EUROPEAN COMMISSION
Information Society and Media Directorate General

Pilot on eHealth Indicators

Benchmarking ICT use among General Practitioners in Europe 2007

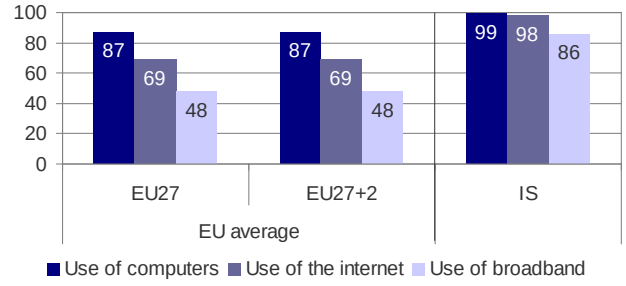
Country Profile: Iceland

Key findings: eHealth among GPs in Iceland[1]

Iceland is one of the frontrunners of ICT use among General Practictioners in the European Union. This concerns both the availability of ICT infrastructure (computer, Internet) and the use of ICT for different eHealth-related purposes.

In terms of infrastructure, 99% of the Icelandic GP practices use a computer and 98% of the practices dispose of an Internet connection. In Iceland, broadband represents the usual form of access to the Internet with 86% of GP practices resorting to broadband connections.

ICT Infrastructure in Icelandic GP practices



Base: All GPs. **Indicators:** R4, C1, C2 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

The storage of electronic medical patient data is common practice in Iceland. Nearly all the GP practices store at least one type of individual data. Iceland also shows results that are above the EU27 averages with respect to the storage of different types of patient data.

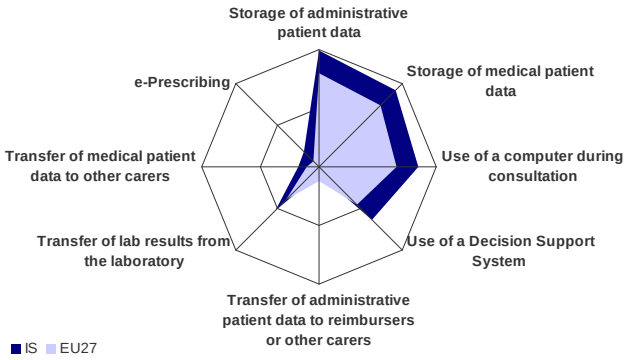
A computer is available in the consultation room in 97% of the Islandic GP practices. Here it could for instance be used to display a patient`s file to the practitioner, to explain medical issues to the patient by means of a photo or animation but also to run a Decision Support System helping in diagnosis or prescribing. In Iceland around 85% of the practices actually use a computer for consultation purposes. Thus a certain "availability versus use" gap can be discerned. It is evident in many European countries and can sometimes be as high as 50% and more. A Decision Support System is used in 69% of the Icelandic GP practices (50% on average in the EU27).

The exchange of electronic patient information via the Internet or other dedicated networks is comparatively common in Iceland. 17% of the practices exchange medical data with other care providers or professionals, as compared to 10% on average in the EU. 52% of GP practices in Iceland receive laboratory results in digital form. This is the type of data transfer which is by far the most frequently used in Europe as well (40%).

ePrescribing is used by 18% of the GP practices in Iceland. This eHealth application can be regarded as a reality in only three Member States: Denmark, the Netherlands and Sweden. Apart from these countries adoption levels are never higher than 5%.

12% of the Icelandic GP practices exchange administrative data with other carers, as compared to the average rate of 10%. The only type of data exchange wich is considerably less used in Iceland is the exchange of administrative data with reimbursers: with a usage rate of only 1%, Iceland scores clearly below the European average of 15%. Frontunner countries are Denmark, the Netherlands and the United Kingdom, but even here not more than one out of two practices use it.

eHealth Use by GPs in Iceland



Indicators: Compound indicators of eHealth use (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

[1] **Disclaimer:** Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of the following information. The views expressed are those of the authors and do not necessarily reflect those of the European Commission. Nothing in this document implies or expresses a warranty of any kind. Results should be used only as guidelines as part of an overall strategy.

ICT Infrastructure in GP Practices

An appropriate ICT infrastructure in the GP practice lays the ground for different eHealth uses and applications (such as storage of patient data, its exchange etc.). It is therefore the baseline from which a European GP can start his or her professional activities in the eHealth domain.

