



Midwives' Outpatient Visits 2009–2016



Tervise Arengu Instituut
National Institute for Health Development

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Department of Health Statistics

Midwives' Outpatient Visits 2009–2016

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Introduction

The midwife's role as the specialist of family-planning and sexual health has had a very long history throughout Europe. They support women in preparing for motherhood and during childbirth, and help families cope with parenthood (Estonian Health Insurance Fund). In the past, it was the gynaecologists who were primarily in charge of monitoring pregnant women in Estonia, that in turn caused long queues for outpatient appointments of gynaecologists. In 2010, the tasks and activities of midwives were expanded to achieve better cost efficiency of the health care system as well as improve the availability of reproductive health services (Lai *et al*, 2013; Estonian Midwives Association, 2011).

Midwifery services are regulated by the Health Services Organisation Act and the regulation "List of midwifery care services and activities permitted to be provided independently and the terms and conditions of home birth care" of the Minister of Social Affairs adopted thereunder (Riigi Teataja, 2nd of July 2014 regulation No. 44). Midwifery care provides both outpatient and inpatient care, but independently midwives are only permitted to offer outpatient care. The service is regarded as a primary health care service along with the services of family physicians, nurses, home nursing care and physiotherapy, and thus contributes to the expansion of the primary health care service package and improves access to the services. Furthermore, it allows women to contact their midwife directly in case they experience gynaecological problems or issues regarding their reproductive health (Estonian Ministry of Social Affairs 2009; 2014; 2017; Estonian Midwives Association, 2011).

Midwifery services include activities regarding the maintaining and promotion of health and prevention of diseases relating to one's reproductive health – monitoring normal pregnancies, consultation, prescribing medicines within their range of competence and independent treatment or treatment prescribed by a doctor, and monitoring the consumption of medicines. The midwife is competent to provide care throughout the entire fertile period¹ of a woman and supervise childbirth (Estonian Ministry of Social Affairs, 2014). The midwife can determine the due date of the child, prescribe medicines and issue certificates of incapacity to work for maternity and parental leave as well as for the temporary provision of work corresponding to the person's state of health and transferring the person to a less strenuous position. Certificates of incapacity to work related to illnesses are still issued by doctors – women who turn to their midwife with health complaints

¹Childbearing age – women between the ages of 15 and 49

will be referred to a doctor. Treatment activities and tests regarding local gynaecological inflammations and mild anemia during pregnancy without any general symptoms are also within the competence of midwives. Midwives are also competent in advising women on matters of unwanted pregnancies, abortion and miscarriages as well as fertility treatment, female health issues, sexually transmitted diseases and domestic and sexual abuse. Midwives who have undergone specific youth work training programs are permitted to work in youth centres as well (Estonian Health Insurance Fund, Estonian Ministry of Social Affairs 2008; 2009; 2012; 2014; Estonian Midwives Association, 2011 etc).

The objective of this analysis is to provide an overview of the statistics of midwives' outpatient visits (consultations and home visits) between 2009 and 2016. Bring out the measured factors of the health statistics, which have influenced the work of midwives during that period and compare them to the outpatient visits of gynaecologists. The national statistics of midwives' outpatient visits have been gathered since 2009 and that is also the basis for the selection of the analysed period. The data is also compared with the international data that has been published in the database of OECD².

Data used in this analyses on independent consultations and home visits carried out by nursing staff³ is collected from all institutions having a license to provide health care services by the National Institute for Health Development (NIHD). The data is collected with the annual report "Health care institution"⁴ (table "Outpatient care"). Data on full-time equivalent employment and average age of health care personnel have been used and collected with the "Health Care Personnel" report, based on the November data. The definitions related to the health care statistics used in the analysis can be found in the glossary of health care statistics issued by the Department of Health Statistics of the NIHD (<http://pxweb.tai.ee/PXWeb2015/Resources/Info/sonastik/sonastik.html>), and data about Estonia with definitions in the Health Statistics and Health Research Database (<http://www.tai.ee/tstua>).

The author would like to thank all those who provided data and information and thereby contributed to the data collection of the midwives' outpatient visits. Many thanks to colleagues who helped to interpret and describe the data.

² OECD – *Organisation for Economic Co-operation and Development*

³ Nursing staff –nurses and midwives in total.

⁴ Reporting form and instructions are available on the website of National Institution for Health Development at <http://www.tai.ee/et/tegevused/tervisestatistika/viited-aruanete-esitajatele> (in Estonian)

Brief overview

Between 2009 and 2015, the number of midwives per 1,000 population increased in most OECD member countries, including Estonia. In 2015, the average number of midwives per 1,000 population was 0.38 in OECD countries. Even though the number of midwives per 1,000 population was 11% below average in Estonia, the number of midwives has increased by 15% between 2009 and 2016. In 2016, there were 440 midwives in Estonia occupying 355 full-time equivalent (FTE) position⁵. 11% of health care workers working as midwives work as nurses as well.

