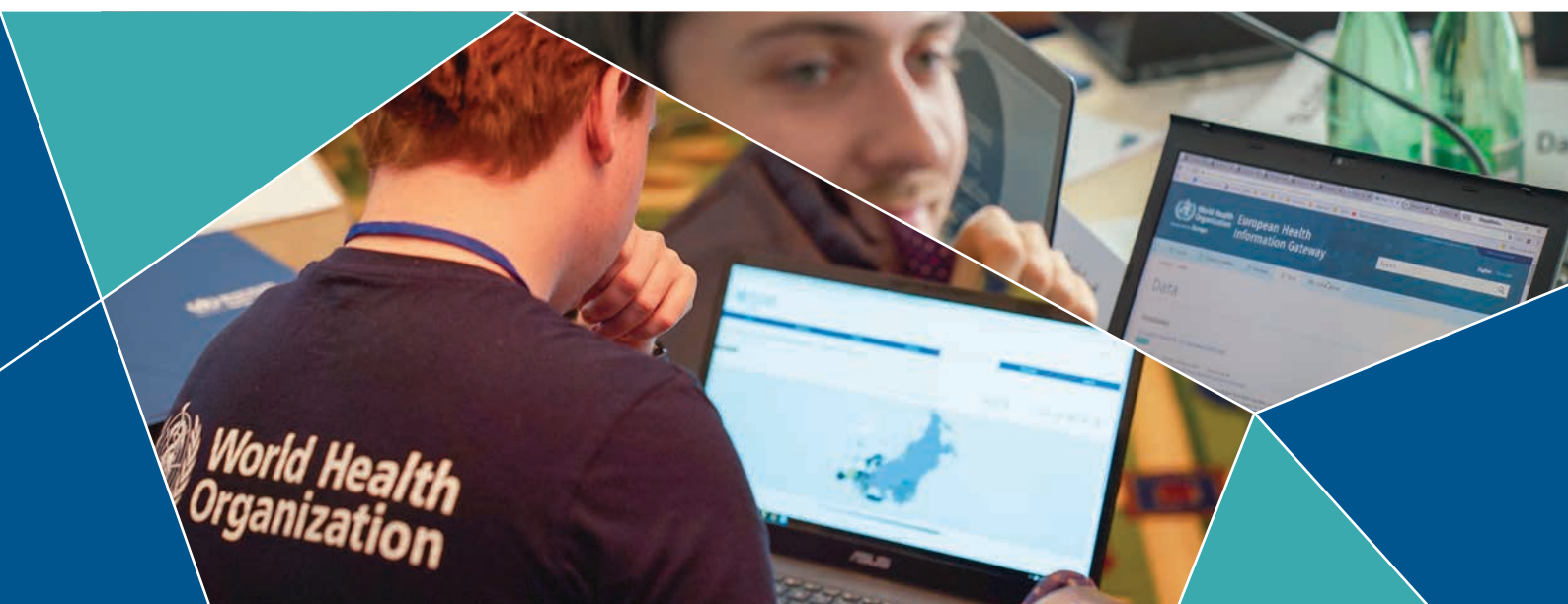


# How has the use of the WHO European Health Information Gateway changed since its launch in 2016?



Comparing user statistics for March 2018 with  
March 2017 and March 2016

Division of Information, Evidence,  
Research and Innovation





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## ABSTRACT

The European Health Information Gateway turned 2 years old in March 2018. It has rapidly grown over the past two years, and we have taken stock of its development and trends in its use. The Gateway is quickly becoming visible on the global scale, and other WHO Regions have requested collaborations and technical support from the WHO Europe's "Gateway team" to advance their health information platforms. The analysis is available in a new summary report.

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The WHO European Health Information Gateway is produced by the staff, consultants and contractors of the Health Informatics and Information Systems unit of the Division of Information, Evidence, Research and Innovation, WHO Regional Office for Europe.





## About the European Health Information Gateway

The European Health Information Gateway<sup>1</sup> is a platform for the dissemination of health information in its broadest sense. It is one of the key products of the WHO European Health Information Initiative (EHII)<sup>2</sup> to improve access to relevant and integrated health information. It is a bilingual platform that allows easy access to data, qualitative information and reference documents on a variety of topics in public health, searchable in English and Russian. In addition to interactive data visualizations and an intelligent search engine, the Gateway also offers an application programming interface for direct connection by advanced users to its data warehouse, and a WHO European Health Statistics mobile application<sup>3</sup>. The Gateway has been designed with the ambition to bring the information closer to its users, to allow integrated access to information, to enable dynamic comparisons and exploration across countries and indicators, to make the information understandable through blog commentaries, and to make the information reusable and shareable as graphics, datasets, embeddable parts of webpages and social media messages.



The Gateway's software development and coordination of content management is performed by the Division of Information, Evidence, Research and Innovation at the WHO Regional Office for Europe. All other technical divisions at the Regional Office contribute health information from their technical domains of work. The governance of the Gateway is described in the Gateway editorial policy. The policy was developed by a working group at the Regional Office with representatives from all technical divisions and the Legal, Partnerships and Communication teams, and was approved by the Regional Director.

1 WHO European Health Information Gateway, <https://gateway.euro.who.int>

2 The European Health Information Initiative, <http://www.euro.who.int/en/data-and-evidence/european-health-information-initiative-ehii>

3 WHO European Health Statistics mobile application, <https://gateway.euro.who.int/en/mobile-app/>

The policy describes the content governance mechanisms for the Gateway, which are operationally discussed by the Gateway Editorial Committee that consists of representatives from all technical divisions, and which consults other units as necessary. The Chair of the Committee is the Unit Leader for Health Informatics and Information Systems, who reports to the Chair of the Statistical Policy Group (SPG). The SPG is a high-level strategic group which sets the statistics and health information management policy for the Regional Office, consisting of the technical directors, representatives from the ICT team, WHO Europe's Geographically Dispersed Offices and Strategic Relations with Countries team.

By March 2018, the Gateway has been available to the public for two full years. During this time, the Gateway has integrated 12 databases into the platform, including the European Health for All database (HFA). Established in the late 1980s, HFA is the Region's collection of data reported directly from the WHO European Member States or taken from other international organizations. The Gateway allows integrated search across all databases, but also provides advanced specialized tools for targeted datasets, such as the "HFA explorer"<sup>4</sup> and "SHIELDS"<sup>5</sup>. The HFA explorer is an advanced data exploration tool for the 1 200 indicators in the family of the Health for All databases, and enables a concentrated look into the indicators that have been established in the European Region to monitor the health situation in the Region. SHIELDS (Synergistic health in emergencies ladder development scale) is a practical platform to present the monitoring and evaluations and to steer, enhance, monitor and scale up the capacities of Member States to implement the International Health Regulations 2005.



4 WHO European Health for All explorer, <https://gateway.euro.who.int/hfa-explorer>

5 Synergistic Health In Emergencies Ladder Development Scale (SHIELDS), <https://gateway.euro.who.int/en/data-stories/in-focus-synergistic-health-in-emergencies-ladder-development-scale-shields/>

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## Key trends in the use of the Gateway

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### Interest in the Gateway has been doubling every year since its launch in 2016.

Traffic on the Gateway has increased 130% since March 2017, and 370% since March 2016. During March 2018, the Gateway received 13 000 unique visits (sessions). This volume of traffic is much higher even when compared to the combined monthly traffic on the previous generation independent platforms at the height of their use – highest monthly traffic was 3 600 sessions for the HFA database, 700 sessions for the Mortality Indicator Database, and 540 sessions for ENHIS (environment and health information system). These databases, and others, have now been integrated into the Gateway and more are lined up for integration.

