



Independent outpatient visits of nurses 2005–2015



Tervise Arengu Instituut
National Institute for Health Development

National Institute for Health Development
Department of Health Statistics

**Independent outpatient visits of nurses
2005–2015**

Tallinn 2017

Mission of the Department of Health Statistics:
Public Health and Welfare through Better Statistics and Information

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Introduction

One of the challenges for Estonian health care is aging population, and the preparedness for this requires the improvement of the sustainability and availability of a greater volume, human resources, and funding of health care services targeted at the elderly (Estonian Nurses Association 2011). The health care system pays more attention to the development of nursing care services and the expansion of activities belonging to the competence of nurses. Nurses are also the greatest group of health care workers in most countries belonging to the Organisation for Economic Co-operation and Development (OECD 2015).

The analysis provides an overview of independent outpatient visits of nurses¹, compares the changes occurred in the statistics on independent visits of nurses with outpatient visits of physicians, and highlights possible factors that have influenced the number of visits of nurses from 2005–2015. The analysis does not reflect independent outpatient visits of midwives, since the target group of independent work of midwives differs from the profile of nurses' patients, and these have to be considered separately.

The objective of outpatient nursing care service is to promote the patient's health awareness, preserve the state of health and ability to cope, improve it, if possible, support the short-term or long-term treatment of a patient in a stable condition, and mitigate complaints, if necessary. Additionally, the nursing care activity supports the treatment determined by the physician. Furthermore, the nurses make visits either to patient's home in the form of a home visit or to care institutions according to the patient's needs (Estonian Health Insurance Fund).

The analysis makes use of data on independent outpatient consultations and home visits carried out by nursing staff² collected by the National Institute for Health Development from all Estonian institutions having a license to provide health care services, concerning both physician-nurse practices and the work of outpatient departments in hospitals. The data is

¹ Visits – consultations and home visits in total.

² Nursing staff – nurses and midwives in total.

collected with the annual report “Health care institution”³ (table “Outpatient care”). Additionally, the data on full-time equivalent employment and average age of health care personnel have been used, which are 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 National Institute for Health Development (<http://pxweb.tai.ee/esf/pxweb2008/dialog/Info/sonastik/>) and data about Estonia together with definitions in the Health Statistics and Health Research Database (<http://www.tai.ee/tstua>).

The analysis is accompanied by an international comparison on the basis of OECD database data.

The author is thankful to all, who send data and information and contributed to the calculation of nurse visits through this. I would like to thank my colleagues Ingrid Valdmaa, Natalja Eigo, and Kati Karelson, who helped to interpret and describe the data.

³ The reporting form and instructions can be found on the website of the National Institute for Health Development at <http://www.tai.ee/et/tegevused/tervisestatistika/viited-aruanete-esitajatele>.

1. Summary

Approximately 7,900 nurses were employed in Estonia in 2015, filling slightly more than 7,600 full-time equivalent (FTE) positions⁴. Estonia has 5.8 employed nurses per 1,000 population. This indicator is 1.4 times smaller than the average of OECD countries (8.4 in 2014). In Estonia, the number of FTE of nurses has increased by 5.4% in 2015 compared to 2005. However, this is insufficient and does not correspond to the needs of the health care system. Based on forecasts, a total of 8.3 FTE nurses per 1,000 population are needed by this year and 9.0 by 2020 in order to ensure the sustainability of health care services (Ministry of Social Affairs 2008, 2012). Therefore, Estonia should have slightly more than 3,300 additional nursing jobs in 2016 and slightly more than 4,200 additional jobs in 2020 compared to 2015.

In 2014, OECD countries had two and a half nurses per one physician. In 2014, the corresponding indicator was 1.7 in Estonia, which did not change by 2015. In order to achieve the average level of OECD countries and taking into account the low number of physicians, Estonia needs approximately 3,100 more nurses.

From 2005–2015, nurses made an average of 1.14 million independent outpatient visits in a year. The number of visits has increased slightly more than four times by 2015 when compared to 2005. An average of two-thirds of the independent outpatient visits of nurses are consultations and a third home visits. The average number of independent outpatient consultations of nurses has increased from 28 to 123 per 100 population over 11 years, and the average number of home visits has increased from 8 to 34. The number of consultations per one FTE nurse has increased four times over 11 years – from 52 to 212 in a year, and the average number of home visits per one FTE nurse from 15 home visits to 58.