The number of health care workers in Estonia who provide health services in the area of reproductive health (that means midwives and gynaecologists) has increased by 40 new workers during last eight years. However, the number of FTE position has decreased by 50.

The number of outpatient visits (consultations and home visits) has increased by 1.7 times between 2009 and 2016. In 2009, midwives made just over 86,000 visits, however, by 2016, the annual number of visits had increased to nearly 146,000. Adapting the number to population characteristics then the number of visits per 100 women aged 15 and above has increased from 26 to 50 visits per year. The number of visits per one FTE midwife has increased from 236 visits to 410 visits per year on average. There was a significant increase (50%) in the number of visits in 2010 and 2011. This was due to the decision adopted in the health care system in 2010, which permitted midwives to offer services within their competency independently and establish private practices.

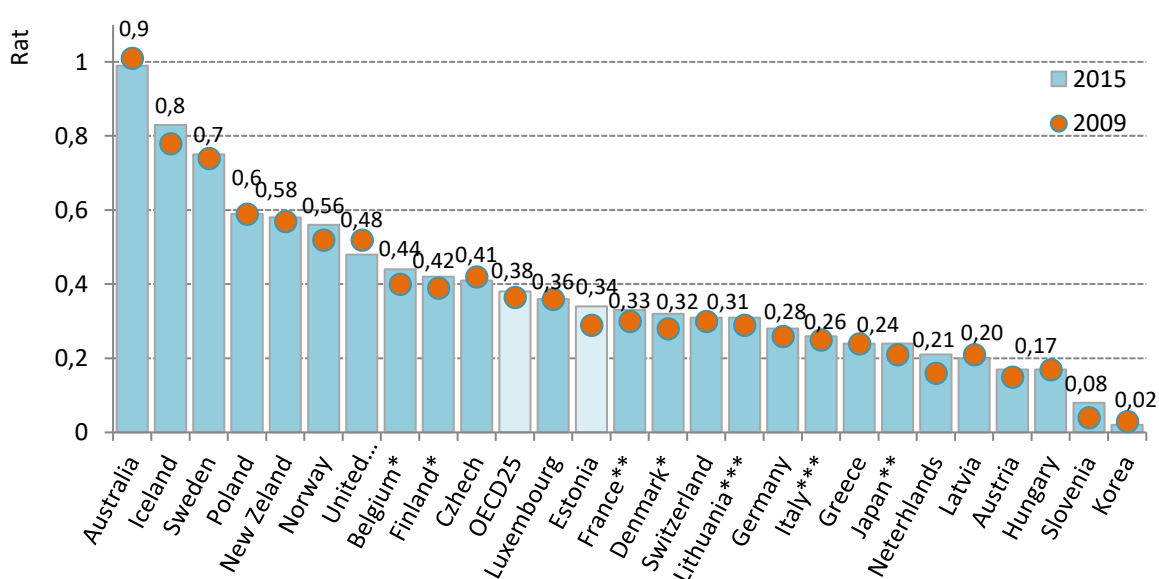
Pregnancy monitoring went through a significant change over the analysed period. In 2009, a woman during pregnancy made an average of three visits to the midwife and seven to her gynaecologist, whereas by 2016, that ratio had changed to six and four visits respectively. Therefore, the monitoring of normal pregnancies is now mostly done by midwives.

The changes in the health care system has improved the accessibility of reproductive health services. Midwives monitor women during pregnancy as well as postpartum period, thus allowing gynaecologists to focus on more severe female health issues. The average workload of gynaecologists has not decreased over the analysed period. The number of gynaecologists' visits per 100 women aged 15 and above has decreased by nearly 8% over eight years, however, the number of visits per FTE of gynaecologists has only decreased by 2%.

⁵ Full-time equivalent employment (FTE) – one FTE is equivalent to one employee working full-time and equals to 40 hours per week.

1. Total number, age and wages of midwives

Between 2009 and 2015, the number of midwives per 1,000 population increased in most OECD countries (Figure 1). In OECD countries, the average number of midwives was 0.38 per 1,000 population in 2015, which has increased by 4.3% compared to 2009. The number of midwives per capita was highest in Australia – one midwife per 1000 population. Australia was followed by Iceland and Sweden – 0.8 and 0.7 midwives per 1,000 population respectively. Korea, Slovenia, Hungary and Austria had the fewest midwives with less than 0.2 midwives per 1,000 population. In Estonia, it was 0.34, which is 11% below the average of OECD countries.