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### The Gateway is gaining recognition on the web and in search engines.

People find the Gateway from search engines and from euro.who.int. Major increases in interest in the Gateway are due to the increasing visibility of the Gateway on the web and in search engines. The traffic that the Gateway receives via the euro.who.int page remains unchanged in absolute numbers.

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### The Gateway serves quality content and is fulfilling its goal to allow users to easily access the information.

Compared with March 2017, people are four times less likely to leave the Gateway without using it. Users find their desired content in only 2.3 clicks (web standard is 2.6), and the average user stays interested in the Gateway content for 3.5 minutes, and in the HFA explorer for 7.5 minutes.

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### The Gateway is rapidly gaining popularity in the Russian-speaking part of the Region.

Traffic from the Russian Federation has tripled since March 2016, putting it among the top three countries of origin of Gateway traffic.

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While most users still use laptops and desktop PCs to access the Gateway, the share of those accessing the Gateway via mobile phones and tablets is increasing every year.

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The new intelligent search has further increased the ability of users to find the information they are looking for.

The Gateway is meeting the needs of different users – those who need to visualize indicators as well as export the data for further analysis.

This is shown both by usage statistics for different user profiles, and by evaluations of the Gateway through usability testing and interactive demonstrations and feedback workshops with WHO staff, national counterparts and technical health information experts, and academic audiences. The feedback praised the bilingual content and modern design of the Gateway. It also emphasized the need for easier access to information; for attention to be paid to navigation; the addition of more information; the ability to visualize and compare information; and for further support to be provided about the tools through training materials and workshops.

European Health Information Initiative

Measurement Access Capacity Building Networks Strategy Communication

 World Health Organization  
REGIONAL OFFICE FOR Europe

The European Health Information Initiative is committed to improving information on which policy is based, and ultimately to integrating and harmonising health information in Europe.

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## Next steps for 2018

### 1. Continue evaluations and adaptable development

- a. The Gateway design strategy follows the user profiles that were defined based on a study of user needs and behaviour. This has helped to strategically invest in the most important tools for policy-makers, analysts, WHO staff and the public. The increase in the Gateway's popularity confirms that this is a cost-effective approach that will lead to success.
- b. The Gateway is frequently evaluated for functionality and user-friendliness (usability) by a variety of audiences, from national health information counterparts, country offices and WHO staff to external academic users. The feedback is considered in the planning of Gateway development cycles. This organization of the Gateway development allows major issues to be quickly addressed and improvements regularly implemented. This approach will continue.

### 2. More: information, analyses, tools - strengthen collaborations with all Divisions

- a. The Gateway and its data warehouse will soon integrate most of the important datasets in the WHO European Region, ranging from statistical data, statistical annexes from a variety of reports and qualitative information.
- b. Interest from technical divisions to contribute to the Gateway is steadily increasing and the Gateway is thus fulfilling the Regional Director's vision for the Region's integrated health information platform.

### 3. Define interdivisional packages; strengthen interlinkages with Regional Office Divisions and Country Offices

- a. Increased interest in depositing information on the Gateway now requires further streamlining of the information flows within the Regional Office, and careful planning of work while facing limited resources and high demand for the Gateway and its tools.
- b. The Division of Information, Evidence, Research and Innovation (DIR) will prepare a proposal for an interdivisional package, summarizing what it takes to make a successful collaboration, and transparently present the financing required.

### 4. Continue making the Gateway a health information discovery and promotion tool

- a. In early 2018, data stories and short blog pieces were introduced on the Gateway. It is too early to show any usage statistics, and they will be evaluated for their impact during 2018.
- b. The Gateway and its tools will be planned as part of the promotion for a variety of reports and thematic topics. Once the remaining databases are integrated into the Gateway over 2018–19, it will become a one-stop-shop for public and media workshops, and targeted communication campaigns.

### 5. Promote the Gateway across WHO Regions and in health statistics circles

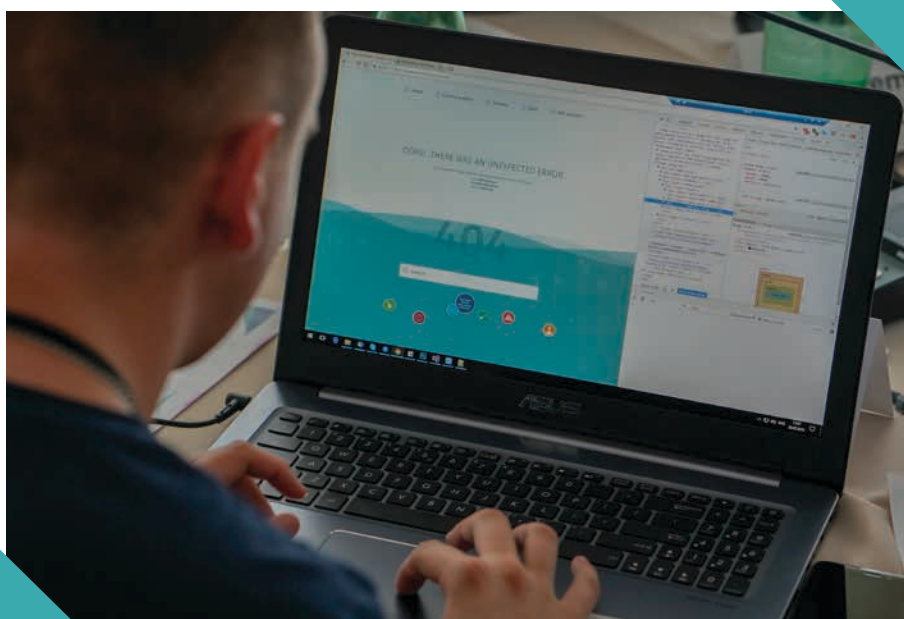
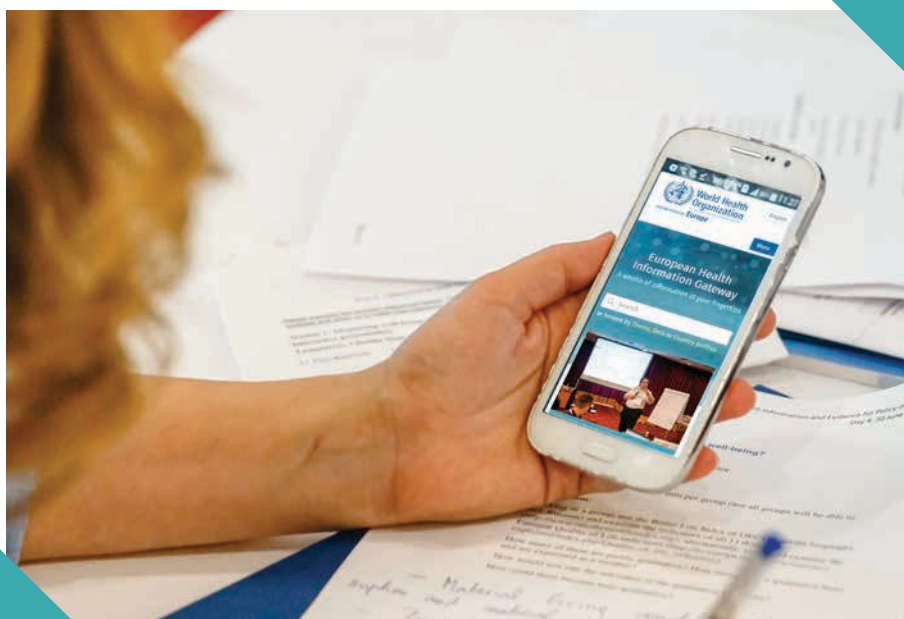
- a. The Regional Offices for the Western Pacific and the Americas have already expressed appreciation for the Gateway. Moreover, the Health Informatics and Information Systems team in DIR (DIR/HIS) has provided feedback to the WHO headquarters for the project to redesign the WHO Global Health Observatory.
- b. DIR/HIS will continue practising the technical exchange of knowledge with the Regions and the Global Health Observatory.