From 2005–2015, the increase in the number of independent outpatient visits of nurses was influenced by restructuring the health care system under which the independent tasks of nurses were expanded. With this regard, the nurses could independently engage in monitoring and assessing the state of health of those patients whose condition was stable and who received outpatient treatment. The role of family nurses also changed in the team

⁴ Full-time equivalent employment (FTE) – one FTE is equivalent to one employee working full-time and equals - to 40 hours per week.

of family doctors – the responsibility for chronically ill patients, pregnant women, and healthy new-borns was transferred from family doctors to family nurse. Changes in health care reduced the work load of family doctors and improved the availability of primary care. It also improved the quality of independent consultation carried out by family nurses while providing general medical care, and made the monitoring and health care related consultation for chronically ill persons more comprehensible (Lai *et al* 2014).

2. Nurses in OECD countries and in Estonia

Nurses play an increasingly important role in the health care system, and this applies not only to hospitals and care homes, but also more and more to primary care. The demand for nurses is increasing in many OECD countries, which has raised the problem of shortage of nurses.

In OECD countries, the average number of nurses was 8.4 per 1,000 population in 2014 (Figure 1). The number of nurses per capita was highest in Switzerland, Norway, Denmark, and Iceland, with more than 15 nurses per 1,000 population. Compared to 2005, the number of nurses per 1,000 population increased in almost all OECD countries by 2014, except in the United Kingdom, Lithuania, and Israel. In Estonia the average number of FTE nurses was 5.7 per 1,000 population in 2014, which is almost 1.5 times lower than the average of OECD.

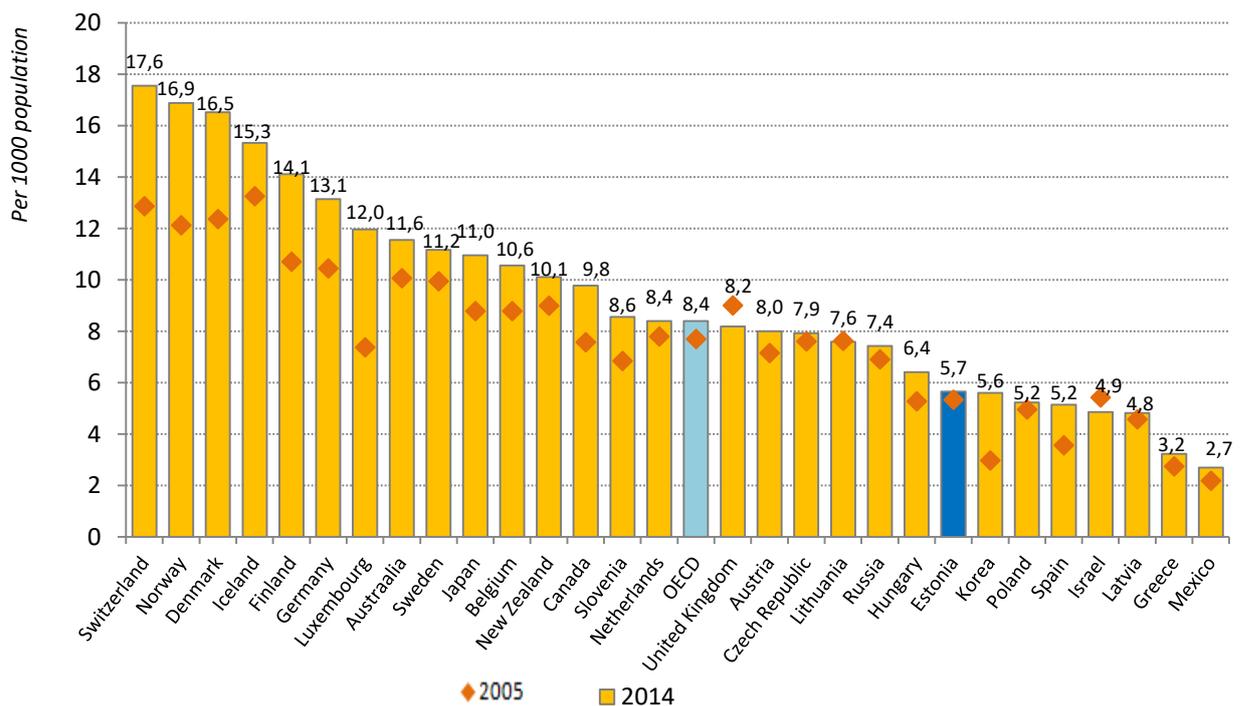


Figure 1. Practising nurses s per 1,000 population in OECD countries, 2005 and 2014

Source: OECD

In 2014, there were about two and a half nurses per doctor on average across OECD countries. In 2014, the nurse-to-doctor ratio was the highest in Finland, Japan, Denmark, Switzerland, and Iceland, where the ratio was four or more nurses per doctor. The lowest

number was found in Bulgaria, Mexico, Spain, Israel, and Greece. Estonia had 1.7 nurses per doctor in 2014, which is a third less than the OECD average.

