

Analysis of the Quality of the Organization of Antenatal Care at the Primary Health Care Level

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Abstract: It is well known that the formation of the health of an unborn child is impossible without taking into account the state of health of a pregnant woman, which is largely determined by her lifestyle. Strengthening the role of primary health care in the field of sexual and reproductive health (RH) is one of the most important directions in further improving maternal and child health issues. In Uzbekistan, the health of the population is one of the priority medical and social areas along with other institutions of the health system. As a result of the assessment of activities based on the data obtained, it was noted that the low quality of services is not only the reason for the lack of desire to visit pregnant women unnecessarily, but may be one of the factors influencing late registration. Also, during the analysis, polyclinics were identified that need an obstetrician-gynecologist, but also the need to organize training so that each medical staff could recognize a particular pathology.

Keywords: antenatal care, family polyclinic, pregnant woman, primary health care.

Introduction. One of the important sections of the preventive work of a family doctor is antenatal care for a pregnant woman. The quality of this work largely determines the long-term programming of the health of the future child. This area in Uzbekistan is one of the priority medical and social areas along with other institutions of the healthcare system. This is reflected in a number of regulatory legal acts aimed at regulating relations in the field of protecting the reproductive health of citizens, further improving the quality of services in this area, including: Presidential Decree No. 6110 from November 12, 2020 "On measures to introduce fundamentally new mechanisms in the activities of primary health care institutions and further improve the effectiveness of reforms carried out in the healthcare system" [4]. Antenatal care focuses on both the medical and psychosocial needs of each pregnant woman within the context of the healthcare system and the culture in which the woman lives. Antenatal care / help

provided by qualified health workers to pregnant women in order to ensure the best conditions for the health of the mother and fetus during pregnancy. The components of ANC include: identification of risk factors, prevention and treatment of pregnancy-related complications or comorbidities, information and counselling. To improve perinatal outcomes and maternal satisfaction, WHO recommends at least 7 visits to a health worker during pregnancy [1]. ANC care can potentially reduce health disparities in different groups of women. Ensuring quality of care should be an integral and important component of all services to improve the health of the mother and her unborn child [1,2].

Aim of the study: To assess the quality of antenatal care for pregnant women and women of reproductive age in the Republic of Uzbekistan at the primary health care level.

Tasks:

1. To study women's satisfaction with the quality of services provided.
2. To assess the knowledge and work organization of primary health care workers.
3. Quality and availability of services in clinics and maternity institutions.
4. Family planning and contraception methods.

Research materials: experts assessed the quality of the developed tools according to the regulatory documents of medical personnel: GPs-345 (27%), Mw-857 (66.9%), obstetricians-gynecologists -78 (6.1%), total - 1280, a survey was also conducted on the provision of services among women of childbearing age, a total of 3563. The study was conducted in maternity institutions and family clinics located in the city of Tashkent, Tashkent region: Chinaz, Bekabad, Akhangaran districts and in the Surkhandarya region: Termez, Denau, Sherabad, Kumkurgan districts.

Results of the study: Satisfaction of the population with services ANC Most women (60%) who took part in the study live in patriarchal traditional families with the husband's parents. They are often dependent on the opinion of the husband and his parents in matters of reproductive health and family planning. Quite a lot of women (16%) are in consanguineous marriages. Despite the fact that 75% of the surveyed women have college or university degrees, 70% are housewives. According to the questionnaire results, 54.4% and according to statistics, about 60% of women suffer from anemia. The main reason may be the diet, since the diet of a third of families does not include vitamins, proteins, meat and dairy products. Every fifth pregnant woman who took part in the study did not register on time. The main reasons, according to the study, lie both in the low medical culture of the woman herself and in the patriarchal structure of the family, where she does not always have the right to vote. Some women register only (as noted during the oral interview) to receive an exchange card and a certificate that she has given birth in order to receive benefits or other privileges.