### 6. Integrate the Gateway with the reporting flows within the Regional Office and to headquarters, especially on the *Joint monitoring framework*.

- a. At the 68th meeting of the Regional Committee in September 2018, the Member States will consider for adoption the common set of indicators for a joint monitoring framework (JMF) for Health 2020, the Sustainable Development Goals and the Global action plan for the prevention and control of

noncommunicable diseases<sup>6</sup>.

- b. The Gateway will directly support the implementation of the JMF, by integrating with the online data collection platform for the common set of indicators, and by making the data openly available to WHO headquarters and other UN agencies.



6 WHO Regional Office for Europe: Developing a common set of indicators for the joint monitoring framework for SDGs, Health 2020 and the Global NCD Action Plan (2017), <http://www.euro.who.int/en/health-topics/health-policy/sustainable-development-goals/publications/2018/developing-a-common-set-of-indicators-for-the-joint-monitoring-framework-for-sdgs,-health-2020-and-the-global-ncd-action-plan-2017>

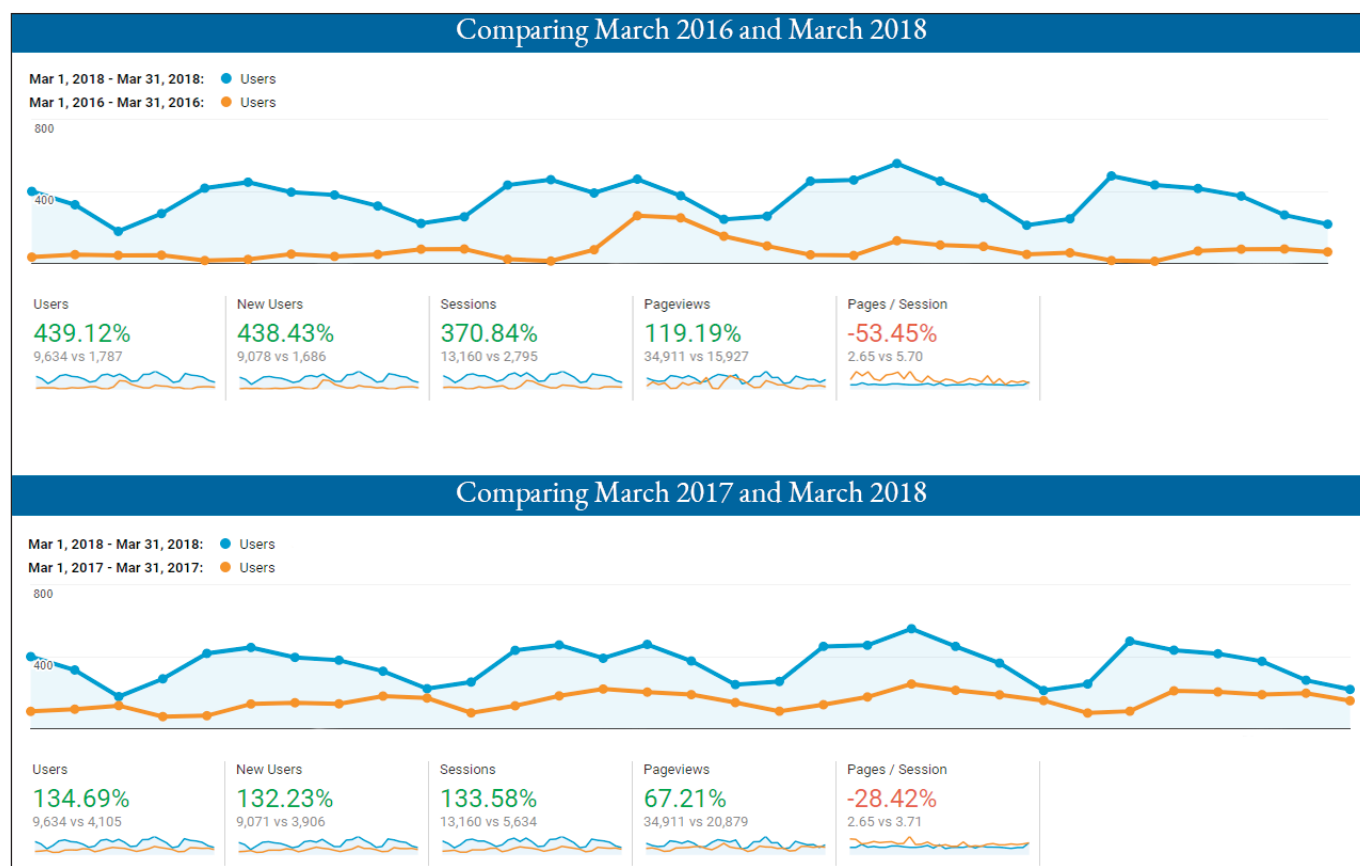
## Detailed analysis of usage statistics

1. Interest in the Gateway has been doubling every year since 2016. Traffic on the Gateway has increased 130% since March 2017, and 370% since March 2016.

Traffic has increased more than twice (+130% unique browser sessions) in comparison with last year, and increased fourfold since 2016 (+370%). We can state that Gateway traffic (interest in the Gateway) is doubling every year.

During March 2018, the Gateway received 13 000 sessions<sup>7</sup>. This volume of traffic is much higher even when compared to the combined monthly traffic on the previous generation independent platforms at the height of their use – highest monthly traffic was 3 600 sessions for the HFA database, 700 sessions for the Mortality Indicator Database, and 540 sessions for ENHIS. These databases, and others, have now been integrated into the Gateway.

Below is the comparison of the activity on the Gateway during the months of March over the past three years<sup>8</sup>.