Comments: * data for 2014; ** for the closest year; *** not part of OECD

Figure 1. Midwives per 1,000 population in OECD countries, 2009 and 2015

Source: OECD

The number of midwives per 1,000 population was 15% higher in 2016 than in 2009. However, the number of FTE midwives per 1,000 population had decreased by 1.6%. In 2009, there were nearly 366 FTE position by 387 midwives, whereas in 2016, there were 11 fewer FTE position by 440 midwives. At the same time, the number of gynaecologists has decreased from 268 to 256 doctors and there are 40 fewer FTE position. In the ratio of 1,000 population, there were 3% less gynaecologists and 13% less FTE position in 2016 than there were eight years ago. Therefore, the total number of midwives and gynaecologists per capita has increased by 8%, however, the number of FTE position in their field has decreased by 7%.

The number of health care providers (HCP) under which midwives work, has increased by four during the analysed period (figure 2). The number of HCPs with practising midwives has fluctuated

between 51 and 59. 2012, 2014 and 2016 saw the highest number of HCPs with 57, 59 and 56 respectively. The number of HCPs increased significantly between 2011 and 2012. It is likely that during these years, the opportunity to establish private practices was widely used.

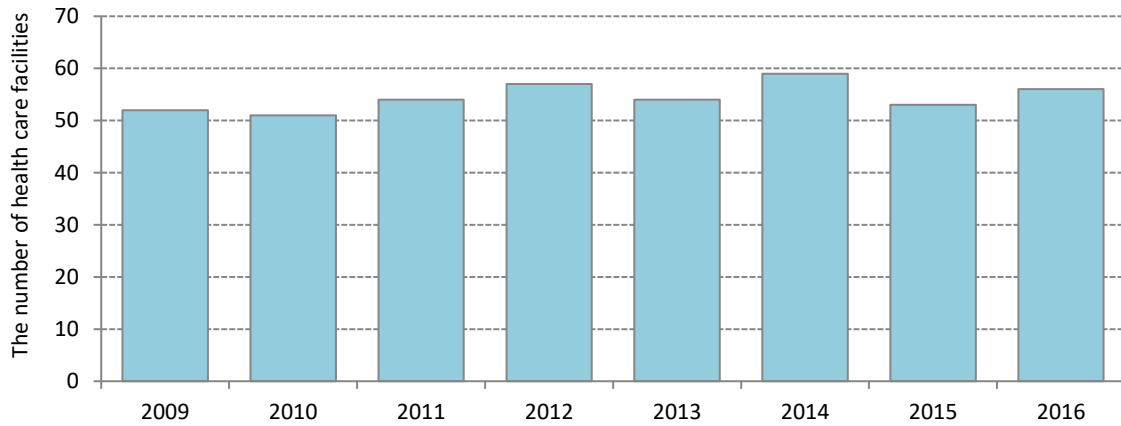


Figure 2. Health care providers that have working midwives, 2009–2016
Source: NIHD

The number of ETF midwives increased by nearly 23% among private HCPs between 2009 and 2011 (figure 3). However, in 2013, the number of FTE midwives decreased by 10% in private HCPs, whereas FTE in HCPs owned by the state and local governments increased by 23% and 9.5% respectively.

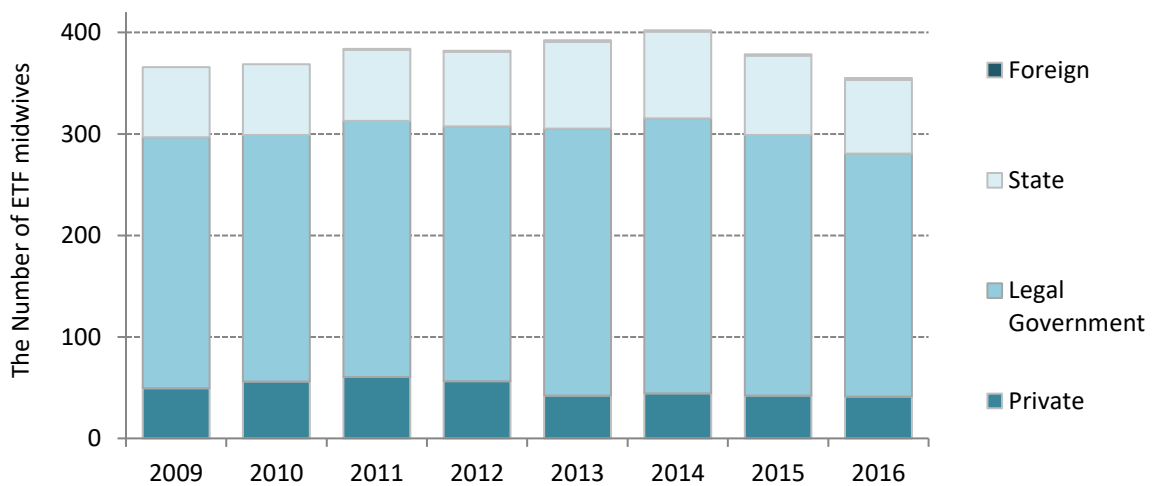


Figure 3. Midwives’ FTE by the type of health care provider, 2009–2016
Source: NIHD

The number of FTE of midwives and HCPs with at least one working midwife was highest in 2014 – over 400 FTE midwives and 59 health care facilities.

