



# Physician's outpatient and home visits 2004–2014



Tervise Arengu Instituut  
National Institute for Health Development

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# Physician's outpatient and home visits 2004–2014

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## Definitions

<b>Correlation coefficient</b>	a statistical measure that calculates the strength of the relationship between the relative movements of the two variables.
<b>Emergency Department (ED)</b>	a department at a hospital with the instruments and furnishings conforming to requirements which provides all emergency care services. Compare: reception department/room.
<b>Family doctor's office</b>	a health care provider in which out-patient health care services are provided by a medical practitioner specialised as a family doctor operating based on his/her practice list.
<b>Home visit</b>	physician's or nurse's visit to a patient's home.
<b>Occupation</b>	a specific set of tasks and responsibilities in the organisation for specific work that is paid for.
<b>Outpatient consultation</b>	a general term meaning the outpatient contact, including an outpatient visit to the doctor's or nurse's office and home visits, excluding contacts by phone (does not include telephone consultations).
<b>Outpatient visit</b>	outpatient contact of a person who needs medical consultation during the doctor's or nurse's working time in the office.
<b>Specialist health care provider</b>	a health care provider in which out-patient health care services are provided by a medical specialist and health care professionals working with him/her. These include the facilities providing occupational health services.

More definitions and explanations relating to health care statistics used in the analysis can be found in the Health statistics glossary<sup>1</sup> on the web page of DHS of the National Institute for Health Development (NIHD) and also in the detailed information added to the tables of Health statistics and health research database (HSHRD). The data on physicians' outpatient visits and home visits in Estonia described in the analysis is also accessible at HSHRD ([www.tai.ee/tstua](http://www.tai.ee/tstua)).

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<sup>1</sup> The dictionary can be found on the NIHD website [www.tai.ee](http://www.tai.ee) → Health statistics → Metadata: <http://www.tai.ee/et/tegevused/tervisestatistika/metaandmed/tervisestatistika-sonastik>

## Summary

In Estonia, physicians make an average of 6.4 outpatient consultations per capita in one year, which is slightly below the average of the OECD countries, which was 6.6 in 2013. Compared to 2004, by 2013 the number of doctor's consultations per capita had increased by 5.6% in the OECD countries; whereas in Estonia, that number increased by 3.2%.

The number of outpatient visits in Estonia has decreased by 0.5% over eleven years. The highest number of outpatient visits were given in 2007 (8.76 mln) and the number was almost 9% lower in 2010 (7.99 mln), which was also the lowest during the years analysed. By 2014, the number of dentist's outpatient visits has dropped by 9.2% compared to 2004.

On average, family doctors have 4,921 outpatient visits per year, which makes up 21 outpatient visits per workday, factoring in case of a one-month holiday.

By counties, the number of family doctor outpatient visits per capita had increased in most of the regions, when compared to the first year of the analysed period, and by 2014, the number of specialist physician outpatient visits had increased in one third of the counties. The number of dentists' outpatient visits, however, has decreased in most counties.

By occupations, the most outpatient visits per capita have taken place with gynaecologists and ophthalmologists. By 2014, a significant rise can be seen in the number of emergency care physician and anaesthesiologist outpatient visits and a decrease in paediatrician and paediatric surgeon outpatient visits per capita.

While outpatient visits are divided equally between family doctors and specialist physicians, 90% of home visits are carried out by family doctors. The number of home visits has decreased year by year. Compared to the beginning of the period analysed, by 2014, the number of home visits has decreased by more than 70%.

The decrease in the number of outpatient visits during the period analysed had an impact on the work of emergency departments, which saw a significant increase in volumes. Health care financing also played an important role in the decrease of physician outpatient visits. The number of both specialist and dentist outpatient visits were in relation to the overall number of the population, while in terms of family doctors, this played no role. The number of outpatient was not in correlation with the overall number of physicians.

## Introduction

This analysis provides an overview of physicians' outpatient visits and home visits in 2004–2014. The objective is to describe the changes in physicians' outpatient visits and home visits during the period under consideration and to bring out potential factors that had an impact on the number of the visits. The connections between physicians' visits and various indicators were studied by the method of correlation analysis.

Some international comparisons have been added to the analysis based on data published in the database of the Organisation for Economic Co-operation and Development.

The author would like to thank all those who provided data and information, thereby contributing to the data collection of the physicians' outpatient visits.

# 1. Data collection

In Estonia, the task of collecting, processing and publishing health statistics data determined by the Minister of Social Affairs is assigned to the National Institute for Health Development (NIHD).

The Department of Health Statistics (DHS) at NIHD collects data on physicians' outpatient consultations from all undertakings in Estonia that have a license for the provision of health care services and in which physicians make outpatient visits and home visits, both in medical practices and in outpatient departments at hospitals. For data collection a quarterly report "Physicians' outpatient and home visits" and annual reports "Health care institution" (table: Outpatient care) and "Dentist's report" were in use.

Health care providers (HCP) submit quarterly data on physician and dentist outpatient and home visits, thus giving an overview of the visits made by occupation. Quarterly include data only physicians' outpatient visits and home visits, excluding telephone consultations or consultations via any other channel, e.g. e-mail, the internet.

The annual report "Health care institution" presents overall number of doctor visits and home visits without distinguishing the data by occupations, except family doctors whose data is presented separately. The annual data also includes the number of telephone consultations registered, which make up an important part in the work of a family doctor. Dental care providers do not submit this report.

All dentists submit an annual report "Dentist's report", which is used to collect data on visits to dentists. The quarterly report "Physician's outpatient and home visits", presents the number of dentists' outpatient and home visits as a total without breakdown by occupations.