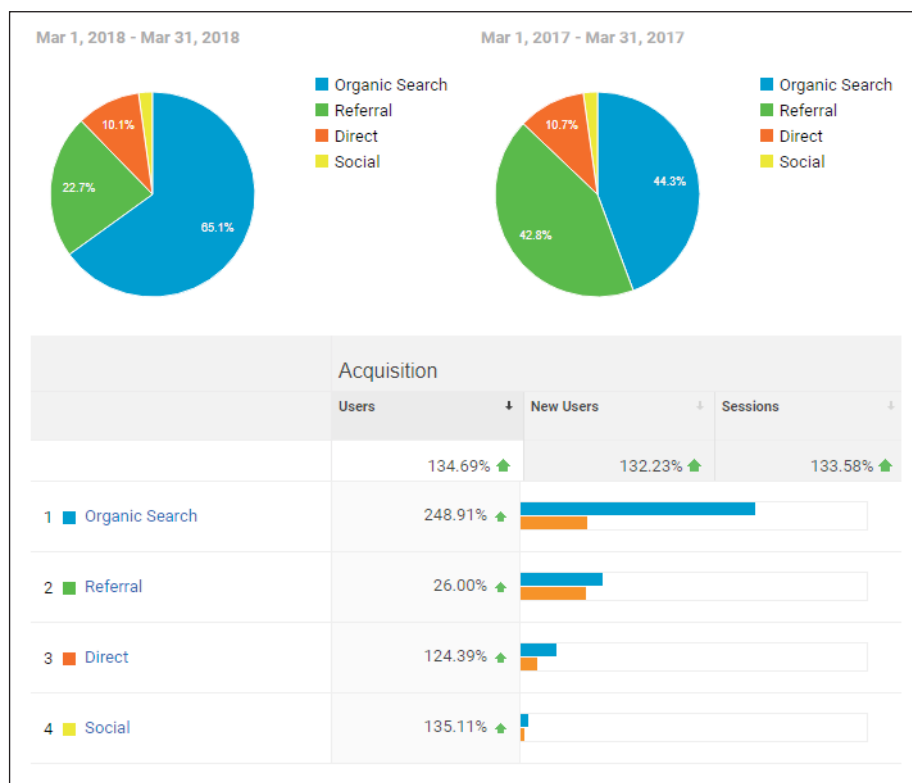


<sup>7</sup> A browser session is the period of time a user is actively engaged with the Gateway.

<sup>8</sup> Note that the number of page views per session has fallen for two reasons: (i) navigation on the Gateway has improved significantly, requiring that users click less to find information. In addition, the new search engine now makes it easier to find information in one search query, thus further reducing the number of clicks on the Gateway; (ii) most people that need advanced visualization of health statistics use the HFA explorer, which allows the user to do more on one single page, therefore clicking through fewer pages.

## 2. The two main sources of traffic on the Gateway are via search engines and referrals from euro.who.int.

However, the major traffic growth is driven by the growing visibility of the Gateway on the web and in search engines:



Note:

- **Organic search:** users that came from a search engine (Google, Yahoo, Bing, Yandex).
- **Referral:** traffic from another site. Our main referral source is euro.who.int.
- **Direct:** traffic from users who enter the address of the Gateway directly; most often these are people who have bookmarked the Gateway and work with it on a daily basis.
- **Social:** users that came from social networks (Facebook, Twitter, Instagram, LinkedIn).

As shown in the graphic above, in 2017 traffic was split equally between two main sources: “Referral” (euro.who.int) and “Organic search” (search engines). However, in 2018 the picture has changed drastically: while traffic from our referrals is staying on the same level on average, traffic from search engines has exploded by 250%. Now the most common user is not a WHO Europe website visitor, but an individual who is interested in exploring data through the Gateway. The most visited pages and indicators are listed later in this report.

There are several interrelated reasons for this happening:

1. The development team applied professional optimizing techniques for not only human-readable information on the website, but also robots metadata; a special kind of markup that search bots use to build search indexes and page ranks in their system.
2. Pages are optimized for quick performance and content edge delivery. The [results of the Google optimization test](#) are in the screenshot below.
3. As a result of the above actions, some of the Gateway pages are being ranked very high in Google searches. For example, a simple Google query search such as “[hospital beds in Europe statistics](#)” yielded four links to the Gateway indicators at the time of writing.



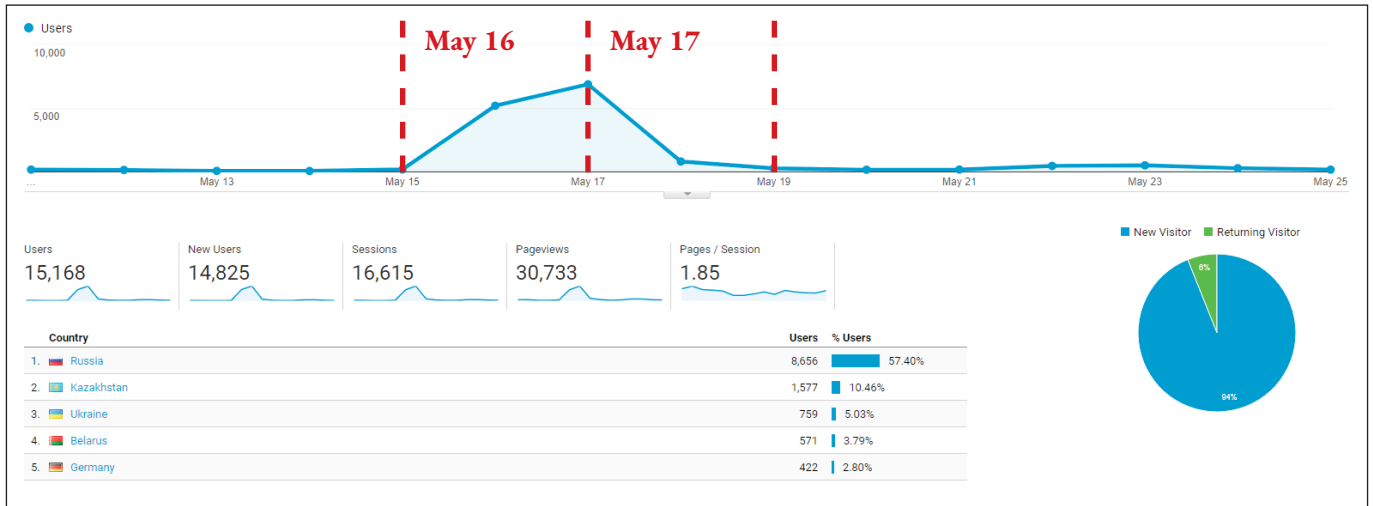
3. In addition to page views or user visits, it is important to evaluate other indicators that measure the extent to which the website's content and functionality meet the users' needs.

The image shows a Google search for "hospital beds in europe statistics" and a PageSpeed Insights analysis for the WHO Gateway website. The search results include several links related to hospital beds in Europe, with red arrows pointing to specific results. The PageSpeed Insights analysis shows a "Good" score of 81/100 for mobile and 86/100 for desktop.

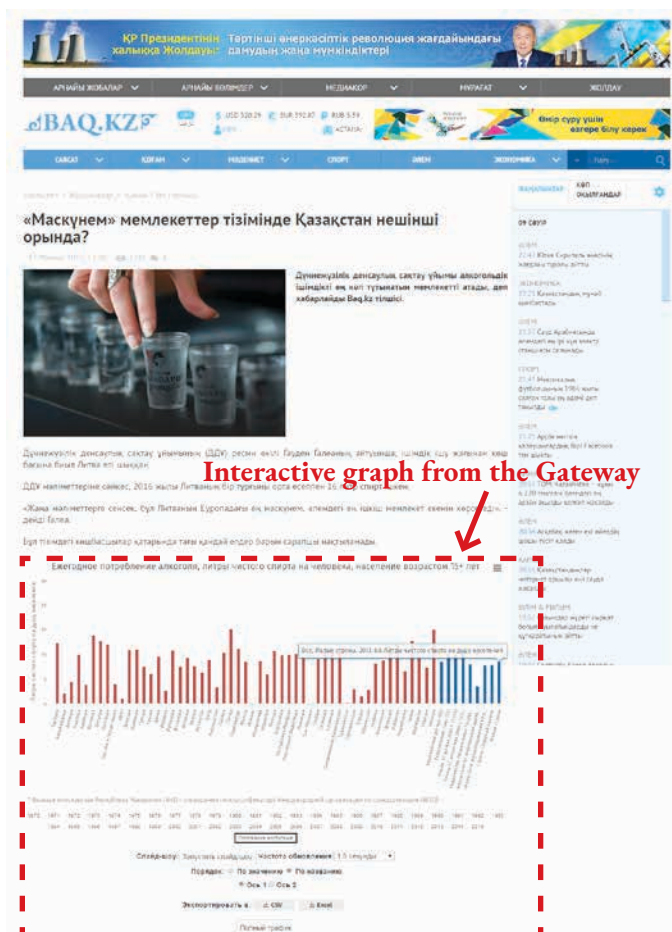
- **Average bounce rate** has significantly dropped on the Gateway for common users. “Bounced session rate” is the percentage of single-page sessions in which there was no interaction with the page. Comparing March 2018 with March 2017, the bounce rate has dropped from **46%** to **14%**. This means that the quality of content and navigation has improved during the last year. Users that are interested in health information systems are welcome to browse our website and explore new data.
- **“Pages/Session” (average page depth)** is the average number of pages viewed during a session. One of the main goals for the Gateway’s design is to decrease website depth, meaning that we are trying to make information accessible as quickly as possible, with the least number of clicks and without confusing navigation labyrinths, whereas commercial websites try to increase the page depth in order to increase the number of pages viewed in order to show ads and promotions. Right now, on average, one session on the Gateway consists of **2.3** page views. According to the Littledata benchmark, the web-standard median pages per session was **2.6** page views in March 2018.
- **“Average session duration”** is a very important characteristic of web portals. It measures how long the website remains interesting for users. This characteristic has been stable at an average of **3.5 minutes** for the Gateway. However, the HFA explorer tool is showing some outstanding results: its average session duration is **7.5 minutes**.

#### 4. The Gateway traffic reflects developing public interest and WHO public announcements.

Example: On 16 May 2017, Gauden Galea, Director, Division of noncommunicable diseases and life-course, presented data on alcohol consumption to the Lithuanian Parliament in which he reported that Lithuania tops the list of countries with the highest alcohol consumption. Many media outlets picked this story up, and the Gateway experienced a 20-fold spike in traffic over the following two days.



Several interesting practices by the news agencies and bloggers were observed:



- [ria.ru](http://ria.ru) – a major Russian news media site posted an article referring to Gauden Galea’s speech about alcohol consumption in Lithuania.
- [baq.kz](http://baq.kz) – Kazakh news media. The article embedded a visualization from the Gateway in their news article. Since May 2017, the Gateway has released a new, improved, version of its visualization design. All social media journalists who had embedded our graphics automatically received an update on their site without regressions or errors.
- [tengrines.kz](http://tengrines.kz) – Another Kazakh news media site cited Gauden Galea, saying that Lithuania is the “Drunkest country in the world”.
- [ru.sputnik.lt](http://ru.sputnik.lt) – Russian–Lithuanian news media. Provided a reference to the data table on the Gateway, Pure alcohol consumption indicator in Russian.
- More than 10 other Russian-speaking portals from Russia, Ukraine, Belarus and Lithuania posted articles about it.

## 5. The Gateway is rapidly gaining popularity in the Russian-speaking part of the Region.

Traffic from the Russian Federation has tripled since March 2016, putting it among the top three countries of origin of Gateway traffic.

Recently, the Gateway has also experienced a growth in traffic originating from India. With the United States being a major user as well, the Gateway is rapidly becoming a global tool. These users find the Gateway through Google searches.

Country	Users	% Users	Country	Users	% Users
1.  United States			4.  India		
Mar 1, 2018 - Mar 31, 2018	1,064	10.84%	Mar 1, 2018 - Mar 31, 2018	649	6.61%
Mar 1, 2017 - Mar 31, 2017	456	11.07%	Mar 1, 2017 - Mar 31, 2017	92	2.23%
<b>% Change</b>	<b>133.33%</b>	<b>-2.12%</b>	<b>% Change</b>	<b>605.43%</b>	<b>195.92%</b>
2.  United Kingdom			5.  Germany		
Mar 1, 2018 - Mar 31, 2018	724	7.37%	Mar 1, 2018 - Mar 31, 2018	472	4.81%
Mar 1, 2017 - Mar 31, 2017	383	9.30%	Mar 1, 2017 - Mar 31, 2017	225	5.46%
<b>% Change</b>	<b>89.03%</b>	<b>-20.70%</b>	<b>% Change</b>	<b>109.78%</b>	<b>-12.00%</b>
3.  Russia					
Mar 1, 2018 - Mar 31, 2018	710	7.23%			
Mar 1, 2017 - Mar 31, 2017	243	5.90%			
<b>% Change</b>	<b>192.18%</b>	<b>22.57%</b>			



6. While most users still use laptops and desktop PCs to access the Gateway, the share of those accessing the Gateway via mobile phones and tablets is increasing every year, in line with global trends: Proportion of internet users browsing from mobile devices is increasing every year.

Since the release of Gateway 2.0 in November 2017, the user experience on most of its pages has greatly improved. Both the number of sessions from phone devices, and the share of mobile traffic have increased almost twofold. The trends are shown in the below figure.

This growth is a direct consequence of constant improvements to the mobile-designed layouts on the Gateway frontend. The development team invests in adjusting and implementing mobile and tablet transformation look and logic. Ultimately, all pages on the Gateway will be as efficient on mobile phones and tablets as on desktop computers.

Device Category <sup>?</sup>	Acquisition		
	Users <sup>?</sup> ↓	New Users <sup>?</sup>	Sessions <sup>?</sup>
	134.69% <span style="color: green;">▲</span> 9,634 vs 4,105	132.23% <span style="color: green;">▲</span> 9,078 vs 3,909	133.58% <span style="color: green;">▲</span> 13,160 vs 5,634
1. desktop			
Mar 1, 2018 - Mar 31, 2018	7,187 (74.50%)	6,662 (73.39%)	10,391 (78.96%)
Mar 1, 2017 - Mar 31, 2017	3,427 (83.46%)	3,240 (82.89%)	4,849 (86.07%)
<b>% Change</b>	<b>109.72%</b>	<b>105.62%</b>	<b>114.29%</b>
2. mobile			
Mar 1, 2018 - Mar 31, 2018	2,131 (22.09%)	2,096 (23.09%)	2,377 (18.06%)
Mar 1, 2017 - Mar 31, 2017	563 (13.71%)	555 (14.20%)	651 (11.55%)
<b>% Change</b>	<b>278.51%</b>	<b>277.66%</b>	<b>265.13%</b>
3. tablet			
Mar 1, 2018 - Mar 31, 2018	329 (3.41%)	320 (3.53%)	392 (2.98%)
Mar 1, 2017 - Mar 31, 2017	116 (2.83%)	114 (2.92%)	134 (2.38%)
<b>% Change</b>	<b>183.62%</b>	<b>180.70%</b>	<b>192.54%</b>

## 7. The new intelligent search functionality has further increased the ability of users to find the information they are looking for.

The release of Gateway 2.0 at the end of 2017 introduced an advanced, faceted search. This allows the users to filter the search information from different perspectives according to their needs. The diagram below visualizes user behaviour in March 2018<sup>9</sup>.



What does the diagram mean about searches carried out on the Gateway in March 2018?

- Of 1200 user sessions that included searching on the main search page, the majority found the information directly through the search. Some 200 users clicked further into the Gateway to find what they needed.
- Users search most often for an indicator.
- The search is most often made from the Gateway's front page. This confirms that users are easily finding the search functionality and that the Gateway has successfully followed good practice in web design and implemented "search from the front page".
- Search is also widely used from other pages of the website, as users need it.

<sup>9</sup> This analysis does not include search requests that were fulfilled via search suggestions. Search suggestions are automated suggestions that the search engine brings up as the user is typing the query into the search box.

## 8. The Gateway is meeting the needs of different users – those who need to visualize indicators as well as export the data for further analysis.

Digital tools are only as good as the extent to which they meet the needs of its audience. The Gateway's design has been grounded on the study of its users' needs and the dynamics of the Gateway's use.

As a start, DIR conducted user research in collaboration with the WHO Europe's web team in early 2016. The study defined four major types of users of the Gateway (see below, for more detail) Their specific needs have been considered in the planning and development of the Gateway over the past two years.

By early 2018, it became evident that the use of the Gateway does vary among different types of users and the user statistics bear this out. This is not only expected, but has been anticipated by the Gateway team in the development of the Gateway based on the user research recommendations.

In addition, the DIR/HIS team has introduced the practice of regular evaluations of user-friendliness and relevance of the Gateway and its tools. The team uses a combination of formal "usability testing" exercises, interactive sessions at capacity-building events, and user feedback workshops with WHO staff, national counterparts, technical health information experts in Member States and academic audiences.

The feedback that is collected is taken into account when setting the mid-term development directions of the Gateway, and more immediately in the biweekly software development plans. This practice of evaluation and incorporation of feedback into the work has helped maintain the usefulness and relevance of the Gateway during its rapid expansion. Moreover, user feedback remains positive, and recognizes the responsiveness to comments.

### Background on the user research of the Gateway (February 2016)

The research conducted in 2016 established that the Gateway has four major types of users: WHO staff, policy-makers, analysts and journalists/public. Each type of user has a different interest in the Gateway and its content and therefore requires a different set of functionality and content to meet their needs.

The Gateway development and promotion focused on implementing the recommendations from this research, with specific focus on discoverability of information, ease of use and navigation, and tailoring the tools to a variety of stakeholder needs. The recommendations of the user research were:

1. Make WHO data and information count
  - a. Bridge the gap between data and decision-making
  - b. Improve insight and inspiration through visualization and interpretative and explanatory approaches
  - c. Extend the use and importance of WHO data and information
2. Proactively pursue important strategic roles
  - a. Integrate and coordinate
  - b. Provide guidance and support
  - c. Drive networks, dialogue and user-oriented development
3. Develop user-oriented tools
  - a. Sustainable and high quality data
  - b. Level-oriented data presentation and approach on the website
  - c. Interactivity
  - d. Easy access, navigation and overview
  - e. Pay attention to the audience's diversity and behaviour

- f. Future-proof design
- 4. Make communication services for users the top priority
  - a. Stronger service information is crucial
  - b. Guidance tools on the website
  - c. Easily downloadable metadata
  - d. Guide the users to additional public health data and insights

## Some observed trends in use of the Gateway and differences among groups of users

### a. Data exploration and export functionalities are very popular and widely used

Since the beginning of 2018 (January to March 2018), indicators were visualized approximately **45 000** times. During the same period, indicator data was exported **about 4 500** times (3 900 times in Excel format and 600 in CSV format).

The 10-fold difference between the visualizing and downloading of the data suggests that the predominant audience of the Gateway are those who come to the Gateway to quickly look up information and need it contextualized and summarized. A much smaller share of users download the data for their own off-line analysis and future reference.

These observations confirm that the Gateway development has appropriately prioritized the needs of users that need quick, user friendly and accurate access to information that can be interactively visualized. On the other hand, the needs of advanced users have been met through the advanced exploration tools, such as the HFA explorer and the application programming interface.

### b. Difference in the interest of users that browse versus use the data

The table below lists the usage of the Gateway in the first quarter of 2018 (January to March 2018). We can see that there is a difference between what is interesting for users to “see and move on” and what is interesting to export and study.

Top five most viewed indicators	Top five indicators most exported into Excel	Top five indicators most viewed in HFA explorer
1. Bed occupancy rate (%), acute care hospitals only (visualized 3 334 times)	1. Number of hospitals (292 exports)	1. Crude death rate, per 1 000 population, by sex
2. Number of hospitals (visualized 2 251 times)	2. Number of nursing and elderly home beds (101 exports)	2. Life expectancy at birth (years), by sex
3. Births with Down syndrome per 100 000 live births (visualized 2 169 times)	3. Absenteeism from work due to illness, days per employee per year (96 exports)	3. Estimated life expectancy (world health report), by sex
4. Abortions per 1 000 live births (visualized 1 874 times)	4. Bed occupancy rate (%), acute care hospitals only (92 exports)	4. Gross domestic product (GDP), US\$ per capita
5. Absenteeism from work due to illness, days per employee per year (visualized 1 295 times).	5. Births with Down syndrome per 100 000 live births (81 exports)	5. Estimated infant mortality per 1 000 live births (world health report)

### c. Difference in the interest of users that come to the Gateway from euro.who.int versus from the search engines

There is a big difference between the interests of users coming from search engines (those searching for topics on the Internet) and those that find the Gateway from euro.who.int (those familiar with the Regional Office).

In addition, there is a striking difference between the interests of those two user groups by their working language, English versus Russian.

The tables below depict the usage of the Gateway in the first quarter of 2018 (January to March 2018), by action and language of use.

<b>Top 5 indicators that are most viewed by “referral” users (those coming from euro.who.int)</b>	<b>Top 5 indicators that are most viewed by “organic search” users (those coming from search engines)</b>
<p><b>In English:</b></p> <ol style="list-style-type: none"> <li>1. Abortions per 1 000 live births</li> <li>2. Births with Down syndrome per 100 000 live births</li> <li>3. Number of hospitals</li> <li>4. Age-standardized prevalence of obesity (defined as BMI <math>\geq</math> 30 kg/m<sup>2</sup>) in people aged 18 years and over (WHO estimates) (%)</li> <li>5. Pure alcohol consumption, litres per capita, age 15+</li> </ol>	<p><b>In English:</b></p> <ol style="list-style-type: none"> <li>1. Bed occupancy rate (%), acute care hospitals only</li> <li>2. Number of hospitals</li> <li>3. Births with Down syndrome per 100 000 live births</li> <li>4. Abortions per 1 000 live births</li> <li>5. Absenteeism from work due to illness, days per employee per year</li> </ol>
<p><b>In Russian:</b></p> <ol style="list-style-type: none"> <li>1. Pure alcohol consumption, litres per capita, age 15+</li> <li>2. Live births per 1 000 population, by sex</li> <li>3. Proportion of young people who have been cyberbullied by messages at least twice in the past couple of months</li> <li>4. A national eHealth policy or strategy exists</li> <li>5. Per capita alcohol consumption among people aged 15+ within a calendar year (litres of pure alcohol)</li> </ol>	<p><b>In Russian:</b></p> <ol style="list-style-type: none"> <li>1. Gross national income, US\$ per capita</li> <li>2. Births with Down syndrome per 100 000 live births</li> <li>3. Total expenditure on health as a proportion of gross domestic product (GDP) (WHO estimates) (%)</li> <li>4. Medical group of specialists, total number</li> <li>5. Gini coefficient (income distribution)</li> </ol>

<b>Top 5 indicators that are most exported by “referral” users (those coming from euro.who.int)</b>	<b>Top 5 indicators that are most exported by “organic search” users (those coming from search engines)</b>
<p><b>In English:</b></p> <ol style="list-style-type: none"> <li>1. Number of hospitals</li> <li>2. People at risk of poverty or social exclusion by age and sex</li> <li>3. Suicide and self-inflicted injury, all ages, per 100 000, by sex (age-standardized death rate)</li> <li>4. Pure alcohol consumption, litres per capita, age 15+</li> <li>5. Age-standardized prevalence of obesity (defined as BMI <math>\geq</math> 30 kg/m<sup>2</sup>) in people aged 18 years and over (WHO estimates) (%)</li> </ol>	<p><b>In English:</b></p> <ol style="list-style-type: none"> <li>1. Number of hospitals</li> <li>2. Number of nursing and elderly home beds</li> <li>3. Absenteeism from work due to illness, days per employee per year</li> <li>4. Births with Down syndrome per 100 000 live births</li> <li>5. Bed occupancy rate (%), acute care hospitals only</li> </ol>
<p><b>In Russian:</b></p> <ol style="list-style-type: none"> <li>1. Incidence of measles, per 100 000</li> <li>2. Percentage of population aged 65+ years, by sex</li> <li>3. Reduction of life expectancy through death before 65 years, by sex</li> <li>4. Pure alcohol consumption, litres per capita, age 15+</li> <li>5. Proportion of young people who have been cyberbullied by messages at least twice in the past couple of months</li> </ol>	<p><b>In Russian:</b></p> <ol style="list-style-type: none"> <li>1. Births with Down syndrome per 100 000 live births</li> <li>2. Magnetic resonance imaging units, per 100 000 population</li> <li>3. Gross national income, US\$ per capita</li> <li>4. Diseases of the digestive system, number of deaths, by sex</li> <li>5. Computed tomography scanners, per 100 000 population</li> </ol>



#### d. Difference in the interest of users that use the Gateway versus the specialized tool HFA explorer

The HFA explorer allows to effectively bookmark their customised graphs for future reference. More than **150** unique visualizations in the HFA explorer were configured and saved as bookmarks in the first quarter of 2018 (January to March 2018), by users from 15 different countries. The users that interacted with the HFA explorer the most have been in Greece.

There is also a noticeable difference between sessions spent in the HFA explorer and those spent on any other part of the Gateway: users who came to the HFA explorer specifically for data analysis (mostly referral traffic) are staying on the HFA explorer page for, on average, 14 minutes picking and saving different countries and indicators.

The table below depicts the usage of the HFA explorer in the first quarter of 2018 (January to March 2018), by the language of use.

Top 5 indicators that are most viewed in the HFA explorer in English	Top 5 indicators that are most viewed in the HFA explorer in Russian
1. Crude death rate per 1 000 population, by sex	1. Incidence of measles, per 100 000
2. Life expectancy at birth (years), by sex	2. Percentage of infants vaccinated against rubella
3. Estimated life expectancy (world health report), by sex	3. Incidence of tuberculosis, per 100 000
4. Estimated infant mortality per 1 000 live births (world health report)	4. Rate of new HIV diagnoses, per 100 000
5. Gross domestic product (GDP), US\$ per capita	5. Incidence of viral hepatitis A, per 100 000

#### e. The Gateway's application programming interface (API) is gaining external users

##### *What is an API?*

The Gateway's API – application programming interface – allows other websites or software to “talk” to the Gateway and query the Gateway's data automatically. Just as the interactive visualizations and web articles are made to meet the needs of web users, the API is a tool that meets the needs of programmers, statisticians and data specialists.

In this way, the API has allowed the Regional Office to open up its data to other developers and to other websites. APIs are increasingly the way in which organizations exchange data and services, both internally and externally. For example, the API is used by the WHO European Health Statistics mobile app to download updated data; and a statistician can use statistical software to automatically query the latest available data for an indicator of interest.

##### *Why would one need an API?*

The Regional Office is committed to efficiently exchanging health information with our stakeholders. APIs enable machine-to-machine querying, essentially removing the barriers to data access. APIs are not useful in all cases, but by providing data as a service, the opportunity is created for significantly reducing the barriers to data access and proliferate innovation and data use. This makes the Gateway ready to be integrated into the data and health information exchange with the Member States, other parts of WHO and the public.

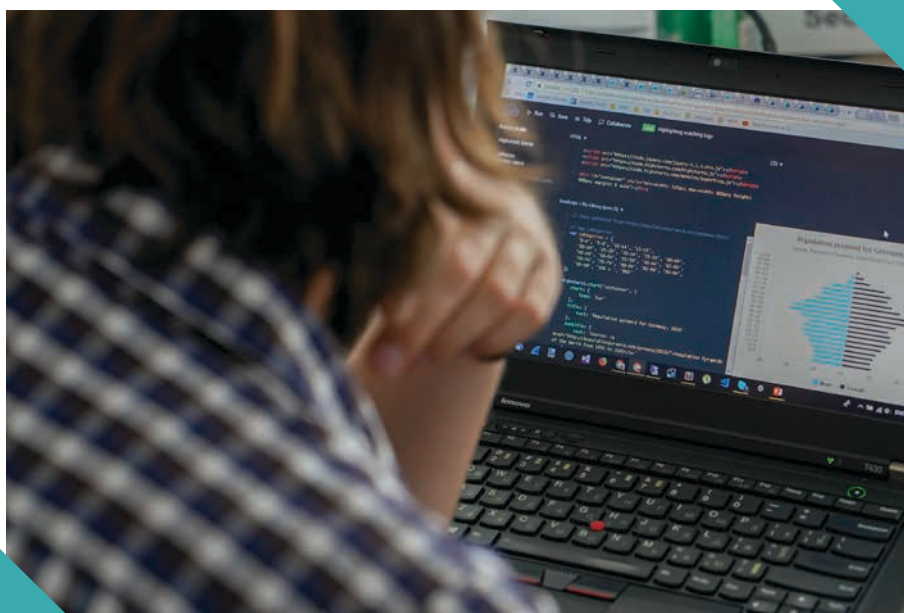
##### *Trends in the API's use*

A comparison of use of the Gateway's API during March of the last three consecutive years shows a growing interest in the Regional Office's health statistics by advanced users (**8 217 queries** in March 2016 and **6 816 queries** in March 2017, compared with **20 678 queries** in March 2018)<sup>10</sup>.

<sup>10</sup> These statistics do not include any queries to the API that are made from the WHO network or WHO tools, and therefore measure the use of the API by external users. Moreover, note that the reduction in queries to the Data Warehouse is likely due to API having changed to a more effective V3 in 2017, and server resourcing constraints that have been since resolved.

The geographical origin of those who programmatically query the API reflects the fact that the Gateway is becoming a tool of global importance – the United States is the origin of by far the most API queries. Numbers of queries to the API during the month of March over the last three years are presented in the figure below.

March 2016			March 2017			March 2018		
Country		Requests	Country		Requests	Country		Requests
	United States	4 858		United States	5 660		United States	9 739
	Ukraine	1 481		Private network	271		Romania	3 915
	United Kingdom	1 089		Denmark	184		Russian Federation	2 251
	Denmark	431		United Kingdom	88		Moldova, Republic of	1 818
	China	129		Austria	75		Germany	790
	Portugal	46		Russian Federation	74		Ukraine	411
	Canada	44		Rwanda	66		Slovakia	351
	Belgium	29		Spain	45		Denmark	265
	Russian Federation	27		France	43		Malta	159
	Private network	24		Croatia	39		Croatia	109
	Thailand	11		Netherlands	31		Sweden	105
	Italy	11		Zambia	27		France	89
	Netherlands	10		Greece	27		Portugal	84
	France	10		Estonia	19		Greece	76
	Greece	6		Europe	17		Spain	62
	Mozambique	4		Germany	17		Belgium	42
	Armenia	4		Ukraine	16		Poland	42
	South Africa	3		Serbia	13		Italy	41
				Canada	13		Hungary	40
				Slovenia	12		Netherlands	36
				Slovakia	11		Finland	33
				Romania	9		Slovenia	29
				Bulgaria	8		Canada	25
				China	7		Europe	22
				Kazakhstan	6		Czech Republic	21
				Pakistan	6		Estonia	20
				Ireland	6		Turkmenistan	18
				Nigeria	5		Ireland	17
				Hungary	5		India	15
				Moldova, Republic of	4		Lithuania	15
				Yemen	4		Jersey	14
				Lithuania	4		Yemen	12
				United Arab Emirates	4		Uzbekistan	12



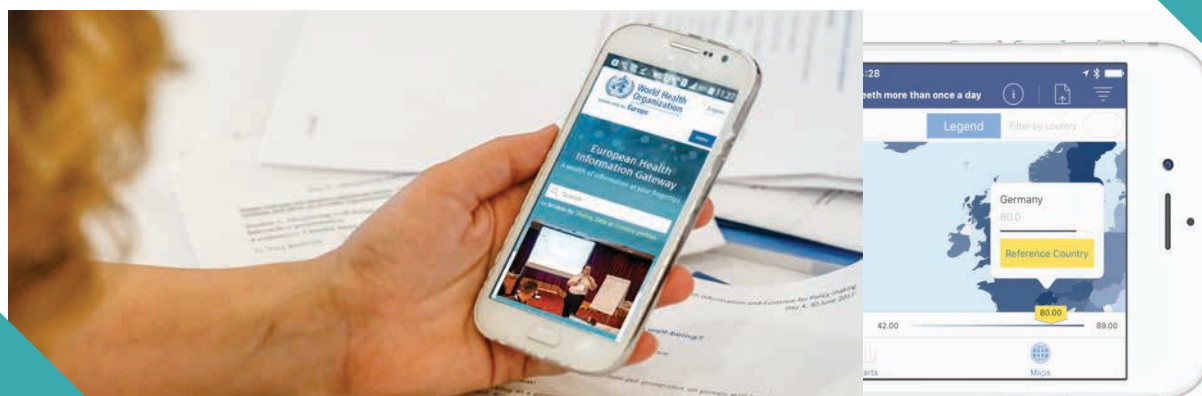
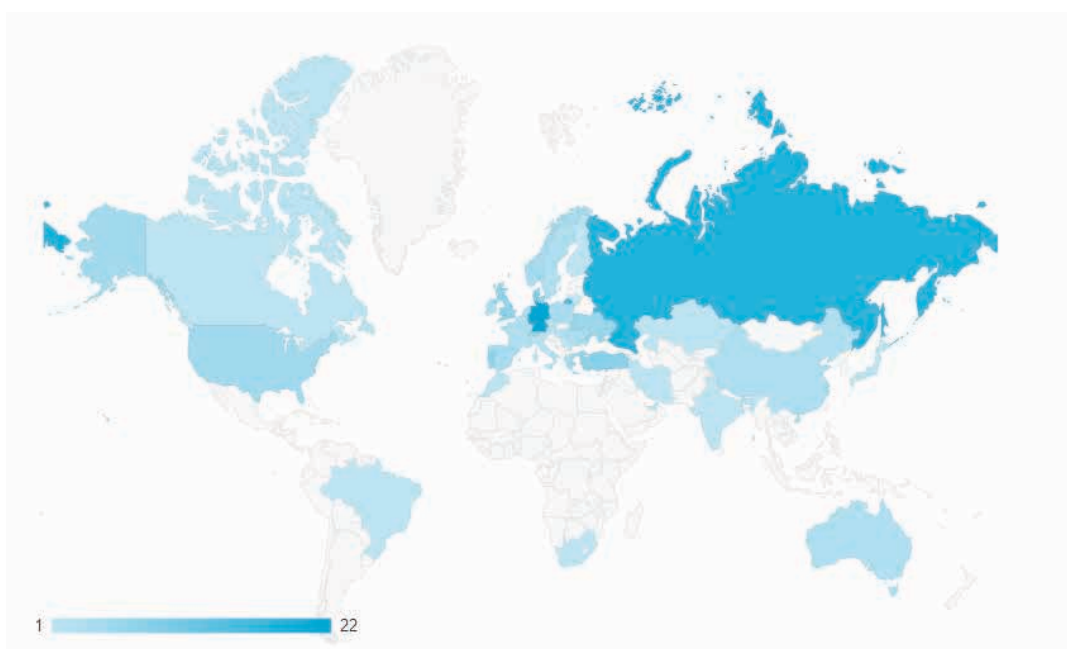
#### f. The WHO European Health Statistics mobile application

The usage of the European Health Statistics mobile application<sup>11</sup> has remained steady at 100 unique users per month for the past two years. This smartphone app makes available the most up-to-date data from the indicator datasets from the Health 2020 monitoring framework and the Health Behaviour in School-aged Children study. The mobile app caters to users that need a statistical pocket reference for the health statistics even when they have no access to the Internet and the Gateway's online tools.

The geographical distribution of the mobile app users reveals a wide audience of users, and a noticeable popularity in Germany and the Russian Federation (figure below).

It is expected that once the mobile app evolves further and incorporates more European health statistics, its popularity and use will increase.

Incorporation of more indicators into the mobile app requires a relatively higher investment of budget and time in comparison to the rest of the Gateway's web-based tools. The development of the mobile app has therefore been slower due to lack of available budget.



11 The WHO European Health Statistics mobile app, <https://gateway.euro.who.int/en/mobile-app/>

## Appendix

### Glossary

- **Sessions:** the number of times visitors are actively engaged on a website. Generally speaking, every visitor has at least one “session” when they visit a site, but they could have multiple depending on the circumstances.
- **Users:** the number of visitors that have at least one session on a website. This number is more accurate in revealing how many “individual” people visited a website.
- **Page views:** the total number of pages people visited on a website. Assuming there are multiple pages on a website, this number should ideally be higher than the number of sessions.
- **Pages per session:** the average number of pages viewed during a session on a website. More pages per session means that users are more engaged and exploring more of the site.
- **Average session duration:** the average length of visitors’ sessions. Again, longer sessions indicate that users are more engaged.
- **Bounce rate:** the percentage of visits that are single-page only (i.e. people who visit one page and leave). Usually, a high bounce rate is a sign that people are leaving a site (or a certain page) because they do not find what they are looking for.
- **Per cent of new sessions:** an average percentage of first-time visitors to a website. Ideally, a good website will have a solid mix of new and returning visitors.





## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

### Member States

Albania  
Andorra  
Armenia  
Austria  
Azerbaijan  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Croatia  
Cyprus  
Czechia  
Denmark  
Estonia  
Finland  
France  
Georgia  
Germany  
Greece  
Hungary  
Iceland  
Ireland  
Israel  
Italy  
Kazakhstan  
Kyrgyzstan  
Latvia  
Lithuania  
Luxembourg  
Malta  
Monaco  
Montenegro  
Netherlands  
Norway  
Poland  
Portugal  
Republic of Moldova  
Romania  
Russian Federation  
San Marino  
Serbia  
Slovakia  
Slovenia  
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Turkey  
Turkmenistan  
Ukraine  
United Kingdom  
Uzbekistan



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