In addition to nurses, midwives made up 6% of all nursing personnel⁶ in 2016. Depending on their qualifications, midwives may also work as nurses (Lai *et al*, 2013). 11% of midwives also worked as a nurse (family nurse, home care nurse, emergency care nurse etc) in 2016. 44% of nursing personnel working as a midwife as well as nurse had a larger workload working as a midwife, 35% as a nurse and 21% had an equal workload in both positions. The average workload of those working as a midwife as well as a nurse was equal to 1.2 position in 2016. During the same year, the average workload of nurses was 0.9 and for midwives 0.8 FTE position.

Wage has not been an important factor for entering the field of either midwifery or nursery – the basic hourly wage⁷ of midwives and nurses has remained similar and the wages have increased in a similar manner (figure 4).

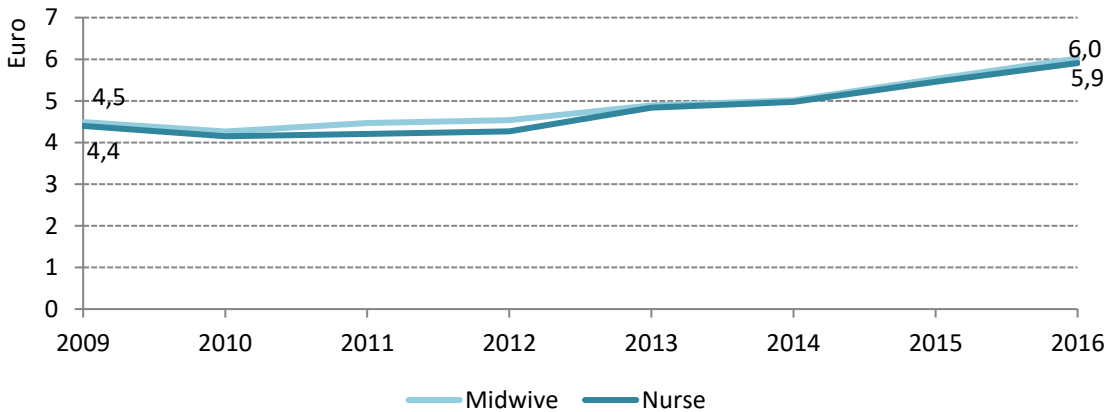


Figure 4. Basic hourly wage of midwives and nurses, 2009–2016
Source: NIHD

The estimates of the Ministry of Social Affairs showed that to ensure the sustainability of health care services, it was necessary to have at least 8.3 nurses per 1,000 population by 2016 and 9.0 nurses by 2020. However, it is not specified how many of them are expected to work as midwives.

⁶Nursing personnel – health care workers who have completed a programme of basic nursing education (at least 3 years) i.e. qualified nurses and midwives.

⁷ Basic hourly wage – base wage i.e. gross wage paid in March pursuant to the piece, hourly, daily, weekly or monthly wage rate determined in an employment contract or legal act (March has been chosen as the annual wage research reference period of NIHD). The hourly base wage is the “pure wage” without regular additional remunerations, additional remunerations for work in the evenings, in the night, on weekends and national holidays and for overtime.

In 2016, there were 6 nurses per 1,000 population in Estonia, which is, however, not enough for the sustainable operation of the health care system (Anderson, 2017).

Estonia has a national evaluation system for the qualifications of nurses and midwives. Since 2002, the competence of midwives and nurses is assessed by the Estonian Midwives Association and the Estonian Nurses Union respectively (Estonian Midwives Association). Midwifery programmes are available at Tallinn Health Care College as well as at Tartu Health Care College and the length of the training is four and a half years. According to the colleges’ data, 32 midwives graduated from the programmes in 2016. The number of midwifery student places has somewhat decreased in the last couple of years (Tartu and Tallinn Health Care College). Therefore, it can be concluded that the number of midwives in Estonia is sufficient enough for the functioning of the health care system, some midwives also work as nurses, thus filling their unoccupied FTE position as well.