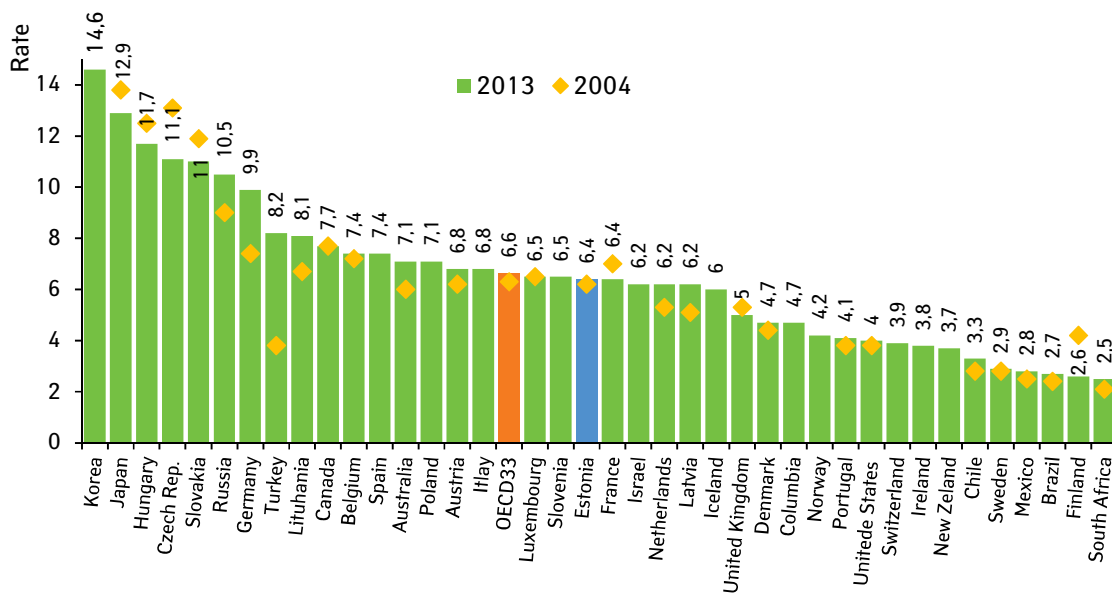
The forms and manuals for the reports can be accessed on the web page of NIHD <http://www.tai.ee/et/tegevused/tervisestatistika/viited-aruanete-esitajatele>.



## 2. Physician's outpatient consultation in OECD countries

Each year, OECD collects data on physicians' outpatient consultations from its member states, including data of the consultations made in medical practice, outpatient departments of hospitals, and homes of the patients. The data does not include telephone consultations.

In 2013, the average number of physician's outpatient consultations per capita in OECD countries was 6.6 (Figure 1). In most countries, a physician makes five to eight outpatient consultations a year per capita. In Estonia, the number of outpatient consultations is slightly below the average of OECD (6.4 consultations per capita in a year). On average, more than 12 outpatient consultations per capita are made by physicians in Korea and Japan. Less than three outpatient consultations a year per capita are made in Sweden, Finland, Mexico, South Africa, and Brazil.



**Figure 1.** Number of physician's consultations per capita, 2004 and 2013

Source: OECD

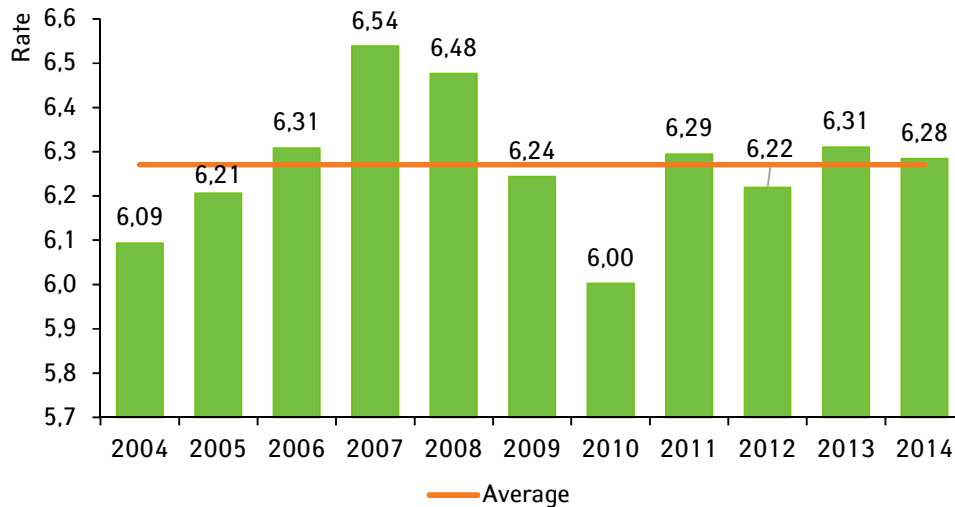
Compared to 2004, the average number of physician's outpatient consultations per capita in OECD countries has increased 5.6% by 2013. When comparing the two years, the number of outpatient consultations has increased the most in Turkey where a physician now makes more than twice as much outpatient consultations per capita than in 2004. The number of outpatient consultations per capita has also increased in Germany (34%), Latvia (22%), Lithuania (21%) and in Russia (17%). In Estonia, this number has increased by 3.2%. The number of outpatient consultations has decreased the most in Finland where an inhabitant visited a doctor on the average of 4.2 times a year in 2004, but by 2013, this number has decreased by 38.1%. The number of outpatient consultations has also decreased in the Czech Republic (15%), Slovakia (7.5%) and Hungary (6%).

### 3. Physician's outpatient visits

In Estonia, on average, a little over 8.3 million outpatient visits are made to physicians in a year. From 2004 to 2014, the number of physician's visits decreased by 0.5%. The largest number of outpatient visits were made in 2007 (8.76 mln) and the number was almost 9% smaller in 2010 (7.99 mln) and was also the lowest smallest across the years analysed.