The overwhelming majority of women - 71.5% during antenatal care take folic acid and iodine preparations [5]. At the same time, a low percentage of taking iron-containing preparations is noted in the Surkhandarya region, while the total number of women with a hemoglobin level below 100 mg / l in this region was 60%. Every fifth woman surveyed noted that the visiting nurse rarely visited her during pregnancy. The main reason for this was noted to be the far location of the household from the family polyclinic (FP). Only a few respondents 56.9% regularly visit a gynecologist. The overwhelming majority receive services in the FP and only every tenth - in a private clinic. During the survey, women expressed dissatisfaction with the organization of services provided in the field of antenatal care, in particular, an appointment with an obstetrician-gynecologist in a rural hospital and a rural medical center is carried out once a week, while a general practitioner does not have sufficient competence to answer a highly specialized question in the field of gynecology/pregnancy management and possible complications associated with pregnancy, and in this regard, long queues are formed to see a gynecologist. There were also complaints about the workload of medical personnel in

paperwork, the quality of medical services (some laboratory tests are not carried out in polyclinics, in places where there is a modern ultrasound machine, there is no specialist who conducts this study). A third of the women surveyed experienced various pathologies during childbirth. Many had cases of spontaneous miscarriages. The background for miscarriages, both in the early and late stages of pregnancy, can be the presence of consanguineous marriages and gynecological diseases of the female genital organs (GO). The majority of women (73.3%) noted the low quality of medical examinations, while 8% did not undergo them at all. For the overwhelming majority – 76.4% of women surveyed, the main source of information on the possibilities of purchasing contraceptives are visiting nurses. The majority of women – 65.1% – would find it difficult to purchase contraceptives if it were not possible to receive contraceptives provided by state medical institutions. The most popular contraceptive methods (CM) are the intrauterine device (IUD) and combined oral contraceptives (COC). At the same time, almost a third of the women surveyed do not use CM. They believe that the use of CM will lead to high blood pressure, weight gain, and oncological diseases. Postpartum care is provided by GPs and/or Mw, in 75% of cases the women surveyed confirmed visiting these specialists. But there is still a certain contingent of women after childbirth who were not visited by a health worker.

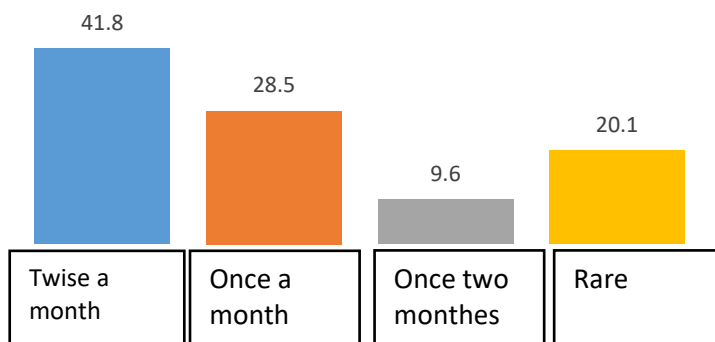
The study involved women of different age groups, education levels and marital status. There is a large imbalance in favor of those living in urban areas. In such families, informal practices of social relationships often prevail to the detriment of the rule of law, especially in matters of women's rights, such as the independence of decision-making about marriage. Women in such families are often disadvantaged in making decisions about observing the interbirth interval when planning the birth of another child. The study also showed that in 16% of cases these are consanguineous marriages, mainly in the Surkhandarya region.