In 2016, the average age of midwives and gynaecologists working in Estonia was 43.6 and 53.5 years of age respectively. Median ages were 44 and 55. 66% of midwives are younger than 50 years of age, but when it comes to practising gynaecologists, nearly just as many are older than 50 (figure 5).

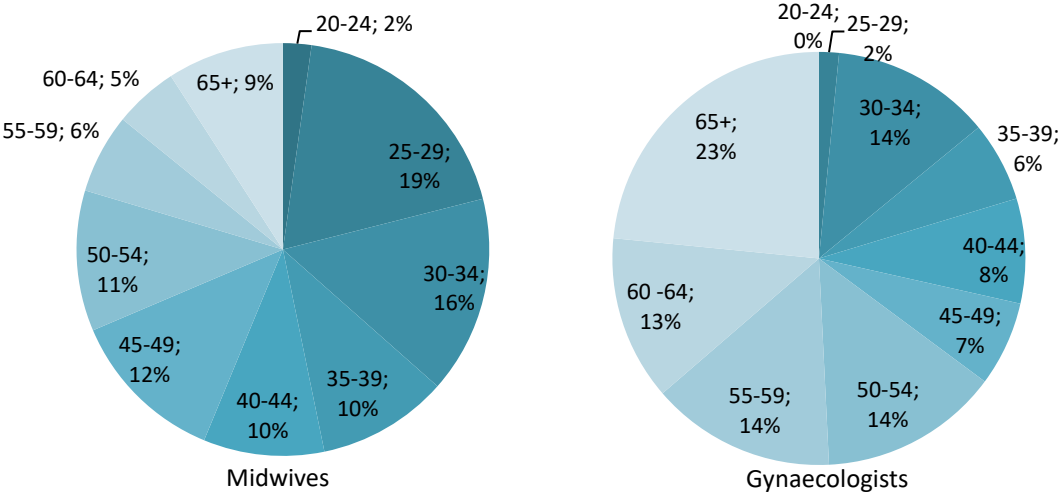


Figure 5. Midwives and gynaecologists by age groups, 2016
Source: NIHD

The general pensionable age in Estonia is currently 63 years according to the State Pension Insurance Act. In 2016, 7% of midwives and 28% of gynaecologists working in Estonia were in the retirement age. In the next eight years, seven midwives and seven gynaecologists on average will reach retirement age every year (figure 6).

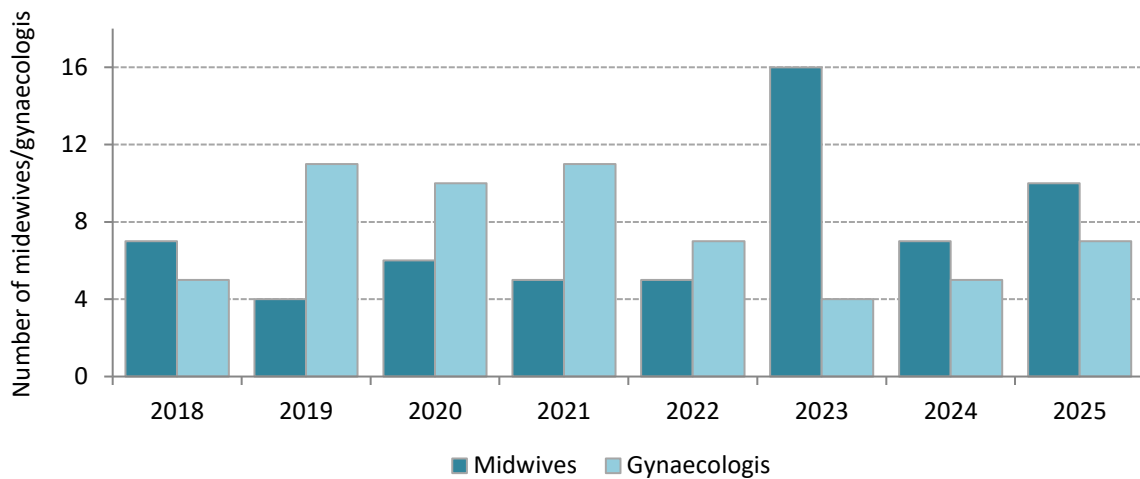


Figure 6. Estimated number of midwives and gynaecologists reaching the retirement age, 2018–2025

Source: NIHD

By 2026, the retirement age will be increased to 65 years (Social Insurance Board). By that time, 85 midwives and 130 gynaecologists who are currently working, or 19% and 51% respectively, will be of retirement age.