Within a year, a resident attends an average of 6.3 physician visits. The year of the highest number of visits in the last 11 years was in 2007 when a resident visited a physician 6.5 times per year on average. This number was 6.0 (Figure 2) in 2010 when the number of visits was the smallest.

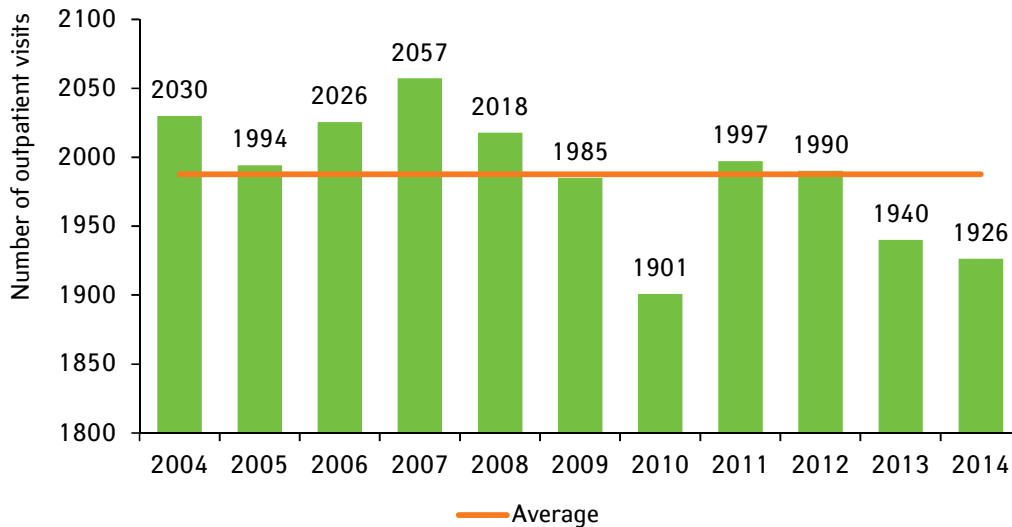
Correlation analysis indicates that the total number of residents has insignificant impact on the total number of physician's visits ( $r=0.3$ ).



**Figure 2.** Number of physician's outpatient visits per capita, 2004–2014

The decrease in the number of visits in 2010 was related to cutbacks in financing of health care that year. The main cause for the decrease in health expenditure was a 1.8% decrease in public sector spending compared to 2009. The decrease in public sector expenditure was mostly caused by a decrease in the health expenditure of Estonian Health Insurance Fund (EHIF). In 2010, EHIF's part made up 86.4% of the public-sector health expenditure, having decreased by 2% or 12.8 million euros that year. Patient's out-of-pocket expenditure sharing does not have as large impact on the changes in the number of physician's visits.

In the period analysed, a physician made 1,988 outpatient visits per year on average (Figure 3). When in 2004, a physician made an average of 2030 visits, the number had decreased by 5.1% by 2014.

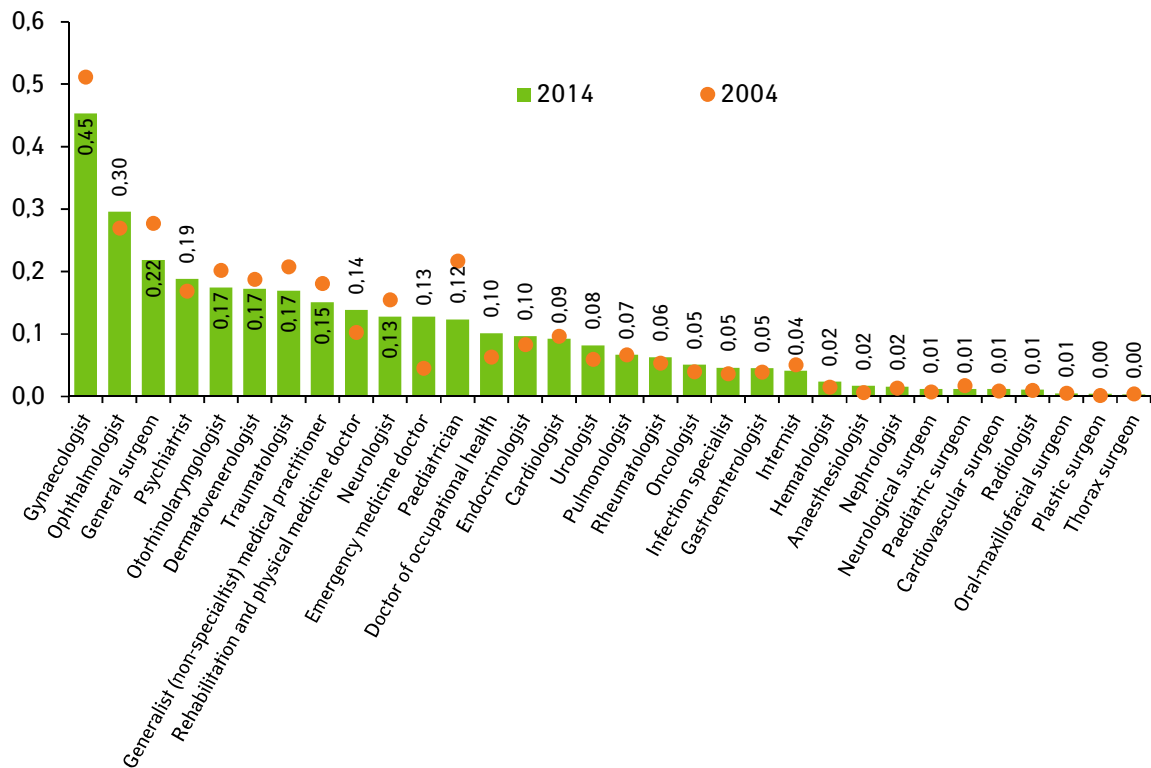


**Figure 3.** Number of physician's outpatient visits per physician, 2004–2014

The average number of residents per physician had decreased by 4.6% by 2014 compared to 2004. At the same time, the overall number of physicians has increased by 4.8% and the number of residents decreased by 3.5%.