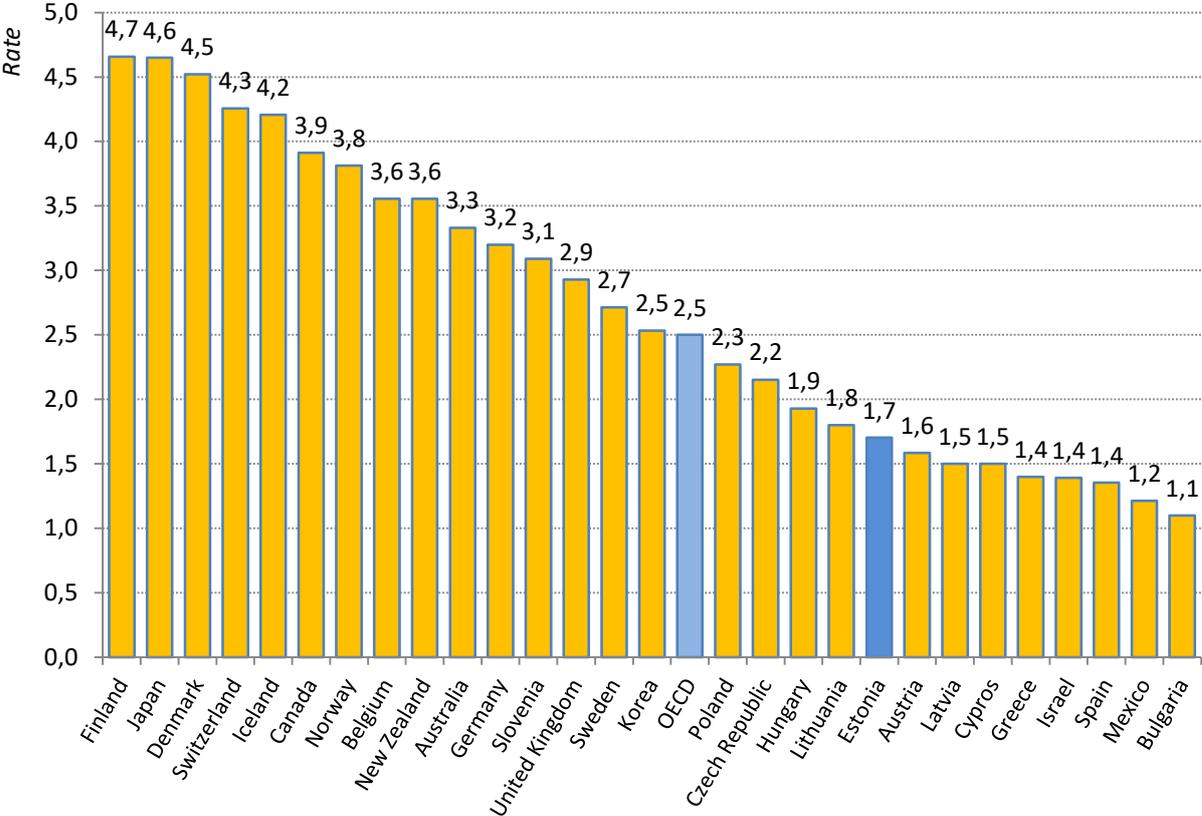


Figure 2. Ratio of nurses to physicians in OECD countries, 2014

Source: OECD

In 2005, there were approximately 7,200 full-time equivalent nurses in Estonia. By 2015, the number of FTE nurses had increased by 5.4%, or to slightly more than 7,600 full-time equivalent nurses. When adapting the number of FTE nurses to population size, then we had 5.8 FTE nurses per 1,000 population in 2015. On the basis of the forecasts of the Ministry of Social Affairs, a total of 8.3 nurses per 1,000 population are needed by 2016 and 9.0 by 2020 in order to ensure the sustainability of health care services (Ministry of Social Affairs 2008, 2012). In 2009, the number of nurses being trained was increased by 350–400 students per year in order to increase the number of practicing nurses in way that there would be 9–10 nurses per 1,000 population (Lai *et al* 2014). Here, when even not considering the fact that health care workers leave to work for abroad, the number of trainees is insufficient in order to achieve the goal set for 2020. In order to achieve the goal, the number of FTE nurses in

Estonia must reach nearly 12,000. In other words, there should already be nearly 30% more nurses in Estonia this year, or more than 3,300 and slightly more than 4,100 FTE nurses by 2020 compared to 2015. Therefore, the number of FTE nurses should increase by 40% over five years.