ICT infrastructure as understood here entails

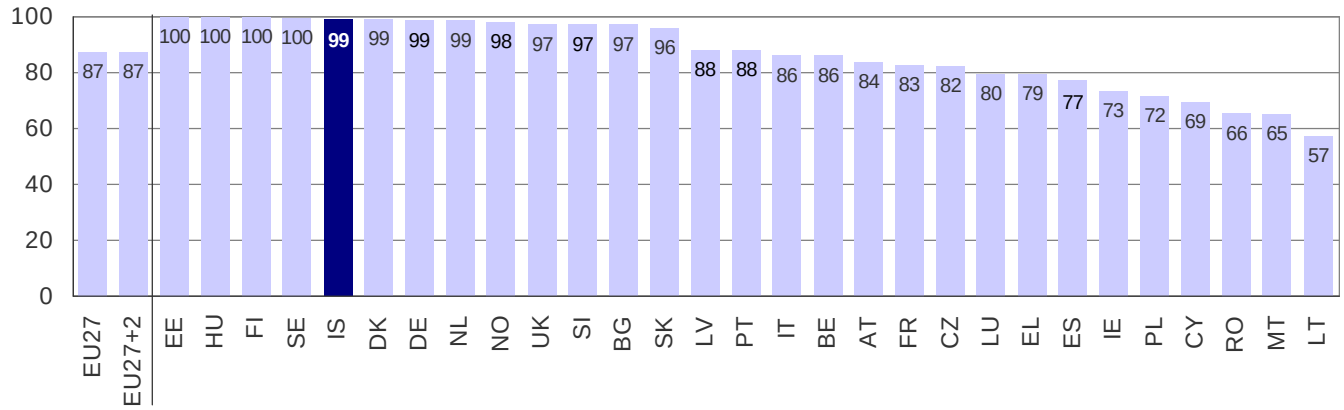
- the availability of one or more computers in the practice;
- a connection with the Internet; and
- the availability of a broadband connection.

Use of computers

With regard to the use of computers in GP practices, Iceland is among the top performers as 99% of GP practices are equipped with one or more PCs. This result puts Iceland on a par with 13 other EU countries where a computer availability rate of nearly 100% is reached. All in all 24 countries show a penetration rate of more than 75%, a fact that clearly indicates that computers have arrived in EU GP practices. They are becoming more and more an essential and unquestioned part of practice fixtures.

Iceland clearly fulfills the infrastructural prerequisite for the successful implementation of eHealth applications.

Use of Computers in GP Practices in Iceland



Base: All GPs. **Indicator:** R4 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

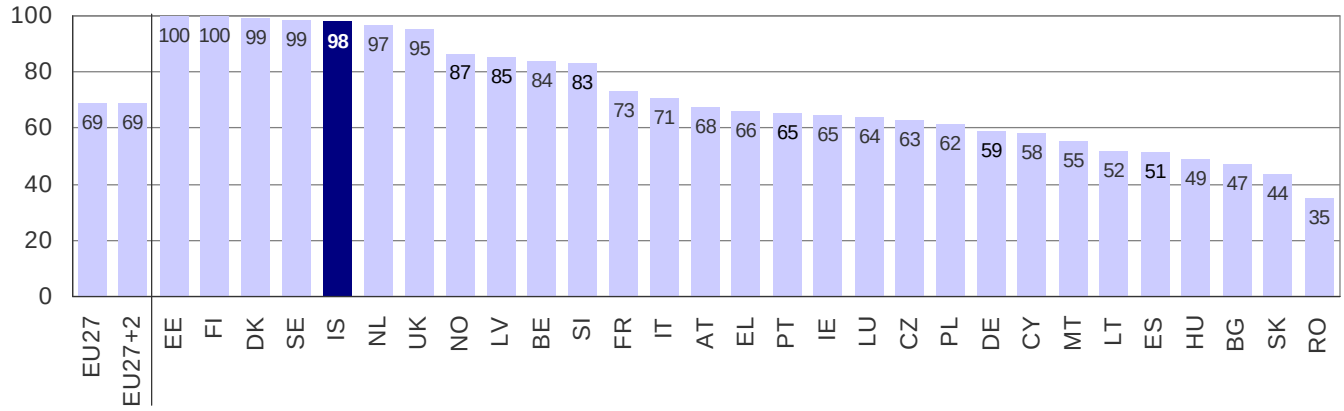
Use of the Internet and broadband

The connection to the Internet or any other dedicated network is a prerequisite for all those eHealth applications that entail data transmissions and information retrieval. In this regard Iceland again scores very well. 98% of Islandic GP practices are connected to the Internet. As a result Iceland is again part of the frontrunner group together with Estonia, Finland, Denmark, Sweden, and the United Kingdom.

On average about 70% of the EU GP practices have an Internet connection. However, large differences between Member States persist and there are still a number of countries with less than 75% practices having Internet access.