In the recent years, an increase in the work volume and physicians' visits at the Emergency Department (ED) has been widely discussed. Throughout the years, the number of patients turning to ED has increased gradually, growing by almost 26% between 2004 and 2014. The number of patients arriving to ED and the number of outpatient visits is related ( $p=0.7$ ). As the number of outpatient visits to physicians of other specialities is decreasing, the number of people turning to ED is on the rise.

By occupations, the most visits per capita is made annually to gynaecologist and ophthalmologist, respectively 0.45 and 0.3 annually (Figure 4). Compared to 2004, the number of visits to emergency health care physicians has increased considerably between 2004 and 2014 – as much as 2.6 times. The number of visits per capita has also increased for anaesthesiologists, plastic surgeons and neurosurgeons, and decreased the most among paediatricians, paediatric surgeons, thoracic surgeons and general surgeons.

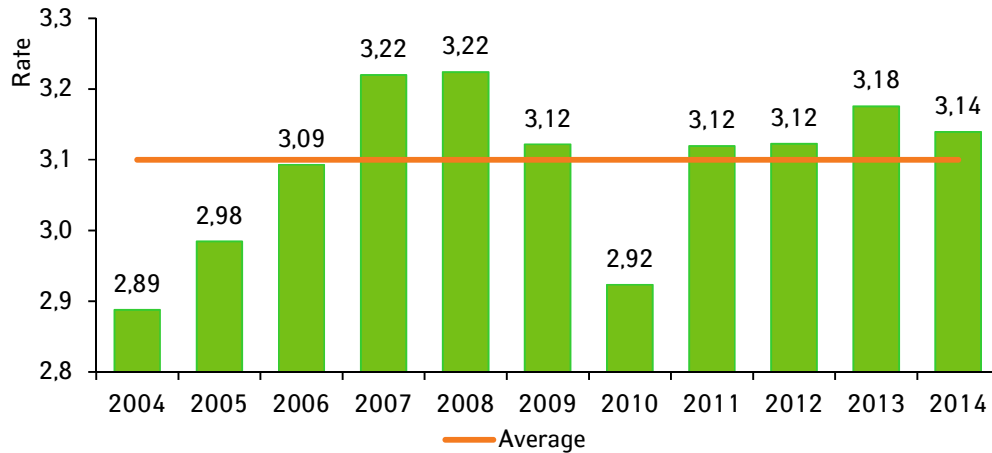


**Figure 4.** Number of specialist physician outpatient visits by occupation per capita, 2004 and 2014

### 3.1 Family doctors' outpatient visits

Family doctor's services are outpatient health care services provided by a medical practitioner specialised as a family doctor and the health care personnel working with him/her. Usually, this is the patient's first contact with the health care system. The main services of a family doctor include diagnosis, treatment of general diseases, provision of health-related advice, health promotion and disease prevention. Family doctors also control access to most of the specialised medical care services.

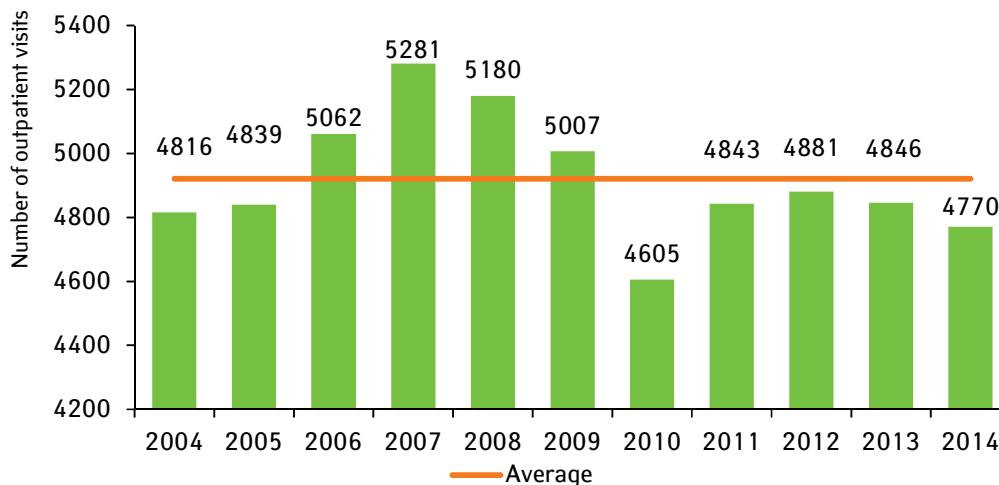
During the last 11 years, visits to family doctors have made up almost 50% of all the visits to health care providers. Family doctors make a total of approximately 4.1 million visits per year and a single person visits a family doctor about 3.1 times per year (Figure 5).



**Figure 5.** Number of family doctors' outpatient visits per capita, 2004–2014

When compared to 2004, the number of family doctor's outpatient visits per residents has increased by 4.9% by 2014. Until the year 2008, the number of family doctor outpatient visits was on the rise, but then decreased during the following four years. The decrease in this number was caused by several factors, but it mainly coincides with the period of economic recession, which brought about a significant rise of unemployment. The availability of family doctor's services for the uninsured declined rapidly. A decrease in financing directed to the health care system also plays an important role. EHIF is the main funder of family doctor's offices – it pays for general medical care provided to insured persons, as well as monthly base funds, capitation fees and research fund and performance pay. For instance, capitation fee for health services was smaller in 2010 than it was in 2009 or 2011.

