delivery management. However by law, the rules of managing easy delivery are enshrined in such protocols on diagnostics and treatment as accepted in 2007, update-2010, 2013.

The findings were given in the absolute numbers and percent. The nominal data was compared by the Pearson Chi-square criterion. The critical significance level  $P = 0.05$  when testing statistical hypotheses in the survey. Statistical analysis was made in the SPSS Program, Version 20.0 for Windows.

## RESULTS

At the first stage, the following practice of medical personnel is applied in Kazakhstan as per the questionnaire survey as

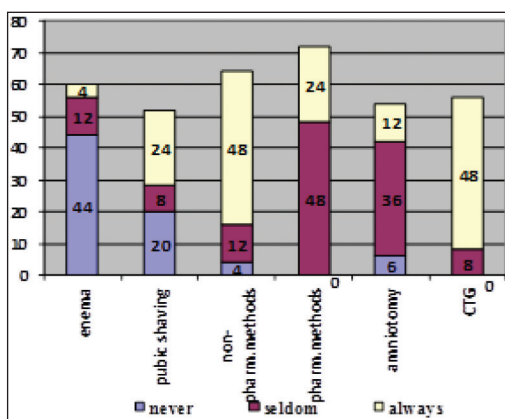


Figure 1: Distribution of answers given by physicians to the question about the labor surveillance at the first stage

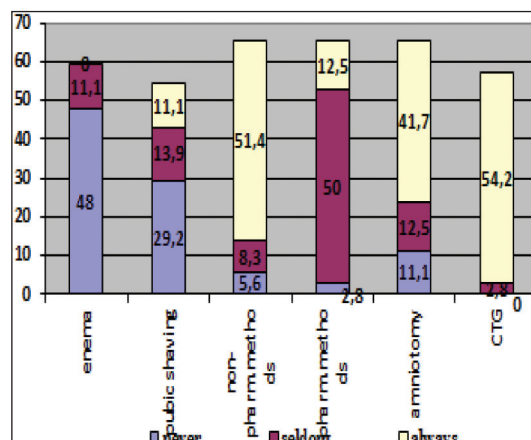
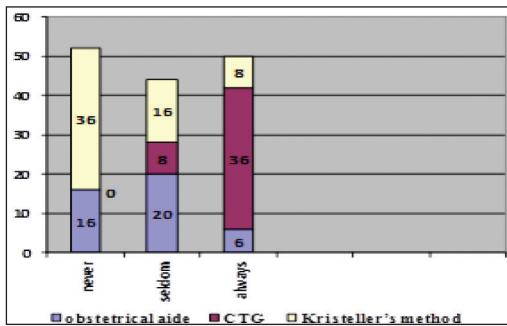


Figure 2: Distribution of answers given by midwives to the question about the labor surveillance at the first stage.



**Figure 3:** Distribution of answers given by physicians to the question about the labor surveillance at the second stage, %

shown in Figures 1 and 2.

At the first stage of labor, nonpharmacological methods of pain relief (point massage, self-massage and others) are used often-48.0% ( $\chi^2 = 25.750$  df = 2  $P < 0.001$ ) according to the obstetricians and 51.4% ( $\chi^2 = 43, 702$  df = 2  $P < 0.001$ ) that corresponds to the said WHO's recommendations.

Second stage of labor [Figures 3 and 4]. Pharmacological pain relief in labor is applied seldom in the Maternity Hospitals concerned 48% ( $\chi^2 = 4.0$  df = 1,  $P = 0,046$ ) based on the results of the questionnaire survey of the obstetricians, 50% ( $\chi^2 = 4.0$  df = 1,  $P < 0.001$ ) of the midwives.