Increasing the interval between births, using effective contraception and preventing unplanned pregnancy are of great importance in reducing maternal mortality. According to WHO recommendations, the optimal interval between two consecutive births is 24 + 9 (gestation) months [6]. In this regard, the normal interval between births for women in the Republic of Uzbekistan was determined as at least 2 years 9 months. Most respondents noted the interval between births of 1.5–2 years, and more than 14% of women reported pregnancy with an interval of up to 1 year, which indicates insufficient use of contraception after childbirth. The study showed that the diet of a third of families (35.8%) does not include vitamins, proteins, meat and dairy products. Only 56.4% of respondents have hot meals in their diet. In this regard, it is not surprising that more than half have anemia. Unfortunately, in the Republic of Uzbekistan, anemia is the most common pathology among women of reproductive age, this is due to an unbalanced diet (iron deficiency, deficiency or excess of vitamin B12); folate metabolism disorders; increased need for nutrients (growth period — adolescence, pregnancy), uncontrolled blood loss (after childbirth, hyperpolymenorrhea, wearing an IUD, etc.). Among other diseases that women are susceptible to, the following were named: endocrine - 9.2%, cardiac pathologies - 8.3%, gastrointestinal tract pathologies - 7.6%, diseases of the nervous system - 6.7%, rheumatism - 4.3%, oncology - 1.5%, and COVID - 9.2%. It is worth noting that, as a result of women's self-assessment, the next most common disease was deviations in mental states (21.2%), this is probably due to working and living conditions, phobias, insomnia, depression (including postpartum), as well as the absence of a husband for a long time (labor migration among men is common in the Surkhandarya region). Despite the fact that pregnancy is a natural process for the female body, pathologies may occur at different stages of gestation that pose a serious danger to the health and life of the mother and child. Therefore, one of the research questions was to study the quality of services provided to pregnant women. Of those registered for antenatal care (ANC), 79.3% of women were registered in the first trimester of pregnancy in accordance with the national standards and 11.3% were registered after 12 weeks of pregnancy. Women did not register before 12 weeks, both due to their own carelessness and because of the patriarchal family structure, when a woman does not always have the right to decide. Given that the prohibition of a pregnant woman to register is socially disapproved, it is quite possible that

the answer option "there was no opportunity" is also based on a family decision. According to the clinical protocol, during the first trimester of pregnancy, it is recommended to prescribe folic acid (400 mcg daily), potassium iodide (200 mg daily) and iron preparations for confirmed anemia. In general, in both regions, women took folic acid and iodine preparations during antenatal care. A low percentage of intake of iron-containing drugs is noted in the Surkhandarya region both in the city and in the regions - 58.8%, while the total number of women with hemoglobin levels below 100 mg/l in this region was 60%.

The system of visiting households by home health nurses (HHN) was introduced to cover more pregnant women, including ensuring access to health services for women from the most vulnerable groups of the population. As can be seen from Diagram 1, the coverage of pregnant women by antenatal care remains quite low, possibly due to the distance of residence. The households of women who chose the answer "rarely" are located 40-45 kilometers from their polyclinic. When asked what the HHN did during the visit, most respondents answered that they mainly asked about their well-being, checked the cleanliness of the house, and photographed the living conditions.

Diagram No. 1. Frequency of visits to midwife (Mw) (in %)



But Mw home visits cannot replace the need for regular examinations by an obstetrician-gynecologist. Only a professional doctor can help identify possible risks during pregnancy and choose methods for their prevention. The doctor evaluates the condition of the reproductive organs, identifies possible pathologies that can affect the course of pregnancy and childbirth. Therefore, the study identified not only the frequency of Mw home visits for pregnant women, but also how regularly the surveyed women visit gynecologists and general practitioners outside of pregnancy. As can be seen from the diagram, more than half of the respondents (56.9%) visit a gynecologist regularly, while they come to general practitioners when they have complaints (44.5%). At the same time, only every tenth woman surveyed can afford to use the services provided by private clinics (PC). The overwhelming majority receive consultations in family polyclinics (FP).

Diagram 2. Where do people most often receive obstetrician-gynecologist services (in %)



Although most of them are dissatisfied with the quality of services provided in the FP, as can be seen from Table 1. This is probably one of the reasons for the irregularity of visiting doctors.