According to the data of institutions of professional higher education in Estonia, nearly 350 nurses graduated from the basic training of nurses in 2016, however, this is insufficient to ensure the sustainability of health care. In order to achieve the goal, approximately 850 nurses must graduate per year over five years. Therefore, it is necessary to pay more attention to increasing the role of nurses in the Estonian health care system.

The total average number of independent outpatient visits of nurses per one FTE nurse has gradually increased from 2005–2015, meaning 4.1 times increase in total (Figure 3).

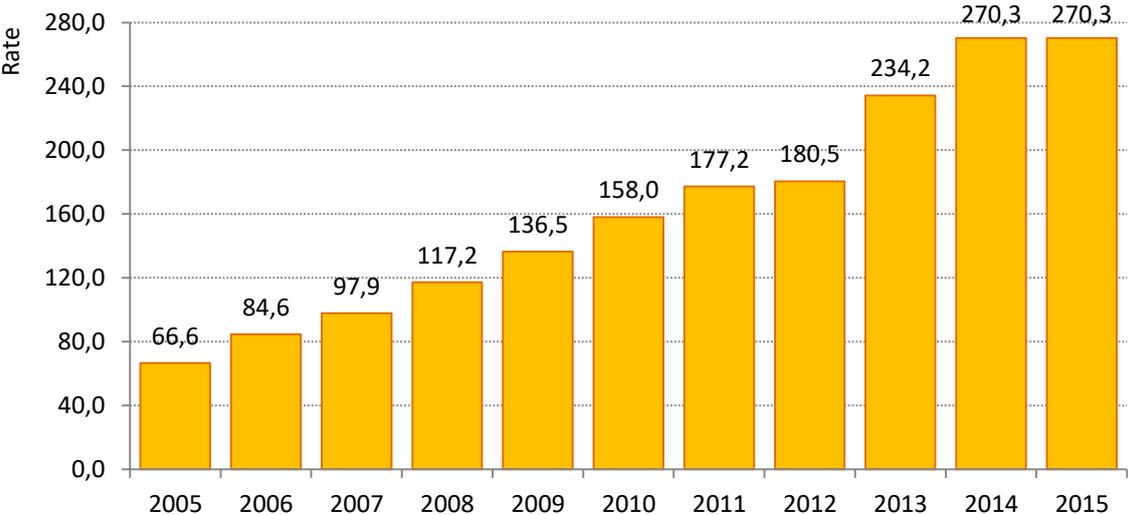


Figure 3. The average number of independent visits of nurses per one full-time equivalent nurse, 2005–2015

Source: National Institute for Health Development

The availability of health care services is significantly facilitated by independent outpatient visits of nurses. Independent outpatient visits and home visits made by nurses help to divide the workload of both family doctors and other medical specialists, and shorten the waiting lists for outpatient consultation of medical specialists.³ Independent outpatient visits of nurses. From 2005–2015, nurses made an average of 1.14 million independent outpatient visits in a year, of which two-thirds

were consultations and a third home visits. The average number of independent consultations of nurses per 100 population has increased by four and half times compared to 2005. When nurses carried out an average of 28 independent consultations per 100 population in 2005, the corresponding indicator has increased to 123 consultations in 2015 (Figure 4).