2. Outpatient visits of midwives and gynaecologists

The number of outpatient visits⁸ of midwives has increased by 1.7 times between 2009 and 2016. In 2009, midwives made over 86,000 outpatient visits, whereas in 2016, the number of visits was over 145,000. In 2010 and 2011, there was a sudden growth in outpatient visits with an increase of 50% compared to 2009 (figure 7). The increase of outpatient visits was certainly due to the previously mentioned decision adopted in the health care system, which allowed midwives to legally and independently supervise healthy pregnancies and monitor the mother and child postpartum, and establish private practices. The number of persons working as midwives has increased by 14% during the analysed period.

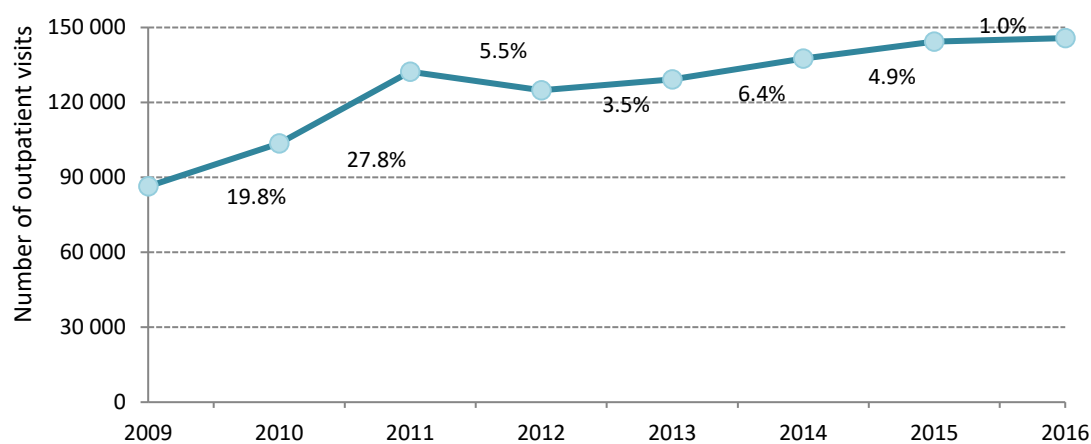


Figure 7. The number of midwives' outpatient visits, 2009–2016

Source: NIHD

Following the rapid increase of outpatient visits in 2010–2011, the number of midwives' outpatient visits decreased by 6% in 2012, but started slowly increasing thereafter. Since the period in question followed the years of economic crisis, it stands to reason that socioeconomic problems, such as shortage of labour, possible change of residence etc., influenced the family-planning of residents to become more moderate. This is confirmed by the decrease of the birth rate in 2012 as well as in 2013 (-4% and -3%), even though the number of women of childbearing age remained the same.

Between 2009 and 2016, the number of outpatient visits per one FTE midwife has doubled (figure 8). The number of outpatient visits per one FTE midwife was 240 in 2009, then by 2016, it had increase to 410.

⁸ Visit – consultations and home visits

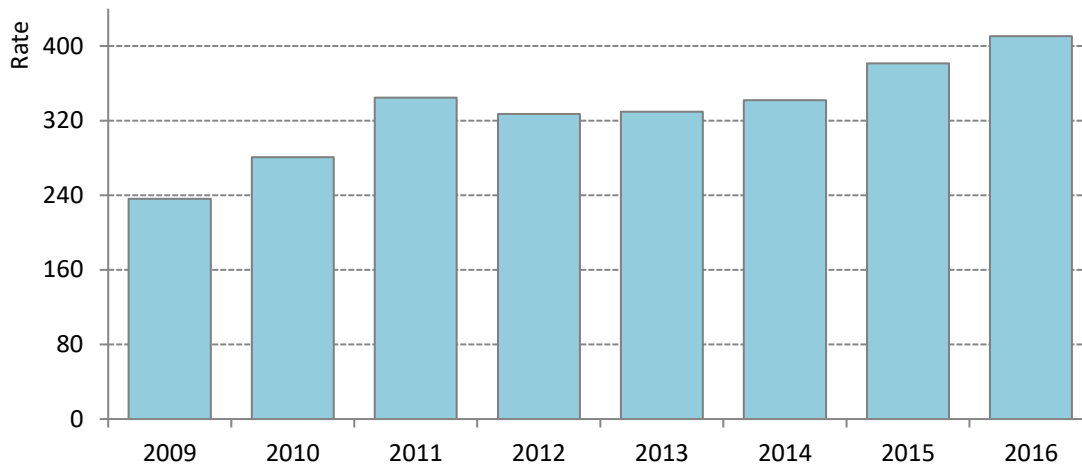


Figure 8. The average number of midwives' outpatient visits per one FTE midwife, 2009–2016
Source: NIHD

