New Challenges of Economic and Business Development – 2013

May 9 - 11, 2013, Riga, University of Latvia

POLICY INITIATIVES IN MATERNAL AND CHILDREN'S HEALTH: A CASE OF LATVIA

Zane Zeile, University of Latvia, Latvia[1]

Abstract. Health, education and economic development being interrelated, an improvement in a nation's overall health will result in increased economic development. Health is a part of human capital. This paper presents the results of a study aimed at improving maternal and children's health by analysing documents that describe public policy and states the conclusions drawn. Logical constructive, interpretive and comparative methods were used in the analysis. The research covered the period between 2000 and 2011. The results can organized in three ways depending on the recipient. In the first group which is directed toward politicians and ministry officers, the focus of the analysis was to determine the quality of the policy documents. It was found that the quality of policy documents aimed to improve the maternal and children's health has improved over time. In the earlier "Strategy of Maternal and Children's Health", the financial and human resources required to achieve the goals are not indicated; nor is the time frame. In comparison, the later "Plan for Improving Maternal and Child Health in Latvia for 2012-2014" specifies the necessary resources and the goals are measurable and specific. The reporting mechanism is developed, and the responsible and involved institutions are indicated. In the second group intended for doctors and researchers the results of investigating the trends in maternal and children's health in the period between 2000-2011 were reported. Although prenatal and infant mortality is decreasing, it is still well below the EU average. The causes for the indications of poor health are prospective parent smoking, unhealthy lifestyles by children and adolescents and insufficient access to timely and quality care. The third group of research results which can be used by NGO's and local governments concentrated on intersectoral collaboration. Inter-sectoral collaboration and education is emphasized in "Plan for Improvement of Maternal and Child Health for 2012-2014" and in "Public Health Guidelines".

Key words: *policy initiatives, policy documents, maternal and child health, inter-sectoral collaboration*

JEL code: I14

Introduction

The goal of this paper is to identify the trends in maternal and children's health between 2000 and 2011 and ascertain the level of improvement of the major policy documents in this field. The tasks undertaken by the research were to analyze maternal and children's health data, to determine main causes of poor health and to

[1] Corresponding author – e-mail address: zane.zeile@gmail.com, telephone: +371 22825790

evaluate the following policy documents: "Strategy for Maternal and Children Health Care", "Plan for Improving Maternal and Children's Health for 2012-2014", "Public Health Strategy for 2004-2010", the action plan for the implementation of "Public Health Strategy for 2004-2010", "Public Health Guidelines for 2011-2017" and the evaluation of achievement of goals set in "Public Health Strategy for 2004-2010" The evaluation criteria were the SMART criteria for goals, appropriate time frames, identification of responsible institutions and resources. The reporting mechanism is also discussed for the "Public Health Guidelines for 2011-2017". In the third part of the research results the intersectoral collaboration is discussed.

Theoretical discussion

What influences maternal and children's health?

The main question is: what influences maternal and children health? Is it the health care administration, the quality of health care personnel, or the lifestyle factors of prospective parents? The data about pregnant women who smoke (~10%) and the influence on stillborn babies by parents who smoke indicate that lifestyle factors are most important. The quality of care is important as well. Improving the performance and quality of health services has become a prime objective of policy reform worldwide. Reliance on innate professionalism to deliver high quality, safe and effective services has come to be seen as curiously old fashioned. Ideas coming from "new public management" (Ferlie et al in Wikstrom and Dellve, 2009) have increased schemes aimed at measuring and shaping the performance of health care delivery. Pay for performance (P4P) schemes provide that a portion of payment is based on performance, assesed against one or several measures.(Hahn, Mannion and Davies in Wikstrom and Dellve, 2009). There is a growing evidence to suggest that public dissemination of performance data can stimulate provider organisations to improve internal data collective systems and processes and lever beneficial changes in staff behaviour. (Davies in Wikstrom and Dellve, 2009). However, there is also a growing evidence to suggest that public disclosure of performance data can induce a range of unintended and dysfunctional consequences for organisations and patients. (Smith, Mannion et al in Wikstrom and Dellve, 2009.) In Latvia, this scheme might improve quality and safety of care, where it is especially needed: maternal and children's health services and raise the responsibility of doctors. In the situation of low wages it might be of value. However, it might create stress and peer- pressure in professionals.