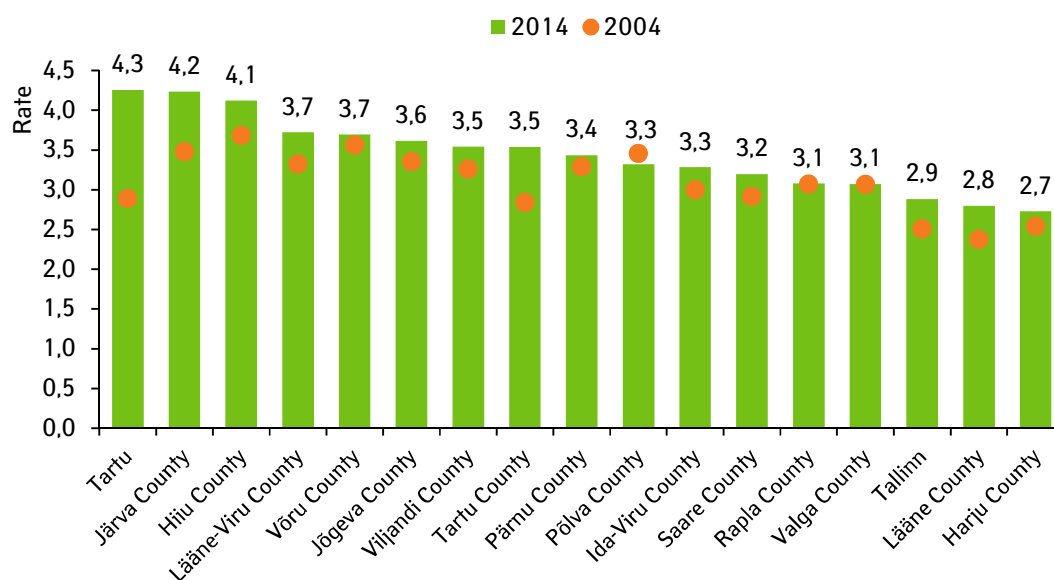
Considering the average of the period, a family doctor makes 4,921 outpatient visits in a year (Figure 6), which equals to 21 visits per workday in case of one month leave per year. Compared to 2004, the average number of outpatient visits of a family doctor had decreased very lightly by 2014, only by one per cent. The most visits per family doctor were made in 2007 when the number of visits per day reached 23, and the number of visits was almost 8% lower in 2010.



**Figure 6.** Number of family doctors' outpatient visits per family doctor, 2004–2014

By 2014, the average number of residents per family doctor dropped by 8.9% in the period under consideration, and the total number of family doctors increased by 5.8%. However, the overall number of family doctors ( $r=-0.06$ ) and inhabitants ( $r=-0.27$ ) has no significant impact on the number of outpatient visits of family doctors.

By counties, the number of family doctors' outpatient visits per capita had increased in most countries by 2014 compared to 2004 (Figure 7). The only county in which the number of outpatient visits has not increased is Põlva county. The number of outpatient visits to family doctors have increased the most in the city of Tartu and in Järva, Lääne and Tartu counties. A resident visited a family doctor, on average, more than four times in 2014 in Hiiu and Järva counties and in the city of Tartu. The number was the lowest in Harju county where a resident visited a family doctor on the average of 2.7 times per year.



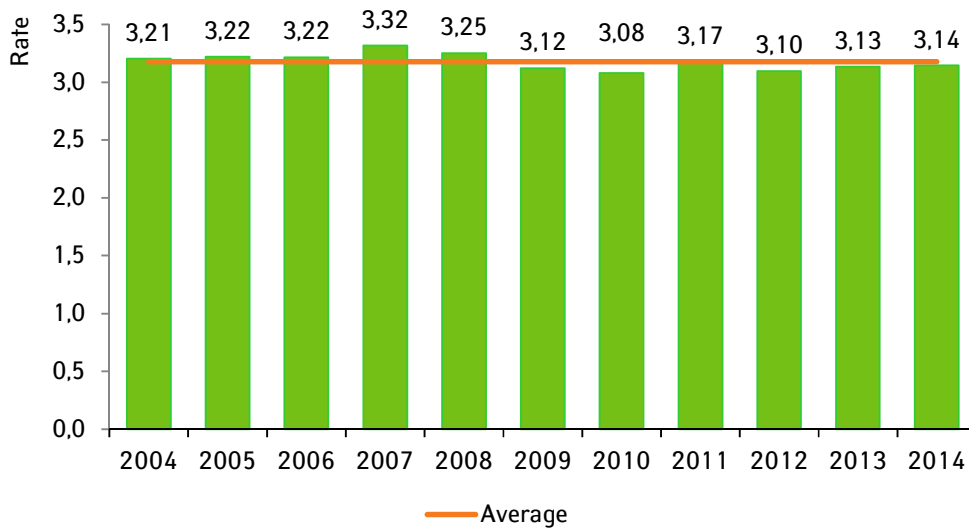
**Figure 7.** Number of family doctors' outpatient visits per capita by counties, 2004 and 2014

### 3.2 Specialist outpatient visits

Outpatient specialist health care refers to services provided by a specialist physician and the health care personnel working with him/her. The List of Specialities of Physicians is established by regulation of the Minister of Social Affairs.