Table 1. Satisfaction with FP services (in %)

Answer options	Distribution of answers
You have to wait in line for a long time to see a doctor	45,6
Conditions and medical services are satisfactory	26
Conditions and medical services are satisfactory	17
Doctors spend a lot of time filling out a medical card	11,5
Medical personnel do not pay due attention	

Almost a third of the women surveyed do not use CM (28.8%). The main reasons were weight gain, fear of increased blood pressure, fear that MC can cause cancer, etc. (45.5%), as well as the lack of CM suitable for them in the clinic (15.4%). Along with the low level of awareness among women, this is one of the factors for unplanned pregnancy (Table 2). This indicates that the quality of medical personnel counseling on contraceptive methods is not high enough, namely, in terms of acceptability of contraceptives.

Table 2. Pregnancy planning (in %)

Answer options	Distribution of answers
Yes, satisfied	56,8
No, unsatisfied	43,2

Almost half of the pregnant women surveyed did not plan this pregnancy, which may indicate insufficient awareness of reproductive rights and contraception methods, as well as women's medical culture (lack of responsibility) in terms of protection from unwanted pregnancy.

Thus, judging by the data obtained, the low quality of services is the reason not only for the lack of desire to visit the SP without special need, but is possibly one of the factors influencing untimely registration.

Quality of work of medical personnel

The majority of the surveyed home care workers are nurses and medical brothers who worked in clinics even before the introduction of the home care system. The overwhelming majority of these are women aged about 40 years. The average length of service of home care nurses was 17-18 years. The majority of respondents - 83.3 PMS correctly answered the question about medical examination. Home care nurses are well aware of the required time frames for screening during pregnancy. Although the majority of Mw – 77% were able to give the correct answer to the question about the timing of routine visits during the physiological course of pregnancy, many health visitors were unable to demonstrate satisfactory knowledge of the diagnosis of severe conditions in obstetrics. The majority of the surveyed Mw (65%) were unable to correctly answer the question about the methods of early diagnosis of cervical cancer.

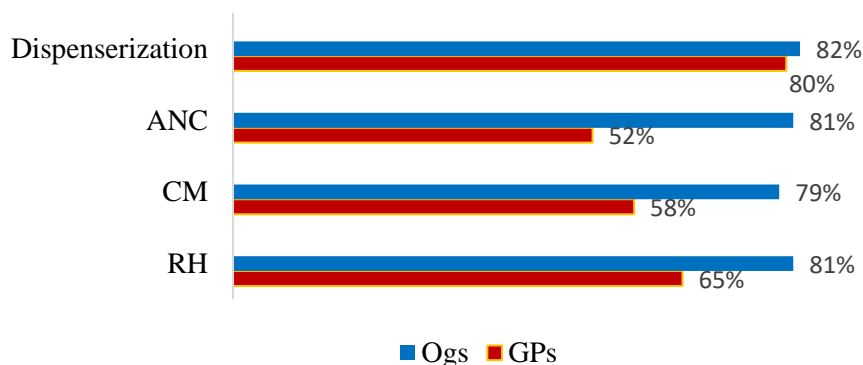
The survey results show that the workload of each Mw is different and there is no standard for the number of pregnant women covered per day. Almost every fifth PMS indicates that they serve more than 4 women per day, which raises the question of the quality of services. The main part of the Mw's working time is taken up by manual filling in of medical cards, as well as reporting.

For the majority of Mw – 64.9%, the main sources of obtaining professional information on mother and child care are seminars and lectures. The knowledge of general practitioners (GPs) in matters of maternal and child health care and contraception methods is somewhat lower compared to the knowledge of obstetricians and gynecologists (OG). Gynecologists come to the family clinic for consultations on schedule and provide services to pregnant women under the antenatal care program. Antenatal care of pregnant women should be carried out in accordance