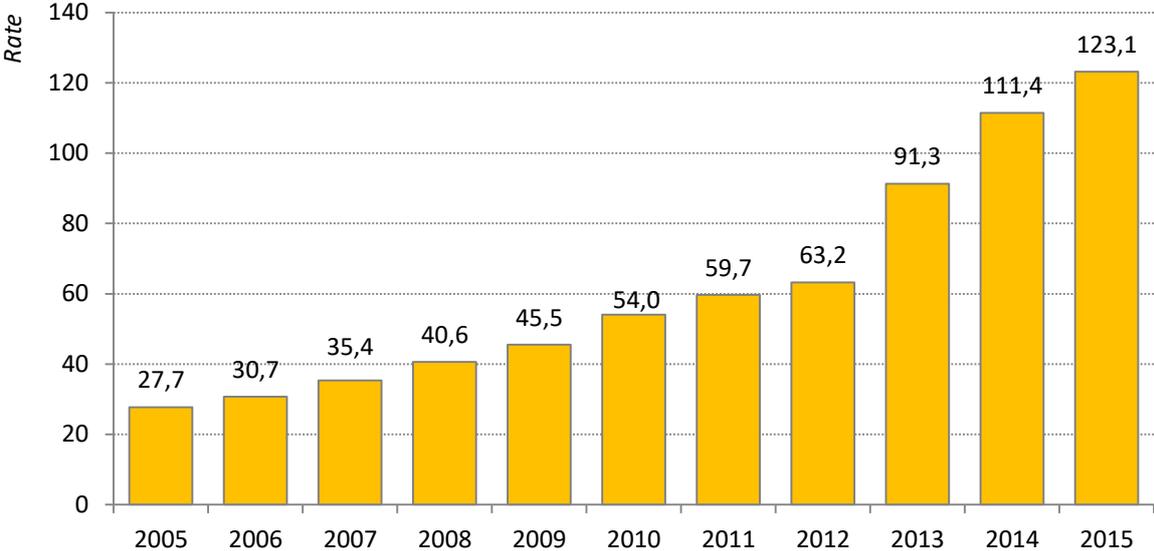


Figure 4. Independent outpatient visits of nurses per 100 population, 2005–2015

Source: National Institute for Health Development

The decisions adopted in 2010, which expanded independent activities and tasks of nurses, have had a major influence. In 2010, the family nurses obtained the right to independently consult certain patients, such as chronically ill persons, pregnant women, and parents of healthy new-borns. Furthermore, the school nurses began to provide all school health care services in 2010, including activities related to immunisation. Also, the activities belonging to home nursing care services were expanded (Lai *et al* 2014). The influence arising from restructuring activities was immediate – while nurses carried out an average of 480,000 independent outpatient visits per year from 2005–2009, the average number of visits from 2010–2013 increased to 780,000, that is more than 60%. It is important to note that the number of FTE nurses has not significantly changed over these years.

Since 2013, the Estonian Health Insurance Fund also finances the costs of family doctors’ practices from the second family nurse if there is a separate cabinet available for nurse’s independent work. The average number of independent outpatient visits of nurses increased

by 2.7 times in family doctors offices over 2013–2015 compared to the average of 2005–2012.

While the average growth rate of independent outpatient consultations of nurses was 16.1% from 2005–2015, the number of outpatient visits of physicians has not increased (+0.1%) (Figure 5).

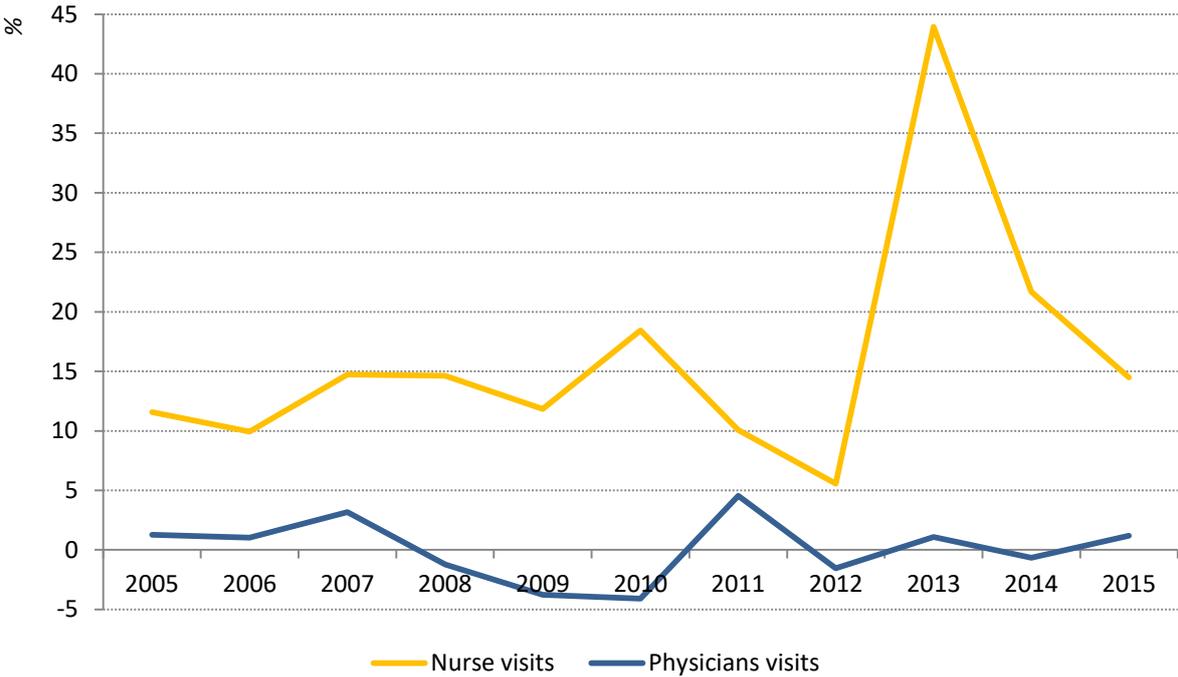


Figure 5. Annual growth of visits of nurses and physicians in percentages, 2005–2015