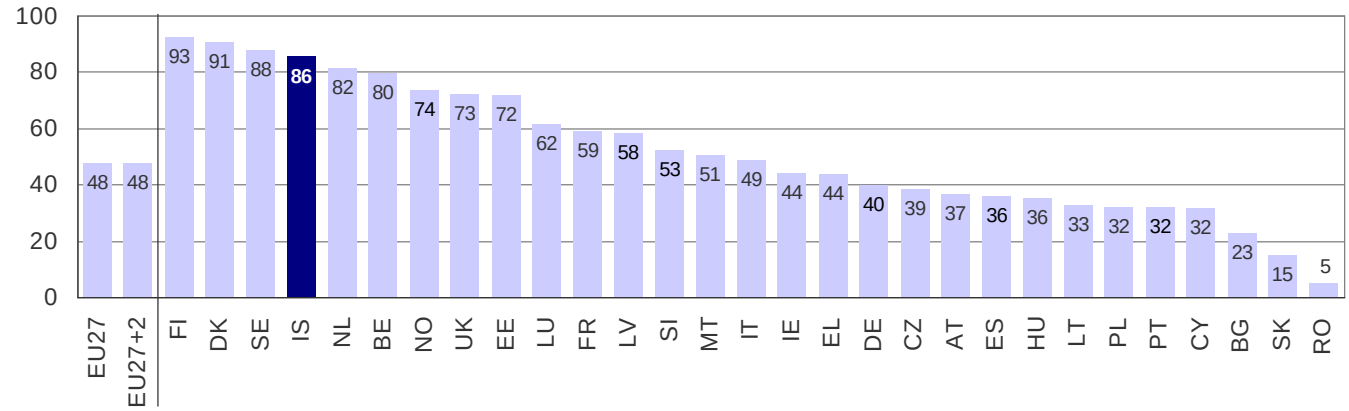
In Iceland, 86% of the practices use a broadband connection. As regards broadband, Iceland is one of the six frontrunner countries in Europe where more than 80% of GP practices use broadband. Iceland thus positions itself clearly above the EU average of 48%. All in all, the differences regarding bandwidth remain high across the EU27 Member States and there are are still several countries where less than 50% of GP practices have broadband connections.

Use of the Internet in GP Practices in Iceland



Base: All GPs. **Indicator:** C1 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Icelandic GP Practices Using a Broadband Connection



Base: All GPs. **Indicator:** C2 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Use of eHealth Applications

With about 87% of European GP practices having a computer and about 69% being connected to the Internet, the question is as to if and how this ICT infrastructure is used. The following sections deal with the use of ICT for different purposes in a GP practice's day-to-day business.

Electronic patient data storage

The storage of electronic medical patient data is very common in Iceland. Nearly all the GP practices (99%) store at least one type of individual medical patient data. Given that Islandic GP practices display extremely high usage rates for all types of medical patient data under observation in the survey, it can be deduced that most GP practices store more than only one type of information. A rather encompassing patient information data base seems to be the norm in Iceland. Information on diagnoses, medications and medical history is stored in all Icelandic GP practices. All other data types are registered in more than three quarters of the GP practices.

Electronic Patient Data Storage in Iceland:
Storage of Different Types of Individual Patient Data by GPs storing electronic medical patient data

	EU27	EU27+2	BE	BG	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO
Diagnoses	90	91	93	97	89	93	99	94	74	89	89	79	85	93	58	65	88	99	80	96	88	73	77	69	89	94	81	97	94	100	100
Medications	90	90	93	93	88	99	93	86	71	94	91	95	95	90	50	8	95	99	80	97	84	55	85	36	43	85	96	95	98	100	99
Basic medical parameters	83	83	91	80	82	96	80	58	65	88	93	85	85	86	42	14	90	96	73	94	80	35	63	49	31	71	90	82	98	90	84
Lab results	79	80	96	83	58	99	78	58	64	81	77	82	75	76	42	17	52	91	66	95	79	53	59	63	20	26	98	97	96	93	98
Symptoms/reasons for encounters	77	77	89	94	70	97	67	59	68	82	92	80	64	86	42	28	88	96	70	96	82	46	73	32	33	60	96	95	92	98	95
Medical history	75	75	89	93	74	97	52	55	73	86	89	84	70	83	50	13	90	93	75	95	69	46	63	34	18	48	98	90	95	100	97
Examinations and results	75	75	87	86	62	95	56	51	64	81	81	68	82	67	42	20	60	93	66	95	76	55	67	58	15	35	98	76	88	92	98
Vital signs measurements	74	74	88	93	67	92	59	51	62	80	88	73	69	88	42	12	76	93	64	92	63	34	70	52	15	51	93	73	92	79	85
Treatment outcomes	65	66	81	78	68	96	52	46	62	76	66	53	58	71	50	26	62	92	58	94	77	49	52	25	14	47	88	78	77	76	91
Radiological images	34	35	53	50	20	98	15	47	42	55	65	23	5	29	42	2	43	70	34	43	49	40	29	12	8	10	95	34	30	87	54

Base: GPs storing electronic medical patient data **Indicator:** A2 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Electronic exchange of patient data via the Internet or other dedicated networks

The electronic exchange of patient data is comparatively common in Iceland. 17% of the practices exchange medical data with other care providers or professionals, as compared to 10% on average in the EU27. 52% of GP practices in Iceland receive laboratory results in digital form. The advantages to be gained from networking with regard to the transfer of lab results appear to be sufficiently substantial to result in a relatively high uptake of this mode of communication across Europe. On average 40% of the GP practices in the EU receive analytic results from labs via different networks.

Telemonitoring has not yet arrived on the scene neither in Iceland nor in the EU as a whole. In Iceland, only 3% of the GP practices make use of it. The highest share of telemonitoring is realised in Sweden, where 9% of GPs report making use of it. The only other countries with a mentionable usage rate of

telemonitoring are the Netherlands and Iceland, scoring 3% each.