with the order of the Ministry of Health of the Republic of Uzbekistan No. 137, which includes 25 standards for the management of antenatal conditions. When assessing the quality of services provided to pregnant women by GPs and A&Gs, only 45.4% of GPs in rural areas and 52.4% of GPs in the city fulfilled their obligations to provide antenatal services, while among OGs 68.2% in rural areas and 71% in the city provided a full range of services during the antenatal visit. According to the survey results, about 60% of women prefer to visit a gynecologist with questions about the reproductive system, although according to the order of the Ministry of Health, OGs should be served by GPs. Low coverage of GP counseling on alarming signs of pregnancy is observed. Only 39% of GPs and OGs indicated that they use specialized literature, despite the availability of regularly updated literature and protocols. They mainly use local protocols, which contain information on the provision of services in the field of RH and antenatal care (ANC), but the use of more detailed information on diseases, treatment and diagnostics, which is fully provided in the medical literature, is not available due to the language barrier.

In order to identify the level of professionalism and experience of home care workers, they were asked a number of questions about the symptoms of diseases and tactics of primary health care services. One of the alarming signals during pregnancy is headaches. According to the antenatal care program, in such cases, the Mw should warn the pregnant woman about alarming signals, in which the woman should urgently contact a doctor, since a headache can be a symptom of preeclampsia. However, 15.1% of the surveyed nurses believe that headaches during pregnancy are not an indication for contacting a clinic. According to the standards for assessing patient counseling, the minimum score should be 85%, the main signs of severe preeclampsia are headache, hypertension 160/110 mm Hg. Among health workers, only 57.3% of doctors answered correctly, this is a low figure for such a formidable pathology of pregnancy. Errors in diagnosis lead to incorrect tactics of providing primary health care. Unfortunately, 25.8% of health workers believe that medical examinations should be done every month, which indicates a lack of understanding of medical examinations, in particular, the frequency of their implementation. At the same time, according to the Mw, the lack of doctors, the absence of modern diagnostic methods, and the remoteness of the family clinic from the patient's place of residence affect the population's medical examinations. In addition, some home care nurses believe that the population has a low level of medical culture. For wider coverage of the population by medical examinations, it is necessary for each home care worker to inform the population about the importance of medical examinations and have persuasion skills. Based on the results of testing questions on the topics: medical examinations, antenatal care, contraception methods, RH among obstetricians-gynecologists and GPs, the following data were obtained (diagram 3).

Diagram 3. Knowledge of OG and GPs on medical examinations, ANU, CM, RH(in %)

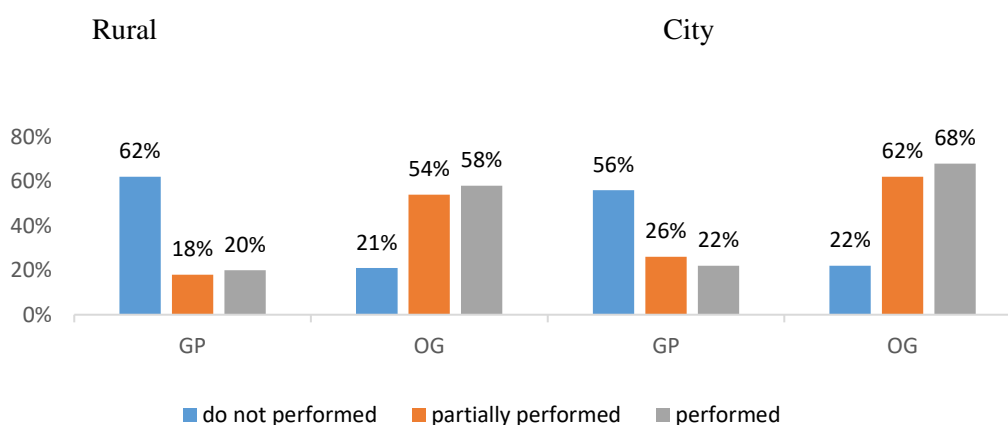


The difference between the correct answers between city and rural doctors was approximately 1.5 times greater for city doctors. About 80% of GPs gave correct answers to questions about medical examinations, however, they had difficulty answering questions about maternal and

child health and contraception methods. Not all obstetricians and gynecologists were able to correctly answer questions directly related to their professional activities. Thus, only 55% of GPs and 82% of obstetricians and gynecologists were able to correctly answer questions about antenatal care, 59% of GPs and 78% of obstetricians and gynecologists were able to correctly answer questions about contraception methods.

To study the quality of antenatal care services provided to pregnant women by GPs and obstetricians and gynecologists, an observation toolkit was developed, including 18 indicators (see Appendix “Indicators of the quality of services provided by GPs and obstetricians and gynecologists”). The assessment scale consisted of three values: “fulfilled”, “partially fulfilled”, “did not fulfill.”

Diagram 4. Quality of services for pregnant women by GPs and OG according to ANU (in %)



During the assessment of GP counseling in the Surkhandarya and Tashkent regions, the percentage of coverage of such a topic as “Warning signs of pregnancy” was very low (6.4% and 20%, respectively). This was confirmed during a survey of women who were unable to answer the question: “What warning signs did the doctor tell you about during the consultation?”

The prescription of folic acid and potassium iodide is recommended only during the first trimester of pregnancy. Given the number of women registered before 12 weeks, the coverage with the prescription of these drugs was generally satisfactory. Access to more detailed information on diseases, treatment and diagnostics, which is fully provided in the medical literature, is impossible due to the language barrier (diagram 4).

According to the results of the survey among the population, it was revealed that OG work more actively in RH and ANC than GPs and Mw, although according to the qualification characteristics, ANC refers to the duties of GPs.

Conclusions:

1. To improve educational work among women of reproductive age, it is necessary to regularly monitor, evaluate the activities and professionalism of health workers, and introduce tools for self-assessment of the quality of knowledge on RH, FP, Cm.
2. It is necessary to develop protocols for maintaining ANC of pregnant women and RH and FP for primary care, both for GPs and Mw, taking into account their working conditions and resources, and also take into account the staffing of medical personnel and the mentality of women living in each individual district of the city and region.
3. It is necessary to concentrate efforts on increasing the level of education in reproductive health issues not only for women, but also for men. Given the large role of men in family planning (FP), consider the possibility of using various institutions for this, for example, religious ones, respected among men.

4. Introduce the topic of RH, FP, and prevention of sexually transmitted infections into the curriculum for schoolchildren and students.
5. Organize systematic training of GPs and home care workers in methods of identifying the needs of the population, information and educational work, including the need for regular medical examinations. In this regard, it is necessary to strengthen interdepartmental coordination at the mahalla level.
6. Consider the possibility of revising the personnel policy in the FP system so that each polyclinic accessible to the population (including branches) provides medical services both GPs and specialists.
7. It is necessary to take into account public opinion on the issue of providing the opportunity to choose to receive the ANC service from a general practitioner or an obstetrician-gynecologist. Determine the involvement of GPs and home care workers in which areas/topics it is better for GPs to work, and in which ones for specialists.
9. Focus on the quality of home care visits, not on their quantity. Transition from the principle of “identify the problem and redirect” to the principle of identifying the risk that can lead to a problem and eliminating/preventing it.
10. Consistently improve the work on providing information on pregnancy, in particular on normal nutrition, warning signs, childbirth and postpartum contraception during individual counseling, conversations or as part of the "School of preparation for childbirth".
11. Where there is access to the Internet, use the Telegram messenger, as well as all available resources to inform about the rules of personal and sexual hygiene, reproductive rights (RR), RH, FP and bad habits that affect RH.
12. More precisely formulate the functional tasks on RH and FP for primary health care workers and develop specific action protocols for them (a minimum package of information for motivation) on each relevant issue. Inform women of reproductive age, especially those currently pregnant, about the importance of registering in the first trimester of pregnancy; observing the interval between births; medical examinations to prevent somatic pathologies.

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