Source: National Institute for Health Development

4. Independent home visits of nurses

The number of independent home visits of nurses has significantly increased from 2005–2015 (Figure 6). While nurses made an average of eight home visits per 100 population in 2005, this number increased four times by 2015, similarly to consultations. The number of home visits of nurses increased at a rapid pace from 2005–2008. The increase in the number of home visits stopped from 2009–2010, and the reason for this might have been the general economic crisis and decline in the health care costs of the Estonian Health Insurance Fund. The number of home visits of nurses increased again from 2011–2014. Over the past two years, the number of home visits has remained at the same level compared to the population indicators.

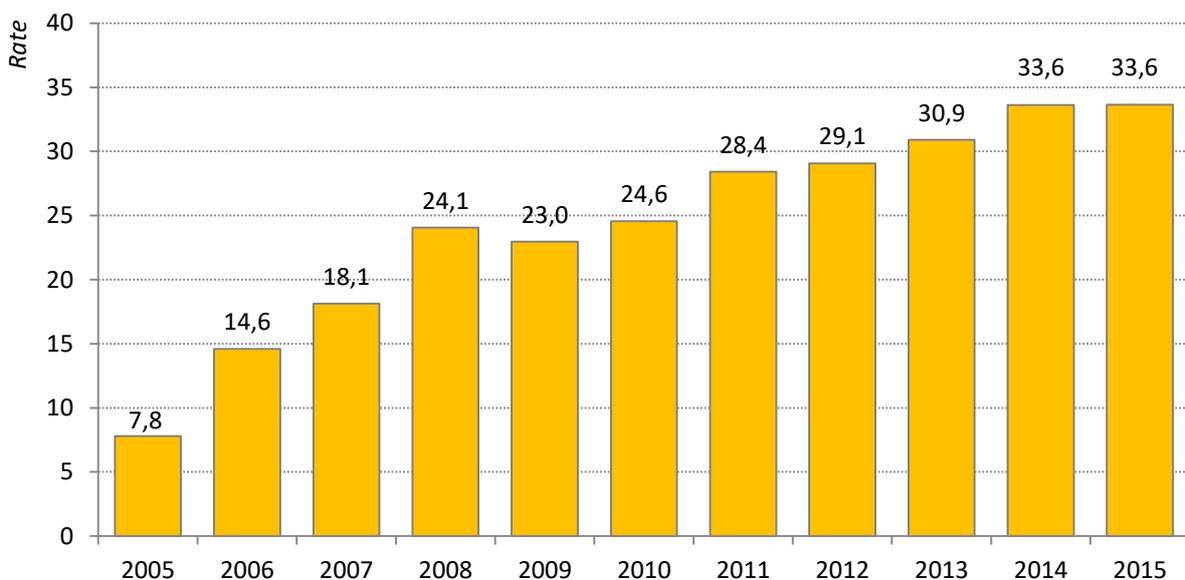


Figure 6. Independent home visits of nurses per 100 population, 2005–2015

Source: National Institute for Health Development

When the number of independent home visits of nurses per 100 population has been on the rise from 2005–2015, the number of home visits made by physicians decreases (Figure 7). The number of home visits of physicians has decreased more than 70% over the analysis period.

