

# Prenatal Care in Uganda and the Czech Republic

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## Abstract:

**Objective:** The objective was to determine whether the Czech and Ugandan women are familiar with the concept of prenatal counseling; if they visit prenatal clinic; what kind of tests are conducted during the prenatal counseling; whether their health throughout pregnancy is monitored by a Health Professional.

**Background:** Prenatal care in the Czech Republic and in Uganda differ from each other. A Midwife plays an important role in the care of pregnant women in Uganda. In the Czech Republic a pregnant woman undergoes a higher number of tests compared to Uganda.

**Methods:** Respondents were selected by purposive sampling. There were two homogeneous sets of respondents from the Czech Republic and Uganda - women with children under the age of 2. A non-standardized questionnaire in Czech and English language was created, with the level of significance of 5%.

**Results:** The knowledge level of the term prenatal clinic is higher in the Czech Republic than in Uganda. 80 Czech respondents (100%) underwent ultrasound examination during pregnancy. It was only 22 respondents (27.5%) in Uganda. Cardiotocographic examination in Uganda does not take place in the Czech Republic is extended, it completed a total of 70 (87.5%) respondents. Health status of Ugandan respondents monitors in 75.6% (51 respondents) Midwife, the Czech Republic all 80 (100.0%) of the respondents is monitored by a Doctor.

**Conclusions:** The results can be applied in legislation changes and improvements in education.

## Introduction

Pregnancy is a physiological period and throughout history, it has been interspersed with various theories, attitudes and procedures. The topical issue in our society is an approach to a pregnancy and a labor as to physiological processes. For a woman, pregnancy and labor are enriching conditions and do not mean a pathology or illness. It is therefore necessary to treat them as natural life phases or natural phenomena.

Prenatal care means not only health monitoring during pregnancy but also an offer of courses and other activities which a woman can do during her pregnancy. Theoretical, exercise and mixed courses are offered to pregnant women in the Czech Republic. (Roztocil, 2008, p. 57)

Prenatal counseling is understood as a pregnant woman seeing a Healthcare Professional, in the Czech Republic mostly a Gynecologist and an Obstetrician. The Czech Gynecological and Obstetrician Society recommends that women with normal

pregnancy undergo prenatal counseling once every four weeks until the 36<sup>th</sup> week of gestation (including) and once a week from 37<sup>th</sup> week of gestation to the due date. The Czech Gynecological and Obstetrician Society also recommends a complex prenatal examination be performed by the end of 12<sup>th</sup> week of gestation at the latest. Within each visit of prenatal counseling a detailed collection of anamnesis data; external examination measuring weight gain; blood pressure and pulse; chemical analysis of urine; if appropriate a bimanual vaginal examination to state the cervix score are carried out. The detection of fetus vitality signs is carried out from 24<sup>th</sup> week of gestation onward. Among irregular examinations in particular week of gestation also belong detailed blood sampling; birth defects screening; ultrasonography screening; vaginal swabs; Cardiotocographic; etc. (Lubusky, 2007)

As regards the frequency of visits in prenatal counseling, pregnant women in the

Czech Republic follow recommendations by the Czech Gynecological and Obstetrician Society. Some of them also search for independent Midwives.

Dish (2007) states that about 94% of Ugandan pregnant women have four prenatal counseling visits during their pregnancy, most often between 10<sup>th</sup>-16<sup>th</sup>, than between 20<sup>th</sup> - 24<sup>th</sup>, 28<sup>th</sup> - 32<sup>nd</sup> and in 36<sup>th</sup> week of gestation. Prenatal counseling is managed by Midwives and it is performed in hospitals or health care centers – health units.

