Abstract

According to foreign sources, the current prenatal and neonatal care has a strong or even protective role in terms of medical approaches, but it is at a low level in salutogenic approaches: results were obtained from three groups, wherein the first group included the answers and documentation of 541 women. Responses were obtained from questionnaires in four regions of the Czech Republic, mainly in the South Bohemian Region. The questionnaire contained 32 questions and 19 data obtained from pregnancy cards of the pregnant women, pregnancy case records, and reports on the mother. Data on preterm births were obtained from medical records and from the Perinatal Center in České Budějovice. The overview of prenatal diagnosis is based on the reports from the Center for Medical Genetics in České Budějovice. The report of the Centre for Medical Genetics describes very prudent and reasonable approaches concerning abortions. A high level of medical approaches is reported, which is demonstrated by low perinatal and neonatal mortality. Salutogenic approaches mainly lack psychosocial approach to pregnant women.

Introduction

The COST agency announced a project focused on prenatal, natal and postnatal issues of medical and salutogenic approaches (COST (13045.LD13045). The reason for publication, as explained by the authors in their memorandum, is that medical approaches in Europe are at a high level, while the salutogenic approaches are neglected. Salutogenic means "why a person is healthy". The authors of this publication conducted a project focused on medical and salutogenic approaches in prenatal and postnatal care for Czech women. Medical approaches have been repeatedly evaluated as excellent. This evaluation results from a low perinatal and neonatal mortality. To date, no systematic analysis of salutogenic approaches dealing with this issue has been conducted.

Objective:

1.To evaluate prenatal and postnatal care for Czech women in terms of medical and salutogenic approaches.

2. To propose integration of these approaches

Methods: results were obtained from three groups, wherein the first group included the answers and documentation of 541 women. Responses were obtained from questionnaires in four regions of the Czech Republic, mainly in the South Bohemian Region. The questionnaire contained 32 questions and 19 data obtained from pregnancy cards of the pregnant women, pregnancy case records, and reports on the mother. (see annex). Further information is based on medical records of a female department but mainly from the final reports of national data.

Q U E S T I O N N A I R E

for women in the postpartum period admitted to a Postnatal Care Department & analysis of data from medical records (pregnancy case record, pregnancy card, and so on)

Dear Ms...,

we are inviting you to take part in a project aimed at improving prenatal, delivery and postnatal care for women and their families. Please complete the following questionnaire which is anonymous. If you are unclear, you can ask the person acting as a researcher who gave you the questionnaire.

Indicate your answer by entering X in the correct box, ***you can also add additional text in the larger box***.

Thank you for your time and cooperation

Team of researchers

1	Number of pregnancies:	1	2	3	4	5	6 and more
2	Number of deliveries:	1	2	3	4	5	6 and more
3	Your age at the respective deliveries:						

No.	Question	yes	no	Your verbal explanation
4	Did you come for visits to the prenatal clinic led by a gynaecologist?			
5	Did you come for visits to the prenatal clinic led by a midwife?			
6	During your pregnancy, have you been contacted by a midwife to offer their services, such as counselling (visit at home before and after birth, birth plan consultation, accompaniment into hospital to give birth, newborn care, breastfeeding,...)?			
7	Would you be interested in the services of a midwife during pregnancy and after childbirth - counselling?			
8	Were you informed about all the tests that were performed during pregnancy (such as collection of blood, urine samples, ultrasound scans, and other tests with any specialists)? If NO, please specify the information you have not received:			
9	Did you undergo tests (blood sampling,			

	ultrasound) to detect developmental disorders in the foetus?			
No.	**Question**	**yes**	**no**	**Your verbal explanation**
10	Who informed you about the possibilities of screening the women at risk of congenital defects in the fetus (you can give more than one answer): ***Seelect the correct answer by circling your choice***	a) gynaecologist b) midwife c) employees of the Department of Medical Genetics d) someone else - please specify who: …… ……. e) I received information from the internet, flyers		
11	Did you amniotic fluid test done (amniocentesis)?			
12	Would you welcome an information leaflet or brochure with brief information about pregnancy, childbirth and the postpartum period, and about the time schedule and importance of basic tests in this period?			
13	During your pregnancy, did you attend courses led by a midwife, such as lectures, exercises, swimming,... If YES, was the child's father present at least at one lesson?			
14	Did you have a prepared birth plan? If YES, please specify what was the main focus of the plan.			
15	Did healthcare professionals at the delivery room respect your birth plan? If NO, please specify what they failed to respect in your plan.			
16	Was a close person or doula present at your delivery? If YES, please specify who was present.			
17	During the first stage of labour (i.e. from the beginning of contractions until the birth), were you allowed to take any labour position? Indicate what position was your prefered one.			
18	During the childbirth, were you allowed to use relaxation techniques to relieve pain? For example, a shower, bath, gym ball, suspension, etc. If YES, please specify the techniques or tools used.			

19	Did you have spontaneous rupture of membranes?			
20	Did rupture of membranes occur following intervention of a medical professional (membrane stripping)?			
21	During the delivery, did you receive an infusion to strengthen contractions?			
22	During the delivery, was any method used to relieve pain (intravenously administered drugs, epidural)? If YES, please specify.			
No.	**Question**	**yes**	**no**	**Your verbal explanation**
23	During the delivery, were you allowed to take any of your preferred labour positions? If YES, please specify which position you actually used. If NO, please specify which position you preferred and the one you actually used.			I gave birth in the following position, please specify: I wanted to give birth in the following position, please specify: I gave birth in the position determined by medical professionals - specify:
24	Was the labour itself (second stage of delivery) led by a doctor?			
25	Was the labour itself (second stage of delivery) led by a midwife?			
26	Did you have an opportunity to discuss episiotomy before the delivery? If NO, would you like to have an opportunity to talk to someone about it?			
27	Did you have an episiotomy done?			
28	Were you informed why episiotomy is to be done?			
29	After the childbirth, did you get an injection into a vein to give birth to the placenta?			
30	Was you baby placed on your stomach immediately after the birth (support of bonding,			

	skin-to-skin contact)			
31	Was you baby laid on your chest within 30 minutes of birth?			
32	Were you together with your family in the postpartum period at the delivery room?			

From the medical records (card, delivery case record, report on mother) of *the same patient*, we will also get:

A record sheet/log for the following information (depending on what records we want to make)

	Information needed	**yes**	**no**	**Specification**
101	Length of gestation at the time of delivery (completed week)			
102	Number of visits to the antenatal center			
103	Number of ultrasound scans during pregnancy			
104	Was admission to the hospital planned?			
105	Was admission to the hospital due to incipient labour?			
106	Length of hospitalization before delivery	days		
107	Length of the first stage of labour	hours		
108	Length of the second stage of labour	min.		
109	Length of the third stage of labour	min.		
110	End of delivery	vaginal, SC, forceps, VEX		
111	Completion of delivery			
112	Manual placenta removal or revision			

113	Blood loss during delivery	mL		
114	Administration of blood products (RBC)			
115	Administration of medications during childbirth - specify all treatments, including quantities			
116	Interval between administration of analgesia and childbirth (iv or epidural)	hours		
117	Number of vaginal examinations before beginning of the first stage of labour (excluding the baseline examination)			
118	Number of vaginal examinations during the first phase of delivery			
119	Number of CTG examinations during the delivery			
120	Condition of the newborn	physiological, suspecting, pathological		

The results shown in Tables 4-7 are based on the publication of the Medical Genetics Centre, "The results of prenatal diagnosis in 2013" in České Budějovice (Chief of project: Dr. Karel Čutka)

The number of pregnancies completed by C-section is based on data from Table 1 and Table 2. It pertaines to 315 data from delivery case records, including 197 preterm births (Table 2) and 118 full-term births (Table 1). Interviews of parents with medical team at the time before birth were also evaluated, especially in groups with the lowest birth weight.