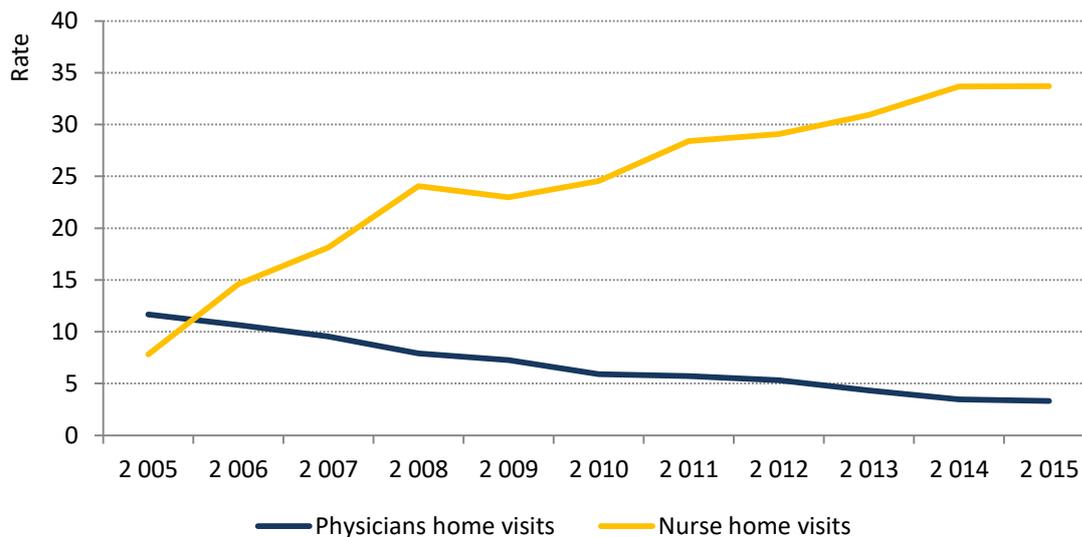


Figure 7. Home visits of nurses and physicians per 100 population, 2005–2015

Source: National Institute for Health Development

The increase in the number of independent home visits of nurses has also been influenced by restructuring the health care system, which included the expansion of the tasks and activities of home nurses. In this context, the use of resources became more efficient (Ministry of Social Affairs). In 2015, 95% of all home visits of nurses were carried out by home nurses.

5. Independent outpatient visits of nurses by the type of health care service provider

Nurses carry out independent outpatient visits mainly in four different types of health care service providing institutions – hospitals, family doctor’s offices, specialist health care, and nursing care institutions.

The highest volume of independent outpatient visits of nurses was found in family doctor’s offices, where 76% of all independent outpatient visits of nurses were carried out in 2015. A total of 18% of independent outpatient visits of nurses are carried out in hospitals and 6% in specialist health care institutions. In general, independent outpatient visits of nurses are not carried out in nursing care institutions. By contrast, precisely home visits of nursing care institutions amounted to 73% of all home visits of nurses in 2015. The rest 20% were carried out in hospitals, 4% in family doctor’s offices, and 3% in specialist health care institutions (Figure 8).

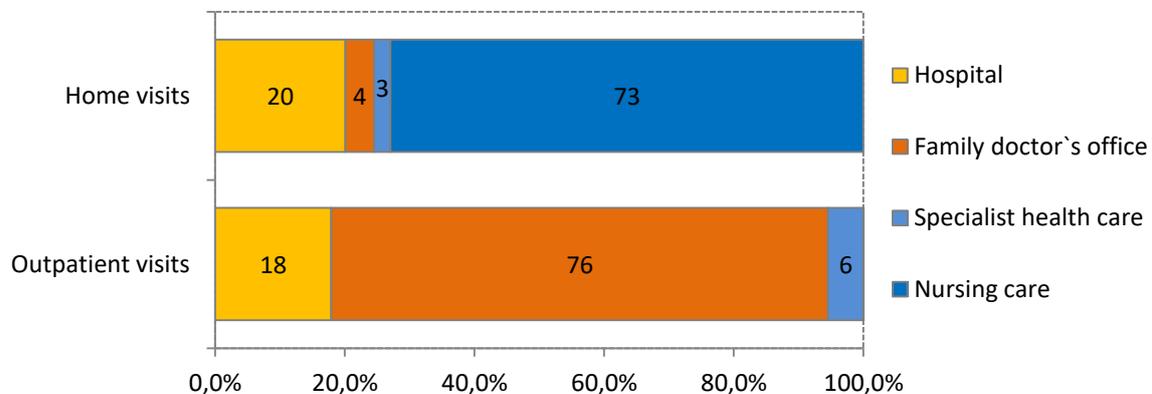


Figure 8. The independent outpatient visits and home visits of nurses by the type of health care service provider, 2015

Source: National Institute for Health Development

The distribution of nurses' visits according to visit's type is different depending on the health care service provider (Figure 9). For example, family doctor’s offices carry out visits to the extent of 98% and home visits to 2%, specialist health care institutions 88% visits and 12% home visits, and hospitals 76% and 24%, respectively. Nursing care institutions generally

carry out all visits at the patient’s home or care homes.