Another question: If the same problems exist in two successive documents does it mean that they haven't been solved in the period between development of documents? The first document formulating strategy was developed in 2003 and the plan in 2012. The urgent call for intersectoral collaboration in promoting adolescent and youth sexual and reproductive health which is a serious issue has not been heeded.Inter-sectoral collaboration has been introduced as a new approach as compared to earlier methods. Probably Latvia will need to learn from overseas experience to develop intersectoral collaboration as a means for improving health. Community participation and intersectoral collabration are core concepts in the present view of the promotion of healthy living.(WHO, 1986, 2005). (Cramer et al in Wagemakers, 2010) has stated that community participation is required to design programs that address the social determinants of health, and intersectoral collaboration has great potential for community action to improve health. (Wagemakers et al. (2010) think that intersectoral collaboration focuses more on the organisational level, whereas participation focuses mostly on the community level.

Innovative and current research

The research is based on a multifaceted approach in the analysis of the four policy documents using the SMART principle and conforming to the reporting mechanism, indicated resources and the required

time frame. The most important finding of this research is that there is a correlation between stopping of twofold child birth benefit for pregnant women who timely register with doctor and decrease in timely registering with doctor of pregnant women. Several drawbacks and tendencies in policy documents in maternal and children's health contain novelty as well.

The index of human development consists of the following three factors: economic development (GDP per capita), health (life expectancy at birth) and educational level (adult literacy per 10000 inhabitants). The research was based on several assumptions. Health and education determine human capital which consists of the abilities and skills that increase the potential for economic activity. (University of Latvia, Institute of Social and Political Research, 2006/2007). Good health begins with healthy prospective parents, mother and father which in turn result in healthy children. This is a prerequisite for healthy society. Health is the basis for the ability to achieve a higher level of education and to work effectively.

Health and economic development – challenges for the government

A challenge for Latvia's government is to acknowledge the correlation between a healthy society and workforce and successful economic development. Government must recognize that while GDP and exports are current economic indicators, young people's health is an indicator of future economic activity. Many policy documents have been developed to promote it. "Plan for improvement of maternal and child health from 2012-2014" and "Public health guidelines for 2011-2017" are based on international documents, both within the EU and global.

The importance of maternal and child health as a key indicator of nation's health has been defined in several international documents. "Global strategy for women's and children's health" (UN Secretary General, 2010) calls for united action by governments, global and regional institutions, health workers and researchers. It encourages all to strengthen health care systems and join efforts across all sectors of health, education and nutrition. It expresses the belief that a focus on the most vulnerable is required, including women and children,the poorest, orphans and those living furthest from health care services. Innovations in technology, treatment and the delivery of services are making it easier to provide better and more effective care.(UN Secretary General, 2010.)

Another important document is "European Strategy for children and adolescent health development" (WHO, 2005). It marks understanding that investment in early stages of life has lifelong impact, affecting economic development and sustainability and establishment of a healthier society.

Research methods

The following policy analysis methods were used for drawing the main conclusions and tendencies in the policy documents, logical constructive method (a type of analysis and synthesis), interpretation method, comparative method, dynamic statistical rows (comparison of data in time).

Research results

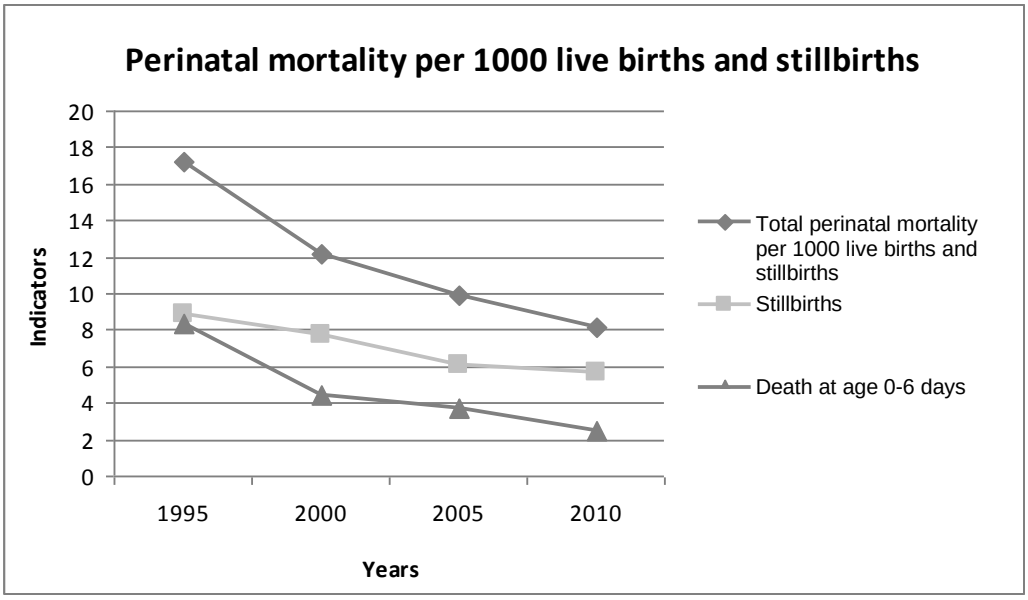
The research results can be divided in three parts, defined by user groups:

1. The trends in maternal and children's health in the period between 2000 and 2012. The users of these research results might be researchers and doctors.

2. The quality of documents, by comparing documents regarding mother and children's health. The target group that could use these results are politicians, ministry officers and developers of policy in the Ministry of Health and Welfare.
3. The new emphasis on intersectoral collaboration and education in "The plan for improvement of maternal and children's health for 2012-2014" and "Public health guidelines for 2011-2017". User groups here are NGO's, local self-governments, ministries, health organisations, government.

Maternal and infant health indicators from 2000-2012

Perinatal mortality has been decreasing since 2003. However it increased in 2009. Perinatal mortality indicators are fluctuating. In rural areas infant mortality is generally lower that in urban areas. Perinatal mortality has been decreasing in time. By 2007 perinatal mortality had reached the EU average level.



Source: Demography 2011, Central Statistical Bureau of Latvia

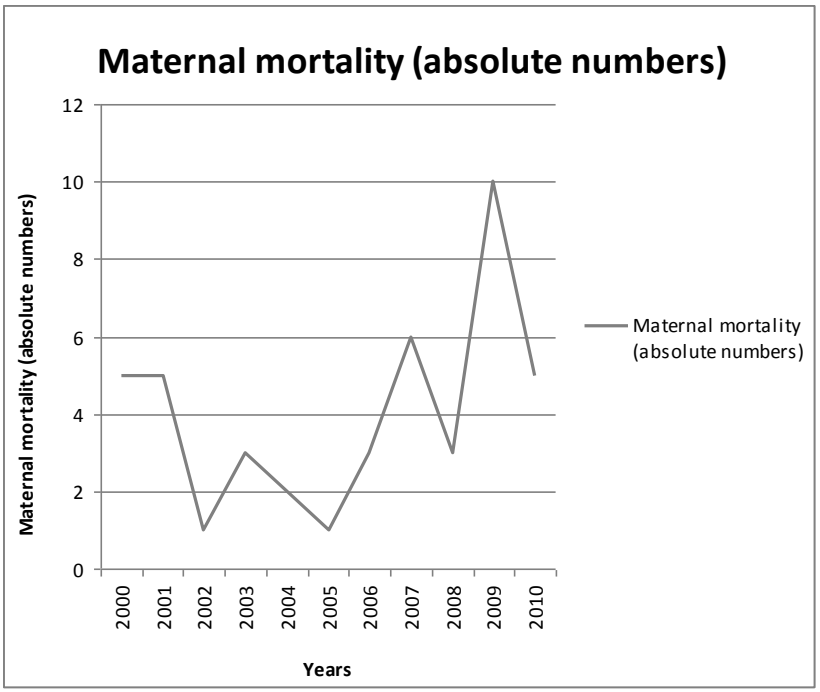
Fig. 1. **Perinatal mortality per 1000 live births and stillbirths.**

Causes of perinatal, neonatal and stillborn infants

(Trapencieris, 2009) has researched that causes of perinatal, neonatal and postneonatal deaths are influenced by maternal attitudes towards pregnancy, mother's and father's lifestyle and status, as well as health care quality. Significant causes for stillborn babies and perinatal deaths are the mothers's and father's smoking before conception and maternal smoking during pregnancy. Various health problems of the mother, pregnancy difficulties, as well as tobacco and alcohol use by the mother and father are the main causes of infants not delivered to term, stillborn babies and infant deaths in 1st week of life.

Approximately 10% of pregnant women have smoked during pregnancy, 0.5% used alcohol, 0.1% psychoactive substances (Public Health Agency, 2008).

Figure 3 shows that maternal mortality is very high in Latvia. It is even more significant when compared to other EU countries, especially Denmark, Finland and Estonia. Maternal mortality is another indicator of the quality of perinatal health care in the country. It includes women, who have died during pregnancy, childbirth and post-delivery period.