RESULTS

Table 1, Results for 581 answers from four regions

First group	**Number**
Non-evaluable answers	40
physiological pregnancy and childbirth	201-37%
Delivery by cesarean section	118-21%
vaginal delivery with episiotomy	222-41%
Total	**581**

Values are calculated from 541 data

Table 2. Overview of births, children with low birth weight and number of C-sections performed

(Children with low birth weight)

weight (g)	**number of deliveries**	**number of deliveries by C-section**
up to 500 g	3	3 100%
500-749 g	17	15 88%
750-999 g	30	24 80%
1000-1499 g	44	34----------70%
1500-1999 g	72	56 77%
2000-2499 g	137	65 47%
Total	**303**	**197 (65%)**

Data from the perinatal center. The percentage of C-sections performed decreases with increasing birth weight (with exception in the birth weight group 1500 to 1999 gr.)

Table 3 Overview of births - twins - with low birth weight

(Gemini)

weight (g)	**number of deliveries**	**number of deliveries by C-section**
up to 500 g	2	2
up to 999 g	7	7

up to 1499 g	12	12
up to 1999 g	11	11
up to 2499 g	27	25
Total	**59**	**57 (96%)**

Data from the perinatal center. The results suggest the concept of birth management in this center

Table 4. C-sections performed before the term and at full term in the study groups.

Term of delivery	number
Number of births completed prematurely by C-section	197 (table 2) 64%
Number of births completed at full term by C-section	118 (table 1) 22%
Total	**315**

Number of C-sections in preterm deliveries is significantly higher than the number of C-sections at full term (based on data from four sites), the results of C-sections in preterm deliveries are based on data from a single perinatal center.

Table 5. Number of medical abortions in the year 2013 performed at a single center

	Number
genetic indications	75
at the request of the pregnant woman	515*
Total	**590**

*****Women stated social and health reasons.

Table 6. Abortion at the request of the pregnant woman, 2010-2013

Year	Number

2010	509
2011	526
2012	576
2013	515

Development of abortions performed in the respective years at the request of woman (single study center)

Table 7. Results and overview of pregnancies continuing with congenital developmental disorders identified in the years 2002-2013 (Center of Medical Genetics, České Budějovice).

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	**Summar**
Number of medical abortions: **1. Ultrasound diagnosis ***CDD (Congenital Developmental Disorders),* ****2.DNA ****diagnosis, *****3. ČIP (DNA chip diagnosis)	31	23	15	25	25	44	38	41	46	50	54	**46**	**438**

Number of medical abortions: with chromosomal aberrations	14	12	18	20	25	19	26	29	25	28	29	**29**	**274**
number of all abortions in the second trimester	45	35	33	45	50	63	64	70	71	78	83	**75**	**712**
number of continuing pregnancies with CDD	53	96	81	75	106	112	108	100	102	111	101	**103**	**1148**

*UPT, Medical abortion;**UZ, Ultrasound diagnosis ***CDD, Congenital developmental disorder;****DNA -.diagnosis based on examination of deoxyribonucleic acid,*****ČIP- DNA chip diagnosis.

In 2013, the number of pregnancies continuing with positive findings remained on the same level.

Table 8. Overview of foetal congenital developmental disorders for which abortion was indicated in the year 2013

(Medical abortions in the year 2013 indicated due to foetal CDD (75))

Number	type of congenital developmental disorder
15	Down syndrome
7	Edwards syndrome
2	Turnerův syndrom
1	Klinefeltův syndrom
2	69,XXX triploidy
1	47,XY+22(4) 46.XY(18) - Mosaic trisomy 22
1	45,XX der(5)+(5,15)(15,33,q11.2),15) - 15q11.2 microdeletions
1	46,XX,+ der(2) rob(14,21))q10q,10)/7/ 45,XX rob(14,21)(q10,q10)/93/
1	Acrania

2	Dandy-Walker syndrome
3	hydrocephalus and associated developmental disorders
2	Encephalocele
1	Porencephaly
10	cardiac malformations incompatible with life & associated chromosome disorders
8	Hydrops
1	pulmonary hypoplasia with elevated diaphragm
1	gastroschisis
3	omphalocele
1	diffuse cystic degeneration of the lungs
1	renal agenesis
2	osteochondrodysplasia
1	osteogenesis imperfecta
2	reduction deformities of limbs combined with chromosomal pathology
4	gene syndrome with extensive cleft palate
1	Microduplication syndrome, interstitial duplication of the long arms of chromosome 4 in the area 4q22x2q24.arr 4q22x2q24(93,484,282x2,94,531,586-104,135,562x3, 104,261,164x2), large unilateral facial cleft
1	foetal growth retardation, anhydramnios
75	**total number**

Diagnostic overview suggests a high level of quality at the Centre for Medical Genetics in České Budějovice. For example, detection of Down syndrome is 100%

)

Overview of congenital developmental disorders in foetus in a continuing pregnancy (103)

Number	**type of congenital developmental disorder**
9	heart defects (ultrasound diagnosis)
4	cleft palate (ultrasound diagnosis)
7	clubfoot (ultrasound diagnosis)

7	multicystic kidney, unilateral (ultrasound diagnosis)
30	hydronephrosis, hydroureter (ultrasound diagnosis)
15	significant pyelectasia (ultrasound diagnosis)
6	developmental disorders of the brain (ventriculomegaly, cerebellar hypotrophy, brain cysts) (ultrasound diagnosis)
5	Pathological findings **in karyotype***
20	other developmental disorders (ultrasound diagnosis)
103	**total number**

***accurate diagnosis has not been published**

Discussion

Researchers in the project were divided into 5 groups. Group 1 and Group 2 were assigned to investigate prenatal care. Members of the first and second group studied the ethical framework in the systems providing prenatal and early postnatal care, specifically the issues related to the indications for prenatal diagnosis in the first trimester of pregnancy (FTPD, amniocentesis, abortion, etc..), as well as indications for episiotomy and caesarean sections in general, including foetuses at about 25 weeks of pregnancy. This working group will include researchers from the area of ethics, genetics, obstetrics, neonatology and midwives.

results.

The number of C-sections was 118 (excluding preterm infants), the most frequent indications were impending fetal hypoxia, large foetus, breech presentation (especially twins), transverse lie and health indications. No situation was reported that would correspond to C-section at the patient's request. In preterm deliveries, Caesarean section was indicated in 197 births (61%). Of course, with prior consent of the mother. The frequency of C-sections decreases with increasing weight. In full-term deliveries, indications for C-section are precisely defined. It is impossible to unambiguously decide whether they are enough or not. A significant decrease in mortality and morbidity can be observed with increasing number of indications. Indications are clear in fetuses with low birth weight, especially in multiple pregnancies. The relatively higher percentage of C-sections in the weight group above 2000 g is caused by the number of multiple pregnancies. Rupture of membranes occurred spontaneously in 34% of women, after the intervention of a medical professional in 38%, and during the surgery in 28% of women. Infusion to strengthen the contractions was administered to 45% of women, and 64% of women received analgesics. In vaginal deliveries, 49% of women had spontaneous rupture of membranes and 51% of women underwent membrane stripping. Sixty percent (60%) of women received an infusion to strengthen the contractions and 57% received analgesics. Thus, the records demonstrated no differences between the C-section deliveries and vaginal births. Medical principles are at a high level in the prenatal period.

Episiotomy was performed in 57% of women with vaginal delivery and in 5.7% of women with surgical delivery. The most frequent indications were protection of the perineum and size of the fetus. Experience of the doctor plays an important role in the indications. Comments on these indications are provided by Doležal. But the fact is, that reduction in neonatal morbidity and mortality increased the number of episiotomies. Some authors report episiotomy is indicated especially by young doctors who are already not proficient in the "art of Obstetric". Numbers of episiotomies, even in deliveries led by a doctor or midwife, are very similar.

Parental approaches to the management of FTPD are influenced by a number of circumstances, namely spiritual orientation of parents. It is evident from the above overview, that parents mostly agree with abortion in the event of a diagnosed significant developmental disorder. In the year 2013, only one case was recorded that parents refused abortion following the diagnosis of Down syndrome. Continuing pregnancies are shown in the table. Physicians inform parents according to their experience, but the final decision is in the hands of parents. Parental approaches to the management of FTPD are influenced by a number of circumstances, namely spiritual orientation of parents. Physicians inform parents according to their experience, but the final decision is in the hands of parents.

The whole issue regarding ethical and psychosocial problems of prenatal life was discussed at the "Fryebergh Days" workshop.

Ø **prof. MUDr. PhDr. Peter G. Fedor-Freybergh, DrSc., dr. h. c. mult.** – "Prenatal diet: Continuity and Dialogue“ **Doc. PhDr. Jiří Jankovský, Ph.D.** – "The issue of prenatal psychology" **Prof. MUDr. Jozef Mikloško, PhD.** – "**Doc. MUDr. Jozef Hašto, PhD.** – "Intimacy, sexuality and relationship binding in paired relationships and children" , **MUDr. Radovan Hrubý, PhD., Lili Maria Maas, ArtD., Prof. MUDr. PhDr. P. G.Fedor-Freybergh, DrSc., dr. h. c. mult.** – "Integrative psychoneurological developmental model in prenatal and perinatal medicine" **PhDr. Katarína Minarovičová, PhD.** - "The relationship between biological parents and children placed in institutional care - a key area for children to manage their life situation, **Michaela Mrowetz** -" How can healthcare professionals promote a strong, loving relationships in families? …“ **(Prof. MUDr. Aleš Roztočil, CSc.** – "Diversification of Czech obstetrics “**Mgr. et Mgr. Ondřej Doskočil, Th.D** – "The right to make informed choices - autonomy of parent (s) and their limits" **Doc. PhDr. Mária Boledovičová, Ph.D.** – "Community Care in the perinatal period“ **Prof. MUDr. Jaroslav Slaný, CSc.** – "Prenatal life in terms of ethics" **Doc. MUDr. Jiří Šimek, CSc**. – "Ethics in relation to an unborn child" **Doc. PhDr. Mária Boledovičová, Ph.D.** – "The experiences of fathers during pregnancy and shortly after birth“ **Ing. Tomáš Nix, Ph.D.**; **MUDr. Karel Čutka**; **MUDr. David Čutka**; **MUDr. Milada Šustrová** – "Array CGH – a new quality in prenatal and postnatal genetic diagnostics" **Bc. Magdalena Čepčányová** – "Issues of prenatal psychology" **Bc. Zdena Kubaštová** – "Selected ethical issues in perinatology"
MUDr. Miloš Velemínský, Ph.D.; **Mgr. Věra Vránová, Ph.D.**; **Doc. PhDr. Mária Boledovičová, Ph.D.; PhDr. Jana Samková, Ph.D.** Prenatal care in the Czech Republic from the view of female immigrants**“**
MUDr. Miloš Velemínský, Ph.D.; D**oc. PhDr. Mária Boledovičová, Ph.D.;**
Mgr. Dominika Průchová, Mgr. Věra Vránová, Ph.D.; **PhDr. Jana Samková, Ph.D.** –
M. Velemínský sr
All lectures will be prepared to the publishing format.

Lectures highlighted the need to focus on prenatal life, including prenatal psychology. The importance of prenatal life for the further development of an individual was emphasized. Professor Freybergh drew attention to the unity of the fetus with the mother. His lecture was called "continuity of development and dialogue between the fetus and the mother." It actually

follows the philosophy of prenatal life. Psychosocial approaches to pregnant women in terms of screening according to Professor Fraybergh were further discussed. Roztočil studied diversification of obstetric management, and classified medical delivery, physiological childbirth and homebirths. He reports that homebirths will continue and will be at parents' risk. Jankovský, who highlighted some philosophical approaches to the problem, studied the issue of prenatal psychology in detail. Psychosocial approach to newborns immediately after birth was emphasized by Mrowetz. Hrubý described psychoneurological developmental model in perinatal medicine. Boledovičová emphasized the importance of fathers in prenatal care and addressed the importance of community care in this period. Čepčányová studied practical assessment of the experiences of mothers with psychosocial issues. The issue of ethics focused on the prenatal period was discussed by Slaný in theoretical aspects, and by Kubaštová in practical aspects.

It is evident from overview of abortions that the indications were justified. However, the Czech medical community, has been unjustly accused that women are forced to prenatal screening. Examples of continuing pregnancies show that parents are not under duress when making decisions regarding abortion. The continuing 103 pregnancies despite severe diagnosis, serve as a proof thereof. Abortion based on mother's request cannot be clearly evaluated. Some mothers have health reasons, while other have social reasons.

The following conclusions can be made from the study. It is necessary:

1. To maintain a high medical level in prenatal and postnatal care

2. To increase the activity of men in the prenatal and natal periods; "Pregnant parents".

3. To improve individual approach to pregnant women and women in labour.

4 To talk a lot to mothers in the event of any complications that may occurr during

the pregnancy or delivery.

4. To increase the participation of midwives in the prenatal and postnatal care.

5. To apply psychosocial approaches to mothers in the prenatal and postnatal periods.

References:

References – COST 2

1. Antonovsky, A. (1979). Health, Stress and Coping. San Francisco: Jossey-Bass.
2. Antonovsky, A. (1987). Unraveling The Mystery of Health – How People Manage Stress and Stay Well, San Francisco: Jossey-Bass Publishers.

3. Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. Health Promotion. 11/1: 11–15.
4. Beeckman, K., Gottfredsdóttir, H. (2014). Measuring antenatal care use across Europe, applicability of a tool considering content and timing of care received. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 17–18. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 2014-06-16]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
5. Berg, M., Perez-Botella, M., Meier Magistretti, C., Lindstroem, B., Downe, S. (2014). The use of a salutogenic framework in empirical studies of maternity care. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 33–34. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 2014-06-16]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
6. Biesty, L., Lalor, J., Oboyle, C. (2014). The home and hospital interface in maternity care in ireland – experiences of Self Employed Community midwives during in-labour transfers. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 57–58. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 2014-06-16]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
7. Cecily Begley, Declan Devane, Mike Clarke, Colette McCann, Patricia Hughes, Mary Reilly, Roisin Maguire, Shane Higgins, Alan Finan, Siobhan Gormally, Miriam Doyle, Comparison of midwife-led and consultant-led care of healthy women at low risk of childbirth complications in the Republic of Ireland: a randomised trial, BMC Pregnancy and Childbirth, 11, (85), 2011, p1-6
8. Doležal, A. et al. (2007). Porodnické operace. (Obstetric surgery.) Praha: Grada Publishing, a. s., 376 s. ISBN 978-80-247-0881-2.
9. Dostál, L. (2006). Odkud pramení zdraví člověka? (What is the origin of human health?) Sanquis č. 43: 38.
10. Fontein Y. The comparison of birth outcomes and birth experiences of low-risk women in different sized midwifery practices in the Netherlands. 2010 Sep;23(3):103-10. doi: 10.1016/j.wombi.2010.01.002. Epub 2010 Mar 5.
11. Fredriksen AM, Lyberg A, Severinsson E. Nurs Health Sci. 2012 Sep;14(3):325-31. doi: 10.1111/j.1442-2018.2012.00724.x.
12. Guittier MJ, Pichon M, Irion O, Guillemin F, Boulvain M. J Altern Complement Med. 2012 Dec;18(12):1147-53. doi: 10.1089/acm.2011.0550. Epub 2012 Oct 2.
13. Klomp, T., de Jonge, A., Hutton, E. (2014). Dutch women in midwife-led care at the onset of labour: which pain relief do they prefer and what do they use? In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 97–98. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
14. Lyberg A, Severinsson E. J Nurs Manag. 2010 May;18(4):391-9. doi: 10.1111/j.1365-2834.2010.01083.x.
15. Lyberg, A., Severinsson, E. (2014). Fear of childbirth: mothers' experiences of team-midwifery care- a follow up study. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 47–48. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf

16. Meier Magistretti, C., Downe, S., Tritten Schwarz, K., Lindstroem, B., Berg, M. (2014). Best practice in maternity care: a salutogenic approach. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 35–36. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
17. Morano, S., Scambelluri, C. (2014). The role of communication in a project educating to a natural physiological birth. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 83. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
18. Mujkic, A., Zlopasa, G., Rodin, U. (2014). Number of antenatal visits, ultrasound examinations, Cesarean sections and perinatal mortality in Croatia from 1981 to 2012. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 21–22. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
19. Müller-Markfort, E.-M. (2014). Preventing the Transgenerational Caesarean Section. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 49. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
20. Nieuwenhuijze, M., Rijnders, M., Gottfredsdóttir, H., Du Preez, A., Vaz-Rebelo, P., Downe, S. (2014). Complexity theory and maternity care systems. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 127–128. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
21. Roztočil, A. (2012). Jak dál s naším porodnictvím? (What's next for our obstetrics?), Čes. Gynekol. 77: 552–554.
22. Roztočil, A. (2014). Diverzifikace českého porodnictví. Současná situace s výhledem do budoucnosti. (Diversification Czech obstetrics. The current situation with a view to the future.) In: Sborník abstrakt, Jihlavské zdravotnické dny 2014, Ošetřovatelství a porodní asistence v 21. století. (Book of abstracts, Jihlava Healthcare Day 2014, Nursing and Midwifery in the 21st Century).
23. Roztočil, A. (year?). Přirozený porod v porodnici. (Natural childbirth in the hospital.) In: Sborník abstrakt: 13. perinatologický den Ústeckého kraje. (Book of abstracts: 13th Perinatal day of the Ústí Region.
24. , . Salutogenesis. 2008 Jun;36(4):337-9. doi: 10.1177/1403494808093268.
25. Takegata M, Haruna M, Matsuzaki M, Shiraishi M, Okano T, Severinsson E. Arch Womens Ment Health. 2014 Feb 4.
26. Takegata, M., Haruna, M., Matsuzaki, M., Shiraishi, M., Okano, T., Severinsson, E. (2014). Sense of coherence during perinatal period and its influence on acute traumatic stress symptoms following childbirth. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 31–32. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf
27. Velemínský, M., Průchová, D. (2014). Prenatal and intrapartal interventions and the outcome of delivery in Czech Republic. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 245–246. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf

28. World Health Organization. Care in normal birth: Practical guide. Department of Reproductive Health and Research (1996). In: [online] [cit. 25/03/2014]. Available from: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/MSM_96_24_/en/

29. Zwart, M. (2014). Home Birth in Portugal. In: Optimising Childbirth Across Europe Conference, 9–10 April 2014, p. 157. Vrije University, Etterbeek campus, Brussels, Belgium. [online] [cit. 16/06/2014]. Available from: optimise2014.exordo.com/data/abstract_book.pdf

Table 4 - female immigrants

Group 4	**Number**
Mongolian ethnicity	35
Vietnamese ethnicity	65
Ukrainian ethnicity	93
Total	**193**

Total information obtained from 1,874 sources

II.Prenatal care

Introduction

results and overview of continuing pregnancies with congenital developmental disorders identified in the years 2002-2013