In prenatal counseling a thorough collection of anamnesis data in pregnant women is carried out. Vaginal examination is carried out on demand and it is aimed to searching of abnormalities and infections – syphilis, candida albicans, etc. Size of pelvis is measured between the 36<sup>th</sup> and 42<sup>nd</sup> week of gestation. This measuring is done to all *primiparas* and all *multiparas* whose previous children were born weighing more than 3 kilograms. (Fraser *et al.*, 2009, p. 247)

Blood pressure and heartbeat is measured during every visit in prenatal counseling. Body height and weight are recorded within the first visit. The weight gain is watched in the course of the entire pregnancy. All the data are recorded into a maternity certificate. Urine and blood examinations are carried out on demand. (Henderson, Macdoland, 2004, p. 248)

Instrumental methods of examination are not widespread in Uganda. Some women undergo ECG during their pregnancy but this is available only in healthcare centers in the capital Kampala. Ultrasonography screening and cardiotocography are not part of routine examinations. (Henderson, Macdoland, 2004, p. 254)

In the second and third trimester, prophylaxis is done against most frequent local diseases such as infection, malnutrition, malaria and pre-eclampsia.

One of the most important African topics of education is hygiene. There is a lack

of drinking water in Uganda. In prenatal counseling Midwives counsel pregnant women about appropriate diet during pregnancy; danger of natural (medicine men's) medicine; basic diseases in pregnancy; importance of labor in hospital environment; malaria and anemia prophylaxes; parenthood planning; signals of labor initialization; correct breastfeeding and importance of exercising and relaxation. They also educate women in childcare and about sexually transmitted diseases.

The principal objective of this work was to compare a level of prenatal care in the Czech Republic and Uganda. Several sub-aims were set through which it was possible to meet the main aim.

#### **Sub-aims: To ascertain whether:**

- the respondents know what the term “prenatal counseling” means.
- the respondents visit/visited prenatal counseling.
- the respondents' health condition was monitored during their pregnancy.
- ultrasonography examination is done in the Czech Republic and in Uganda.
- cardiotocography examination is done in the Czech Republic and in Uganda.

### **Sample and research methodology**

A standardized questionnaire in English and Czech languages was created. It consisted of 21 items, topics covering prenatal care, labor and postnatal period with socio-demographic data. The linguistic validity was carried out with respect to a bilingual version of the instrument. In the introduction to the questionnaire, the respondents were presented with research objectives and informed about how the data would be used. Within the scope of a pilot study a content and construct validity of research instrument was made. The software Microsoft Word 2007 and Microsoft Excel 2007 were

used. For statistical processing the  $\chi^2$  test (Chi-squared Test) was used; calculation was with Microsoft Excel 2007 and open source OpenEpi 2.3.1.

The collected data were recorded into contingency tables and consequently generated tables and graphs of particular measuring values. We worked at a significance level of 5%. The research survey took place in locations where the author acted as a volunteer – Midwife, in *Holy Innocents Children's Hospital Mbarara* and *Uganda Martyrs Ibanda Hospital*, districts Mbarara (Mbarara, Tsigye) and Isingiro (Ibanda, Kanyonza, Ruhimbo, Mabona, Rwengiri, Rwembwa). All stated workplaces and locations acknowledged the survey and agreed with the research being carried out.

The research survey in the Czech Republic was realized in healthcare providers at selected Medical Doctors' offices, who were acknowledged with a research survey in advance and agreed with it. Research was held: in office of General Practitioner for children and adolescents MUDr. Jana Spackova in Ostrava-Poruba, General Practitioner for children and adolescents MUDr. Vera Chvatalova in Valasske Mezirici and in the Pediatric Department of the Hospital in Valasske Mezirici. The selection of healthcare providers and General Practitioners was realized on the basis of a pilot study after which we learned that it was optimal to opt for women respondents who had already given birth, visited a General Practitioner or were in hospital with a child under two years of age at that time – this seemed to be an adequate period because women were able to remember the course of prenatal care and childbirth itself. Data collection took place in both countries ranging from June to September 2010.

The research survey was carried out in two sets of respondents. They were women with children under two years of age living in the Czech Republic and Uganda.