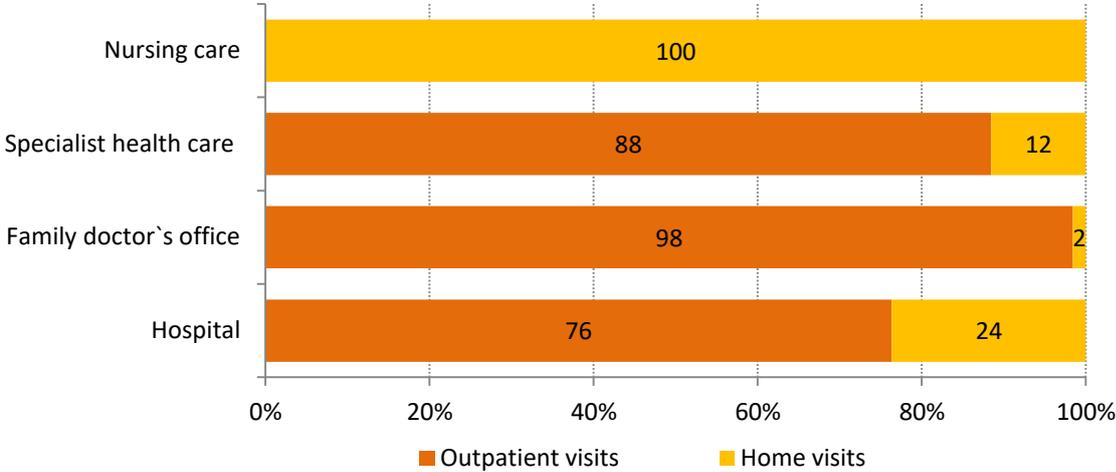


Figure 9. Work division of health care service providers by the type of independent outpatient visit of nurses, 2015

Source: National Institute for Health Development

With regard to FTE employment, approximately three quarters of nurses are employed in hospitals and 15% in family doctor’s offices. The rest 16% of nurses is divided between nurses employed in emergency medical care, specialist health care, nursing care, rehabilitation, and other health care institutions⁵, such as diagnostics and dental care providers (except for dental nurses) (Figure 10).

⁵ Other institution – diagnostics and general health care institution (except for family health care institution).

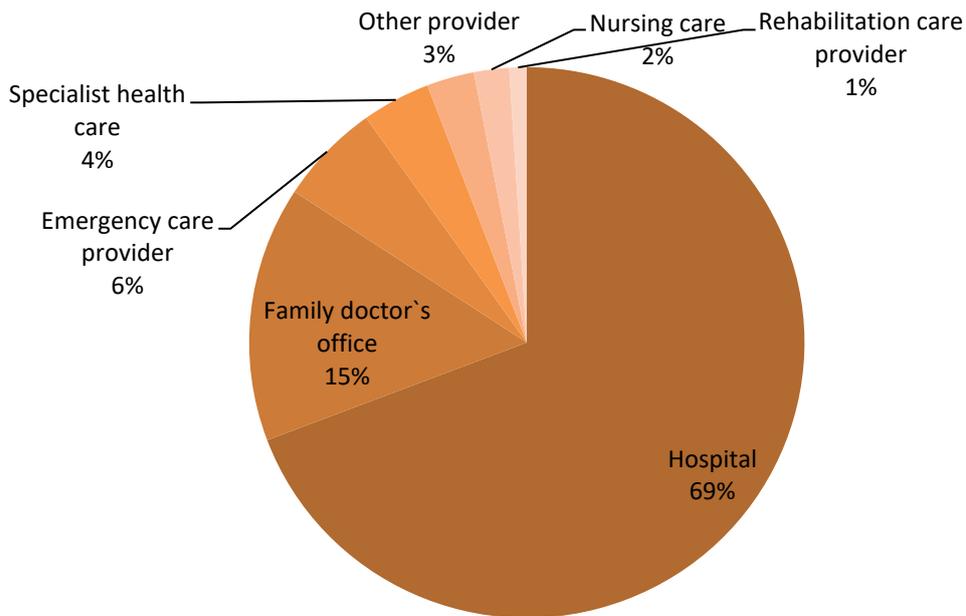


Figure 10. Full time equivalent nurses by the type of health care service provider, November 2015

Source: National Institute for Health Development

Based on initial data, the average age of nurses was 44.7 years in Estonia in November 2015. By the type of health care service provider, nurses belonging to higher average age group are employed in rehabilitation (52.2 years), nursing care (48.9), and family doctor's offices (47.2). Nurses belonging to lower average age group are employed in emergency medical care (39.6) and specialist health care institutions (46.3).

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(<http://www.tai.ee/tstua>)

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/tegevused/tervisestatistika>

- **Dataquery to National Institute for Health Development**

tai@tai.ee

- **Database of Statistics Estonia**

<http://www.stat.ee/>

- **Statistics of European Union**

<http://ec.europa.eu/eurostat>

- **European health for all database (HFA-DB)**

<http://data.euro.who.int/hfad/>

- **OECD's statistical databases (OECD.Stat)**

http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT