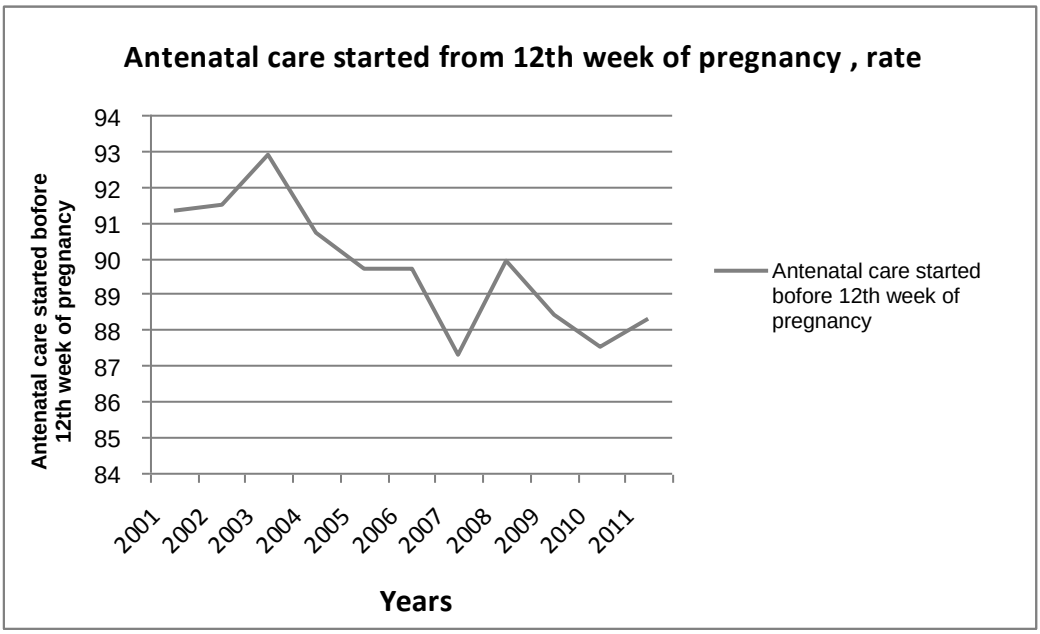


Source: Maternal and children's health in Perinatal Period, Public Health Agency, 2009

Fig. 2. **Maternal mortality in Latvia from 2001 to 2010.**

It is important to begin antenatal care (before the 12th week of pregnancy) to ensure a good health outcomes for the infant. However between 1.8 and 2.7% of women have not seen a doctor to check their health or monitor their pregnancy. The rate peaked in 2009. The number of women who received antenatal care before the 12th week of pregnancy has decreased from 89.6% in 2006 to 88.3 in 2011 (Figure 4). However, this indicator has varied each year. A lack of antenatal care might result in higher perinatal mortality and infant death.

Diminishing number of pregnant women that register with a doctor in a timely manner might be explained by the fact that until 2004 timely registration was significantly motivated by the twofold child birth benefit. After 2004, mothers would receive a maternity benefit of 14 days additional leave from work if they began antenatal care before the 12th week of pregnancy. This support was available for all women. In 2008, socially insured individuals could receive a parental benefit of 70% of social payment wages. This benefit was paid from the social payments that had been made. After the economic crisis beginning in 2009, the standard rules were changed and the amount of the benefits was reduced. This shows how health policy influences peoples behaviour. Additionally, according to the view of gynecologists and birth specialists state paid pregnancy care health services not always are available, therefore there is risk that antenatal care may not be ensured (Ministry of Health, 2012).



Source: Demography, 2011, Central Statistical Yearbook of Latvia

Fig. 3. **Rate of women, who have started antenatal care before 12 th week of pregnancy in Latvia from 2001 to 2011.**

The number of smoking mothers and fathers is important factor affecting the health of newborns. Ten percent of pregnant women smoked during pregnancy. In 2011 a significantly higher number of stillborn babies were born to mothers, who smoked during pregnancy.

Smoking mothers accounted for:

- 9.5% of live born babies;
- 19.6% of stillborn babies.

For smoking fathers:

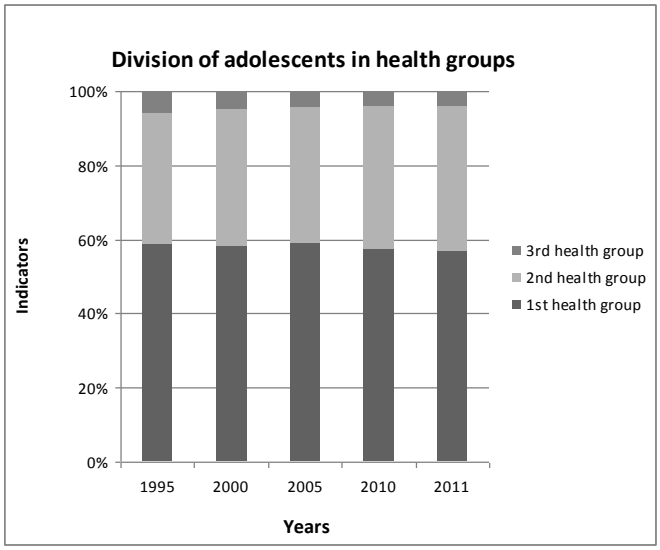
- 32.8% of live born babies;
- 34.8% of stillborn babies.

Children's (1-14) and adolescent's (15-17) health

One of the most important means to monitor children's and adolescent's health are regular preventive check-ups.