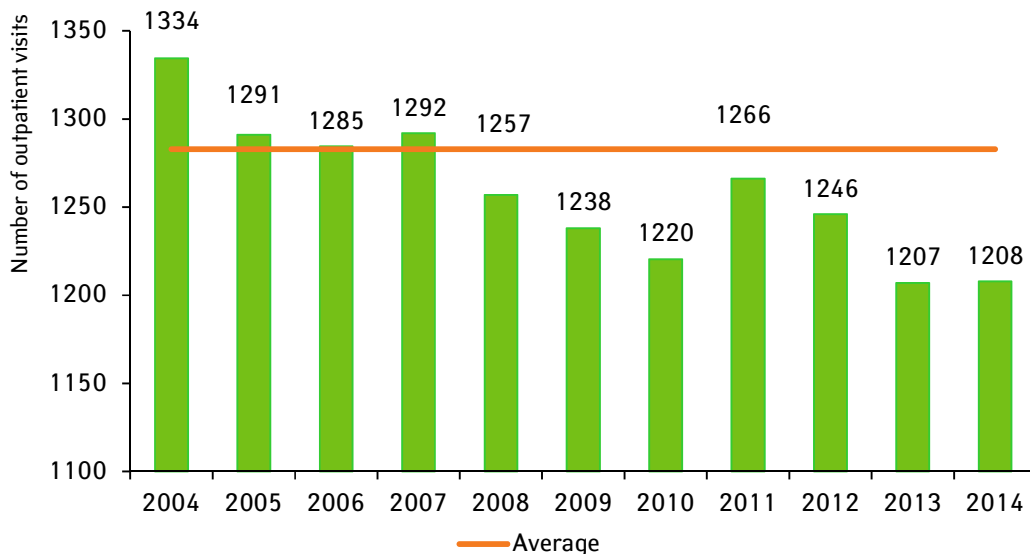
Specialist physicians make an average of 4.2 million outpatient visits per year. A specialist physician makes as many outpatient visits as a family doctor on the average per capita – in 2014 was 3.1 outpatient visits.

They made the most outpatient visits in 2007 when a resident visited a specialist physician 3.3 times per year on average (Figure 8). The number of outpatient visits decreased considerably in 2009 and the decrease continued in 2010 when the respective number per capita was 3.08. The number of outpatient visits increased to the average level of the years analysed in 2011 and fell again in 2012. There has been a slight upwards trend in the last two years in the number of specialist physician outpatient visits and it is nearing the average of the years analysed (3.18) again.



**Figure 8.** Number of specialist physician outpatient visits per capita, 2004–2014

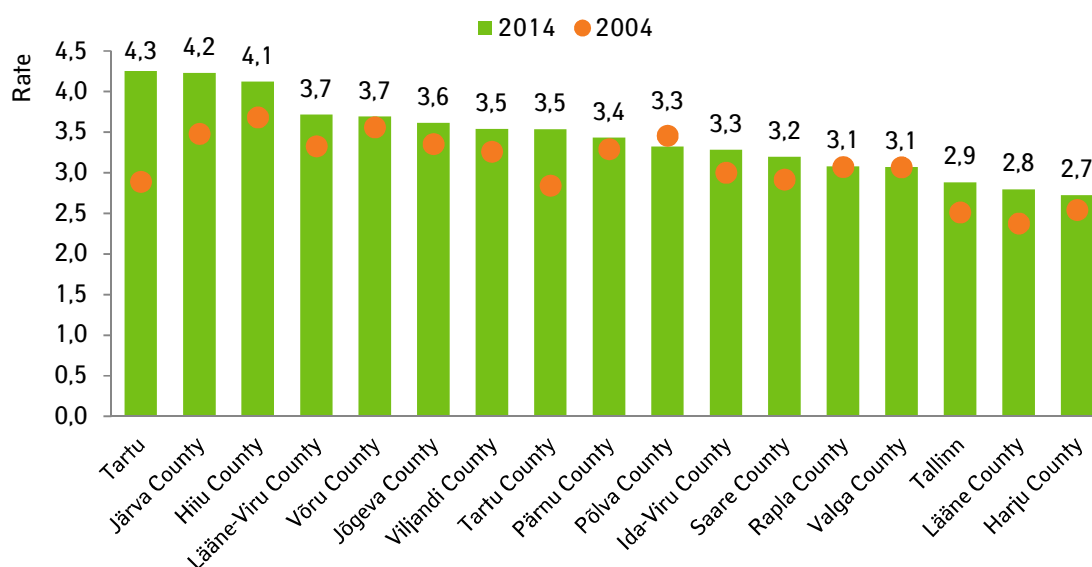
On average, a specialist physician makes 1,283 outpatient visits per year (Figure 9). Considering that a doctor has a one-month holiday each year, this makes up an average of 5.6 visits per workday. In 2004, a specialist physician made 1,334 outpatient visits on average; whereas, 11 years later, the number was smaller by 126 visits, i.e. it had decreased by 9.5%. The number of outpatient visits per capita during the period was the highest in 2004 and the lowest in 2013. The overall number of specialist physicians has no impact on the overall number of specialist physician outpatient visits ( $r=0.2$ ).



**Figure 9.** Number of specialist physician outpatient visits per physician, 2004–2014

The average number of residents per specialist physician had decreased by 7.7% by 2014. The total number of specialist physicians, however, had increased by 4.5% compared to the first year of the period. The overall number of residents has a strong correlation with the number of specialist physician visits and has a significant impact on the number of such visits ( $r=0.78$ ).

By counties, the average number of specialist physician outpatient visits per capita has increased, by 2014, the most during the period in the city of Tartu and in Viljandi, Tartu, Rapla and Jõgeva counties (Figure 10). In 2004, a person in Tartu county visited a specialist physician 3.5 times on average; whereas by 2014, that number had increased by 28%. The largest, almost 30% decrease in the period analysed has taken place in Saare county, and the number of outpatient visits has decreased by more than 15% in Valga and Harju counties.