A similar pattern can be discovered with regard to the exchange of medical patient data across borders. The Islandic GPs having participated in the survey do not exchange medical data across national borders at all. In this case the Netherlands show the highest usage level with however still only 5% of practices taking part in cross-border transmissions of medical data. Denmark, Cyprus, Malta, France and Greece come in second with scores between 2% and 3%.

The low level of trans-border data sharing may be explained by the fact that the health care jurisdiction is explicitly under the jurisdiction of the indivdual Member States. Due to the differing health care systems in EU Member States, it is unsurprising that, with only very few exections, planned treatment is provided principally in the country of residence.

Electronic Exchange of Different Types of Medical Patient Data in Iceland

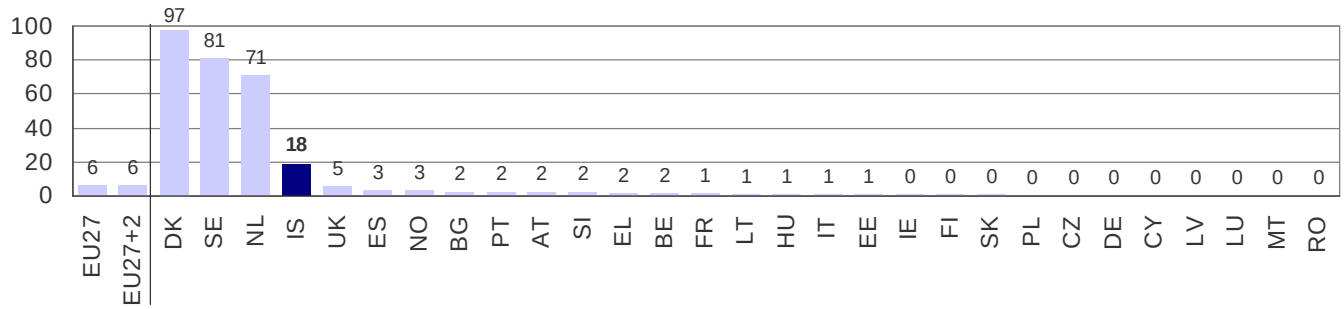
	EU27	EU27+2	BE	BG	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO
Medical data with carers	10	11	13	3	6	74	4	1	4	13	5	2	7	3	0	3	0	2	7	26	12	2	8	2	0	1	55	13	26	17	35
Analytic results from labs	40	40	73	5	25	96	63	39	3	30	33	40	8	10	1	8	27	12	11	84	37	10	1	4	10	5	90	82	85	52	88
Telemonitoring	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	0	0	0	3	1	0	1	0	0	0	1	9	2	3	0
Medical data across borders	1	1	1	1	1	2	0	0	2	1	2	0	0	3	0	0	0	0	3	5	1	0	0	0	0	0	0	1	0	0	0

Base: All GPs. **Indicator:** D1 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

ePrescribing

In Iceland 18% of the GP practices use ePrescribing. In most EU Members States however, ePrescribing is not used at all. There are only three EU Member States where ePrescribing is a reality: Denmark, Sweden and the Netherlands.

Use of ePrescribing by GPs in Iceland



Base: All GPs. **Indicator:** D1 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Coded data entry

In Iceland, 5% of the GP practices use exclusively un-coded data for the storage of electronic patient data. 41% store data in coded form only. Compared to the European average rates the storage of un-coded data only is less prevalent in Iceland, whereas the storage of coded data is above the European average. Most practices in the EU27 store a combination of both coded and un-coded data (45%). This holds true for Iceland as well as 52% of the GP practices store both coded and un-coded data.

Coded data entry in this context refers to the use of coding systems such as the ICD (the WHO's International Classification of Diseases) that allows to store a disease or diagnoses as a code rather than as a textual description.

Use of data coding for the storage of electronic patient information by Icelandic GPs

	EU27	EU27+2	BE	BG	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO
Coded data only	21	21	29	22	6	19	19	35	20	35	6	10	22	10	25	68	2	6	14	37	11	30	18	24	25	36	2	10	24	41	14
Un-coded data only	30	30	36	27	56	31	33	5	58	26	66	50	26	64	25	8	60	5	39	13	55	25	23	26	34	24	26	29	5	5	18
Both coded and un-coded data	45	46	33	50	33	49	48	59	16	36	19	34	50	14	50	13	24	88	25	49	31	19	49	43	33	36	72	54	70	52	64

Base: GPs storing patient data. **Indicator:** A4 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Exchange of administrative patient data

Data transfer via networks concerns not only medical data, but can also be used for administrative purposes, i.e. for data exchanges between the GP practice and reimbursers or other care providers.

12% of the Icelandic GP practices exchange administrative data with other carers, as compared to an average rate of 10%. With only 1% of the Icleandic GP practices that exchange administrative data with reimbursers, Iceland scores below the European average of 15%. Frontunner countries in this regard are Denmark, the Netherlands and the United Kingdom, but even here no more than one out of two practices uses ít.