General children's health status is characterized by 3 health groups:

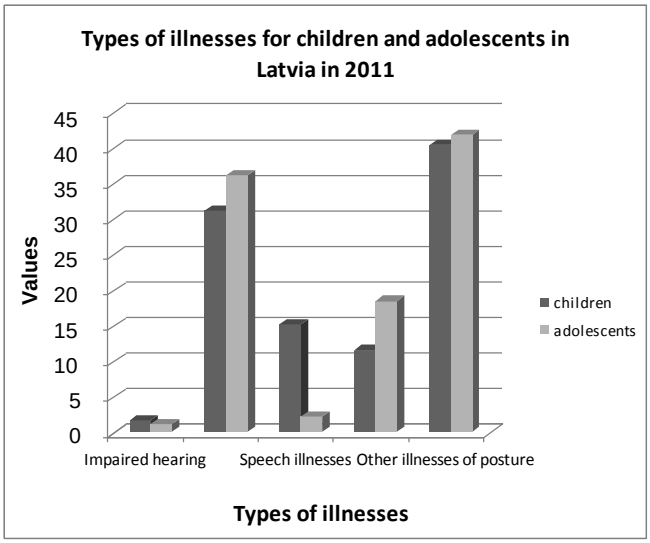
- 1st health group: children wihout chronic pathologies, organ and system functions without pathologies, physical development according to age;
- 2nd health group – children with threats of development of chronic illnesses, acute illneses develop with complications;
- 3rd health group- children with chronic illneses, genetic organ and system pathologies.



Source: Disease Prevention and Control Centre, Statistical Data about year 2011

Fig. 4. **Children's (3-14 years) division in health groups in Latvia from 1995-2011**

Figures 4 and 5 show that the percentage of children in the 1st health group has not increased significantly in the last 16 years. For adolescents it has decreased by two percentage points. Figure 5 presents the results of of calculations made by the author regarding health problems.



Source: calculations made by the author, based on data of Disease Prevention and Control Centre, Statistical Data Collection about year 2011

Fig. 5. **Rates of diseases for children and adolescents in Latvia, in 2011**

As shown in the Figure 5 the greatest rate of is other disorders of posture and impaired vision. Impaired vision and scoliosis increase with age. Speech disorders decrease rapildly with age.

Health problems have been detected in 30% of children and in 35.5% of adolescents. Data shows that health problems increase with age. From 1st grade pupils, already 32.3% have health problems and these indicators have a tendency to increase.

Other factors which describe schoolchildren's health are nutrition habits, prevalence of smoking and alcohol use, as well as physical activity.

Lifestyle habits of school children – nutrition, alcohol use and smoking prevalence

According to Survey of Health Habits of Schoolchildren in Latvia, 14.6% of schoolchildren in school year of 2005./2006 never eat breakfast on working days. Only 18.2% boys and 21.1% girls eat vegetables daily, indicating a decrease when compared to school year 2002./2003. 39.8% of schoolchildren eat sweets at least once a day. Amongs 11-year old girls the rate rapidly increased from 31% in 2001./2002 school year to 41% in the 2005./2006 school year.

The positive trend has been observed as well: a number of schoolchildren who drink cola once a day, has decreased significantly.

TV viewing and computer use affect children's vision and posture,as well as contributing to an increase in obesity. Computer and TV viewing data for schoolchildren in 2006 show that 32.5% of boys, and 30.2% girls watch TV at least 4 hours on work days. In 2001 among 15 year olds, 24% of the boys and 8.9% of the girls have spent at least 3 hours a day at the computer.The number of girls in the 15 year old girls group who who spend at least 3 hours a day increased significantly from 8.9 in 2001 to 29% in 15 year. This number has increased in all girls age groups.

Trends in alcohol use and smoking prevalence are very alarming. The number of 15 year old schoolchildren, who have used alcohol at least once a week for boys varies. It was the lowest in 1994 at 17.5%. It appears to have peaked in 2008. at 27.8%. In 1994, 6.8% girls used alcohol at least once a week and in 2006 it increased to 12.7% (Health Economics Centre, 2009).

The rate of smoking of both boys and girls who smoke regularly increased with age. Observing the rate of smoking schoolchildren, it can be concluded that prevalence of smoking is not decreasing. The rate of smoking boys in the last 3 years has stabilized, but among girls it continues to increase (Health Economics Centre, 2009).