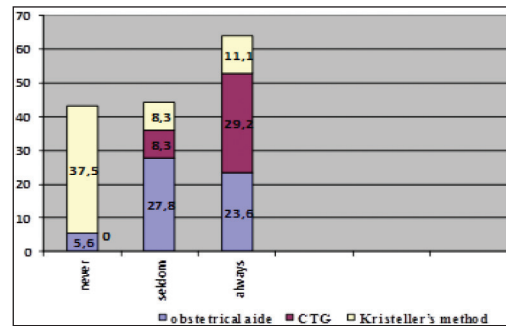
Up to now, the amniotomy is used in case of the cervical dilatation at 8 cm or more-often - about 12.0% of the obstetricians so surveyed ( $\chi^2 = 9.6$  df = 2  $P < 0.001$ ), and 41.7% of the midwives ( $\chi^2 = 19.702$  df = 2  $P < 0.001$ ).

The case follow-up for a maternity patient at the first stage of labor is carried out by measuring of temperature, pulse and blood pressure. According to the questionnaire survey, 54.0% ( $\chi^2 = 60.25$  df = 3  $P < 0.001$ ) of the obstetricians monitor the state of the woman — every 4 h and 41.7% of the midwives ( $\chi^2 = 69.118$  df = 5  $P < 0.001$ ), fetal heart beats — every 30 min (the obstetricians-48.0% ( $\chi^2 = 48.4$  df = 3  $P < 0.001$ ), and 58.3% of the midwives ( $\chi^2 = 100.0$  df = 3  $P < 0.001$ ).

The vaginal examination is made by 72% of the surveyed obstetricians every 4 h that corresponds to the WHO's recommendations as per the partograph.

At the second stage of labor, the Kristeller's method is used according to 8% of the surveyed obstetricians ( $\chi^2 = 10.4$  df = 2  $P = 0.006$ ), 11.1% — of the midwives ( $\chi^2 = 19.659$  df = 2  $P < 0.001$ ).

At the third stage of labor, the WHO's recommendations



**Figure 4:** Distribution of answers given by midwives to the question about the labor surveillance at the second stage, %

are complied with as follows: Controlled cord traction noted by 50% of the surveyed midwives ( $\chi^2 = 57.8$  df = 2  $P < 0.001$ ), and 60% of the obstetricians ( $\chi^2 = 24.5$  df = 1  $P < 0.001$ ), preventive medication of Oxytocin-63.9% of the midwives ( $\chi^2 = 35.280$  df = 1  $P < 0.001$ ).

## DISCUSSION

According to such protocols of diagnostics and treatment as accepted in Kazakhstan, (Order of the Kazakhstan Ministry of Health, 2010), at the time of the survey, at the first stage of labor, the following was provided for in the RK: Case follow-up (measuring of temperature, pulse and blood pressure, uterine contractions, monitoring the fetal heart rate, partograph, and vaginal examination — every 4 h), and point massage, at the second stage of labor, in addition to the case follow-up, obstetrical aide; and at the third stage-controlled cord traction and preventive prescription of oxytocin.

According to the results of the questionnaire survey, despite the fact that the routine procedures such as routine use of enema fall in the Category B WHO (1996)<sup>[18]</sup> the WHO's classification, that is, they are practices which are clearly harmful or ineffective and should be eliminated, the same has been still used in the Almaty Maternity Hospitals.

At the second stage of labor, unfortunately, the Christeller's method is used that can be noted in the answers of both obstetrician-gynecologists and midwives.

It should be particularly noted that some part of respondents both among the physicians and the midwives noted the usage of CTG at the first and second stages to monitor the state of a fetus even in the normal (physiological) birth management.

## CONCLUSION

Thus, in analyzing the questionnaire survey of the said obstetricians and midwives, who directly manage

normal (physiological) births, it was found that the Almaty Maternity Hospitals complied with the WHO's recommendations but not in all cases of normal births. Up to now, there are inadvisable procedures and measures such as cleansing enema, sanitization, Kristeller's method that requires the more detailed study of the causes.

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### Conflicts of interest

The authors have no conflicts of interest.

## AUTHORS' CONTRIBUTION

ADK and ABK contributed in the conception of the work, conducting the study, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. Aizhan D. Aizhan D. Kyzayeva contributed in the conception of the work, drafting and revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work.

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