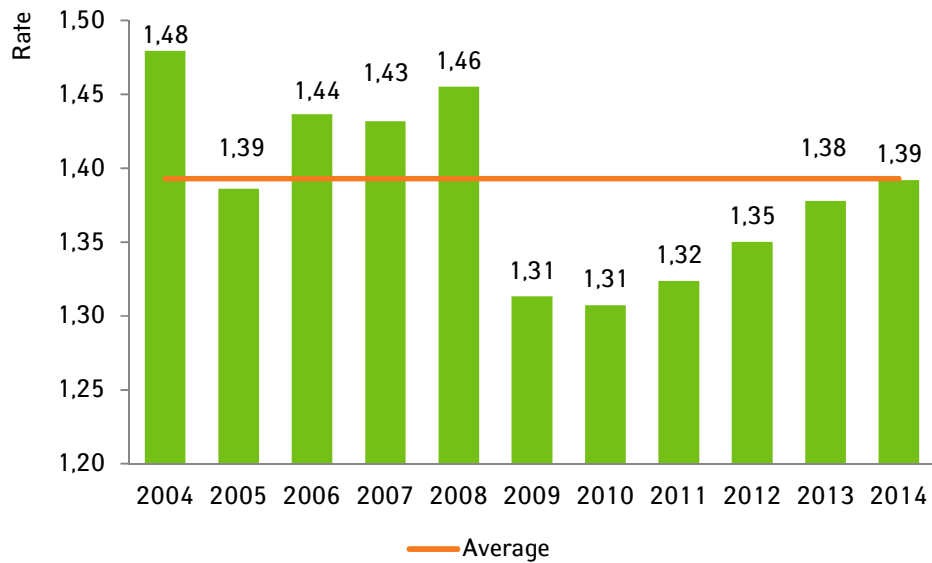
**Figure 10.** Number of specialist physician outpatient visits per capita by counties, 2004 and 2014

### 3.3 Dentist visits

The dentist outpatient visits reflected in the analysis include dental, prosthetic and orthodontic visits.

On the average, dentists have 1.8 million outpatient visits per year and a resident visits a dentist 1.4 times per year on average. During the period analysed, the number of dentist outpatient visits had decreased by 9.2% (Figure 11) by 2014. The number of outpatient visits in this field was the highest in 2004 when a resident visited a dentist 1.48 times on average. The number of dentist outpatient visits was on decline already in 2009, but it being nearly 10% lower than in the previous year. The decrease continued in 2010 when a resident visited a dentist 1.31 times on average. After the economic crisis, the number of dentist outpatient visits has started to increase again.

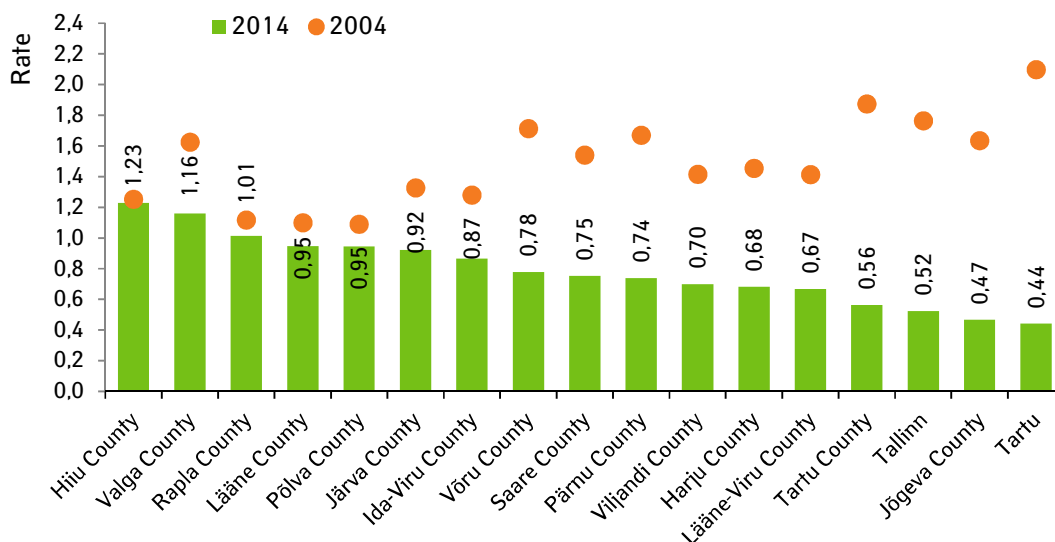




**Figure 11.** Number of dentist outpatient visits per capita, 2004–2014

On average, a dentist has 1,601 outpatient visits per year. Although the general number of dentist outpatient visits has decreased during the period analysed, the average number of outpatient visits per dentist has increased by 3.2%. This is due to the fact that the overall number of dentists has decreased by 12% by 2014, when compared to the first year of the period analysed.

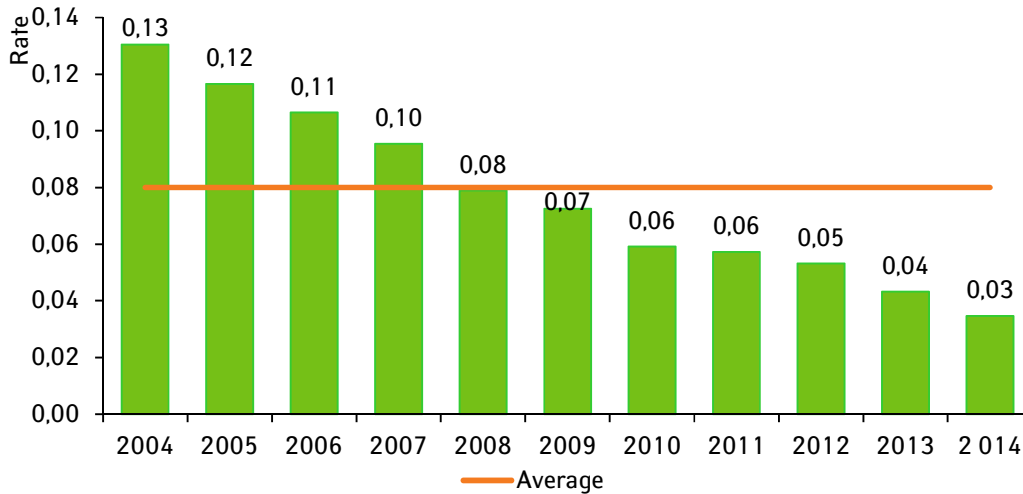
By counties, the absolute number of dentist visits has decreased in most counties during that period. The number of dentist visits has increased only in Tallinn, Jõgeva county and the city of Tartu. However, the number of outpatient visits per capita has decreased in all counties, including in Tallinn and Tartu (Figure 12). In Tartu, a resident visited a dentist an average of 2.1 times in 2004; whereas, by 2014, this number had dropped by almost 80%.



**Figure 12.** Number of dentist outpatient visits per capita by counties, 2004 and 2014

## 4. Physician's home visits

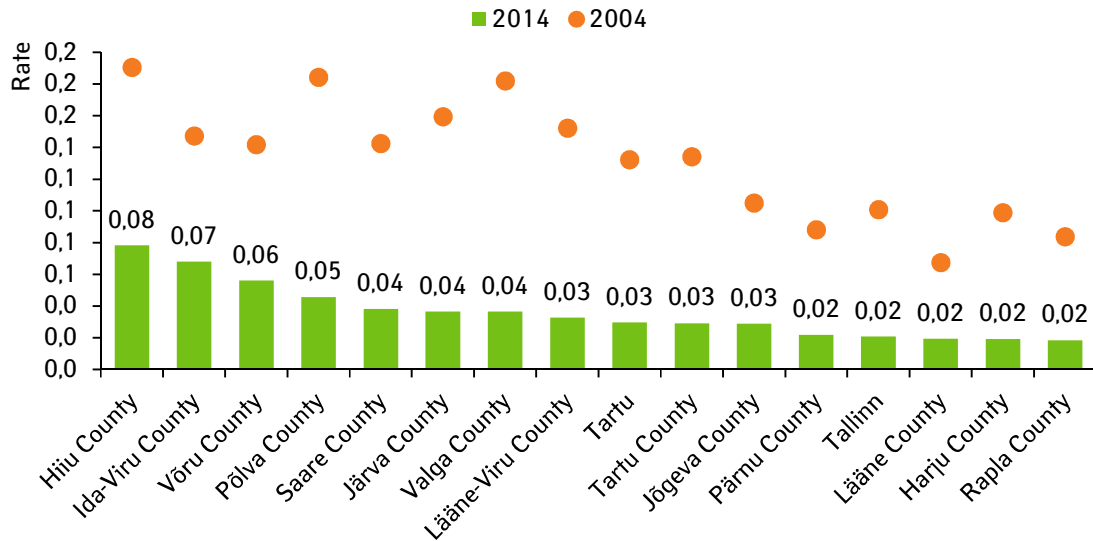
Almost 90% of all home visits are made by family doctors. In addition to family doctors, also oncologists, anaesthesiologists and paediatricians make home visits quite often. In the last decade, the number of home visits has decreased continuously and rapidly. When in 2004, physicians made almost 178,000 home visits, this number was just 45,500 in 2014. Per capita, this means a decrease of average number of home visits from 0.13 to 0.03 – more than 74% (Figure 13).



**Figure 13.** Physicians' home visits per person, 2004–2014

Reorganisation of health care services, as well as improving cost efficiency and ensuring better quality of health services has also played role in the decrease in the number of home visits. They are usually time consuming and not as effective as visits at doctors' offices equipped with necessary medical devices. A precise diagnosis and treatment cannot be determined during a home visit. There is also no possibility of making first analyses and checks and does not ensure the quality of modern evidence-based medicine, which is why home visits have been losing significance in medical practice.

Since the highest share of home visits are made by family doctors, below is an overview of the changes in the number of home visits made by family doctors (Figure 14). In 2004, a family doctor made an average of 0.11 visits per capita (110 home visits per 1,000 people); whereas in 2014, the number was 0.03 (30 home visits per 1,000 people). The number of home visits has decreased by more than 3.7 times.



**Figure 14.** Number of family doctors' home visits per capita by counties, 2004 and 2014

The number of home visits is declining in all counties. The decline has been the steepest in Harju (including Tallinn), Lääne-Viru, Rapla, Tartu (including city of Tartu) and Valga counties. In the counties that already had a higher than average number of home visits per capita, it remained high also in 2014, e.g., in Hiiu and Ida-Viru counties.

During the last decade, the number of specialist physician home visits has dropped as well. In 2004, specialist physicians made a total of nearly 15,400 home visits; whereas, by 2014 this number had decreased by slightly over 64%. In 2004, a paediatrician made 6.6 home visits per 1,000 residents<sup>2</sup>; whereas, by 2014 the number had decreased to just a couple of hundred home visits per year, i.e., to 0.2 home visits per 1,000 people. However, the number of home visits by oncologists and anaesthesiologists has increased significantly. During 2004–2006, oncologists made almost 700 home visits per year, which amounts to 0.5 home visits per 1,000 residents; whereas, during 2007–2014 the average annual number of home visits has increased to 3.1 per 1,000 people. The increase of this indicator was affected due to the launch of the domestic care project initiated by the Estonian Cancer Society.

<sup>2</sup>Number of home visits per 1,000 residents – due to the low volume of data, it is better to express the results per 1,000 residents in this context

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## Tervisestatistilised andmed ja informatsioon:

- **Tervisestatistika ja terviseuuringute andmebaas**  
<http://www.tai.ee/tstua>
- **Tervise Arengu Instituudi tervisestatistika osakonna veebileht**  
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