2. Comparative analysis of policy initiatives regarding maternal and children's health in Latvia

2.1. Comparative analysis of "Strategy of maternal and children's health care in Latvia" with "Plan for improvement of maternal and children's health for 2012-2014"

The first document, devoted to improvement of maternal and children health was "The strategy of maternal and children health care in Latvia" (2003). This document had many drawbacks when compared with "Plan for improvement of maternal and child health for 2012-2014". The main goals of the strategy are a healthy next generation, reduced genetic pathologies and child morbidity, increase in birth rate by 5%, reduction in child mortality to average EU average. These goals are too vague, universal and not specific. On the whole, they do not meet the SMART criteria for goals, which specifies that goals should be specific, measurable, attainable, realistic and timely. In the document indicators were defined, but only for some goals and they are vague, not being specific and measurable. The neccessary financial resources

and responsible institutions are not identified. This is a serious drawback as it inhibits implementation and control of policy stated in the policy documents.

However the positive side of this document is the development of possible course of action and states the consequences of no action.

Caldwell and Mays (2012) describe the CLAHRCS programme in three levels.The macro-level requires governmental action. At this level programme exists conceptually. In the meso-level, the CLAHRC programme started to shape from policy to programme with specific scope of defined deliverables. Micro-level frame is understanding of CLAHRCS as an organisation in its local contexts, including its ability to fulfil the proposed model as policy and programme. The analysed policy documents described in this article also have these three levels. The first is a policy initiative, a proposal for Cabinet of Ministers. At the meso level, it is planned in greater detail with necessary resources, actions and indicators. At micro-level, it is the implementation of the policy document in a health organisation, for example Perinatal Health Care Centre.

2.2. Analysis of the "Public Health strategy for 2004-2010"

The goals for maternal and children health for the period 2007-2010 were included in "Public health strategy for 2004-2010". It was decided further not to develop a seperate document. "Strategy" and it's action program for 2004-2010. was accepted by the Cabinet of Ministers on the March 6, 2001. In this document the goals formulated are mostly expressed as qualitative indicators but quantitative indicators are used as well. This strategy and action program has been regularly monitored and reports on results were prepared by Public Health Agency for the Ministry of Health. Each report covered completion of a specific goal.

The strategy is well structured and clear. The implementation process, monitoring and evaluation has been defined. The action program for implementation of "Public health strategy for 2004-2010" has shown the neccesary financial resources required each year for state institutions, local-self governments and NGO's. Financing mechanism is based in budget reality and the implementation of activities is planned to comply with the available budget. If the financial resources are only partially available then it is indicated that the goals would be achieved only partially.

In the action program of "Public Health Strategy for 2004-2010" activities, required to reach each goal, responsible institutions, the expected results and their indicators and schedule has been stated. Monitoring progress and timely reporting of results are important requirements in implementation of this document. It characterizes health policy planning process as a goal oriented process. Each second year Ministry of Health handed in a report in the Cabinet of Ministers.

Evaluation of "Public Health guidelines for 2011-2017"

In "Public Health guidelines for 2011-2017" a new concept "health of mother, father and a children" has been introduced. It is noteworthy because health habits of fathers and their attitude towards partners pregnancy influence health of the children.

The aim of public health policy is to increase healthily lived life years and prevent early death, to improve and restore good health.

The main directions for achieving these goals have been developed:

1) ensure partnerships and promoting equal opportunities for all inhabitants;
2) improve the health of pregnant women and children;
3) reduce non- communicable diseases.

Health Economics Centre (2010) has developed policy results, action results and resultative indicators to precisely show the goals and indicators of the guidelines. Indicator is a measure which shows when a goal has been achieved.

There are several policy results, action results and resultative indicators that relate to maternal and children's health.

Policy result (A1): average newborn life expectancy has increased. Resultative indicators: average newborn life expectancy for men (in years) has increased from 69.1 years of life in 2014 to 71.1 years of life in 2017.

Action result (C1): informing of parents about effects of substance abuse on pregnant women's and fetal health. Resultative indicator: rate of smoking pregnant women has decreased from 9% in 2014 to 8% in 2017 (Health Economics Centre, 2010).

From the results it is estimated that only very small improvements in health indicators have ocurred. It is especially alarming regarding infant mortality and pregnant women, who have smoked during pregnancy. Instead of setting the target low not to compromise the policy developers in case the target is not reached, effective strategies should set high target goals to improve maternal and children's health. Two important indicators have not been shown regarding maternal health – maternal mortality and antenatally uncared for women. These indicators are rising, therefore should have been included. Lack of those indicators might result in lack of monitoring and diminished improvement in care as well and acess to care.

Evaluation of "Report on achieving goals set in public health strategy for 2004-2011"

"Report on achieving goals set in public health strategy for 2004-2011" is a document showing the progress in achieving the set goals. Many goals relating to the health of mother, infant and children's health have either not been reached or only partially reached. The causes preventing the achievement of goals were not analysed in this document. If they had been analysed, the goals might have been reached more timely or completely. The third goal stated in the document is that by 2010. the health of newborns, infants and pre-school children has to be improved significantly. The first subgoal required that Latvia be in the top third European Region states in terms of the quality of work in reproductive health, antenatal, perinatal and children's health services. Unfortunately this subgoal has not been reached. The following indicators of first subgoal of the third goal have not been reached: the number of antenatally uncared women until 12th week of pregnancy is increasing, the number of Caesarean sections is increasing, mother mortality is very high. Three more subgoals relating to children's health, as well as life expectancy have not been reached.

3. Intersectoral collaboration

Intersectora collaboration is an important trend in both public health administration and in improving maternal and children's health. Many institutions, ministries and local-self governments are included in "Maternal and children's health improvement plan for 2012-2014" and "Public Health guidelines for 2011-2017". Nutbeam (1998 a, in Wagemakers et al (2010) has defined intersectoral collaboration as "a recognized relationship between part or parts of different sectors of society which has been formed to take action on an issue to achieve health outcomes or intermediate health outcomes in away which is more effective, efficient and sustainable than might be achieved by the health sector acting alone."

Intersectoral collaboration in "The plan for improvement of maternal and children health for 2012-2014" main calls for intersectoral collaboration in mainly involving NGO's in informal education in sexual and reproductive health for adolescents and youth because they have longer experience in this area. It also calls

for education in family planning and education in schools regarding these issues Here the Ministry of Education and schoolteachers work as a team. Nutbeam (1998a in Wagemakers et al (2010) thinks that health education, e.g., communication of information, skills and confidence necessary to take action to improve health in itself is not enough to bring about behavioural effects. Therefore reorientation towards health promotion, in particular community action in health, is needed and is now noticable.

The plan encourages cooperarating among state institutions, local self- governments and NGOs in adolescent and youth sexual and reproductive health education. In 2011. the guidelines for local self-governments in health education were confirmed. This will support local self-governments in sexual and reproductive health education and support activities. To implement these guidelines beginning from 2012, it is planned to introduce local self-governments coordinator net that will be responsible for public health issues. Several local self-governments (Riga, Rēzekne, Talsi) have already been active in organising specialist work groups in information exchange about violence against children. Primary health specialists and media should play role in educating young parents about violence against children and children safety. (Ministry of Health, 2012). WHO and EU institutions also should be team players along with government, local self-governments and NGO's. The key players, who ensure intersectoral collaboration in implementation the "The plan for improvement of maternal and children health for 2012-2014" are the following: The Ministry of Health, Ministry of Welfare, World Health Organisation, National Health Agency, Association of Latvian Gynecologists and Birth specialists, Health Inspection, Disease Prevention and Control Centre, Riga Stradiņš University.

Conclusions

1. Analysis of data and time-series show that the indicators of maternal and infant health during period 2000-2012. have not improved much. Infant, perinatal and neonatal mortality have decreased during the period 2000-2012, but these indicators fluctuate from year to year, and do not indicate an overall downward trend. Maternal mortality remains high. Antenatal care started from 12 th week of pregnancy has desreased from 92.9 in 2003 to 88.3 in 2011. Most of the indicators are below EU average.
2. The policy document analysis shows that diminished number of women who have started timely pregnancy care might be explained by changes in social benefit system, because these indictors correspond to the cessation of twoforld child birth benefit.
3. There are serious drawbacks in "The strategy of maternal and children health care" (2003), when compared with "The plan for improvement of maternal and children health for 2012-2014" and "Guidelines for public health for 2011-2017". In the first document there is a lack of SMART criteria for goals, fiancial resources, responsible insitutions and time frame are not indicated. The latter two documents are well prepared, with the SMART criteria present. In time, the policy documents have improved in many aspects.
4. Intersectoral collaboration mentioned in "The plan for improvement of maternal and children health for 2012-2014" focuses sexual and reproductive health education for adolescents and youth. The team players here are schools, NGO's and local self-governments. Violence against children has been recognized as a problem, which has not yet fully been researched. Local self-governments, which have started work groups in information exchange in violence against children are indicated.

Proposals

1. Trends in perinatal mortality and maternal motality asks for more detailed research on causes of poor maternal and infant health.

2. Well-functioning perinatal care-system should be created and a perinatal and maternal mortality audit be implemented. (Wolfe, 2012) states that prental care can help to undo past harms, alter risky behaviours, build capacity for health. Because the pregnant woman is the intended recipent of services, her compliance and satisfaction tends to be primary. Goals that focus on the mother's health include decreasing maternal mortality, decreasing short-term maternal diseases and generally improved maternal health and well-being.
3. Policy document development might be improved by creating policy briefs before developing strategies, guidelines or plans. (Lavis et al, 2009) describes that policy briefs allow to mobilise a full range of research evidence for a high priority issue. It can be of help to peolpe who are responsible for making desicions about health policies and programmes and those who support policy makers.Policy briefs take much shorter time to develop and allow to consider whether it is a high priority issue which is being addressed. The policy brief should describe the problem, costs and consequences of options to adress the problem, and the key implementation considerations.
4. Intersectoral collaboration should be strengthened and developed between ministries, local self-governments, NGO's and foreign organisations (EU, WHO, UNICEF). Policy developers and local self-governments as well as other partners might use the model developed by Wagemakers et al. (2010). The models or framework has structured key variables. Variables that local collaboration partners might use are regard for participant's expectations, competences, experience, expertise. Variables pertinent to parnerships are: the role, task and responsibility and structure, leadership management. The evaluation of outcomes should be based on percieved effectiveness, benefits and costs.
5. Programs for improving adolescent's health should be developed to reduce the impact of films, media, advertisments and marketing that create unhealthy habits such as smoking and excessive alcohol use, obesity and sedentary lifestyle.

Bibliography

Bronnum-Hansen Henrik, 2000. Socioeconomic differences in health expectancy in Denmark, *Scandinavian Journal of Public Health*, 28, 194 p. [Online] Available at: http://sjp.sagepub.com/content/28/3/194.

Caldwell and Mays, 2012. Stydying policy implementations using a macro, meso and micro frame analysis: the case of Collaboration for Leadership in Applied Health Research (CLAHRC) programme, *Research Policy and Systems*, 10, 32 p. 10/1/32.

Central Statistical Bureau of Latvia, 2011. Demography 2011, Riga: Central Statistical Bureau of Latvia, pp. 86-87.

Hogan C. Margaret et al., 2010. Maternal mortality for 181 countries, 1980-2008: a systematic analysis of progress towards Millenium Development Goal 5, Lancet, 375: pp. 1609-1623. [Online] Available at: http://www. thelancet.com.

Lavis et al, 2009. SUPPORT Tools for evidence – informed policymaking 13: preparing and using policy briefs to support evidence-informed policymaking, *Health Research Policy and Systems*, Suppl 10: 13 p. [Online] Available at: http://www.health-policy-systems.com/content/7/S1/s13.

Mackenbach et al, 2008. Socioeconomic inequalities in health in 22 European Countries, *The New England Journal of Medicine*, 358, pp. 2466-2481.

Mackenzie Mhairi, 2008. "Doing" public health and "making" public health practitioners: Putting policy into practice in "Starting Well", *Social Science and Medicine*, 67, pp. 1028-1037. [Online] Available at: http://www.elsevier.com/locate/socsciemed [Accessed 14 February 2013].

Ministry of Health, 2012. Plan for improvement of maternal and children health for 2012-2014, Riga: Ministry of Health, pp. 10, 14-15, 26-28, 38-57.

Ministry of Health, 2011. Public Health Guidelines for 2011-2017, Riga: Ministry of Health, pp. 9-10.

Ministry of Health, 2004. "Public Health Strategy" implementation action program for 2004-2010, Riga: Ministry of Health.

Ministry of Health, 2003. Strategy of maternal and children health care, Riga: Ministry of Health.

The Order of Ensuring Help for Deliveries, 2006. The rules of Cabinet of Ministers, No. 611, 25 July 2006, Riga.

Partnership for Maternal, Newborn and children's Health, 2010. Global strategy for woman's and children's health, UN Secretary General.

Public Health Agency, 2009. Maternal and children health during perinatal period, Riga: Public Health Agency, pp. 9, 19-23.

Public Health Agency, 2009. Newborn register in Maternal and children health during perinatal period, Riga: Public Health Agency.

Richter et al, 2009. Socio-economic differences and adolescent health, *Social Science and Medicine*, 69, pp. 396-403.

Tabuns et al, 2006/2007. Latvia. Human Development Report. Human Capital, Riga: University of Latvia, Institute of Social ad Political Research.

Trapencieris, Māris. Women, who have used dependency creating substances and their newborns. Riga.

Wagemakers et al, 2010. Community Health Promotion: a framework to facilitate and evaluate supportive environments for health", *Evaluation and Program Planning*, 33, pp. 430.

Wikstrom E. and Dellve L., 2009. Contemporary leadership in health care organisations: fragmented or concurrent leadership, *Journal of Health Organisation and Management*, Vol. 23, Iss 4., 411 p.

Wolfe W. Matthew, 2012. Mother and child: a multi- determinant model for maternal and infant health outcomes in urban, low-income communities and the effectiveness of prenatal care and other interventions. [Online] Available at: http://ssrn.com/abstract=979683 [Accessed 20 June 2013].