When it comes to the exchange of administrative patient data in the EU27 Member States, huge variations come into view. As regards the exchange of administrative data with other care providers, shares differ between 0% (Latvia and Lithuania) and 74% (Denmark). Rates for the echange of administrative data with reimbursers also differ widely: from 0% (Latvia and Lithuania) to 48% (Denmark).

Exchange of Administrative Patient Data in Iceland

	EU27	EU27+2	BE	BG	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO
Admin data with other carers	10	10	13	6	6	74	3	1	4	6	4	4	3	3	0	10	0	1	7	28	7	6	6	6	3	2	21	16	32	12	25
Admin data with reimbursers	15	15	3	10	13	48	4	5	3	2	26	15	1	3	0	21	0	5	3	45	19	23	5	2	14	4	8	8	43	1	19

Base: All GPs. **Indicator:** D1 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Data exchange and security

Data security is an important issue when sensitive, identifiable patient data is stored and transmitted electronically. There are a number of different techniques to make the handling of patient data secure, including password protection of the computer system and of transmitted files, encryption of transmitted files and e-mails as well as the use of e-signatures.

Islandic GPs show above average rates for all of the security measures under observation. The use of e-Signatures in particular is quite remarkable: 43% of the Islandic GP practices use e-signatures. Iceland thus positions itself clearly above the EU average of 19%.

The same holds true for the password protection of transmitted files. 83% of the Icelandic GP practices make use of them compared to 57% on the EU average. Only the use of encryption of transmitted files is slightly less prevalent (37%).

100% of Islandic GP practices have established a password protected access. High rates (on average 94%), are due to the fact that password protection can be achieved comparatively easy as it is available for basically all commercial computer operating systems.

GPs Use of Security Features in Iceland

	EU27	EU27+2	BE	BG	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO
Password (PW) protected access	94	94	97	92	97	97	95	100	59	93	88	97	100	72	100	92	96	100	94	95	94	86	97	80	92	94	100	98	98	100	100
PW protection of transmitted files	57	57	60	77	65	71	63	76	40	56	39	59	70	41	100	45	54	57	47	62	60	63	62	62	64	69	56	27	58	83	59
Encryption of transmitted files	42	42	64	49	31	68	53	85	22	35	36	30	45	19	50	32	42	31	21	36	46	40	26	44	32	28	14	20	42	37	58
Use of e-signatures	19	19	22	68	49	93	7	58	15	24	16	11	40	13	0	12	12	7	9	28	12	11	5	12	20	19	16	41	10	43	48

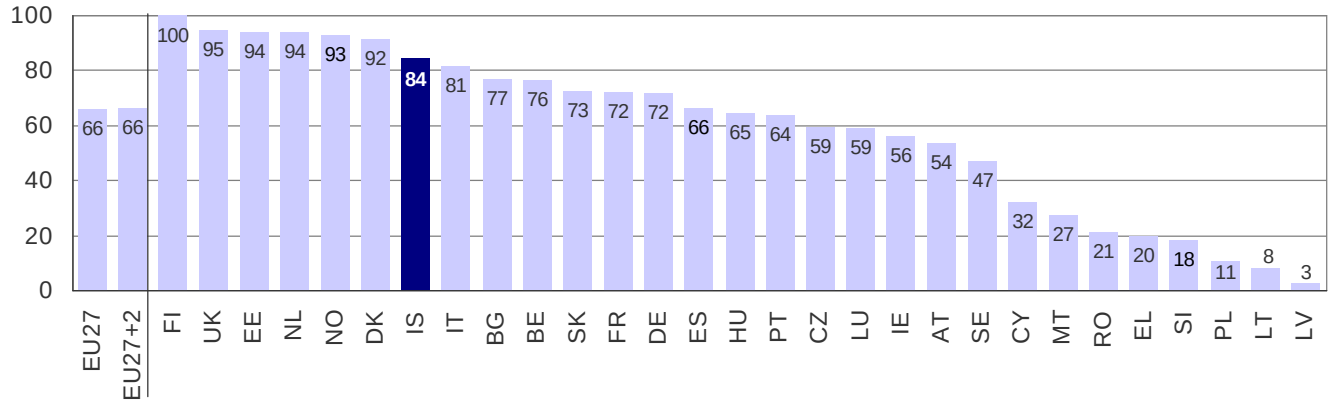
Base: All GPs. **Indicator:** D4 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Computer use in consultation

Apart from the storage and exchange of patient data, a computer can also be used in direct interaction with the patient, i.e. during the consultation in the practice. It can be used to display a patient's file to the practitioner, to provide supporting information when making treatment or medication decisions, but also for the explanation of medical issues to the patient, e.g. by means of a graph, photo or animation.

84% of the GPs in Iceland use a computer in patient consultation. Higher utilisation rates can only be found in six other countries with Finland showing the highest rate of 100%. With regard to computer use in consultations with the patients, Iceland scores clearly above the EU27 average of 66%. This indicator shows a considerable gap between frontrunners with more than 90% of computer use and the countries following or lagging behind. In seven countries computers are used for consultation with the patients in less than 30% of the GP practices.

Computer Use in Consultation with the Patient in Iceland



Base: All GPs. **Indicator:** B2 (cf. annex for more information), % values. **Source:** empirica, Pilot on eHealth Indicators, 2007.

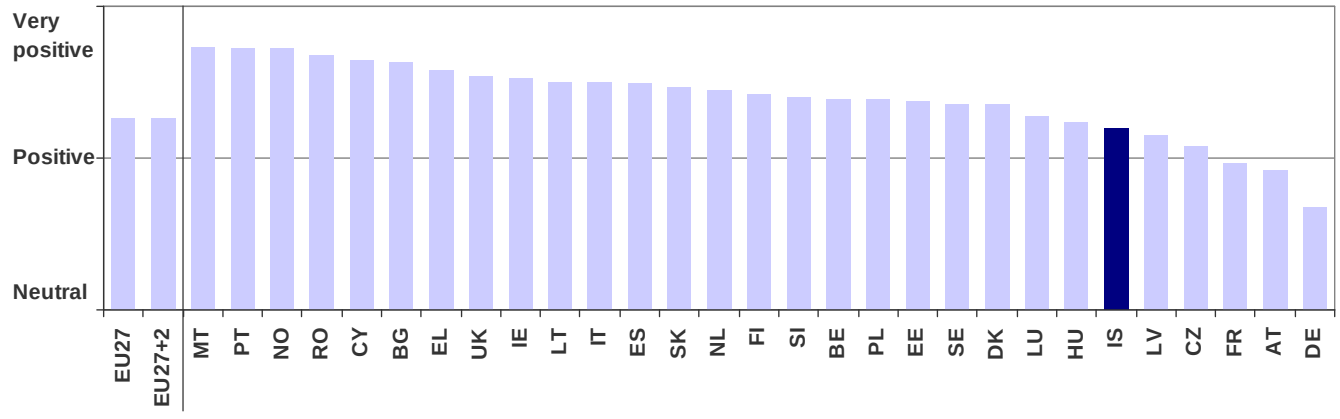
Attitudes and Impacts

What role do ICTs play in the day-to-day work of a European General Practitioner? What is a GPs general attitude towards ICT and what facilitators and barriers towards a wider uptake of eHealth do they perceive? What are the impacts of eHealth?

GPs in Iceland are quite positive when it comes to the question whether ICT really and tangibly improves the quality of health care services, as are basically all GPs in Europe. When looking at the other countries it is interesting to see that in none of the 29 countries under observation a negative attitude is prevalent.

This positive attitude seems to have nothing to do with whether a country is more of an eHealth laggard or a frontrunner. Those countries displaying an only moderately positive attitude (such as Germany, France and Austria) are all average eHealth performers. At the same time, GPs using eHealth and practising in countries that can be considered eHealth laggards (e.g. Greece, Cyprus or Romania) show an attitude that is more positive than the EU average. Since differences between the countries in relation to the perception of facilitators and barriers as well as eHealth impacts are only small, the following analysis focuses on the EU average results, reporting national deviations where they occur.

GPs General Attitude Towards ICT Use in Health Care in Iceland



Base: GPs using computers **Indicator:** F1 (cf. annex for more information), attitude scores. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Perception of facilitators and barriers

The perception of faciliators and barriers of Icelandic GPs differ slightly from the perception shown by the majority of GPs in the EU27. This concerns in particular the exchange of clinical information.

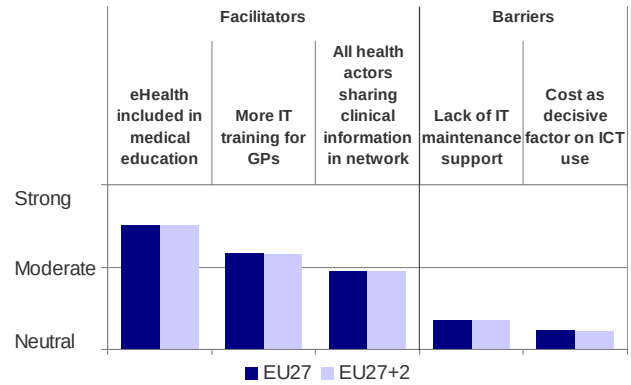
Among factors that could facilitate the diffusion of eHealth, most European GPs would prefer if the issue were included in the curricula of medical education. The second most important facilitating factor is related to IT training provided to the GPs themselves. Thirdly, a better networking of all health actors in order to share clinical information is also regarded as beneficial by a majority of GPs.

As regards the electronic exchange of clinical information, GPs in Germany, Poland, Iceland and Norway are less positive about this than the European average, but still mostly agree to a certain extent. On the other hand, Greek, Lithuanian and Romanian GPs are considerably more positive on this issue than their European peers. In relation to IT training for GPs, practitioners in Denmark, Germany, Hungary and the Netherlands see this as a less important issue.

When it comes to potential eHealth barriers, most practitioners seem — on average — to consider neither a lack of IT maintenance support nor cost as a factor that seriously hampers their use of ICT. In some of the Eastern European Member States, GPs are however considerably more critical about both issues. A lack of IT maintenance support is seen as a barrier to eHealth — at least to a certain extent — by a majority. In these countries cost are perceived as a barrier to eHealth by a noticeably larger number of GPs than in the EU on average.

Noticeable deviations from these patterns can also be found in Greece, Spain and Ireland, here a majority of GPs somewhat agrees to the statement that a lack of IT support has a negative impact on eHealth use.

GPs Perception of Facilitators and Barriers in the EU27



Base: GPs using computers. **Indicator:** F1b (cf. annex for more information), agreement scores. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Perception of impacts

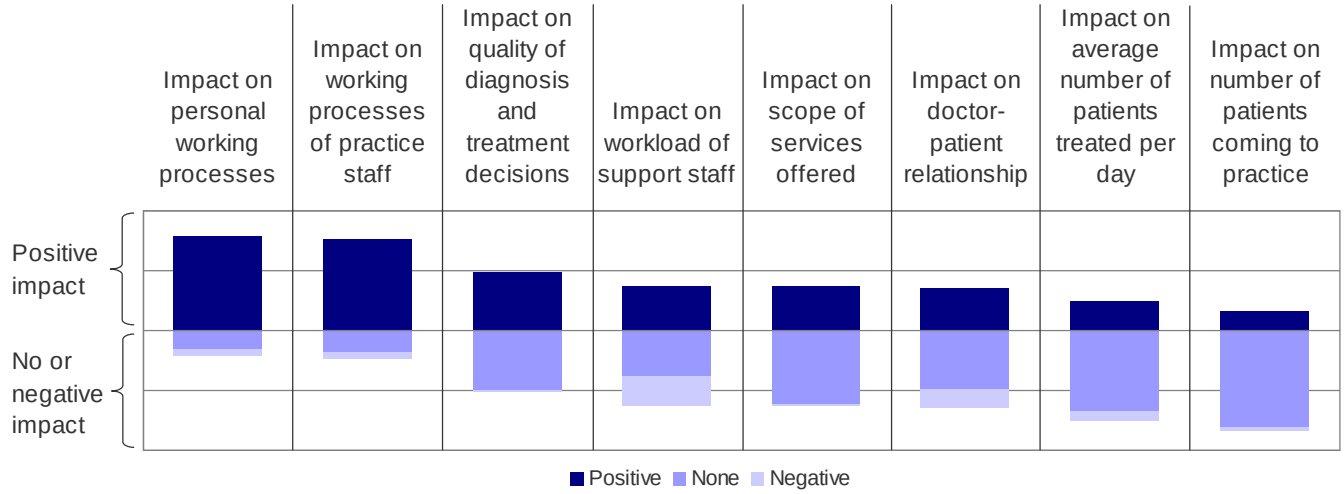
In Iceland the perception of eHealth impacts resembles the general pattern found in the EU27. The general impact perceptions show quite a clear pattern: the GPs are most positive about the administrative impacts of ICT use in health care, namely impacts in relation to their personal or practice staff working processes. When it comes to patient-related or medical impacts a more ambivalent picture emerges. For every GP being positive about those impacts, there is at least one other GP not perceiving any benefit. In Iceland the impact perception is slightly more positive than in the EU27 on average as 58% of the practices perceive a positive impact on the quality of diagnoses against only 39% not perceiving any impacts. In case of doctor-patient relationship and the workload of the support staff — including nurses etc. — between 16% and 25% say that the impacts are actually negative, i.e. that the relationship to the patient has deteriorated or that the workload of the support staff has gone up. The latter could indicate that the brunt of additional effort created by ICT use is not borne by the GP but by the other workers in the practice.

This is also not contradicted by the perceived improvement of working processes. For the practitioners this may be due to the fact that they are not burdened with additional work generated by ICT and for the rest of the practice staff improved working processes might mean that an overall increased workload is simply handled more efficiently. About one-third of the practitioners state that the scope of services offered by the practice actually increased due to the use of IT systems and software. In Iceland this hold true for over 42% of the practicioners. It can be assumed that for these GPs IT is not just a tool to make existing — e.g. administrative — processes more efficient but to broaden the range of their activities.

The last two areas under observation here are the impact on the number of patients treated as well as on the number of patients coming to the practice. A majority of Icelandic GPs did not experience any changes in the number of patients coming to the practice (70%) nor the number of patients treated per day (48%) that could be related to the introduction of eHealth solutions. This goes in line with the general impression by European GPs, most of whom did not report any changes in the number of patients coming to the practice or being treated per day. However, it should be noted that already one forth of Icelandic GP practices did regard ICT applications to have increased the number of patients they could treat in one day.

GPs from eHealth frontrunner countries tend to be somewhat more positive about impacts on personal and staff working processes and also about impacts on the quality of diagnosis and treatment decisions. They perceive a higher increase in the scope of services offered by their practice compared to their colleagues in the other countries. At the same time, negative impacts on the workload of the practice staff are deemed to be stronger.

GPs Perception of eHealth Impacts in the EU27



Base: Users of electronic records, or access to health networks, or electronic patient data exchange **Indicator:** F1 (cf. annex for more information), attitude scores. **Source:** empirica, Pilot on eHealth Indicators, 2007.

Making Sense of eHealth Use Patterns in the Member States

Iceland is one of the frontrunners of ICT use among General Practictioners. This concerns both the availability of ICT infrastructure (computer, Internet) and the use of ICT for different eHealth-related purposes.

Iceland scores well above average in regard to the storage of electronic medical and administrative patient data, the use of computers during consultations and the transfer of laboratory results. The only area under observation which is only averagely well developed concerns the exchange of administrative patient data. Noticeable is the comparatively high prevalence of ePrescribing in Iceland, which is used by nearly one fifth of the practitioners. This high use rate can be attributed to a seven year ePrescribing project that has been launched a couple of years ago and provided for the nationwide implementation of ePrescribing in 2007.

The small country developed an eHealth strategy as a part of the “eGovernment Information Society 2004-2007 strategy”.

Icelandic policy strategies with eHealth relevance
only part of eGov; action plan to achieve secure national Healthnet

It included electronic transactions between the State Social Security Institute, healthcare providers and the public, the introduction of Electronic Patient Records and the establishment of a Healthnet to link all institutions within the sector. Other activities are planned by the Ministry of Health and Social Security to improve the structure of the healthcare system and enhance the quality of healthcare services.

The Ministry has published minimum data sets for an Electronic Health Record system, a factor that has surely contributed to the comparatively high storage rates for electronic patient data in Iceland.

ANNEXES

The Pilot on eHealth Indicators Study

The "Pilot on eHealth Indicators" study was carried out by empirica in association with IPSOS on behalf of the European Commission, Information Society and Media Directorate-General. The purpose of the present study was to measure the availability and use of ICT by primary care physicians in the EU27 and EEA countries, achieved by means of a survey of primary care physicians on their use of ICT for communicating with patients and between primary and secondary care and other eHealth agencies. Through this survey up-to-date information and data on eHealth developments was obtained. In addition 29 Country Briefs for each of the Member States, Norway and Iceland were developed.

The Final Report

The Final Report of the study puts together all the results from the General Practitioner survey, including many indicators not used for this Country Profile. It also contains an extensive analysis of data, drawing a coherent picture of ICT use among General Practitioners in Europe.

Indicators used

The Final Report contains an indicator annex listing all statistical indicators covered by the survey, including those used for this Country Profile. The indicator codes used in the footnotes of the graphs and tables (e.g. B2, C1 etc.) can be used to identify the corresponding indicator in the list.

Methodology Report

The survey

Data used for this County Profile were collected by means of a survey of primary care physicians and their use of ICT with patients and between primary and secondary care and other health agencies.

The survey was carried out in all 27 Member States of the European Union and in Norway and Iceland. The fieldwork took place in the third quarter of 2007. It was coordinated by the German Ipsos branch Ipsos GmbH, Mölln and was conducted in cooperation with local partner institutes.

The survey was carried out in form of Computer-Aided Telephone Interviewing (C.A.T.I.). Exception is Malta where face-to-face interviews using P.A.P.I. methodology (Paper-and-Pencil Interviews) were conducted. In Sweden CATI interviews were used, until the sample was exhausted due to the specificities of the Swedish health system. The remaining interviews were accomplished through Computer-Aided Web-Interviews.

Universe/ Target Person and Sampling

The universe consisted of all General Practitioners in the respective countries. From the universe a random sample of practices / institutions with a quota on region and - where possible - private practice / institution was drawn. The target respondent within the practice / institution was selected via a random procedure if more than one GP were present. In total, 6,789 interviews were achieved. The sampling was done in a decentralised way and by each of the partner institutes.

Number of Interviews Conducted

	Country	Interviews
BE	Belgium	318
BG	Bulgaria	206
CZ	Czech Republic	304
DK	France	261
DE	Germany	253
EE	Estonia	150
EL	Greece	315
ES	Spain	325
FR	France	302
IE	Ireland	206
IT	Italy	290
CY	Cyprus	72
LV	Latvia	177
LT	Lithuania	263
LU	Luxembourg	63
HU	Hungary	251
MT	Malta	92
NL	Netherlands	258
AT	Austria	299
PL	Poland	351
PT	Portugal	284
RO	Romania	304
SI	Slovenia	103
SK	Slovakia	261
FI	Finland	250
SE	Sweden	267
UK	United Kingdom	257
IS	Iceland	103
NO	Norway	204
	Total	**6.789**

Weighting schemes

After the fieldwork, weighting coefficients were computed giving each country a weight according to its population size in the respective group of countries: EU27+2 (for all 29 countries surveyed), EU27 (all EU Member States).

More information

If you wish to be provided with more details, or to receive news and updates, please contact us at: indeh [at] empirica [dot] com or get in touch with us.

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