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	**summary**
number of artificial abortions: 1. Ultrasound diagnosis of congenital anomalies, 2. DNA Diagnosis, 3. DNA chips	31	23	15	25	25	44	38	41	46	50	54	46	**539**

number of medical abortions: with chromosome aberrations	14	12	18	20	25	19	26	29	25	28	29	29	**337**
number of all abortions in the second trimester	45	35	33	45	50	63	64	70	71	78	83	75	**876**
number of continuing pregnancies with CDD	53	96	81	75	106	112	108	100	102	111	101	103	**1148**

Abortion at the request of the pregnant woman, 2010-2013

Year	Number
2010	509
2011	526
2012	576
2013	515

Overview of foetal congenital developmental disorders for which abortion was indicated in the year 2013

(Medical abortions in the year 2013 indicated due to foetal CDD (74))

Number	**type of congenital developmental disorder**
15	Down syndrome
7	Edwards syndrome
2	Turner syndrome
11	Klinefelter syndrome
2	69,XXX triploidy
1	47,XY+22(4) 46.XY(18) - Mosaic trisomy 22
1	45,XX der(5)+(5,15)(15,33,q11.2),15) - 15q11.2 microdeletions
1	46,XX,+ der(2) rob(14,21))q10q,10)/7/ 45,XX rob(14,21)(q10,q10)/93/
1	Acrania
2	Dandy-Walker syndrome
3	hydrocephalus and associated developmental disorders

2	Encephalocele
1	Porencephaly
10	cardiac malformations incompatible with life & associated chromosome disorders
8	Hydrops
1	pulmonary hypoplasia with elevated diaphragm
1	gastroschisis
3	omphalocele
1	diffuse cystic degeneration of the lungs
1	renal agenesis
2	osteochondrodysplasia
1	osteogenesis imperfecta
2	reduction deformities of limbs combined with chromosomal pathology
4	gene syndrome with extensive cleft palate
1	Microduplication syndrome, interstitial duplication of the long arms of chromosome 4 in the area 4q22x2q24.arr 4q22x2q24(93,484,282x2,94,531,586-104,135,562x3, 104,261,164x2), large unilateral facial cleft
1	foetal growth retardation, anhydramnios
75	**total number**

Overview of congenital developmental disorders in foetus in a continuing pregnancy

(Continuing pregnancy (98))

Number	**type of congenital developmental disorder**
9	heart defects
4	cleft palate
7	clubfoot (congenital talipes equinovarus)
7	multicystic kidney, unilateral
30	hydronephrosis, hydroureter
15	significant pyelectasia
6	developmental disorders of the brain (ventriculomegaly, cerebellar hypotrophy, brain cysts)
20	other developmental disorders
98	**total number**

Table 2. Overview of births, children with low birth weight and number of C-sections performed

(Children with low birth weight)

weight (g)	**number of deliveries**	**number of deliveries by C-section**
up to 500 g	3	3
500-749 g	17	15

750-999 g	30	24
1000-1499 g	44	34
1500-1999 g	72	56
2000-2499 g	137	65
Total	**303**	**197**

Overview of births - twins - with low birth weight

(Gemini)

weight (g)	number of deliveries	number of deliveries by C-section
up to 500 g	2	2
up to 999 g	7	7
up to 1499 g	12	12
up to 1999 g	11	11
up to 2499 g	27	25
Total	**59**	**57**

Overview of congenital developmental disorders in foetus in a continuing pregnancy

(Continuing pregnancy (98))

Number	type of congenital developmental disorder
9	heart defects
4	cleft palate
7	clubfoot (congenital talipes equinovarus)
7	multicystic kidney, unilateral
30	hydronephrosis, hydroureter
15	significant pyelectasia
6	developmental disorders of the brain (ventriculomegaly, cerebellar hypotrophy, brain cysts)
20	other developmental disorders
98	**total number**