A return rate of questionnaires was 88.9% in the Czech Republic and 100% in Uganda. A 100% return rate in Uganda was because of the language barrier; we had to address a particular woman and translate and fill in a complete questionnaire to the local African language in cooperation with an interpreter because not all the respondents could speak English. It is possible to describe the cooperation with an interpreter as a potential limit of study because of possible tending to distortion of research survey results. In total, 160 questionnaires were evaluated, 80 from the Czech Republic and 80 from Uganda.

## Results

We focused on women's awareness in the area of pregnancy, labor and childcare. Mother was reported as the information source about pregnancy, labor and childcare by 10 respondents (12.5%); a Midwife by 45 respondents (56.3%); a Medical Doctor by 29 respondents (36.3%). Three respondents stated another information source – a sister, a husband or a friend. It was found that in the Czech Republic mother was given as the information source about pregnancy, labor and childcare by 34 respondents (42.5%) and the same number stated a Midwife as their information source. For 48 respondents (60.0%) a Medical Doctor was an information source about pregnancy, labor and childcare; 24 respondents (30.0%) stated other information sources - a friend, specialized literature and the Internet.

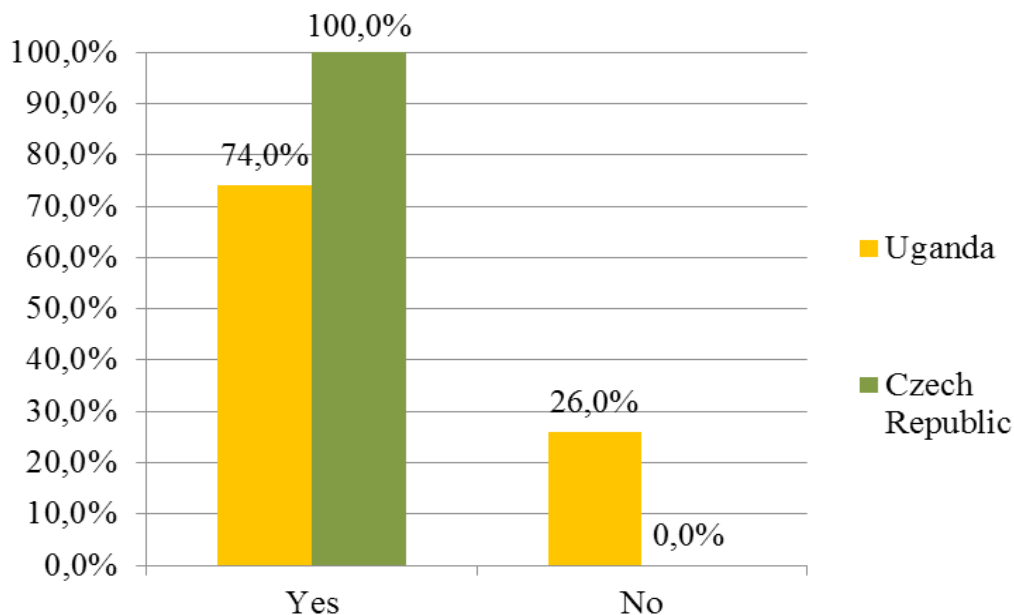
Our objective was to ascertain if respondents know what prenatal counseling is and whether they had received it. 64 (81.0%) Ugandan respondents stated they knew what prenatal counseling was; 15 (19.0%) respondents did not know. In the Czech Republic, the results show that except for one respondent all the 79 respondents knew what prenatal counseling was. Statistically

significant difference in response rate  $p=0,0002$ ,  $p < 0.01$  was confirmed.

**Graph No. 1** shows percentage of respondents from Uganda and the Czech Republic in a visit rate of prenatal counseling. In this item was result of Chi-squared Test  $p = 0.0002$ , statistically significant difference in response ( $p < 0.01$ ) was found.

units (healthcare centers with low quality of healthcare) or during field shift of Midwives.

Nowadays, the ultrasound examination is being done for a pregnant Czech woman several times during the pregnancy. This was confirmed in the survey showing that all the 80 respondents (100.0%) from the Czech Republic underwent an ultrasound



**Graph No. 1:** Antenatal clinic attendance.

The health condition in pregnancy was checked in Uganda in 78 respondents (97.0%). In the Czech Republic all the 80 respondents (100.0%) underwent a medical check of pregnancy in prenatal counseling.

In Uganda, 17 respondents (21.8%) were present in prenatal counseling (in hospitals) for medical check-up of their pregnancy. The health condition of 59 respondents (75.6%) was checked by a Midwife and in 2 respondents (2.6%) by their mothers. Examination by a Midwife was carried out in the course of random meeting in Health

examination during their pregnancy. The result of Chi-squared Test  $p= 1.4510$  shows there no statistically significant difference in respond rate ( $p > 0.01$ ) was found. There were only 22 respondents (27.5%) who underwent an ultrasound screening in Uganda; CTG examination is not carried out there. The reason that none of the addressed respondents underwent this examination is very simple – lack of financial resources for the instruments. No statistically significant difference in response rate ( $p > 0.01$ ),  $p=6.7338$  was found. (Chart No. 1)

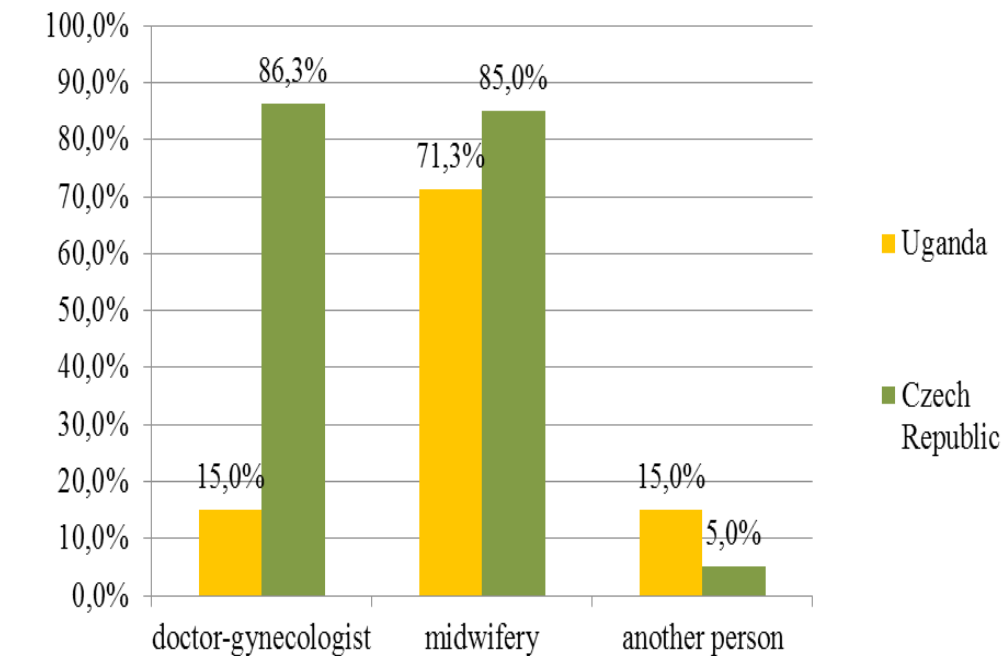
**Chart No. 1:** Cardiotocographic examination by the respondents in pregnancy.

Answer	Uganda		Czech Republic	
	Relative	Absolute	Relative	Absolute
Yes	0	0.0%	70	87.5%
No	80	100.0%	10	12.5%

In our research survey, we were interested in who assisted women in the course of labor itself. The respondents were allowed to give more answers. The results from the Czech Republic and Uganda are shown in the Graph No. 2. Other person was stated by Ugandan respondents in 12 cases (15.0%), out of which a husband assisted to 1 respondent (8.3%), mother-in-law to 1 respondent (8.3%) a neighbor to 1 respondent (8.3%), 3 respondents (25.0%) reported the assistance of TBA (traditional birth assistant) and mother in 4 respondents (33.3%). 2 respondents (16.7%) stated they delivered on their own. The other person, namely a husband, was reported by 4 respondents (5.0%) in the Czech Republic.

## Discussion

Except for one, all the respondents (99.0%) from the Czech Republic knew what prenatal counseling was. In Uganda, this term is familiar to 81.0% and unknown for 19.0%. The reason for different results of research surveys in Uganda and the Czech Republic could be insufficient and poor health awareness of Ugandan women during their pregnancy. It is connected to the woman's age and her maturity. Research of Grant and Hallman (2006) in South Africa revealed that at the age of 18 more than 30% of adolescent women have given birth at least once. Pregnancy poses one of the most serious cause of interrupting school attendance, namely at the

**Graph No. 2:** Assistance of labor.

high-school level. This means that in many cases for teenage mothers the child birth results in study termination. (Grant, Hallman, 2006, p. 3) The research showed there are factors which influence whether a teenage mother is able to continue in her education after giving birth. Most of the factors depend on the girls' ability to control logistics, finances and education with mother care. (Kaufman, Wet & Stadler, 2001)

We learned from results of research surveys in the Czech Republic and Uganda that 100.0% of Czech respondents visited prenatal counseling. There were 74.0% Ugandan respondents who visited prenatal counseling and 26.0% who did not. There could be several reasons for these different results: poor awareness on prenatal counseling importance in Uganda; poor access to a healthcare center providing prenatal counseling in Uganda along with its remoteness. Globally, if we look at the prenatal care in Uganda it is necessary to note that the percentage of women visiting prenatal counseling is progressively increasing. UNICEF, *State of the World's Children, Child info and Demographic and Health Survey* constantly informs the general public about these results. (UNICEF 2016)

We were interested if a health condition was checked in all respondents. In all the respondents in the Czech Republic checks were carried out in prenatal counseling. In 2 Ugandan respondents their health condition was not checked at all, however 21.8% respondents visited prenatal counseling. While in the Czech Republic the prenatal counseling is carried out by a Medical Doctor, in Uganda it is done by a Midwife. Research survey results indicate that the activities and competency of Midwives are far wider in Uganda than in the Czech Republic. Prenatal counseling is often done only by a student of Midwifery degree program.

The Czech Republic differs from Uganda in the development of instrumental methods

of examination. Only 27.5% respondents in Uganda underwent ultrasound examination in their pregnancy. Cardiotocography is not available in Uganda; therefore no respondent undertook this examination during pregnancy. It was reported that in the Czech Republic 12.5% of respondents did not undergo cardiotocography. The reason why not all the Czech respondents undertook this examination, although the CTG equipment is available in every Czech prenatal care, can lie in the women's approach to this examination, their opinion, lifestyle and also the week of gestation.

## Conclusion

Knowledge of prenatal counseling is wider in the Czech Republic than in Uganda. Similar results were discovered regarding visits of prenatal counseling. More Czech women visited prenatal counseling than Uganda women. The frequency of ultrasound examination was higher in the Czech Republic. CTG was not available for any Uganda respondent. In all Czech respondents their health condition was monitored by a Medical Doctor; in Uganda respondents' health condition was monitored by a Midwife.

Follow-up research surveys should focus more intensively on the profession of a Midwife. The competencies of Midwives in Uganda are far greater than in the Czech Republic. Information gained in the research can be used in praxis, above all as a motivation for tighter cooperation between both countries. In many parts of Uganda, the study programs of Midwifery are supported by the European Union and therefore a potential cooperation should not pose an issue.

It should be noted that despite the survey, results look more positive more for the Czech setting, the quality of prenatal care in Uganda is on the increase and is gradually improving, as has been confirmed in studies carried out by UNICEF.

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