Even though the number of women in the population has decreased during the analysed period, the number of visits to the midwife per woman has increased. In 2009, a midwife made an average of 26 outpatient visits per 100 women aged 15 to 49, whereas by 2016, that indicator had increased to 50 visits i.e. 89%. At the same time, the number of gynaecologists' outpatient visits for women aged 15 to 49 decreased by nearly 8% (figure 9). One of the reasons for this may be the 15% decrease of FTE position in the field of gynaecologists and the expansion of midwifery care services. In 2009, women made up 54% of the Estonian population, 85% of whom were women aged 15 and above. The proportion of women of fertile age i.e. between the ages of 15 and 49 made up 45% of the overall number of women. The number of women has decreased by 2% during the eight years, and the percentage of women of fertile age by 10%. It is important to consider the fact that women visit the midwife repeatedly during their pregnancy or while planning pregnancy with the help of fertility treatments or due to other reasons, whereas other women of fertile age do not visit a midwife at all during that period.

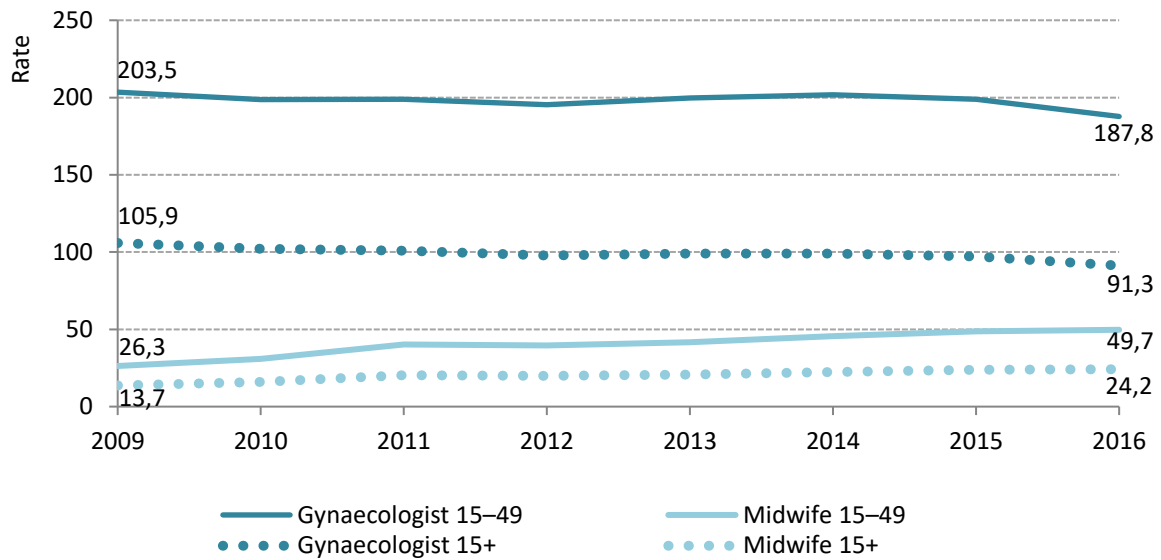


Figure 9. Outpatient visits of midwives and gynaecologist per 100 women in age groups 15–49 years and 15+, 2009–2016

Source: NIHD

Outpatient visits of midwives and gynaecologists are not necessarily moving in opposite directions, however, there has been a change in the pattern of prenatal visits of women who have already given birth before (figure 10). In 2009, pregnant women visited the midwife an average of three times and the gynaecologist seven times, whereas in 2016, the midwife had an average of six and the gynaecologist four appointments per woman. During eight years, the work allocation of health care workers monitoring pregnancies has shifted, however, the usage of the service has remained the same i.e. prenatal visits still consist of 10 visits that are made to either a midwife or gynaecologist.

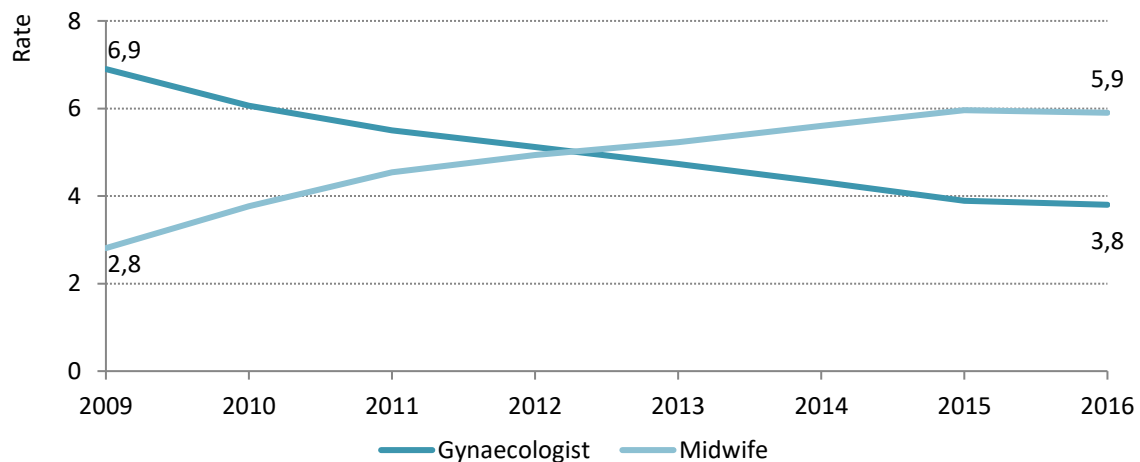


Figure 10. Prenatal visits of midwives and gynaecologists per one pregnant woman, 2009–2016

Source: NIHD

The right to monitor healthy pregnancies as well as the mother and newborn postpartum, advise women on sexual and reproductive health and family planning provided the opportunity to distribute the tasks of doctors and midwives more evenly. The workload of gynaecologists in the monitoring of pregnancies decreased significantly, which improved the availability of gynaecologists in case of gynaecological illnesses in particular.

Even though the main target group of midwives' outpatient visits is pregnant women and women who have recently given birth, their work with newborns is no less important. The competence of midwives includes monitoring the child's development during their first weeks of life and solving more minor problems, such as weight loss, decreased muscle tone or alleviating gas pains by means of massage etc. Midwives also counsel young people, including young men up to the age of 24 on various issues and problems, such as confirming pregnancy, finding suitable contraceptive methods, sexually transmitted diseases and other topics related to one's sexual health (East-Tallinn Central Hospital).

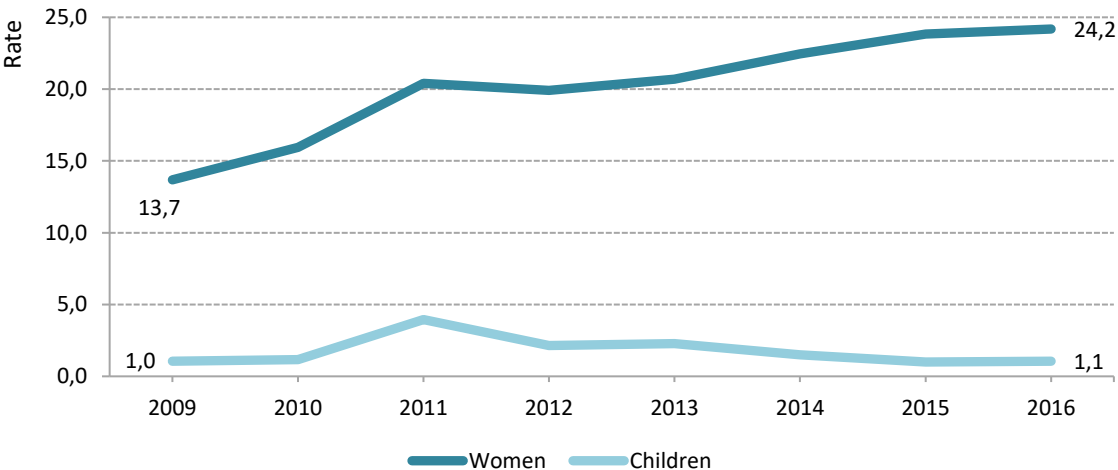


Figure 11. Outpatient visits of midwives per 100 women and children, 2009–2016
Source: NIHD

By 2016, the number of children between the ages of 0 and 14, both boys and girls, has increased by 6% compared to that of 2009. Approximately 3% of all midwives' outpatient visits are with children between the ages of 0 and 14. The number of visits has not changed between 2009 and 2016 (figure 11). However, it is not possible to distinguish whether the visits were with newborns or youths, and it is unknown whether the consultation is about the termination of a pregnancy or something else. There is a knowledge that 15 children having born to mothers between the ages of 10 and 14 during that period.

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Health and health care statistics:

- **Health statistics and health research database**
<http://www.tai.ee/tstua>
- **Website of Health Statistics Department of National Institute for Health Development**
<http://www.tai.ee/en/r-and-d/health-statistics/activities>
- **Dataquery to National Institute for Health Development**
tai@tai.ee
- **Database of Statistics Estonia**
<http://www.stat.ee/en>
- **Statistics of European Union**
<http://ec.europa.eu/eurostat>
- **European health for all database (HFA-DB)**
<http://data.euro.who.int/hfadb/>
- **OECD's statistical databases (OECD.Stat)**
http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT

