



Health Consumer Powerhouse



Euro Health Consumer Index

2014



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Report

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European healthcare – the good, the bad and what needs to be done?

Ten years of open assessment have taught Health Consumer Powerhouse that there are surprisingly stable patterns of national healthcare systems of Europe. Some are quite positive: overall, the performance of almost every country improves year by year, offering more than 500 million people stronger patient influence, better access, reduced risk of medical failures, improved treatment outcomes and, even in times of significant funding pressure, extended range and reach of services in the public package. The negative impact from austerity policies were somewhat increased waiting in some countries (largely reversed in 2014) and slower inclusion of new pharmaceuticals in reimbursement systems.

Looking forward, it would be a good idea to stop the “crisis” fixation, which in many countries tends to be an excuse for poor performance. Another HCP conclusion is that there is a rather vague correlation between financial resources and high quality care; many other assets are essential to deliver good performance: a culture of openness and responsibility, a civic climate of trust and accountability, the absence of corruption, the belief that empowered patients and consumers can do great things *etc.* Among the countries ranked by the 2014 Euro Health Consumer Index (EHCI) offering the best healthcare value for the money spent, there is a surprising number of medium and low income countries.

To understand what these qualities are, and how they interact for good results becomes more and more important, as European healthcare will be under pressure to meet growing demand and expectations without significantly increased funding for times foreseeable. The recent decision of the European Commission to develop mechanisms to assess member state health systems can be understood in this context: health and healthcare should contribute to the competitiveness and progress of Europe. Or bluntly put, more and better health and healthcare for every euro spent.

Such methodological evaluation of member state systems should detect what works well and what needs to be done in each member state, and also address:

- How come that national healthcare, contrary to large public systems such as education, and every successful private business, is reluctant to learn from the best performers among European health? “Not invented here” is still a strong, harmful culture.
- What are the lessons from some health systems (crisis-struck Baltic states the best example) doing the right things to recover while in other countries anarchy and deterioration is the pattern?
- How to implement the values, strategies and incentives that makes some countries radically repair “traditional” weaknesses such as waiting lists or weak patient positions, while other national systems never seem to gather enough focus and courage.

This is about re-shaping and modernizing the biggest industry of Europe. It is absolutely necessary that this huge process of replacing poor, expensive performance with modern, value-for-money health delivery becomes a success.

Brussels January 27, 2015

Johan Hjertqvist

Founder & President

Health Consumer Powerhouse Ltd.

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1. Summary

1.1 General observations

In spite of financial crisis-induced austerity measures, such as the much publicized restrictions on the increase of healthcare spend, European healthcare keeps producing better results. Survival rates of heart disease, stroke and cancer are all increasing, even though there is much talk about worsening lifestyle factors such as obesity, junk food consumption and sedentary life. Infant mortality, perhaps the most descriptive single indicator, also keeps going down, and this can be observed in countries such as the Baltic states, which were severely affected by the financial crisis.

What is less encouraging is that the tendency of an increasing equity gap between wealthy and less wealthy European countries noted in the EHCI 2013¹ shows with increased clarity in the 2014 edition. A record of 9 countries, all Western European, are scoring above 800 points of the maximum 1000. These are followed at some little distance by three more affluent countries (Austria, France and Sweden) "not quite making it" for different reasons. After those, there is a clearly visible gap to the next group of countries, where the first CEE and Mediterranean countries start appearing. This stratification is clearer in the EHCI 2014 than in any previous edition.

1.2 Country performance

The EHCI 2014 total ranking of healthcare systems shows The Netherlands again widening the gap to country #2 from 19 points in 2013 to 43 points in 2014, (in 2012, the margin was 50 points), scoring 898 points out of 1000, an EHCI all time high. Beginning from Switzerland (855 points) down, the EHCI 2014 shows competition at the top getting much harder with no less than 9 countries scoring above 800 points.

The changes in rank should not at all be dismissed as an effect of changing indicators, of which there are 48 in the EHCI 2014, which is the same number as in the previous year. The Netherlands is the only country which has consistently been among the top three in the total ranking of any European Index the Health Consumer Powerhouse (HCP) has published since 2005. The Netherlands is sub-discipline winner, or joint winner, in four of the six sub-disciplines of the EHCI 2014. The Dutch healthcare system does not seem to have any really weak spots, except possibly some scope for improvement regarding the waiting times situation, where some central European states excel. Normally, the HCP takes care to state that the EHCI is limited to measuring the "consumer friendliness" of healthcare systems, *i.e.* does not claim to measure which European state has the *best* healthcare system across the board.

However, the fact that it seems very difficult to build an Index of the HCP type without ending up with The Netherlands on the medallists' podium, creates a strong temptation to actually claim that the winner of the EHCI 2014 could indeed be said to have "the best healthcare system in Europe". There should be a lot to learn from looking deeply into the Dutch progress!

Switzerland has for a long time had a reputation for having an excellent healthcare system, and it therefore comes as no surprise that the more profound research which eliminated most **n.a.** scores results in a prominent position in the EHCI.

Bronze medallists are Norway at 851 points; the very high *per capita* spend on healthcare services finally paying off!

¹ www.healthpowerhouse.com/files/ehci-2013/ehci-2013-report.pdf

Finland (4th, 846 points) has made a remarkable advance, and seems to have rectified its traditional waiting time problems!

Denmark (5th, 836 points) did gain a lot from the introduction of the e-Health sub-discipline. Non the less, as can be seen from the longitudinal analysis in Chapter 6, Denmark has been on a continuous rise since it was first included in the EHCI 2006, until competition tightened in 2014.

The Swedish score for technically excellent healthcare services is, as ever, dragged down by the seemingly never-ending story of access/waiting time problems, in spite of national efforts such as *Vårdgaranti* (National Guaranteed Access to Healthcare); in 2014, Sweden drops to 12th place with 761 points.

In southern Europe, Spain and Italy provide healthcare services where medical excellence can be found in many places. Real excellence in southern European healthcare seems to be a bit too much dependent on the consumers' ability to afford private healthcare as a supplement to public healthcare. Also, both Spain and Italy show large regional variation, which tends to result in a lot of Amber scores for the countries.

Some eastern European EU member systems are doing surprisingly well, particularly the Czech Republic and Estonia, considering their much smaller healthcare spend in Purchasing Power Parity (PPP) adjusted dollars per capita. However, readjusting from politically planned to consumer-driven economies does take time.

The FYR Macedonia is making the most remarkable advance in the EHCI scoring of any country in the history of the Index, from 27th to 16th place, largely due to more or less eliminating waiting lists by implementing their real time e-Booking system!

Consumer and patient rights are improving. In a growing number of European countries there is healthcare legislation explicitly based on patient rights and a functional access to your own medical record is becoming standard. Hospital/clinic catalogues with quality ranking used to be confined to two – three countries for years; the 2014 number of nine countries hopefully is a sign that something is happening in this area. Medical travel supported by the new patient mobility directive can accelerate the demand for performance transparency. After the cross-border directive, the criteria for this indicator have been tightened to reflect the implementation of this directive. Not unexpectedly, in 2013 the only countries to score Green were The Netherlands and Luxembourg, who have been allowing cross-border care seeking for years.

1.3 Some interesting countries

1.3.1 The Netherlands!!!

The Netherlands is the only country which has consistently been among the top three in the total ranking of any European Index the Health Consumer Powerhouse has published since 2005. The 2012 NL score of 872 points was by far the highest ever seen in a HCP Index. The 898 points in 2014 are even more impressive, as it becomes increasingly difficult to reach a very high score on many indicators – no country is superbly good at everything. What prevented The NL from breaking the 900-barrier was the Red score earned for smoking prevention, graded on the Tobacco Control Scale 2013. Also, the only Index in recent years where the NL have not been among the top three countries was the Tobacco Harm Prevention Index, where a rather liberal Dutch attitude was detected.

Between the latest EHCI editions, The Netherlands have also scored 922 points in the Euro Diabetes Index 2014. That score would normally have been a secure Gold medal – in the EDI, that was seized by Sweden at 936 points on the power of having data on all indicators.

The NL wins four of the six sub-disciplines of the Index, and the large victory margin seems essentially be due to that the Dutch healthcare system does not seem to have any really weak spots, except possibly some scope for improvement regarding the waiting times situation, where some central European countries excel.

Normally, the HCP takes care to state that the EHCI is limited to measuring the “consumer friendliness” of healthcare systems, *i.e.* does not claim to measure which European state has the *best* healthcare system across the board.

Counting from 2006, the HCP has produced not only the generalist Index EHCI, but also specialist Indexes on Diabetes, Cardiac Care, HIV, Headache and Hepatitis. The Netherlands are unique as the only country consistently appearing among the top 3 – 4, regardless what aspects of healthcare which are studied. This creates a strong temptation to actually claim that the landslide winner of the EHCI 2014 could indeed be said to have “the best healthcare system in Europe”.

1.3.1.1 So what are the Dutch doing right?

It has to be emphasized that the following discussion does contain a substantial amount of speculation outside of what can actually be derived from the EHCI scores:

The NL is characterized by a multitude of health insurance providers acting in competition, and being separate from caregivers/hospitals. Also, the NL probably has the best and most structured arrangement for patient organisation participation in healthcare decision and policymaking in Europe.

Also, the Dutch healthcare system has addressed one of its few traditional weak spots – Accessibility – by setting up 160 primary care centres which have open surgeries 24 hours a day, 7 days a week. Given the small size of the country, this should put an open clinic within easy reach for anybody.

Here comes the speculation: one important net effect of the NL healthcare system structure would be that healthcare operative decisions are taken, to an unusually high degree, by medical professionals with patient co-participation. Financing agencies and healthcare amateurs such as politicians and bureaucrats seem farther removed from operative healthcare decisions in the NL than in almost any other European country. This could in itself be a major reason behind the NL landslide victory in the EHCI 2014.

1.3.1.2 So what, if anything, are the Dutch doing wrong?

The NL scores well or very well in all sub-disciplines, except possibly Accessibility and Prevention, where the score is more mediocre – on the other hand, so are those of most other countries.

The “traditional” Dutch problem of mediocre scores for Waiting times has to a great extent been rectified by 2014. As was observed by Siciliani & Hurst of the OECD in 2003/2004, and in the EHCI 2005 – 2014, waiting lists for specialist treatment, paradoxically, exist mainly in countries having “GP gatekeeping” (the requirement of a referral from a primary care doctor to see a specialist).

GP gatekeeping, a “cornerstone of the Dutch healthcare system” (said to the HCP by a former Dutch Minister of Health) is widely believed to save costs, as well as providing a continuum of care, which is certainly beneficial to the patient. As can be seen from the references given in Section 8.10.2 on indicator 2.2, there is no evidence to support the cost-reducing hypothesis. Also, as can be seen in Section 5.1, the NL has risen in healthcare spend to actually having the *highest per capita spend in Europe* (outside of what the HCP internally calls “the three rich bastards”; Norway, Switzerland and Luxembourg, who have a GDP per capita in a class of their own). This was observed already in the EHCI 2009, and the situation remains the same.

1.3.1.3 But Dutch healthcare is terribly expensive, is it not?

This has been extensively treated in the EHCI 2013 report².

It seems that actual modes of operating the healthcare system in The Netherlands could explain the high *per capita* healthcare spend, *i.e.* **not** the multi-payor model. If the country can afford this, fine; but also for Outcomes and patient quality of life reasons, a programme to reduce the share of in-patient care would be beneficial for the Dutch healthcare budget!

1.3.2 Switzerland

Silver medallists, 855 points (up from 851).

Switzerland has enjoyed a solid reputation for excellence in healthcare for a long time. Therefore it is not surprising that when the **n.a.**'s of previous EHCI editions have mainly been eliminated, Switzerland scores high. Considering the very respectable costs ploughed into the Swiss healthcare system, it should! Along with Belgium, the only country to score All Green on Accessibility.

In 2014, Switzerland is leading a "hornets' nest" of Western European Countries scoring above 800 points!

1.3.3 Norway

3rd place, 851 points. Norwegian wealth and very high *per capita* spend on healthcare seem to be paying off – Norway has been slowly but steadily rising in the EHCI ranking over the years. Traditionally, Norwegian patients complained about waiting times – this has subsided significantly. Good outcomes, but sometimes surprisingly restrictive on innovative pharmaceuticals on grounds, which can hardly be financial.

1.3.4 Finland

4th, 846 points. As the EHCI ranking indicates, Finland has established itself among the European champions, with top outcomes at a fairly low cost. In fact, Finland is a leader in value-for-money healthcare.

Compared with Sweden, Denmark and other Nordic countries, Finnish healthcare is somewhat old-style in the sense that national authorities have not paid too much attention to user-friendliness. This means that some waiting times are still long, provision of "comfort care" such as cataract surgery and dental care is limited and that out of pocket-payment, also for prescription drugs, is significantly higher than for Nordic neighbours.

This probably means that the public payors and politicians are less sensitive to "care consumerism" than in other affluent countries. Even if the outcomes are excellent, the rationing of expensive care such as kidney transplants probably takes its toll. Finnish "sisu" is no remedy for severe illness.

1.3.5 Denmark

Denmark was catapulted into 2nd place by the introduction of the e-Health sub-discipline in the EHCI 2008. Denmark has been on a continuous rise since it was first included in the EHCI 2006. Interestingly, when the EHCI 2012 was reverted to the EHCI 2007 structure,

² www.healthpowerhouse.com/files/ehci-2013/ehci-2013-report.pdf

Denmark survived this with flying colours and retained the silver medal with 822 points! However, in 2013, the introduction of the Prevention sub-discipline did not help Denmark, which lost 20 points on this sub-discipline relative to aggressive competitors, but still scores an impressive 836 points and a 5th place in the EHCI 2014. A not-very-scientific interpretation of the loss on Prevention is provided by the classic Danish reply when confronted with the fact that male life expectancy is 5 years less in Denmark than across the water in Sweden: "We have more fun while it lasts!"

Denmark has also made dramatic advancement in the reduction of heart disease mortality in recent years.

Denmark is one of only three countries scoring on "Free choice of caregiver in the EU" after the criteria were tightened to match the EU directive, and also on having a hospital registry on the Internet showing which hospitals have the best medical results.

1.3.6 Belgium

Perhaps the most generous healthcare system in Europe³ seems to have got its quality and data reporting acts together, and ranks 6th in the EHCI 2013 (797 points). A slightly negative surprise is that Belgium still, as in 2012, has the worst number for acute heart infarct survival in hospital in the OECD Health Data.

1.3.7 Iceland

Due to its location in the North Atlantic, Iceland has been forced to build a system of healthcare services, which has the capability (not dimensions!) of a system serving a couple of million people, which is serving only 300 000 Icelanders. The Icelandic 7th place, with 818 points, does not come as a surprise to the HCP research team.

Iceland is handicapped in the Index by being outside of the EU. In 2014, drug sales data available to the EHCI project have been supplied by the Icelandic pharmacy benefits system.

It also seems that all speculation about the financial crisis affecting Icelandic healthcare has been exaggerated. Basically, Iceland is a very wealthy country, which is also proved by the speedy recovery from the crisis.

Lacking its own specialist qualification training for doctors, Iceland does probably benefit from a system, which resembles the medieval rules for carpenters and masons: for a number of years after qualification, these craftsmen were forbidden to settle down, and forced to spend a number of years wandering around working for different builders. Naturally, they did learn a lot of different skills along the way. Young Icelandic doctors generally spend 8 – 10 years after graduation working in another country, and then frequently come back (and they do not need to marry a master builder's widow to set up shop!). Not only do they learn a lot – they also get good contacts useful for complicated cases: the Icelandic doctor faced with a case not possible to handle in Iceland, typically picks up the phone and calls his/her ex-boss, or a skilled colleague, at a well-respected hospital abroad and asks: Could you take this patient?, and frequently gets the reply: "Put her on a plane!"

1.3.8 Luxembourg

Luxembourg (8th, 814 points), being the wealthiest country in the EU, could afford to build its own comprehensive healthcare system. Unlike Iceland, Luxembourg has been able to capitalize on its central location in Europe. With a level of common sense which is unusual in the in-sourcing-prone public sector, Luxembourg has not done this, and has for a long time allowed its citizens to seek care in neighbouring countries. It seems that they do seek care in good hospitals.

³ Some would say over-generous: a personal friend of the HCP team, living in Brussels, was "kidnapped and held" in hospital for 6 days(!) after suffering a vague chest pain one morning at work.

1.3.9 Germany

Germany (9th, 812 points) took a sharp dive in the EHCI 2012, sliding in the ranking from 6th (2009) to 14th. As was hypothesised in the EHCI 2012 report, when patient organisations were surprisingly negative, this could have been an artefact created by “German propensity for grumbling”, *i.e.* that the actual deterioration of the traditionally excellent accessibility to health care was less severe than what the public thought, and the negative responses were an artefact of shock at “everything not being free anymore”.

The 2014 survey results seem to confirm this theory, and it would appear that German patients have discovered that “things are not so bad after all”, with Mrs. Merkel being Queen of Europe.

Germany has traditionally had what could be described as the most restriction-free and consumer-oriented healthcare system in Europe, with patients allowed to seek almost any type of care they wish whenever they want it (“stronger on quantity than on quality”). The traditional weakness of the German healthcare system: a large number of rather small *general* hospitals, not specializing, resulting in mediocre scores on treatment quality, seems to be improving.

In the feedback round from national healthcare bodies, the response from the German Bundesministerium für Gesundheit (BMG) contained an interesting reference to a study of waiting times in German primary care. It is almost irrelevant what the actual numbers were in that study; the unit of time used to measure and analyse primary care accessibility was not months, weeks or days, but minutes!

1.3.10 Austria

Austria (10th, 780 points) suffered a drop in rank in 2012, and made a slight rebound in 2013 (*cf.* Germany).

In 2014, Austria makes up a distinct trio with France and Sweden, >30 points behind the top countries but >40 points ahead of the rest of the field. The introduction of the Abortion indicator did not help: Austria does not have the ban on abortion found in Poland and three more countries, but abortion is not carried out in the public healthcare system. Whether Austria should deserve a Red or an **n.a.** score on this indicator could be a matter of discussion – there are no official abortion statistics.

The EHCI patient organisation survey confirms the claims from the English NHS that the very large resources invested in reducing waiting list problems in British healthcare have paid off, even though the U.K. is still definitely a part of European “waiting list territory” (see also Section 6.6!). Unfortunately, in 2014 the English Waiting Time scores are worsening slightly, which is confirmed by English press reports on healthcare accessibility. The efforts to clean up hospitals to reduce resistant hospital infections have also paid off: UK England scores Amber on this indicator. Having reduced the share of hospital infections being resistant from around 45% down to ~15% is a unique performance for a European country. Unfortunately, England does score a straight Amber also on all the other Outcomes indicators, except the trend line for cardiac deaths.

There is really no reason to expect to find significant differences between England and Scotland merely because they have separate healthcare administrations. The basic organisational cultures are still very similar, entrenched in GP referral systems, which not unexpectedly are associated with waiting times for specialist services. It should be noted that there is very little evidence that having separate sets of bureaucrats does influence *anything*. Expecting minimal differences would therefore be the natural thing.

If connected with things in real life at all, the 10 % higher *per capita* healthcare spend in Scotland could at least partially be motivated by public health factors such as heart disease, alcohol consumption and depression being bigger problems in Scotland than in England. A 10% cost difference is a major problem in private industry. In the public sector, including healthcare, it is not uncommon to find cost differences >30%, which are not reflected in significant differences in performance.

1.3.12 Ireland

22nd place (not counting Scotland), down from 14th in 2013.

Ireland has detailed official statistics on waiting times all over healthcare, and that data was been allowed to prevail up until EHCI 2013. However, for several EHCI years, Irish patient organisations have been radically more pessimistic in their responses to the survey conducted as part of EHCI research. It is well known that customers/patients have long memories for less good things. As the same pessimistic results reoccurred in 2014 – Ireland and Sweden had the worst patient organisation feedback on Accessibility among the 37 countries – doubts must be raised on the validity of official statistics.

As a matter of principle, in the EHCI 2014 it was decided to use the patient organisation feedback to score Ireland on Accessibility. This accounts for the drop from rank 14 to 22.

The fact that Ireland has the highest % of population (> 40 %; down from 52 % two years ago⁵) purchasing duplicate healthcare insurance also presents a problem: should that be regarded as an extreme case of dissatisfaction with the public system, or simply as a technical solution for progressive taxation?

Ireland no longer has a total ban on abortion. The requirement that a woman wishing an abortion becomes subject to judgement on if the pregnancy should be regarded as a serious health hazard, including suicide risk, is a very minor step indeed towards abortion as a women’s right.

1.3.13 Sweden

Sweden tumbled in the EHCI 2013 from 6th place to 11th at 756 points, which was only 6 points down from the 2012 value of 762 points. In the EHCI 2014, Sweden is down another position to #12, with 761 points. The reason for the loss of positions thus cannot be said to

⁵ OECD Health at a Glance, 2012.

be that healthcare services in Sweden have become worse, but that other countries have improved more. In 2014, with nine countries scoring above 800, Sweden, France and Austria make up a distinct trio, scoring >30 points less than the top nine, but >40 points ahead of the pack.

Sweden scores surprisingly well in the sub-discipline Prevention, considering that the country's healthcare system has a long tradition of steering patients away from taking up time for their doctor unless *really* sick.

Sweden loses vital points as it no longer scores All Green on Outcomes after the introduction of the indicator Abortion rates. Sweden enjoys the companionship only of a number of CEE countries having more than 30 abortions per 100 live births, which in turn is probably a left-over from before 1990. In Russia, abortion is still used as a common contraceptive, with 95 abortions per 100 births (and that is down from 160 in the mid-1990's). It should be added that EHCI takes a critical view on the four countries executing a legal ban on abortion.

At the same time, the notoriously poor Swedish accessibility situation seems very difficult to rectify, in spite of state government efforts to stimulate the decentralized county-operated healthcare system to shorten waiting lists by throwing money at the problem ("Queue-billions"). The HCP survey to patient organizations confirms the picture obtained from the official source www.vantetider.se, that the targets for maximum waiting times, which on a European scale are very modest, are not really met. The target for maximum wait in Sweden to see your primary care doctor (no more than 7 days) is underachieved only by Portugal, where the corresponding figure is < 15 days. In the HCP survey, Swedish and Irish patients paint the most negative pictures of accessibility of any nation in Europe. Particularly cancer care waits, not least in the capital Stockholm, seem inhumane!

Another way of expressing the vital question: Why can Albania operate its healthcare services with practically zero waiting times, and Sweden cannot?

1.3.14 Portugal

Continues its very impressive climb: In 2013, 16th place on 671 points (up from 25th place in 2012). In 2014, Portugal advances to 13th place with 722 points, just ahead of the UK! This is all the more remarkable, as Portugal is one of the countries most notably affected by the euro crisis!

1.3.15 The Czech Republic

The Czech Republic has always been the star performer among CEE countries, and in 2014 retains its 15th place, leading the group of CEE countries and squeezing in between England and Scotland.

1.4 The Balkans

As there now are no less than nine Balkan countries in the EHCI – four EU-members and five countries with various ambitions of becoming members – a deeper look into this region can be of interest:

The term Balkans comprises⁶ the following countries included in the EHCI 2014:

- Albania
- Bosnia and Herzegovina
- Bulgaria

⁶ Bideleux, Robert; Taylor, Richard (1996). *European integration and disintegration: east and west*. p. 249.

- Croatia
- Greece
- FYR Macedonia
- Montenegro
- Romania
- Serbia

Although Slovenia does not unequivocally count as a geographic part of the Balkans, it will be discussed under this section because of its history as part of Yugoslavia 1918 – 1991.

Except Greece, Slovenia and Croatia, the Balkans contain the poorest states included in the EHCI, as is shown in the Graph below. Unfortunately, this coincides with a high level of corruption as measured by Transparency International⁷. As can be seen from the Graph, there is a fairly close correlation between poverty and high levels of corruption, with Greece and Italy deviating in showing a worse corruption Index score than would be expected from their levels of wealth. The question whether poverty leads to corruption or corruption causes/maintains poverty is beyond the scope of the EHCI study.

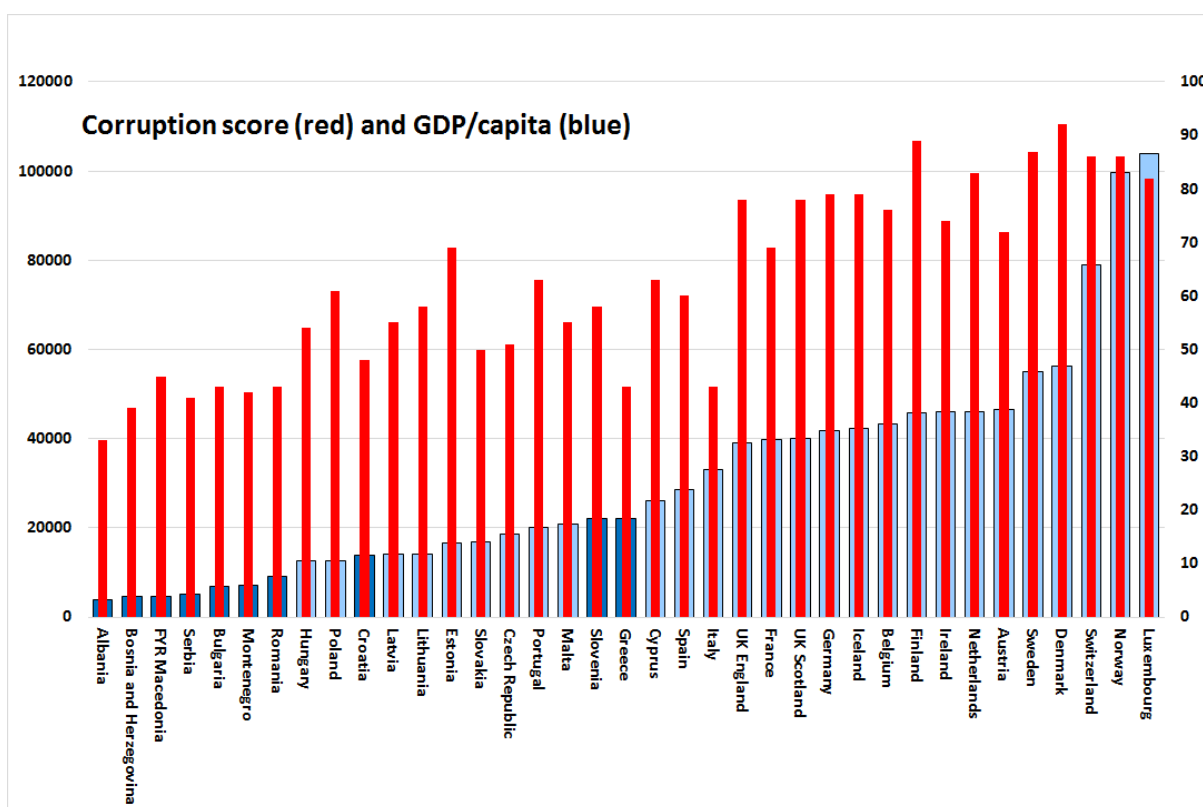


Figure 1.2 Corruption scores and GDP/capita. The Balkans are marked with dark blue GDP (broad) bars. On the corruption scale, a score of 100 denotes a corruption-free country; the lower the score, the more severe the corruption. Apart from Greece and Italy, there is a quite close correlation ($R = 81\%$) between poverty and corruption.

⁷ <http://www.transparency.org/cpi2014/results>

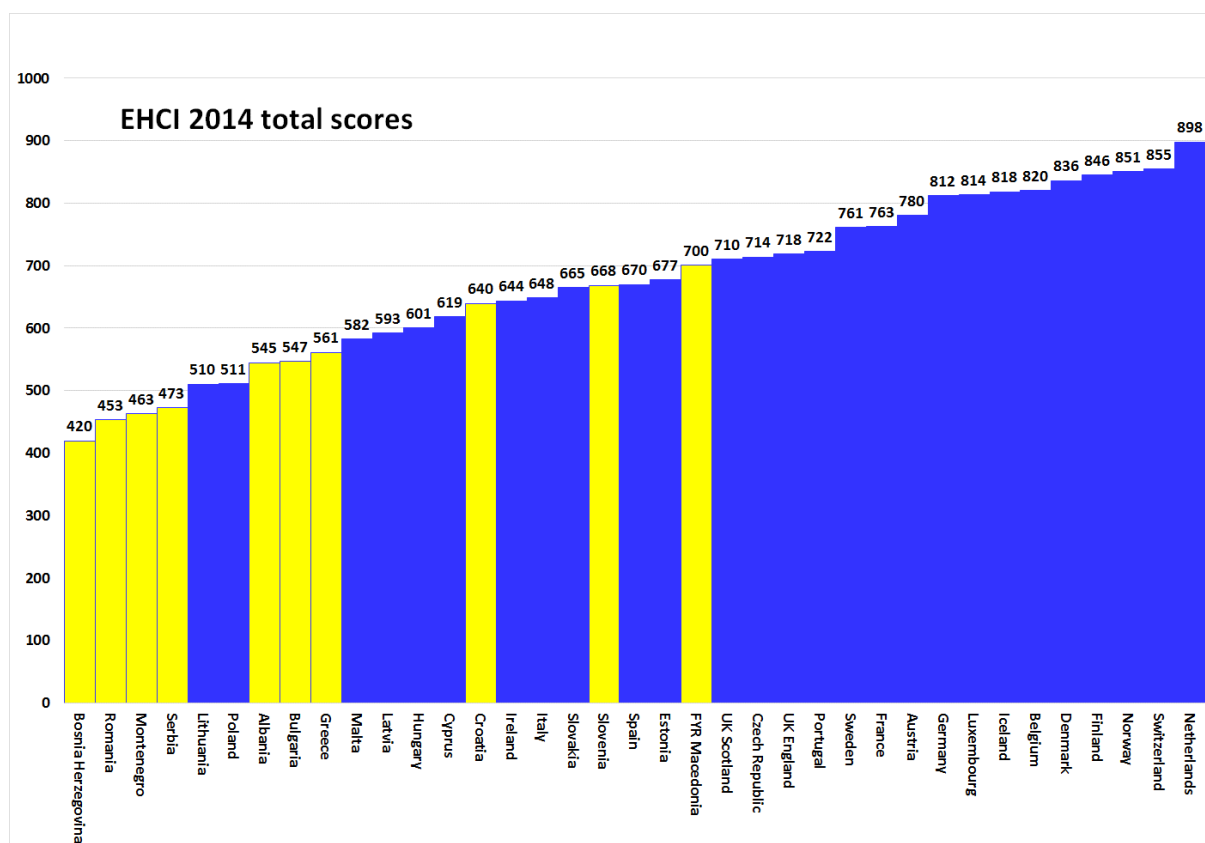


Figure 1.2-2 EHCI 2014 total scores with Balkan states in yellow.

1.4.1 Former Yugoslav Republic Of Macedonia (FYROM)

FYROM remained at peace through the Yugoslav wars of the early 1990s. However, it was seriously destabilised by the Kosovo War in 1999, when an estimated 360,000 ethnic Albanian refugees from Kosovo took refuge in the country, most leaving fairly soon after.

FYROM is the absolute "Rocket of the Year", ranking 16th in the EHCI 2014 with a score of 700 points, up from 555 points and 27th place in 2013.

This also makes the country the "EHCI Rocket of all Time"; no country ever gained 11 positions in the ranking in only one year!

The country has made a remarkable breakthrough in electronic booking of appointments – since July 2013, any GP can call up the booking situation of any specialist or heavy diagnostic equipment in the country in Real Time with the patient sitting in the room, and book anywhere in the country with a few mouse clicks. This has essentially eliminated waiting times, provided that the patient is willing to travel a short distance (the entire country measures approximately 200 km by 130, with the capital Skopje located fairly centrally). It seems that patients have caught on, with FYROM receiving top scores for accessibility.

Much of this can probably be attributed to firm leadership, with the Minister of Health declaring "I want that system up and running on July 1, 2013; *basta!*"

The FYROM referral/booking system is well worth a study trip from other countries! The message to all other European ministers and other persons in charge of healthcare systems: "Go and do likewise."⁸ This advice does not exclude that e-health implementation most often

⁸ Luke 10:37

may need some time to settle and that down-sides can occur over time, before patients get used to their newborn power and choice.

The area, where FYROM still has a way to go is on actual medical treatment results. There is no quick fix for this; even with very determined leadership, it will probably be a matter of ~5 years to produce significant improvement.

1.4.2 Albania

30th place, 545 points. Albania is included in the EHCI at the request of the Albanian Ministry of Health. Albania, as can be seen in Section 5.1, does have very limited healthcare resources. The country avoids ending up last chiefly due to a very strong performance on Access, where patient organizations also in 2014 confirmed the official ministry version that waiting times essentially do not exist.

The ministry explanation for this was that “Albanians are a hardy lot, who only go to the doctor when carried there”, *i.e.* underutilization of the healthcare system. This is an oversimplification; Albanians visit their primary care doctor more than twice as often as Swedes (3.9 visits per year *vs.* 1.7)!

Albania shares one problem with all the Balkan states, with some exception for Slovenia: it is difficult to evaluate which healthcare services are accessible without under-the-table payment.

1.4.3 Bosnia and Herzegovina (“B&H”)

B&H is a country in great difficulties. As Republica Srpska, with its unofficial capital of Banja Luka, has control over almost half the country, it is hard for the “federal” government in Sarajevo to influence very much at all. B&H is occupying last place in the EHCI 2014, largely due to a massive number of **n.a.** scores. The survey deployed as part of the EHCI research failed to produce a single response from the country. However, the general state of things in B&H makes it probable that the rank would be the same, had data been available.

Brain drain is also a severe problem for B&H, as for many other Balkan countries: an obvious choice for young doctors when seeking employment is to emigrate to prosperous parts of the EU, with Germany being perceived as the main attraction.

1.4.4 Serbia

33rd place, 473 points.

After Serbia’s first inclusion in the EHCI in 2012 (finishing last), there were some very strong reactions from the Ministry of Health in Belgrade, claiming that the scores were unfair. Interestingly, there also were reactions from organisations of medical professionals in Serbia claiming that the Serbian scores were inflated, and that the EHCI did not take corruption in healthcare systems seriously enough. The only directly corruption-related indicator is Under-the-table payments to doctors, where Serbia does score Red. Unfortunately, Serbia finished last also in 2013.

After several years, there was a change of government in Serbia after the April 2014 election. The new government seems to be making a sincere effort at reforming the healthcare system. A palpable circumstance is the appointment of the Chairperson of “Doctors Against Corruption” as Special Adviser to the Ministry of Health.

In 2014, Serbia has behind it in the EHCI not only Bosnia & Herzegovina and Montenegro, but has also overtaken Romania. However, it still has a long way to go to catch up with the more developed Balkan states.

1.4.5 Montenegro

34th place, 463 points. Battling with Serbia and Romania to avoid 35th (second last) place in the EHCI. Used to remain in union with Serbia until 2006. The healthcare situation is most likely very similar to that of Serbia. One circumstance favouring Montenegro is a massive influx of Russian capital, which at the time of writing this report might be endangered by sanctions against Russian capitalists after the seizure of Crimea.

Montenegrin healthcare is showing promise: the score on Medical Outcomes is good, compared with that of neighbouring countries. The country has only 650 000 inhabitants, making it possible for reforms to take effect rapidly.

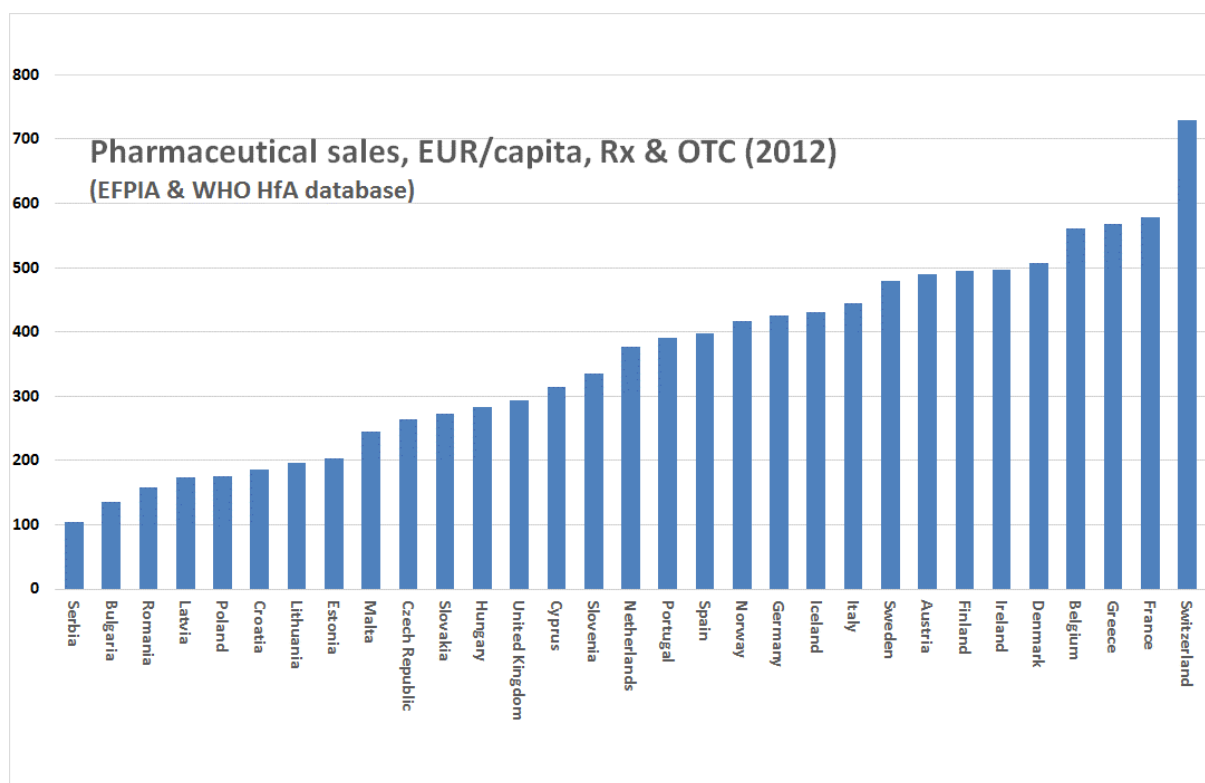
1.4.6 Greece

In 28th place (not counting Scotland), down from 22nd in 2012, 25th in 2013.

Greece was reporting a dramatic decline in healthcare spend per capita: down 28 % between 2009 and 2011, but a 1% increase in 2012! This is a totally unique number for Europe; also in countries which are recognized as having been hit by the financial crisis, such as Portugal, Ireland, Spain, Italy, Estonia, Latvia, Lithuania *etc*, no other country has reported a more severe decrease in healthcare spend than a temporary setback in the order of < 10 % (see Appendix 2). There is probably a certain risk that the 28% decrease is as accurate as the budget numbers, which got Greece into the Euro.

Greece has markedly changed its traditional habit as eager and early adopter of novel pharmaceuticals to become much more restrictive. However, the graph below shows that as late as 2012, Greece still had the 3rd highest *per capita* consumption of pharmaceuticals in Europe, counted in monetary value! Part of the explanation for this is unwillingness to accept generic drugs. It would seem that pharmacists (and doctors?) are not keen on communicating to patients that generics are equal to the branded drugs.

What has changed in Greece is the readiness to adopt *new* drugs. As Indicator 6.5 (new arthritis medication) shows, Greece has in some cases radically changed its previous generous attitude to the introduction of novel, expensive pharmaceuticals.



Greece leads Europe by a wide margin in the number of doctors *per capita* (below), and also has the highest number of pharmacists *per capita*. Still the picture of Greek healthcare, painted by the patient organisation responses, does not at all indicate any sort of healthy competition to provide superior healthcare services.

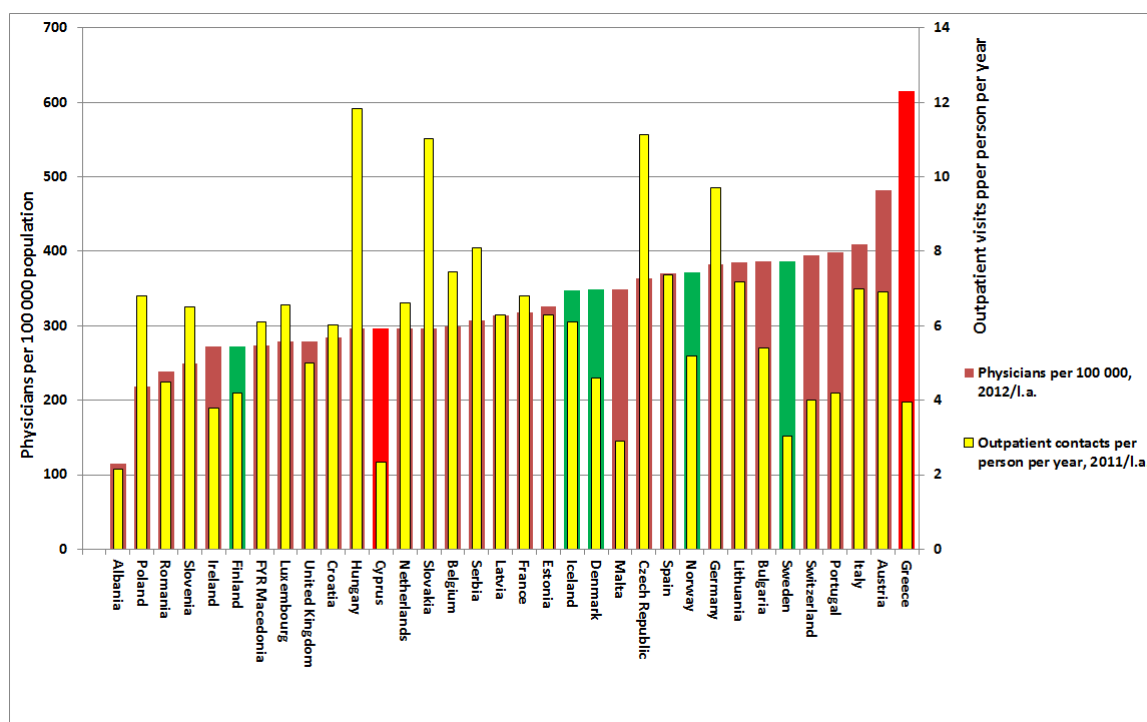


Figure 1.1.12 Physicians per 100 000 population (broad bars) and Number of doctor appointments *per capita* (yellow narrow bars).

It would seem almost supernatural that Greece can keep having the large number of doctors and pharmacists (a report from 2013 still gives >6 doctors per 1000 population), unless these have taken very substantial reduction of income.

It deserves to be mentioned that the indicators on Outcomes (treatment results) do not show a worsening of results for Greece.

1.4.7 Romania

35th place, 453 points.

Romania does have severe problems with the management of its entire public sector. In healthcare, discrimination of minority groups such as romani (3½ - 4% of the population) shows as poor Outcomes ratios.

Also, Albania, Romania and Bulgaria are suffering from an antiquated healthcare structure, with a high and costly ratio of in-patient care over out-patient care (see Figure below).

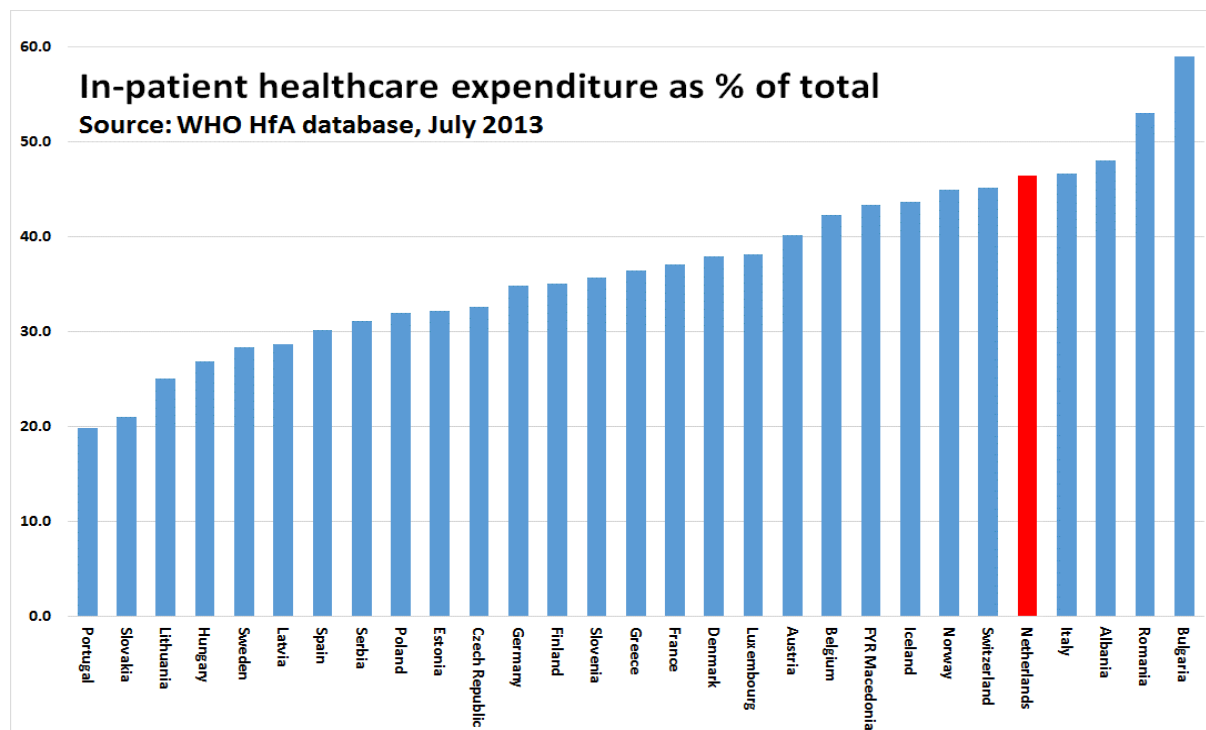


Figure 1.2.7 The higher the share of in-patient care, the more antiquated the healthcare provision structure. If Dutch, Swiss and Norwegians prefer long hospital admissions, they can afford it; Bulgaria, Romania and Albania cannot! They should receive professional support to restructure their healthcare services!

1.4.8 Bulgaria

29th place, 547 points.

Bulgaria made a remarkable advance between 2012 and 2013 by the power of patient organisations in 2013 giving much more positive responses on survey questions on the EHCI sub-discipline Accessibility. Such an improvement is very difficult to achieve if it is not the result of a system reform such as the FYROM booking/referral system. The HCP team is still a shade unconvinced that the good accessibility numbers in 2013 – 14 are accurate.

1.4.9 Croatia

23rd place, 640 points. Croatia (and even more Slovenia) were the remarkable success stories among the ex-Yugoslavian countries, until the Macedonian wonder in 2014. In spite of a GDP/capita, which is still modest by Western European standards, Croatian healthcare does excel also at advanced and costly procedures such a kidney transplants: the Croatian number of ~50 transplants per million population is among the top countries of Europe.

1.4.10 Slovenia

19th place, 668 points.

When the HCP team first visited the Slovenian Ministry of Health in 2006, the MoH representatives proudly stated “We are not a Balkan state – we are an Austrian province, which had bad luck in 1918!”

Slovenia has a GDP/capita which is 3 – 4 times that of the other ex-Yugoslav countries (except Croatia at ~75% of the Slovenian GDP). This difference cannot have been created in just over two decades – Tito’s Yugoslavia must have had significant internal inequalities!

Slovenia’s 19th place is a respectable performance considering the country’s recent history. What is more remarkable is that with a population of only 2 million, there is a possibility for a limited number of skilled and dedicated professionals to make a difference in certain medical specialities. This has been observed in hepatitis, where Slovenia ranked #2 in Europe in the 2012 Euro Hepatitis Index⁹, and also in diabetes, Slovenia ranking #6 in the 2014 Euro Diabetes Index¹⁰.

1.5 Financial crisis impact on European healthcare?

This is one of the most frequent questions asked to HCP staff in meetings with healthcare decision makers. This issue has been given special attention in the work on the EHCI since 2012.

The EHCI 2013 introduced more indicators in the sub-disciplines Range and reach of services and Pharmaceuticals, plus the new sub-discipline Prevention (totally 48 indicators vs. 42 in 2012). The more indicators introduced, the more difficult it becomes for countries to reach very high scores, as no country is excellent at everything. If the number of indicators were to be increased dramatically, countries would tend to migrate towards the “centre of gravity”, which is 667 points. Also, with the exception of a few indicators, the score distribution is strictly relative, why it is difficult to use the straight mean score to detect differences over time.

However, the overall total scores seem to indicate what could be a macro effect of the financial crisis. In the total scores shown in Figure 4.1 below, the top end of the ranking in 2014 shows a concentration of the wealthier countries, which is more obvious than in any previous edition. It would seem that these countries have been able to avoid the (rather modest) effects of the financial crisis, which have affected less affluent countries.

This can be interpreted that the financial crisis has resulted in a slight but noticeable increase of *inequity* of healthcare services across Europe.

When results are analysed at indicator level, some tendencies seem to be detectable:

1.5.1 Outcomes quality keeps improving

Indicators such as Cancer Survival or Infant Mortality keep showing improvement over time. This is true also for countries such as the Baltic states, which have undergone a financial “steel bath”, in every way comparable with that hit southern Europe or Ireland. As an example, both Latvia and Lithuania have shown remarkable improvement in Infant Mortality right during the period of the worst austerity measures.

⁹ <http://www.healthpowerhouse.com/files/euro-hepatitis-index-2012/Report-Hepl-HCP-121104-2-w-Cover.pdf>

¹⁰ <http://www.healthpowerhouse.com/files/EDI-2014/EDI-2014-report.pdf>

This is probably a positive effect of doctors being notoriously difficult to manage – signals from managers and/or politicians are frequently not listened to very attentively. This would be particularly true about providing shoddy medical quality as this would expose doctors to peer criticism, which in most cases is a stronger influencing factor than management or budget signals.

1.5.2 Delays and/or restrictiveness on the introduction of novel pharmaceuticals

As is shown by Indicators 6.3 – 6.5 (section 8.10.6), saving on the introduction/deployment of drugs, particularly novel, patented (expensive) drugs, seems to be a very popular tactic for containing healthcare costs in many countries. This has been observed also in previous HCP Indices¹¹.

This is particularly obvious for Greece – a country, which traditionally has been a quick and ready adopter of novel drugs. The Greek public bill for prescription drugs was 8 billion euro as late as 2010, for 11 million people. As a comparison, the Swedish corresponding number was 4 billion euros for 9½ million people – and drug prices have traditionally been *lower* in Greece. That Greek readiness to introduce new drugs has dropped dramatically, along with the introduction of generic substitution.

Still, the Greek drug consumption by monetary value was the third highest in Europe as late as 2012!

1.6 BBB; Bismarck Beats Beveridge – now a permanent feature

The Netherlands example seems to be driving home the big, final nail in the coffin of Beveridge healthcare systems, and the lesson is clear: Remove politicians and other amateurs from operative decision-making in what might well be the most complex industry on the face of the Earth: Healthcare! Beveridge systems seem to be operational with good results only in small population countries such as Iceland, Denmark and Norway.

1.6.1 So what are the characteristics of the two system types?

All public healthcare systems share one problem: Which technical solution should be used to funnel typically 8 – 11 % of national income into healthcare services?

Bismarck healthcare systems: Systems based on social insurance, where there is a multitude of insurance organisations, Krankenkassen etc, who are *organisationally independent* of healthcare providers.

Beveridge systems: Systems where financing and provision are handled within one organisational system, *i.e.* financing bodies and providers are wholly or partially within one organisation, such as the NHS of the UK, counties of Nordic states etc.

For more than half a century, particularly since the formation of the British NHS, the largest Beveridge-type system in Europe, there has been intense debating over the relative merits of the two types of system.

Already in the EHCI 2005, the first 12-state pilot attempt, it was observed that “In general, countries which have a long tradition of plurality in healthcare financing and provision, *i.e.* with a consumer choice between different insurance providers, who in turn do not discriminate between providers who are private for-profit, non-profit or public, show common features not only in the waiting list situation ...”

¹¹ The Euro Hepatitis Index 2012, <http://www.healthpowerhouse.com/files/euro-hepatitis-index-2012/Report-HepI-HCP-121104-2-w-Cover.pdf>

Looking at the results of the EHCI 2006 – 2014, it is very hard to avoid noticing that the top consists of dedicated Bismarck countries, with the small-population and therefore more easily managed Beveridge systems of the Nordic countries squeezing in. Large Beveridge systems seem to have difficulties at attaining really excellent levels of customer value. The largest Beveridge countries, the U.K., Spain and Italy, keep clinging together in the middle of the Index. There could be (at least) two different explanations for this:

1. Managing a corporation or organisation with 100 000+ employees calls for considerable management skills, which are usually very handsomely rewarded. Managing an organisation such as the English NHS, with close to 1½ million staff, who also make management life difficult by having a professional agenda, which does not necessarily coincide with that of management/administration, would require absolutely world class management. It is doubtful whether public organisations offer the compensation and other incentives required to recruit those managers.
2. In Beveridge organisations, responsible both for financing and provision of healthcare, there would seem to be a risk that the loyalty of politicians and other top decision makers could shift from being primarily to the customer/patient. Primary loyalty could shift in favour of the *organisation* these decision makers, with justifiable pride, have been building over decades, with justifiable pride, have been building over decades (or possibly to aspects such as the job-creation potential of such organisations in politicians' home towns).

2. Introduction

The Health Consumer Powerhouse (HCP) has become a centre for visions and action promoting consumer-related healthcare in Europe. "Tomorrow's health consumer will not accept any traditional borders", we declared in last year's report, but it seems that this statement is already becoming true; the 2011 EU Directive for patients' rights to cross-border care is an excellent example of this trend. In order to become a powerful actor, building the necessary reform pressure from below, the consumer needs access to knowledge to compare health policies, consumer services and quality outcomes. The Euro Health Consumer Indexes are efforts to provide healthcare consumers with such tools. Not only do consumers gain from the transparency of benchmarking, the quality and function of healthcare systems improve as outcomes are displayed and analysed in an open, systematic, and repeated fashion.

2.1 Background

Since 2004 the HCP has been publishing a wide range of comparative publications on healthcare in various countries. First, the Swedish Health Consumer Index in 2004 (also in an English translation). By ranking the 21 county councils by 12 basic indicators concerning the design of "systems policy", consumer choice, service level and access to information we introduced benchmarking as an element in consumer empowerment. In two years time this initiative had inspired – or provoked – the Swedish Association of Local Authorities and Regions together with the National Board of Health and Welfare to start a similar ranking, making public comparisons an essential Swedish instrument for change.

For the pan-European indexes in 2005 – 2008, HCP aimed to basically follow the same approach, *i.e.* selecting a number of indicators describing to what extent the national healthcare systems are "user-friendly", thus providing a basis for comparing different national systems.

Furthermore, since 2008 the HCP has enlarged the existing benchmarking program considerably:

- In January 2008, the Frontier Centre and HCP released the first Euro-Canada Health Consumer Index, which compared the health care systems in Canada and 29 European countries. The 2009 edition was released in May, 2009.
- The Euro Consumer Heart Index, launched in July 2008, compares 29 European cardiovascular healthcare systems in five categories, covering 28 performance indicators.
- The first edition of Canada Health Consumer Index was released in September 2008 in co-operation with Frontier Centre for Public Policy, examining healthcare from the perspective of the consumer at the provincial level, and repeated 2009 and 2010.
- The Euro Consumer Diabetes Index, launched in September 2008, provides the first ranking of European diabetes healthcare services across five key areas: Information, Consumer Rights and Choice; Generosity, Prevention; Access to Procedures and Outcomes.
- Other Indexes published include the Euro HIV Index 2009, the Euro Headache Index 2012 and the Euro Hepatitis Index 2012.
- This year's edition of Euro Health Consumer Index covers 48 healthcare performance indicators for 35 countries.

Though still a somewhat controversial standpoint, HCP advocates that quality comparisons within the field of healthcare is a true win-win situation. To the consumer, who will have a better platform for informed choice and action. To governments, authorities and providers, the sharpened focus on consumer satisfaction and quality outcomes will support change. To media, the ranking offers clear-cut facts for consumer journalism with some drama into it. This goes not only for evidence of shortcomings and method flaws but also illustrates the potential for improvement. With such a view the EHCI is designed to become an important benchmark system supporting interactive assessment and improvement.

As we heard one of the Ministers of health saying when seeing his country's preliminary results: "It's good to have someone still telling you: you could do better."

2.2 Index scope

The aim has been to select a limited number of indicators, within a definite number of evaluation areas, which in combination can present a telling tale of how the healthcare consumer is being served by the respective systems.

2.3 About the author

Project Management for the EHCI 2014 has been executed by **Arne Björnberg, Ph.D.**, Chairman and Chief Operating Officer of the Health Consumer Powerhouse.

Dr. Björnberg has previous experience from Research Director positions in Swedish industry. His experience includes having served as CEO of the Swedish National Pharmacy Corporation ("Apoteket AB"), Director of Healthcare & Network Solutions for IBM Europe Middle East & Africa, and CEO of the University Hospital of Northern Sweden ("Norrlands Universitetssjukhus", Umeå).

Dr. Björnberg was also the project manager for the EHCI 2005 – 2013 projects, the Euro Consumer Heart Index 2008 and numerous other Index projects.

3. Countries involved

In 2005, the EHCI started with a dozen countries and 20 indicators; this year's index already includes all 28 European Union member states, plus Norway and Switzerland, the candidate country FYR Macedonia, Albania, Iceland and Serbia, plus Montenegro and Bosnia & Herzegovina.

As an experiment, Scotland, having its own National Health Service, has been separated out as a country of its own in the EHCI 2013 - 2014. It is evident from the results (England 718 points, Scotland 710 points) that separate bureaucracies is not a key to different healthcare performance. There also are several areas of healthcare, where regional differences within England or Scotland are greater than the differences observed between the two geographies taken as separate countries.

4. Results of the Euro Health Consumer Index 2014

EuroHealth Consumer Index 2014

Sub-discipline	Indicator	Albania	Austria	Belgium	Bosnia Herzegovina	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	FYR Macedonia	Germany	Greece	Hungary	Iceland	Ireland
1. Patient rights and information	1.1 Healthcare law based on Patients' Rights				n.a.														
	1.2 Patient organisations involved in decision making				n.a.														
	1.3 No-fault malpractice insurance				n.a.														
	1.4 Right to second opinion				n.a.														
	1.5 Access to own medical record				n.a.														
	1.6 Registry of bona fide doctors				n.a.														
	1.7 Web or 24/7 telephone HC info with interactivity				n.a.														
	1.8 Cross-border care seeking financed from home	n.ap.			n.ap.									n.ap.				n.ap.	
	1.9 Provider catalogue with quality ranking				n.a.													n.ap.	
	1.10 EPR penetration				n.a.														
	1.11 Patients' access to on-line booking of appointments?				n.a.														
	1.12 e-prescriptions				n.a.														
	Subdiscipline weighted score	92	125	100	54	79	104	83	100	142	121	133	117	138	121	58	96	138	83
2. Accessibility (waiting times for treatment)	2.1 Family doctor same day access				n.a.														
	2.2 Direct access to specialist				n.a.														
	2.3 Major elective surgery <90 days				n.a.														
	2.4 Cancer therapy < 21 days				n.a.														
	2.5 CT scan < 7 days				n.a.														
	2.6 A&E waiting times				n.a.														
	Subdiscipline weighted score	200	200	225	75	163	163	150	175	200	150	175	175	213	188	138	163	163	88
3. Outcomes	3.1 Decrease of CVD deaths																		
	3.2 Decrease of stroke deaths																		
	3.3 Infant deaths																		
	3.4 Cancer survival																		
	3.5 Preventable Years of Life Lost																		
	3.6 MRSA infections				n.a.														
	3.7 Abortion rates																		
	3.8 Depression				n.a.														
	Subdiscipline weighted score	104	177	198	115	125	156	177	177	198	177	219	198	104	229	156	115	229	198
4. Range and reach of services provided	4.1 Equity of healthcare systems																		
	4.2 Cataract operations per 100 000 age 65+	n.a.			n.a.														
	4.3 Kidney transplants per million pop.																		
	4.4 Is dental care included in the public healthcare offering?				n.a.														
	4.5 Informal payments to doctors				n.a.														
	4.6 Long term care for the elderly				n.a.			n.a.											
	4.7 % of dialysis done outside of clinic																		
	4.8 Caesarean sections																		
	Subdiscipline weighted score	50	119	138	69	56	100	75	119	131	119	138	113	94	94	69	88	125	100
5. Prevention	5.1 Infant 8 disease vaccination																		
	5.2 Blood pressure																		
	5.3 Smoking Prevention																		
	5.4 Alcohol																		
	5.5 Physical activity	n.a.			n.a.														
	5.6 HPV vaccination				n.a.														
	5.7 Traffic deaths																		
	Subdiscipline weighted score	65	83	83	60	71	60	71	71	89	54	95	89	95	95	83	83	107	89
6. Pharmaceuticals	6.1 Rx subsidy																		
	6.2 Layman-adapted pharmacopoeia?				n.a.														
	6.3 Novel cancer drugs deployment rate	n.a.			n.a.									n.a.					
	6.4 Access to new drugs (time to subsidy)				n.a.	n.a.	n.a.							n.a.				n.a.	
	6.5 Arthritis drugs	n.a.			n.a.														
	6.6 Metformin use	n.a.			n.a.													n.a.	
	6.7 Antibiotics/capita	n.a.																	
	Subdiscipline weighted score	33	76	76	48	52	57	62	71	76	57	86	71	57	86	57	57	57	86
Total score		545	780	820	420	547	640	619	714	836	677	846	763	700	812	561	601	818	644
Rank		30	10	6	36	29	23	24	15	5	17	4	11	16	9	28	25	7	22

EuroHealth Consumer Index 2014

Sub-discipline	Indicator	Italy	Latvia	Lithuania	Luxembourg	Malta	Montenegro	Netherlands	Norway	Poland	Portugal	Romania	Serbia	Slovakia	Slovenia	Spain	Sweden	Switzerland	UK England	UK Scotland
1. Patient rights and information	1.1 Healthcare law based on Patients' Rights						n.a.													
	1.2 Patient organisations involved in decision making																			
	1.3 No-fault malpractice insurance						n.a.													
	1.4 Right to second opinion																			
	1.5 Access to own medical record																			
	1.6 Registry of bona fide doctors																			
	1.7 Web or 24/7 telephone HC info with interactivity						n.a.													
	1.8 Cross-border care seeking financed from home						n.ap.		n.ap.				n.ap.					n.ap.		
	1.9 Provider catalogue with quality ranking					n.ap.	n.a.													
	1.10 EPR penetration						n.a.													
	1.11 Patients' access to on-line booking of appointments?																			
	1.12 e-prescriptions																			
	Subdiscipline weighted score	104	113	104	108	88	71	146	142	96	133	83	83	113	96	96	117	117	129	108
2. Accessibility (waiting times for treatment)	2.1 Family doctor same day access																			
	2.2 Direct access to specialist																			
	2.3 Major elective surgery <90 days																			
	2.4 Cancer therapy < 21 days						n.a.													
	2.5 CT scan < 7days																			
	2.6 A&E waiting times																			
	Subdiscipline weighted score	138	150	100	188	125	113	188	138	100	163	100	113	175	113	100	88	225	100	125
3. Outcomes	3.1 Decrease of CVD deaths																			
	3.2 Decrease of stroke deaths																			
	3.3 Infant deaths																			
	3.4 Cancer survival																			
	3.5 Preventable Years of Life Lost																			
	3.6 MRSA infections						n.a.													
	3.7 Abortion rates				n.a.															
	3.8 Depression																			
	Subdiscipline weighted score	167	125	125	219	115	125	240	240	104	188	83	83	135	198	188	219	229	177	177
4. Range and reach of services provided	4.1 Equity of healthcare systems																			
	4.2 Cataract operations per 100 000 age 65+						n.a.													
	4.3 Kidney transplants per million pop.																			
	4.4 Is dental care included in the public healthcare offering?						n.a.													
	4.5 Informal payments to doctors																			
	4.6 Long term care for the elderly						n.a.								n.a.					
	4.7 % of dialysis done outside of clinic																			
	4.8 Caesarean sections																			
	Subdiscipline weighted score	88	81	81	131	113	56	150	144	88	94	63	69	88	106	113	150	113	131	125
5. Prevention	5.1 Infant 8-disease vaccination																			
	5.2 Blood pressure																			
	5.3 Smoking Prevention																			
	5.4 Alcohol																			
	5.5 Physical activity						n.a.													
	5.6 HPV vaccination						n.a.													
	5.7 Traffic deaths																			
	Subdiscipline weighted score	95	71	48	101	95	65	89	107	71	83	71	77	83	89	107	107	95	95	89
6. Pharmaceuticals	6.1 Rx subsidy																			
	6.2 Layman-adapted pharmacopoeia?						n.a.													
	6.3 Novel cancer drugs deployment rate						n.a.													
	6.4 Access to new drugs (time to subsidy)		n.a.	n.a.			n.a.													
	6.5 Arthritis drugs						n.a.													
	6.6 Metformin use						n.a.													
	6.7 Antibiotics/capita																			
	Subdiscipline weighted score	57	52	52	67	48	33	86	81	52	62	52	48	71	67	67	81	76	86	86
Total score		648	593	510	814	582	463	898	851	511	722	453	473	665	668	670	761	855	718	710
Rank		21	26	32	8	27	34	1	3	31	13	35	33	20	19	18	12	2	14	16

4.1 Results Summary

In order to help a comparison over time, the Rank numbers $\geq$ Rank 16 (from UK Scotland down) in the Index matrix above do not include Scotland.

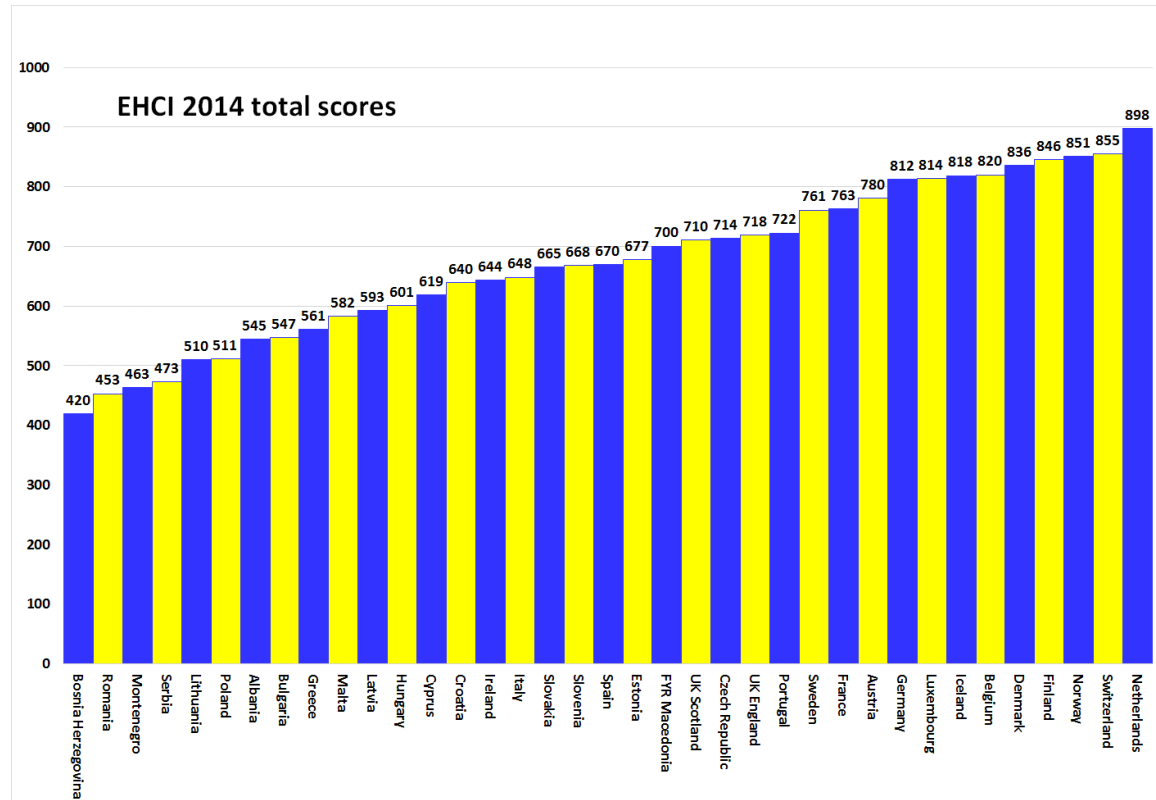


Figure 4.1 EHCI 2014 total scores.

This seventh attempt at creating a comparative index for national healthcare systems has confirmed that there is a group of EU member states, which all have good healthcare systems seen from the customer/consumer's point of view.

The scoring has intentionally been done in such a way that the likelihood that two states should end up sharing a position in the ranking is almost zero. It must therefore be noted that great efforts should not be spent on in-depth analysis of why one country is in 13th place, and another in 16th. Very subtle changes in single scores can modify the internal order of countries, particularly in the middle of the ranking list.

The EHCI 2014 total ranking of healthcare systems shows The Netherlands again widening the gap to country #2 from 19 points in 2013 to 43 points in 2014, (in 2012, the margin was 50 points), scoring 898 points out of 1000, an EHCI all time high. Beginning from Switzerland (855 points) down, the EHCI 2014 shows competition at the top getting much harder with no less than 9 countries scoring above 800 points.

The changes in rank should not at all be dismissed as an effect of changing indicators, of which there are 48 in the EHCI 2014, which is the same number as in the previous year. The Netherlands is the only country which has consistently been among the top three in the total ranking of any European Index the Health Consumer Powerhouse has published since 2005. The Netherlands is sub-discipline winner, or joint winner, in four

of the six sub-disciplines of the EHCI 2014. The Dutch healthcare system does not seem to have any really weak spots in the other sub-disciplines, except possibly some scope for improvement regarding the waiting times situation, where some central European states excel. Normally, the HCP takes care to state that the EHCI is limited to measuring the “consumer friendliness” of healthcare systems, *i.e.* does not claim to measure which European state has the *best* healthcare system across the board.

However, the fact that it seems very difficult to build an Index of the HCP type without ending up with The Netherlands on the medallists’ podium, creates a strong temptation to actually claim that the winner of the EHCI 2014 could indeed be said to have “the best healthcare system in Europe”. There should be a lot to learn from looking deeply into the Dutch progress!

Switzerland has for a long time had a reputation for having an excellent healthcare system, and it therefore comes as no surprise that the more profound research which eliminated most **n.a.** scores results in a prominent position in the EHCI.

Bronze medallists are Norway at 851 points; the only country to score All Green on the Outcomes indicators.

Finland (4th) has made a remarkable advance, and seems to have rectified its traditional waiting time problems!

The Swedish score for technically excellent healthcare services is, as ever, dragged down by the seemingly never-ending story of access/waiting time problems, in spite of national efforts such as *Vårdgaranti* (National Guaranteed Access to Healthcare); in 2014, Sweden drops to 12th place with 761 points.

In southern Europe, Spain and Italy provide healthcare services where medical excellence can be found in many places. Real excellence in southern European healthcare seems to be a bit too much dependent on the consumers' ability to afford private healthcare as a supplement to public healthcare. Also, both Spain and Italy show large regional variation, which tends to result in a lot of Amber scores for the countries.

Some eastern European EU member systems are doing surprisingly well, particularly the Czech Republic and Estonia, considering their much smaller healthcare spend in Purchasing Power adjusted dollars per capita. However, readjusting from politically planned to consumer-driven economies does take time.

Consumer and patient rights are improving. In a growing number of European countries there is healthcare legislation explicitly based on patient rights and a functional access to your own medical record is becoming standard. Hospital/clinic catalogues with quality ranking used to be confined to two – three countries for years; the 2014 number of nine countries hopefully is a sign that something is happening in this area. Medical travel supported by the new patient mobility directive can accelerate the demand for performance transparency. After the cross-border directive, the criteria for this indicator have been tightened to reflect the implementation of this directive. Not unexpectedly, in 2013 the only countries to score Green were The Netherlands and Luxembourg, who have been allowing cross-border care seeking for years.

Generally European healthcare continues to improve but medical outcomes statistics is still appallingly poor in many countries. This is not least the case regarding the number one killer condition: cardiovascular diseases, where data for one very vital parameter;

30-day case fatality for hospitalized heart infarct patients, had to be compiled from several disparate sources.

If healthcare officials and politicians took to looking across borders, and to "stealing" improvement ideas from their European colleagues, there would be a good chance for a national system to come much closer to the theoretical top score of 1000. As a prominent example; if Sweden could achieve a Belgian waiting list situation, that alone would suffice to lift Sweden to compete with The Netherlands at ~880 points!

A further discussion on results of states and the changes observed over time can be found in [Chapter 6: Important trends over the six years](#).

4.1.1 Country scores

There are no countries, which excel across the entire range of EHCI indicators. The national scores seem to reflect more of "national and organisational cultures and attitudes", rather than mirroring how large resources a country is spending on healthcare. The cultural streaks have in all likelihood deep historical roots. Turning a large corporation around takes a couple of years – turning a country around can take decades!

4.1.2 Results in "Hexathlon"

The EHCI 2014 is made up of six sub-disciplines. As no country excels across all aspects of measuring a healthcare system, it can therefore be of interest to study how the 37 countries rank in each of the five parts of the "pentathlon". The scores within each sub-discipline are summarized in the following table:

Sub-discipline	Albania	Austria	Belgium	Bosnia Herzegovina	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	FYR Macedonia	Germany	Greece	Hungary	Iceland	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Montenegro	Netherlands	Norway	Poland	Portugal	Romania	Serbia	Slovakia	Slovenia	Spain	Sweden	Switzerland	UK England	UK Scotland
1. Patient rights and information	92	125	100	54	79	104	83	100	142	121	133	117	138	121	58	96	138	83	104	113	104	108	88	71	146	142	96	133	83	83	113	96	96	117	117	129	108
2. Accessibility	200	200	225	75	163	163	150	175	200	150	175	175	213	188	138	163	163	88	138	150	100	188	125	113	188	138	100	163	100	113	175	113	100	88	225	100	125
3. Outcomes	104	177	198	115	125	156	177	177	198	177	219	198	104	229	156	115	229	198	167	125	125	219	115	125	240	240	104	188	83	83	135	198	188	219	229	177	177
4. Range and reach of services	50	119	138	69	56	100	75	119	131	119	138	113	94	94	69	88	125	100	88	81	81	131	113	56	150	144	88	94	63	69	88	106	113	150	113	131	125
5. Prevention	65	83	83	60	71	60	71	71	89	54	95	89	95	95	83	83	107	89	95	71	48	101	95	65	89	107	71	83	71	77	83	89	107	107	95	95	89
6. Pharmaceuticals	33	76	76	48	52	57	62	71	76	57	86	71	57	86	57	57	57	86	57	52	52	67	48	33	86	81	52	62	52	48	71	67	67	81	76	86	86
Total score	545	780	820	420	547	640	619	714	836	677	846	763	700	812	561	601	818	644	648	593	510	814	582	463	898	851	511	722	453	473	665	668	670	761	855	718	710
Rank	30	10	6	36	29	23	24	15	5	17	4	11	16	9	28	25	7	22	21	26	32	8	27	34	1	3	31	13	35	33	20	19	18	12	2	14	16

As the table indicates, the total top position of the Dutch healthcare system is to a great extent a product of an even performance across the sub-disciplines, very good medical quality improved Accessibility, which used to be a weaker point in previous years.

Runner-up Switzerland is in top position for Accessibility. with Belgium. No country scores All Green on Outcomes. The Swedish healthcare system would be a real top contender, scoring All Green on Range & Reach of Services along with the NL, were it not for an accessibility situation, which by Belgian or Swiss standards can only be described as abysmal.

Sub-discipline	Top country/countries	Score	Maximum score
1. Patient rights and information	Netherlands	146	150
2. Accessibility	Belgium, Switzerland	225!	225
3. Outcomes	Netherlands, Norway	240	250
4. Range and reach of services	Netherlands, Sweden	150!	150
5. Prevention	Iceland, Norway, Spain, Sweden	107	125
6. Pharmaceuticals	Finland, Germany, Ireland, Netherlands, UK England and Scotland	86	100

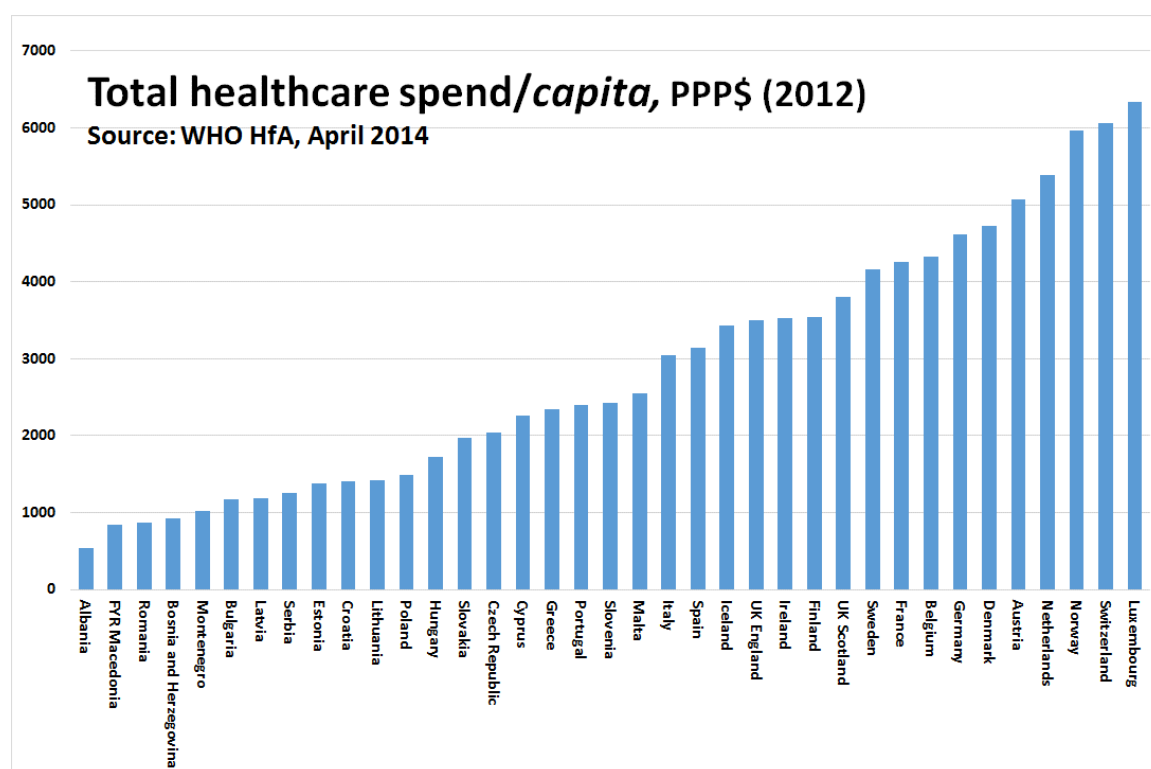
5. Bang-For-the-Buck adjusted scores

With all 28 EU member states and eight other European countries included in the EHCI project, it becomes apparent that the Index tries to compare states with very different financial resources. The annual healthcare spending, in PPP-adjusted (Purchasing Power Parity) US dollars, varies from less than \$600 in Albania to around \$6000 in Norway, Switzerland, and Luxembourg. Continental Western Europe and Nordic countries generally fall between \$3000 and \$5000. As a separate exercise, the EHCI 2013 has added a value for money-adjusted score: the Bang-For-the-Buck adjusted score, or “BFB Score”.

5.1 BFB adjustment methodology

It is not obvious how to do such an adjustment. If scores would be adjusted in full proportion to healthcare spend per capita, the effect would simply be to elevate all less affluent states to the top of the scoring sheet. This, however, would be decidedly unfair to the financially stronger states. Even if healthcare spending is PPP (Purchasing Power Parity) adjusted, it is obvious that also PPP dollars go a lot further to purchase healthcare services in member states, where the monthly salary of a nurse is € 200, than in states where nurse’s salaries exceed € 3500. For this reason, the PPP adjusted scores have been calculated as follows:

Healthcare spends per capita in PPP dollars have been taken from the WHO HfA database (April 2014; latest available numbers, almost all 2012) as illustrated in the graph below:

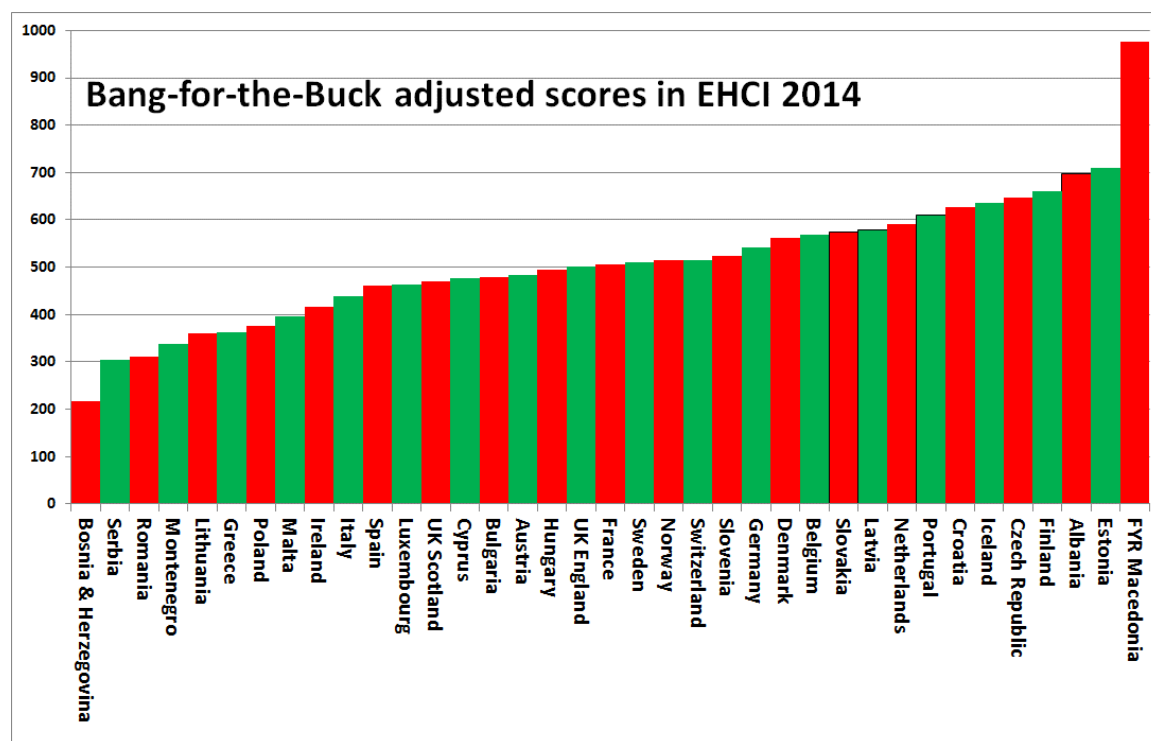


For each country has been calculated *the square root* of this number. The reason for this is that domestically produced healthcare services are cheaper roughly in proportion to the healthcare spend. The basic EHCI scores have been divided by this square root. For this exercise, the basic scoring points of 3, 2 and 1 have been replaced by 2, 1 and 0. In the basic EHCI, the minimum score is 333 and the maximum 1000. With 2, 1 and 0, this does not (or only very marginally) change the relative positions of the 37 countries, but is necessary for a value-for-money adjustment – otherwise, the 333 “free” bottom points have the effect of just catapulting the less affluent countries to the top of the list.

The score thus obtained has been multiplied by the arithmetic means of all 37 square roots (creating the effect that scores are normalized back to a similar numerical value *range* to the original scores).

5.2 Results in the BFB Score sheet

The outcome of the BFB exercise is shown in the graphic below. Even with the square root exercise described in the previous section, the effect is to dramatically elevate many less affluent nations in the scoring sheet.



The BFB scores, naturally, are to be regarded as somewhat of an academic exercise. Not least the method of adjusting to the square root of healthcare spent certainly lacks scientific support.

With the great score increase on reduced Waiting Times, FYR Macedonia is absolutely unstoppable in this exercise in 2014! Estonia has always been doing well in this analysis, and is now joined by Finland; Iceland has been well positioned since it was first included. It does seem that the supreme winner in the 2007 and 2008 BFB scores,

Estonia, keeps doing well within its financial capacity. It might be that the “steel bath” forced upon Estonia after the financial crisis helped cement the cost-effective streaks of Estonian healthcare.

For The Netherlands, the increase in healthcare spend is dragging down the BFB score compared with previous years. Portugal is definitely advancing in the BFB league.

Czech Republic and Croatia were doing well in the BFB Index already in 2012. The good positions of the Czech Republic and Croatia in the BFB sheet are probably not just artifacts; The Czech Republic seems to have a degree of fundamental stability and freedom from corruption in its healthcare system, which is relatively rare in CEE states. Croatia does have “islands of excellence” in its healthcare system, and might well become a popular country for “health tourism”; there are few other places where a state-of-the-art hip joint operation can be had for €3000.

One thing the authors find interesting is to see which countries top the list in the BFB Scores, and also do reasonably well in the original scores. Examples of such countries are primarily Finland, Iceland and The Netherlands.

6. Trends over the eight years

EHCI 2005 was a pilot attempt with only 12 countries and 20 indicators, and is hence not included in the longitudinal analysis.

In the responses on “Single Country Score Sheets” received from national bodies (ministries of health) in 2013, there was an unprecedented number of references to formal legislation as arguments for a higher score. A typical example was on indicator 6.4 “Time lag between registration of a drug and inclusion in subsidy system”, where several countries referring to legislation saying that the legal time limit for this is 180 days as an argument for an Amber score. In the EHCI, legislation as such is not the basis for an indicator score, as real life often shows significant implementation gaps for rules and regulations.

6.1 Score changes 2006 - 2014

From the point of view of a healthcare consumer, the overall situation is improving in most countries. However, not least after the introduction of nine new indicators in the 2012 index and a further seven new indicators in 2013, there are some countries which survive those extra tests on their healthcare systems, and some which suffer in the 2014 scores.

Among the “survivors” are the Netherlands, Switzerland, Norway, Iceland, Denmark, Belgium, Finland and Latvia. Among countries suffering in 2012 were Austria, Germany, Italy and Spain. However, as the “country trends” graph below is showing, the “shock-induced(?) grumpiness displayed in the survey responses from a number of patient organisations in 2012 seemed to have been relieved to a great extent in 2013. The most obvious example is Germany, made a giant rebound in 2013 from the deep dive it took in 2012, when patient organisations gave unexpectedly negative responses to the survey forming part of EHCI data.

A feature, which is more prominent in post-crisis 2014 than in previous years is a stratification between affluent and less affluent countries. After sovereign winners Netherlands, there is a cluster of 8 WE countries. These are followed by Austria, France and Sweden, wealthy countries which "do not quite make it" for different reasons. Below these three is a mid-section containing countries such as the three "Big Beveridge"; UK, Italy and Spain, together with the best of CEE, the Czech Republic and also "climber of the year", the FYR Macedonia. Another relative newcomer in this group is Portugal, which has been doing consistently well in recent years, reaching 13th place in 2014.

There is also a noticeable gap separating the mid-section from countries having a greater improvement potential; mainly CEE countries. This is a more obvious correlation with national wealth than has been observed in previous EHCI editions, which supports the hypothesis that the financial crisis has created a more noticeable "equity gap" for healthcare services in rich and poor European countries.

However, the performance of countries such as Portugal and FYR Macedonia shows that GDP/capita need not be a dominating factor. Outside Europe, this is proven by a country such as Cuba.

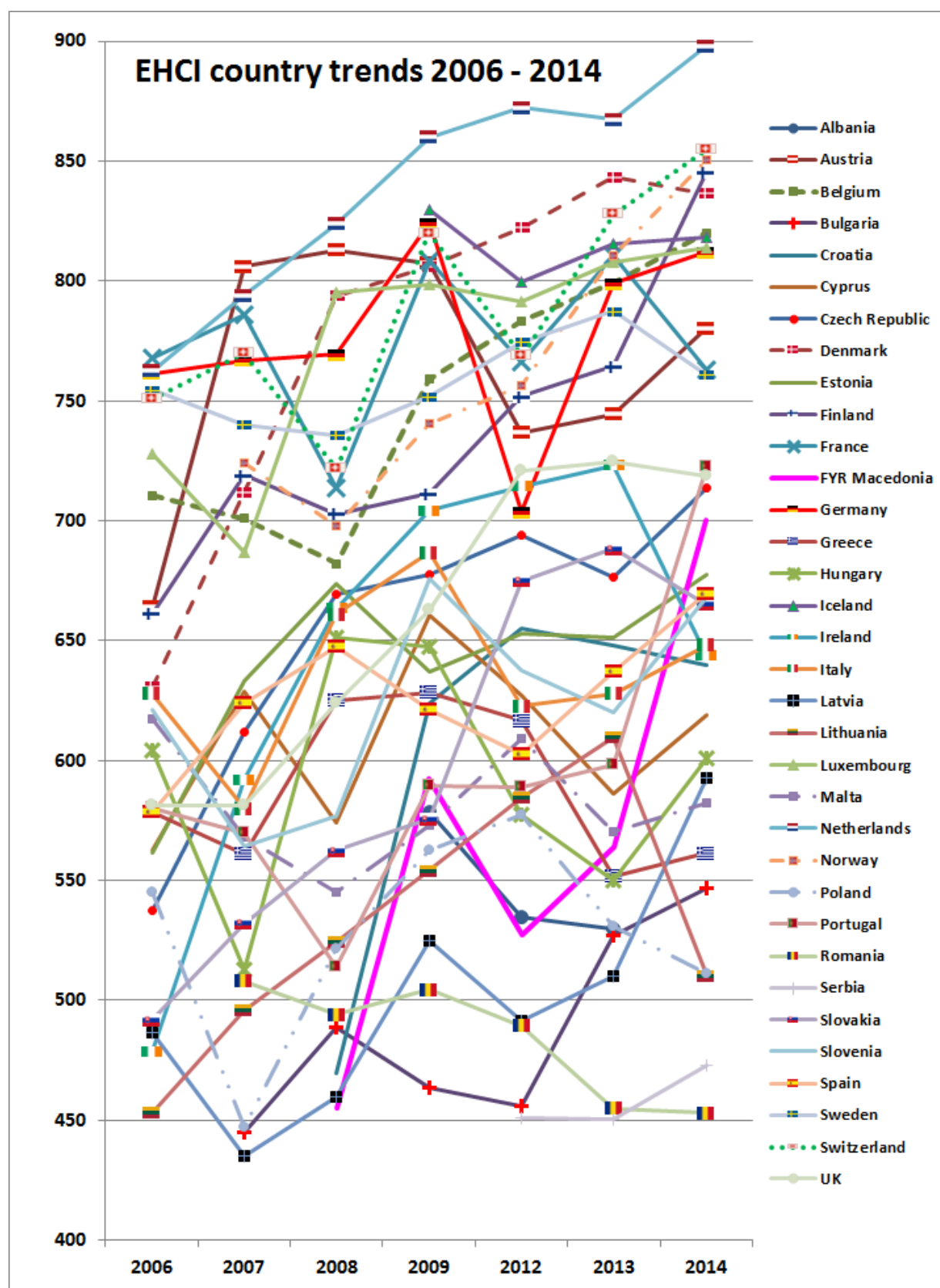


Figure 6.1. The results over the eight years 2006 – 2014.

6.1.1 Ranking strictly relative – a lower position does not necessarily mean deterioration of services

The fact that most countries show an upward trend in this normalized calculation can be taken as an indication that European healthcare is indeed improving over time. That some countries have a downward trend among other countries cannot be interpreted in the way that their healthcare systems have become worse over the time studied – only that they have developed less positively than the European average!

6.2 Closing the gap between the patient and professionals

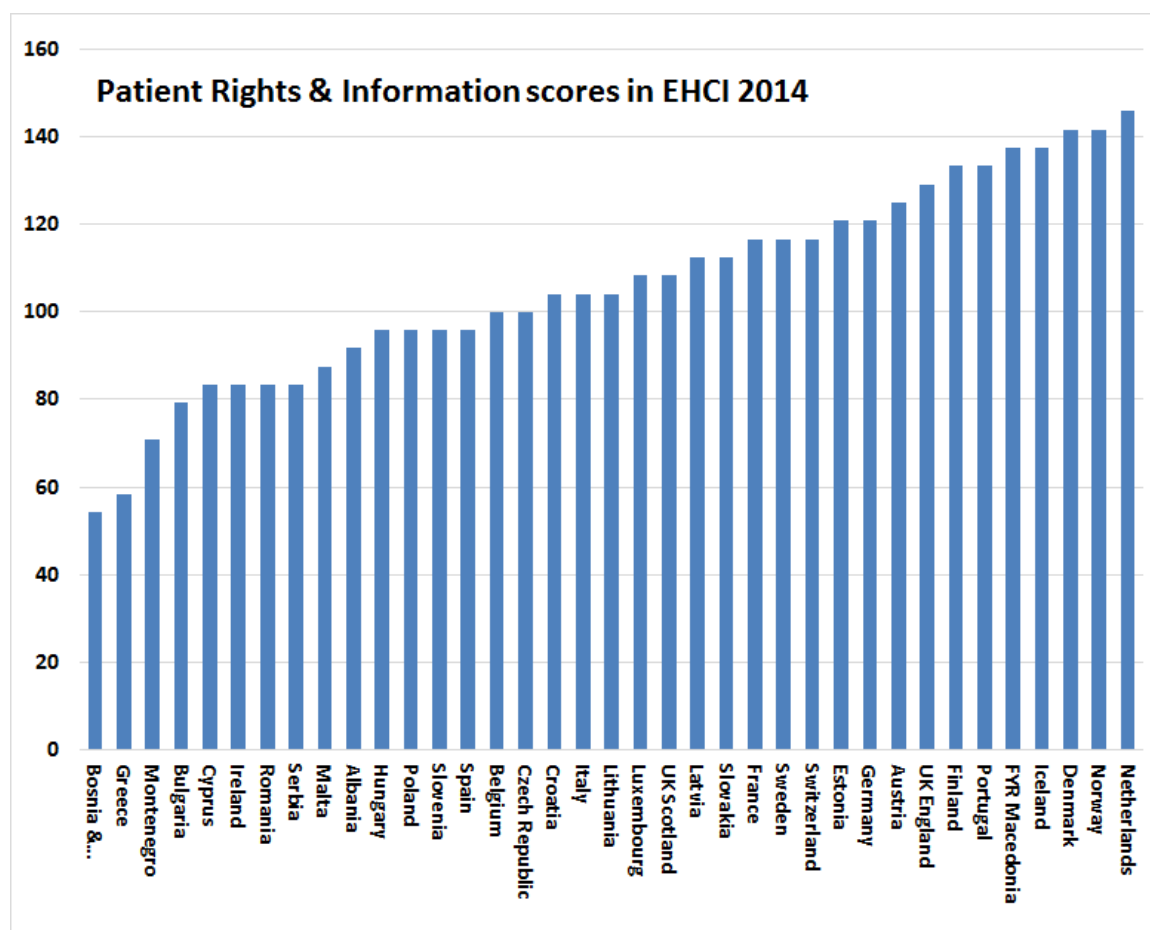


Figure 6.2 The scores have been re-weighted to a maximum of 175, as was the case in 2012.

More and more states are changing the basic starting point for healthcare legislation, and there is a distinct trend towards expressing laws on healthcare in terms of rights of citizens/patients instead of in terms of (*e.g.*) obligations of providers (see section describing the indicator [Healthcare law based on Patients' Rights](#)). By 2013, only 2 out of 34 countries had *not* introduced healthcare legislation based on Rights of patients: Malta and Sweden! From 2015, Sweden will hopefully repair this shortcoming.

When the indicator on the [role of patients' organisations](#) in healthcare decision making was introduced in 2006, no country got a Green score. In 2012, 16 countries scored Green, which was a remarkable improvement. In 2014, only in 11 countries do patient organisations seem to remember this; a side effect of economic cutbacks?

Still, there is a lot to improve: if the patient has to fill in a two-page form and pay EUR 15 to get access to her own medical record, it sounds more like a bad joke than a 21st century approach to patients' rights (this is an actual example).

In e-Health, some CEE countries (most notably the FYR Macedonia) have introduced applications, which are still rare in Western Europe. This is probably similar to the rapid uptake of mobile telephones in India – sometimes, it can be an advantage *not* to have had an ancient technology established.

6.3 Healthcare Quality Measured as Outcomes

For a detailed view of the results indicators, please see section 8.10.3 in order to study development over time. Generally it is important to note that regardless of financial crises and austerity measures, treatment results in European healthcare **keep improving**. Perhaps the best single indicator on healthcare quality, 3.3 Infant deaths, where the cut-offs between Red/Amber/Green scores have been kept constant since 2006, shows an increase in the number of Green scores from 9 in 2006 to 22 in 2014, (plus Scotland). The figure below shows the “healthcare quality map” of Europe based on the Outcomes sub-discipline scores in EHCI 2014:



This map is also remarkably constant over time. Some CEE countries which were definitely Red in 2006 have climbed into Amber scores, and Germany, which used to

score Amber is today safely in the Green territory. Ireland and Belgium have also got their quality acts together.

That Spain, Italy and the UK ("Big Beveridge") are still Amber is probably due to large regional variation; all three countries most certainly have many centres of excellence in healthcare, but the national scores tend to be a rather bleaker Yellow. (UK England actually scores Amber on all but one of the Outcomes indicators in 2014.)

6.3.1 The LAP indicator – money can buy better outcomes!

Even though the "Big Beveridge" states do less well than their Bismarck colleagues, there seems to be a definite correlation between money spent and medical treatment results, as is shown by the Graph below:

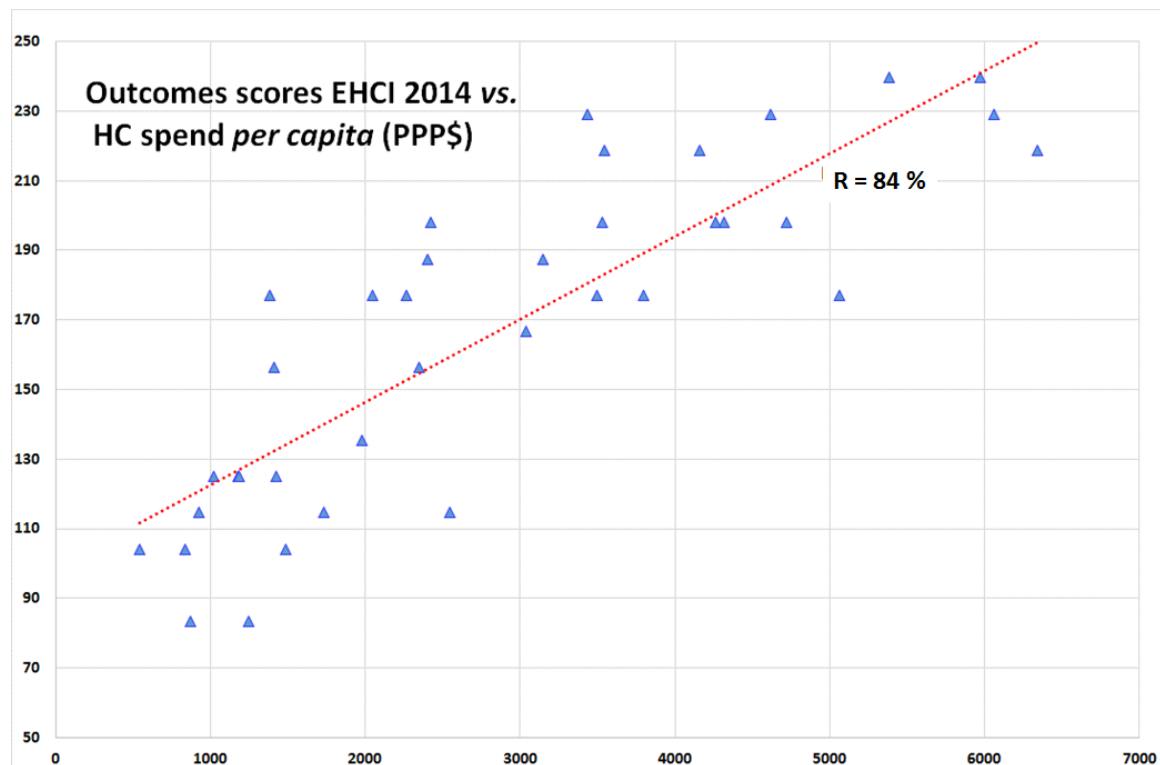


Figure 6.3.1. The correlation between Outcomes and money spent is quite strong!

There probably are several reasons why money can buy better outcomes, apart from the obvious of affording top experts and state-of-the-art technical facilities. Another reason seems to be that more generous funding allows for admitting patients on weaker indications. This can be shown by the "Level of Attention to the Problem" (LAP) indicator, one illustration of which is found in the Graph below. The graph shows the relation between "the ratio of hospital discharges over deaths for heart disease" and the *per capita* healthcare spend. If the ratio of hospital discharges over deaths is high, it would indicate that patients are admitted on weaker indications.

The correlation is noticeable. Also noticeable is the interesting fact that crisis-stricken Greeks cannot only afford lots of drugs (see Section 1.4.6), but can somehow afford to be very generous on cardiac care hospital admissions in relation to their official healthcare spend numbers!

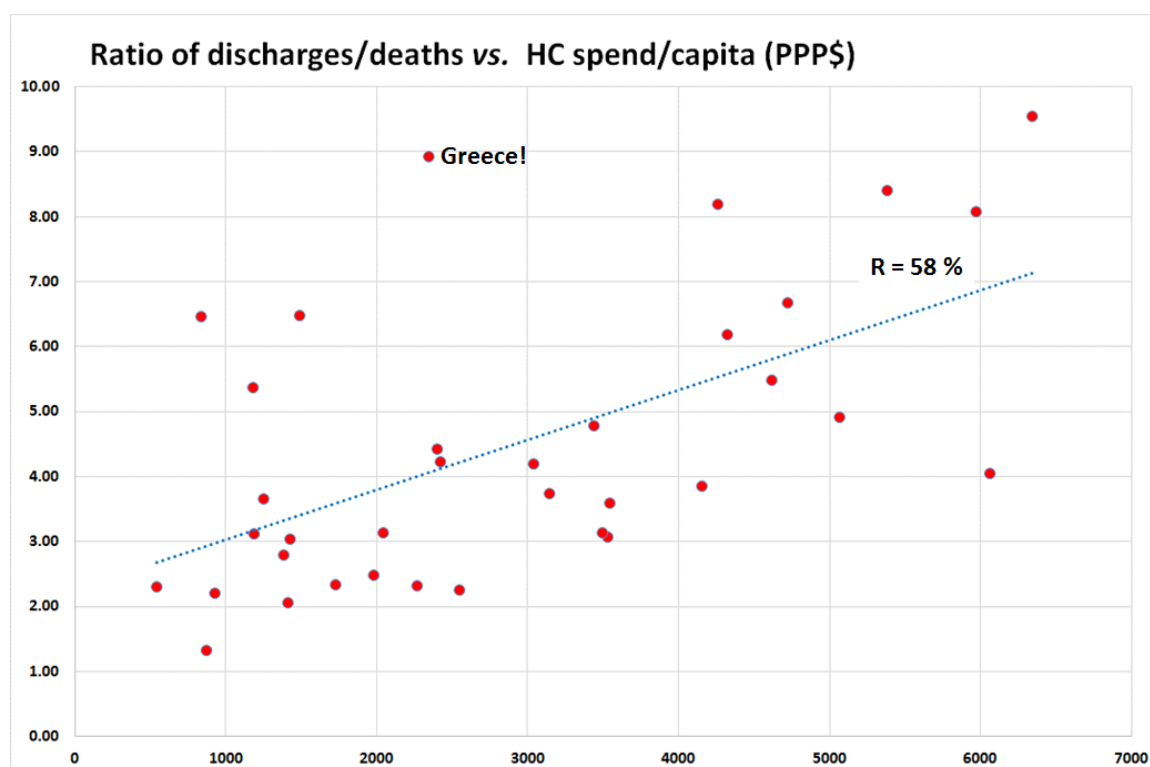


Figure 6.3.2. An example of the LAP indicator.

6.4 Transparent monitoring of healthcare quality

In 2005, Dr. Foster of the UK was the single shining star on the firmament of provider (hospital) listing, where patients could actually see which hospitals had good results in term of actual success rates or survival percentages.

In 2007, there were already a couple more examples, where the Health Consumer Powerhouse believes that the most notable is the Danish www.sundhedskvalitet.dk, where hospitals are graded from ★ to ★★★★★ as if they were hotels, with service level indicators as well as actual results, including case fatality rates on certain diagnoses. Perhaps the most impressive part of this system is that it allows members of the public to click down to a link giving the direct-dial telephone number of clinic managers.

Germany did join the limited ranks of countries (today eight, not counting Scotland separately!) scoring Green by the power of the public institute BQS, www.bqs-institut.de, which also provides results quality information on a great number of German hospitals. Possibly, this could be a small part of the reason why German healthcare quality in 2013 is safely in the “Green territory” (see above).

Estonia, The Netherlands, Norway, Portugal and Slovakia have joined the ranks of countries providing this information to the public. We can also find not-so-perfect, but already existing, catalogues with quality ranking in Cyprus, Hungary, FYR Macedonia, Italy (regional; Tuscany *et al.*) and Slovenia! In France, the HCP team still have not found any other open benchmark than the weeklies *Le Point* and *Figaro Magazine* annual publishing of “The best clinics of France”. As French patient organisations were

top of Europe at knowing about this service, France gets a Green score on the strength of this.

Ministry sources of FYR Macedonia claim that they will shortly begin publishing lists of “the 100 best doctors”. That will be most interesting to follow, not least from a methodology standpoint! Publishing results at individual physician level is also starting in the UK!

6.5 Layman-adapted comprehensive information about pharmaceuticals

In a discussion as late as January 2007, a representative of the Swedish Association of Pharmaceutical Industry (LIF), who were certainly pioneers with their well-established pharmacopoeia “Patient-FASS” (www.fass.se), was arguing that this and its Danish equivalent were the only examples of open information about prescription drugs in Europe. Today, easy-to-use web-based instruments to access information on pharmaceuticals can be found in 25 countries (see Section 8.15.6, indicator 6.2), also in CEE countries, *e.g.* Czech Republic, Estonia, Hungary, Romania, and Slovakia. The vast majority of these information sites have information providers clearly identifiable as the pharmaceutical manufacturers. It seems likely that this indicator might cease to be of comparative interest in a year or two!

6.6 Waiting lists: A Mental Condition affecting healthcare staff?

Over the years, one fact becomes clear: gatekeeping means waiting. Contrary to popular belief, direct access to specialist care does not generate access problems to specialists by the increased demand; repeatedly, waiting times for *specialist care* are found predominately in systems requiring referral from primary care, which seems to be rather an absurd observation.

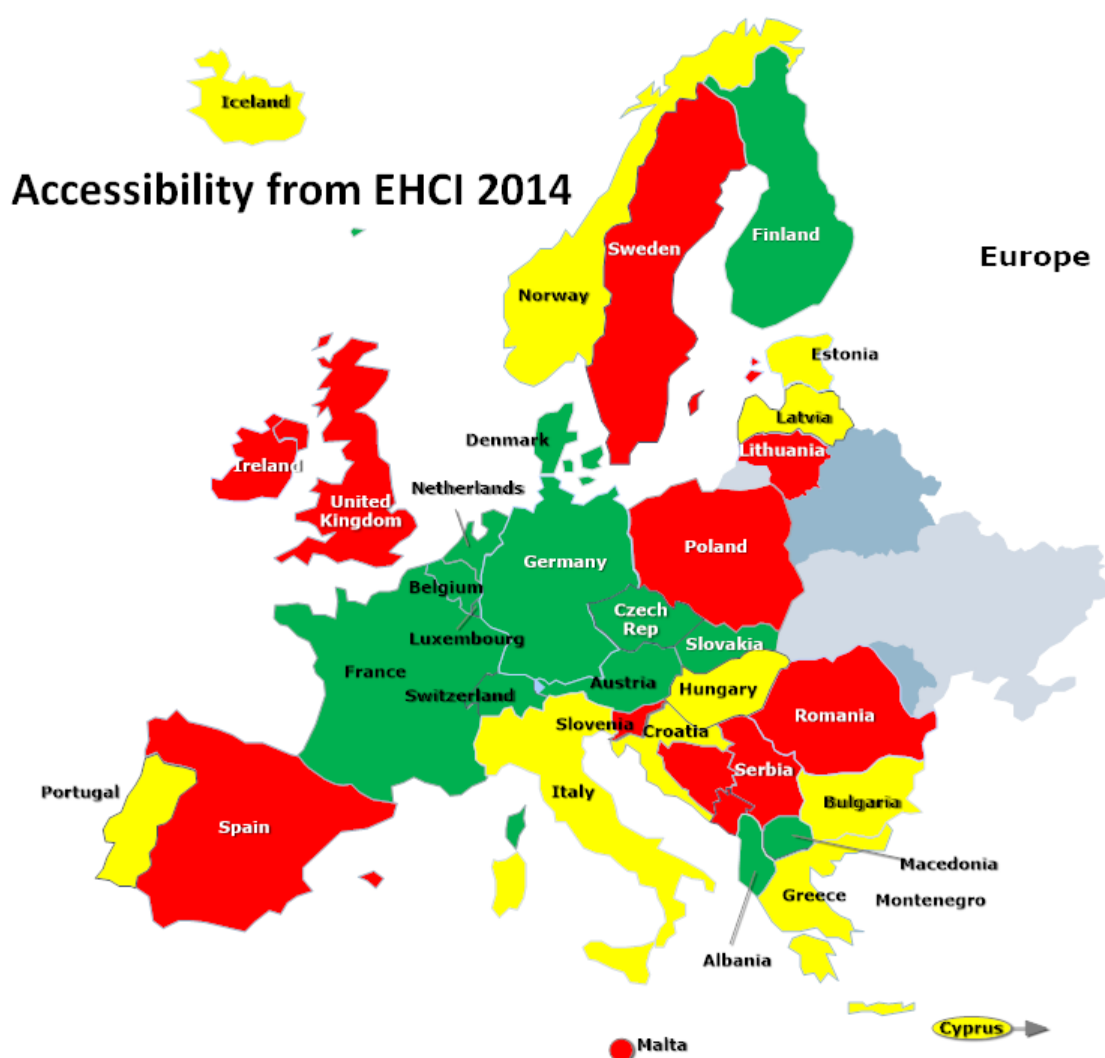


Figure 6.6a. "Waiting time territory" (red) and Non-wait territory (green) based on EHCI 2014 scores.

The "waiting time territory" situation is remarkably stable over time. However, in 2014 there seem to have been improvement in some countries such as Finland, Denmark, Norway, Portugal, Estonia and Latvia.

There is virtually no correlation between money and Accessibility of healthcare system, as is shown by the Graph below. This could explain the limited effect of showering a billion euros over Swedish counties to make them reduce waiting times.

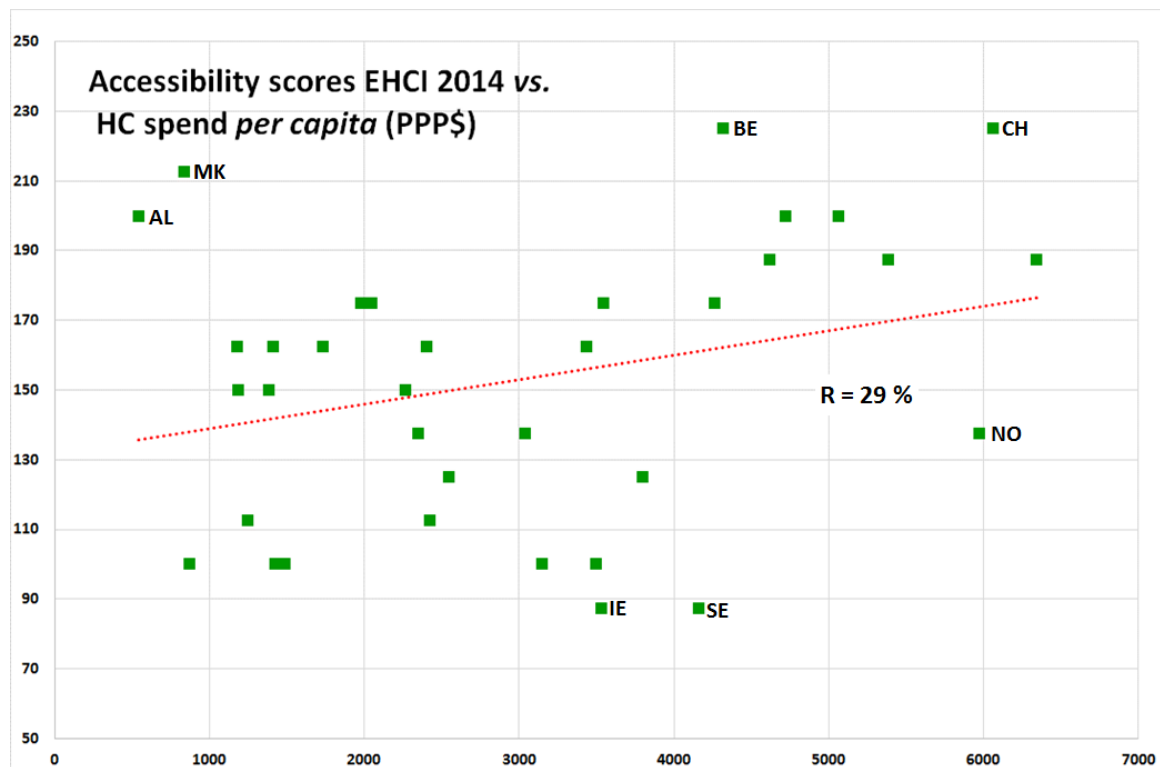


Figure 6.6b. Any correlation coefficient (R) lower than 50 % means essentially no correlation.

It seems that waiting times for healthcare services are a mental condition affecting healthcare administrators and professionals rather than a scarcity of resources problem. It must be an interesting behavioural problem to understand how an empathic profession such as paediatric psychiatrists can become accustomed to telling patients and their parents that the waiting time for an appointment is in the order of 18 months for a child with psychiatric problems (a common occurrence in Sweden)!

The Swedish queue-shortening project, on which the state government has spent approximately one billion euro, has achieved some shortening of waiting times. Sadly, that improvement, which unfortunately does *not* seem to have succeeded on waiting times for cancer treatment, still in 2014 has been insufficient to make Sweden leave the group of laggard countries.

One of the most characteristic systems for GP gatekeeping, the NHS in the UK, spent millions of pounds, starting in 2008, on reducing waiting and introduced a maximum of 18 weeks to definitive treatment after diagnosis. The patient survey commissioned by the HCP for the 2012 and 2013 Indices did show improvement, some of which seems to have been lost in 2014.

This is different from Ireland, where patient organisation survey responses are still much more negative than (the very detailed) official waiting time data. For this reason, after several years of accepting official Irish waiting time statistics, the EHCI 2014 has scored Ireland on patients' versions of waiting times.

Furthermore, even the strong winners of past years' rankings have been turning to restrictive measures: France, for example, was restraining access in 2007, which resulted in waiting times, and therefore worse score (together with not really brilliant results in the e-Health sub-discipline). Since 2009, French patients (and doctors?) seem

to have learned to work the new regulations, as the French survey responses on this sub-discipline are today more positive. Also, about French waiting times in healthcare, see Appendix 1!

HCP will continue to advocate the free choice, equal and direct access and measures intended to diminish the information handicap of the consumer as cornerstones of 21st century modern European healthcare.

6.6.1 The “good old days” that never were!

Why are the traces of the “financial crisis” so comparatively modest, particularly regarding medical treatment results (Outcomes)? One fundamental reason is that healthcare traditionally used to be very poor at monitoring output, which leads healthcare staff, politicians and the public to overestimate the service levels of yesteryear!

Cost-cutting in healthcare was not talked about much until the early 1990’s, and the economic downturn at that time, which forced serious cost-cutting more or less for the first time in decades. Before 1990, healthcare politicians’ main concern used to be “How do we prioritize the 2 – 3% annual real-term increase of resources?”

In waiting time territory such as Scandinavia and the British Isles, the waiting list situation was decidedly worse not only 5 – 10 years ago, but most certainly also before 1990. Interviews with old-timer doctors and nurses frequently reveal horror stories of patients all over corridors and basements, and this from the “good old days” before the financial crisis.

6.6.2 Under-the-table payments

Even more notable: one of the indicators, introduced for the first time in 2008, is asking whether patients are expected to make informal payments to the doctor in addition to any official fees. Under-the-table payments serve in some (rather surprising Western European) countries as a way to gain control over the treatment: to skip the waiting list, to access excellence in treatment, to get benefit of modern methods and medicines. More on informal payments can be found in the section [Informal payments to doctors](#).

The cross-European survey on informal payments remains, in spite of its obvious imperfections, the only study ever done on all of Europe, which also illustrates the low level of attention paid by nations and European institutions to the problem of parallel economy in healthcare.

This observation gives reason for two questions:

1. Unlike other professionals, such as airline pilots, lawyers, systems engineers etc, working for large organisations, doctors are unique in being allowed to run side jobs without the explicit permission of the main employer. What is the reason(s) for keeping that?
2. What could be done to give doctors “normal” professional employment conditions, *i.e.* a decent salary and any extra energy spent on working harder (yes, and making more money) for their main employer, instead of disappearing to their side practices, frequently leaving large hospitals standing idle for lack of key personnel?

6.7 Why do patients not know?

Each year, the results of the survey made in co-operation with Patient View reveal an interesting fact: in some countries, the patients' organisations and health campaigners (even very respectful ones) do not know about some of the services available in their country. Interestingly, this has probably been more evident in 2013 than the rather obvious situation in previous years. The Single Country Score Sheets returned from national bodies have had as a very common feature that officials have, with a more or less irritated vocabulary, pointed out that certain patient rights or information services indeed do exist in their country.

For example, the research team constantly finds negative answers on the existence of doctors' registries, pharmacopoeias, access to medical records etc. in countries where HCP researchers can easily find this kind of information even without the knowledge of local language. To sum up, probably the reason is that national authorities make considerable improvements, but miss out on communicating these to the wide public. As healthcare moves from a top-down expert culture into a communication-driven experience industry, such a situation must be most harmful to users as well as tax-payers and systems!

Three countries, where the opinions of patient organisations are deviating negatively from official statistics, are Greece, Ireland and Spain. One example: Spanish regulations do give patients the right to read their own patient records – nevertheless, Spanish patient organisations returned among the most pessimistic responses to this survey question of any of the 37 countries!

In private industry, it is well known and established knowledge that a product or service, be it ever so well designed and produced, needs skilful marketing to reach many customers. In the public sector in general, the focus is (at best) on planning and production of a service, but there is frequently an almost total lack of focus on the information/marketing of that service.

European healthcare needs to increase its focus on informing citizens about what services are available!

6.8 MRSA spread

In the EHCI 2007, considerable attention was paid to the problem of antibiotics resistance spread: "MRSA infections in hospitals seem to spread and are now a significant health threat in one out of two measured countries." Unfortunately, the only countries where significant improvement can be seen are Bulgaria, Poland and the British Isles. Only seven countries out of 35 today can say that MRSA is not a major problem, thus scoring Green – rather depressingly, these are the same seven countries as in 2009!

The most dramatic reduction of MRSA rates has taken place in the UK, where the % of resistant infections has dropped from > 40 % down to ~15 %. This must be a result of intense efforts in hospital hygiene, as the British Isles are still among the most pronounced over-users of antibiotics, according to pharmaceutical industry sales numbers.

6.8.1 Ban sales of antibiotics without prescription!

There is one measure, which could be very effective against the spread of microbial resistance; the banning of sales of antibiotics without a prescription. This could become an easily formulated EU directive, which also would be quite simple to monitor, as all countries do have systems to check the distinction between R_x (prescription) and OTC (Over The Counter) drug sales. There is no country, where sales of antibiotics without a prescription is commonplace, which does *not* have a significant resistance problem!

Such Brussels action would mean far more to patient safety than most other things EU engages in!

7. How to interpret the Index results?

The first and most important consideration on how to treat the results is: with caution!

The Euro Health Consumer Index 2014 is an attempt at measuring and ranking the performance of healthcare provision from a consumer viewpoint. The results definitely contain information quality problems. There is a shortage of pan-European, uniform set procedures for data gathering. Still, European Commission attempts to introduce common, measurable health indicators have made very little impact. As the Commission now moves ahead to develop approaches to assess the performance of national healthcare systems, there further challenges to tackle.

Again, the HCP finds it far better to present the results to the public, and to promote constructive discussion rather than staying with the only too common opinion that as long as healthcare information is not a hundred percent complete it should be kept in the closet. Again, it is important to stress that the Index displays consumer information, not medically or individually sensitive data.

While by no means claiming that the EHCI 2013 results are dissertation quality, the findings should not be dismissed as random findings. The Index is built from the bottom up – this means that countries who are known to have quite similar healthcare systems should be expected not to end up far apart in the ranking. This is confirmed by finding the Nordic countries in a fairly tight cluster, England and Scotland clinging together as are the Czech Republic and Slovakia, Spain and Portugal, Greece and Cyprus.

Previous experience from the general Euro Health Consumer Indexes reflects that consumer ranking by similar indicators is looked upon as an important tool to display healthcare service quality. The HCP hopes that the EHCI 2013 results can serve as inspiration for how and where European healthcare can be improved.

8. Evolvement of the Euro Health Consumer Index

8.1 Scope and content of EHCI 2005

Countries included in the EHCI 2005 were: Belgium, Estonia, France, Germany, Hungary, Italy, the Netherlands, Poland, Spain, Sweden, the United Kingdom and, for comparison, Switzerland.

To include all 25 member states right from the start would have been a very difficult task, particularly as many memberships were recent, and would present dramatic methodological and statistic difficulties

The EHCI 2005 was seeking a representative sample of large and small, long-standing and recent EU membership states.

The selection was influenced by a desire to include all member states with a population of ~40 million and above, along with the above-mentioned mix of size and longevity of EU membership standing. As the Nordic countries have fairly similar healthcare systems, Sweden was selected to represent the Nordic family, purely because the project team members had a profound knowledge of the Swedish healthcare system.

As already indicated, the selection criteria had nothing to do with healthcare being publicly or privately financed and/or provided. For example, the element of private providers is specifically not at all looked into (other than potentially affecting access in time or care outcomes).

One important conclusion from the work on EHCI 2005 was that it is indeed possible to construct and obtain data for an index comparing and ranking national healthcare systems seen from the consumer/patient's viewpoint.

8.2 Scope and content of EHCI 2006 – 2013

The EHCI 2006 included all the 25 EU member states of that time plus Switzerland, using essentially the same methodology as in 2005.

The number of indicators was also increased, from 20 in the EHCI 2005 to 28 in the 2006 issue. The number of sub-disciplines was kept at five; with the change that the "Customer Friendliness" sub-discipline was merged into "Patient Rights and Information". The new sub-discipline "Generosity" (What is included in the public healthcare offering?) was introduced, as it was commented from a number of observers, not least healthcare politicians in countries having pronounced waiting time problems, that absence of waiting times could be a result of "meanness" – national healthcare systems being restrictive on who gets certain operations could naturally be expected to have less waiting list problems.

In order to test this, the new sub-discipline "Generosity" of public healthcare systems, in 2009 called "Range and reach of services", was introduced. A problem with this sub-discipline is that it is only too easy to land in a situation, where an indicator becomes just another way of measuring national wealth (GDP/capita). The suggested indicator "Number of hip joint replacements per 100 000 inhabitants" is one prominent example of this. The cost per operation of a hip joint is in the neighbourhood of € 7000 (can be more in Western Europe – less in states with low salaries for healthcare staff). That

cost, for a condition that might be crippling but not life-threatening, results in provision levels being very closely correlated to GDP/capita.

Cataract operations seem a better and less GDP-correlated indicator on the Generosity of public healthcare systems. The cost per operation is only one tenth of that for a hip joint and thus much more affordable in less affluent countries.

To achieve a higher level of reliability of information, one essential work ingredient has been to establish a net of contacts directly with national healthcare authorities in a more systematic way than was the case for previous EHCI editions. The weaknesses in European healthcare statistics described in previous EHCI reports can only be offset by in-depth discussions with key personnel at a national healthcare authority level.

In general, the responsiveness from Health Ministries, or their state agencies in charge of supervision and/or Quality Assurance of healthcare services, was good in 2006 – 2008. Written responses were received from 19 EU member states. This situation greatly improved in 2009 – 2012 and stayed very positive in 2013 (see section 8.9.2).

8.3 EHCI 2014

The project work on the Index is a compromise between which indicators were judged to be most significant for providing information about the different national healthcare systems from a user/consumer's viewpoint, and the availability of data for these indicators. This is a version of the classical problem "Should we be looking for the 100-dollar bill in the dark alley, or for the dime under the lamppost?"

It has been deemed important to have a mix of indicators in different fields; areas of service attitude and customer orientation as well as indicators of a "hard facts" nature showing healthcare quality in outcome terms. It was also decided to search for indicators on actual results in the form of outcomes rather than indicators depicting procedures, such as "needle time" (time between patient arrival to an A&E department and trombolitic injection), percentage of heart patients trombolysed or stented, etcetera.

Intentionally de-selected were indicators measuring public health status, such as life expectancy, lung cancer mortality, total heart disease mortality, diabetes incidence, etc. Such indicators tend to be primarily dependent on lifestyle or environmental factors rather than healthcare system performance. They generally offer very little information to the consumer wanting to choose among therapies or care providers, waiting in line for planned surgery, or worrying about the risk of having a post-treatment complication or the consumer who is dissatisfied with the restricted information.

8.3.1 Two indicators taken out from the EHCI 2013 set

Of the totally 48 indicators used for the EHCI 2013, two been discontinued in the 2014 Index: "Undiagnosed Diabetes" and "Sugar Intake".

Undiagnosed Diabetes was taken out when it was found that the data from the IDF Diabetes Atlas consisted only of applying a factor of 0.34 (34%) on the national diabetes

prevalence rates, *i.e.* the indicator contained no additional information. (A couple of countries were given the factor 0.303 applied to the diabetes prevalence.

Sugar Intake was discontinued as the Expert Panel discussion ended with very little evidence that the indicator could be linked to health status.

Despite frenetic disagreement from some countries, HCP proudly keeps the indicator "[Direct access to specialists](#)" in the EHCI, as there is absolutely no evidence that the GP gatekeeping role has an impact on healthcare costs. Studies such as that made by Kroneman *et al.*¹² provide more respectful reasoning in this regard than statements like "The gatekeeping is a matter of policy and we insist that this indicator is removed from the index."

Also, the example of Germany shows that the effective way to make patients want to go first to their primary care doctor before seeking specialist attention is to establish long-term relationship and trust between patient and doctor. Restrictions on direct access to specialist functions very poorly.

8.3.2 New indicators introduced for EHCI 2014

In the design and selection of indicators, the EHCI has been working on the following three criteria since 2005:

1. Relevance
2. Scientific soundness
3. Feasibility (*i.e.* can data be obtained)

Those same three principles are also governing the German quality indicators project, www.bqs-institut.de/.

As every year the international expert panel has fed in a long list of new indicators to be included in this year's Index (find more on [expert panel composition](#)), there was a true brainstorm of new bright ideas to be included in this year's Index. Unfortunately, the research team was unable to turn all of them into a green-yellow-red score in the matrix. The research team was able to present data for **3 new and one modified** indicator, and only two **indicators have been discontinued**, keeping the total number of indicators at 48.

For description and more details on the indicators, see section 8.10 Content of indicators in the EHCI 2013.

Sub-discipline 1 (Patient rights, information and e-Health)

This sub-discipline is the same as in 2013.

Sub-discipline 2 Accessibility (waiting times)

This sub-discipline is the same as in 2013.

Sub-discipline 3 (Outcomes) – new indicators:

¹² Kroneman *et al.* *Direct access in primary care and patient satisfaction: A European study*. Health Policy 76 (2006) 72–79.

Indicator 3.1 which used to be “Case Fatality Rate for acute heart infarct” has been replaced by “Steepness of the trend line of deaths rates for heart disease”. A similar indicator (3.2) has been added for stroke death rates.

Sub-discipline 4 (Range and Reach of services provided) – no new indicators, but

4.8 Caesarean section rates

has been moved here from sub-discipline Outcomes.

Sub-discipline 5 (Prevention) – new indicators:

5.7 Traffic deaths

Sub-discipline 6 (Pharmaceuticals) – new indicators:

This sub-discipline is the same as in 2013, except:

- the indicator Deployment rate of antipsychotics has been replaced by Deployment rate of metformin for diabetics
- a novel data source has been used for 6.7 Antibiotics consumption.

8.4 Indicator areas (sub-disciplines)

The 2013 Index is, just like previous EHCI editions, built up with indicators grouped in six (this number has varied) sub-disciplines.

The EHCI 2013 was given a sixth sub-discipline, Prevention, as many interested parties (both ministries and experts) have been asking for that aspect to be covered in the EHCI. One small problem with Prevention might be that many preventive measures are not necessarily the task of healthcare services. The Index at least tries to concentrate on such aspects of Prevention, which can be affected by human decision makers in a reasonably short time frame.

After having had to surrender to the “lack of statistics syndrome”, and after scrutiny by the [expert panel](#), 48 indicators survived into the EHCI 2014.

The indicator areas for the EHCI 2014 are:

Sub-discipline	Number of indicators
1. Patient rights and information	12
2. Accessibility/Waiting time for treatment	6
3. Outcomes	8
4. Range and reach of services (“Generosity”)	8
5. Prevention	7
6. Pharmaceuticals	7

8.5 Scoring in the EHCI 2014

The performance of the respective national healthcare systems were graded on a three-grade scale for each indicator, where the grades have the rather obvious meaning of Green = good (👍), Amber = so-so (👉) and red = not-so-good (👎). A green score earns 3 points, an amber score 2 points and a red score (or a "not available", **n.a.**) earns 1 point.

Having six non-EU countries in the Index, who should not be stigmatized for not (yet) being EU member states on indicator "1.8 Free choice of care in another EU state", forced the introduction of a new score in the EHCI 2009: "not applicable". These countries therefore receive the "**n.ap.**" score, which earns 2 points. That score was also applied on indicator 1.9 for Iceland and Malta, as they essentially have only one real hospital each.

In 2013, a Purple score: , earning 0 points, was introduced for particularly abominable results. It has been exclusively applied on indicator "3.7 Abortion rates" for countries not giving women the right to abortion.

Since the 2006 Index, the same methodology has been used: For each of the sub-disciplines, the country score is calculated as a percentage of the maximum possible (*e.g.* for Waiting times, the score for a state has been calculated as % of the maximum $3 \times 6 = 18$).

Thereafter, the sub-discipline scores were multiplied by the weight coefficients given in the following section and added up to make the final country score. These percentages were then rounded to a three digit integer, so that an "All Green" score on the 48 indicators would yield 1000 points. "All Red" gives 333 points.

8.6 Weight coefficients

The possibility of introducing weight coefficients was discussed already for the EHCI 2005, *i.e.* selecting certain indicator areas as being more important than others and multiplying their scores by numbers other than 1.

For the EHCI 2006, explicit weight coefficients for the five sub-disciplines were introduced after a careful consideration of which indicators should be considered for higher weight. The accessibility and outcomes sub disciplines were decided as the main candidates for higher weight coefficients based mainly on discussions with [expert panels](#) and experience from a number of patient survey studies.

In the EHCI 2014, the scores for the five sub-disciplines were given the following weights, which are the same as in 2013:

Sub discipline	Relative weight ("All Green" score contribution to total maximum score of 1000)	Points for a Green score in each sub-discipline
Patient rights, information and e-Health	150	12.50
Accessibility (Waiting time for	225	37.50

treatment)		
Outcomes	250	31.25
Range and reach of services ("Generosity")	150	18.75
Prevention	125	17.85
Pharmaceuticals	100	14.29
Total sum of weights	1000	

Consequently, as the percentages of full scores were added and multiplied by (1000/Total sum of weights), the maximum theoretical score attainable for a national healthcare system in the Index is 1000, and the lowest possible score is 333.

It should be noted that, as there are not many examples of countries that excel in one sub-discipline but do very poorly in others, the final ranking of countries presented by the EHCI 2014 is remarkably stable if the weight coefficients are varied within rather wide limits.

The project has been experimenting with other sets of scores for green, amber and red, such as 2, 1 and 0 (which would really punish low performers), and also 4, 2 and 1, (which would reward real excellence). The final ranking is remarkably stable also during these experiments.

8.6.1 Regional differences within European states

The HCP is well aware that many European states have very decentralised healthcare systems. Not least for the U.K. it is often argued that "Scotland and Wales have separate NHS services, and should be ranked separately".

The uniformity among different parts of the U.K. is probably higher than among regions of Spain and Italy, Bundesländer in Germany and possibly even than among counties in tiny 9½ million population Sweden.

This has been proved by the EHCI 2013 – 2014, which include the experiment of separating out Scotland. Scotland and England end up close at 710 and 718 points out of 1000 respectively; the two countries actually have slightly different scores on 11 out of 48 indicators, still with this net result. It was also observed that regional differences within England are greater than the differences between England and Scotland.

Grading healthcare systems for European states does present a certain risk of encountering the syndrome of "if you stand with one foot in an ice-bucket and the other on the hot plate, on average you are pretty comfortable". Particularly Italy seems to be a victim of that syndrome, ending up with a large number of Yellow scores made up by some regions in reality scoring Green and others scoring Red. This problem would be quite pronounced if there were an ambition to include the U.S.A. as one country in a Health Consumer Index.



As equity in healthcare has traditionally been high on the agenda in European states, it has been judged that regional differences are small enough to make statements about the national levels of healthcare services relevant and meaningful.

8.7 Indicator definitions and data sources for the EHCI 2014

It is important to note, that since 2009, the HCP has been receiving much more active feedback from national healthcare agencies in all but a few of the 37 countries. In those cases, the responses in the survey commissioned from Patient View 2014 have been applied very cautiously, *e.g.* when the “official” data says Green, and the survey says “definitely Red”, the country has been awarded a Yellow score.

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
1. Patient rights and information	1.1 Healthcare law based on Patients' Rights	Is national HC legislation explicitly expressed in terms of Patients' rights?	Yes	Various kinds of patient charters or similar byelaws	No	European Observatory HiT Reports, http://europatientrights.eu/about_us.html ; Patients' Rights Law (Annex 1 to EHCI report); http://www.healthline.com/galecontent/patient-rights-1 ; http://www.adviceguide.org.uk/index/family_parent/health/nhs_patient_s_rights.htm ; www.dohc.ie ; http://www.sst.dk/Tilsyn/Individuelt_tilsyn/Tilsyn_med_faglighed/Skaerpet_tilsyn_med_videre/Skaerpet_tilsyn/Liste.aspx ; http://db2.doyma.es/pdf/261/261v1n2a13048764pdf001.pdf . http://www.bmg.bund.de/praevention/patientenrechte/patientenrechte_gesetz.html
	1.2 Patient organisations involved in decision making		Yes, statutory	Yes, by common practice in advisory capacity	No, not compulsory or generally done in practice	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. Personal interviews.
	1.3 No-fault malpractice insurance	Can patients get compensation without the assistance of the judicial system in proving that medical staff made mistakes?	Yes	Fair; > 25% invalidity covered by the state	No	Swedish National Patient Insurance Co. (All Nordic countries have no1fault insurance); www.hse.ie ; www.hiqa.ie .
	1.4 Right to second opinion		Yes	Yes, but difficult to access due to bad information, bureaucracy or doctor negativism	No	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. Personal interviews.
	1.5 Access to own medical record	Can patients read their own medical records?	Yes, they get a copy by simply asking their doctor(s)	Yes, but cumbersome; can require written application or only access with	No, no such statutory right.	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. Personal interviews; www.dohc.ie .

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
				professional "walk-through"		
	1.6 Registry of <i>bona fide</i> doctors	Can the public readily access the info: "Is doctor X a <i>bona fide</i> specialist?"	Yes, on the www or in widely spread publication	Yes, but in publication expensive or cumbersome to acquire	No	Survey commissioned from Patient View by HCP 2014. National physician registries.; p://www.sst.dk/Tilsyn/Individuelt_tilsyn/Tilsyn_med_faglighed/Skaerpet_tilsyn_med_videre/Skaerpet_tilsyn/Liste.aspx; http://
	1.7 Web or 24/7 telephone HC info with interactivity	Information which can help a patient take decisions of the nature: "After consulting the service, I will take a paracetamol and wait and see" or "I will hurry to the A&E department of the nearest hospital"	Yes	Yes, but not generally available, or poorly marketed to the public	No or sporadic	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. Personal interviews; http://www.nhsdirect.nhs.uk/; www.hse.ie; www.ntpf.ie.
	1.8 Cross-border care seeking financed from home	Can patients freely choose to be treated in another EU state?	Yes; including elective in-patient procedures	Yes, after excessive wait	Yes, with pre-approval, or very limited choice (for care not given in home country)	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. Interviews with healthcare officials.
	1.9 Provider catalogue with quality ranking	"NHS Choices" in the U.K. a typical qualification for a Green score. The "750 best clinics" published by LaPointe in France would warrant a Yellow.	Yes	To some extent, regional or not well marketed to the public	No	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. http://www.drforster.co.uk/home.aspx; http://www.sundhedskvalitet.dk/; http://www.sykehusvalg.no/sidemaler/VisStatiskInformasjon____2109.aspx; http://www.hiqa.ie/; http://212.80.128.9/gestion/ges161000com.html.
	1.10 EPR penetration	% of GP practices using electronic patient records for diagnostic data	≥ 90 % of GP practices	<90 ≥ 50 % of practices	< 50 % of practices	http://ec.europa.eu/public_opinion/flash/fl126_fr.pdf; http://www.europartnersearch.net/ist/communities/indexmapconso.php?Se=11; www.icgp.ie; Commonwealth Fund International Health Policy Survey of Primary Care Physicians "Benchmarking ICT use among GP's in Europe"; European Commission, April 2008; study made by Empirica, Bonn, Germany (p.60), Gartner Group
	1.11 Patients' access to on-line booking of appointments?	Can patients book doctor appointments on-line?	Yes, widely available	With some pioneer hospitals/clinics	No, or very rare	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials.
	1.12 e-prescriptions		Fully functional ePrescription services across the country or substantial parts of certain regions	Some pharmacies have this service	No, or very rare.	Survey commissioned by HCP from Patient View 2014. Kierkegaard, P. (2013), "E-Prescription across Europe". Health and Technology, 3 (1) Interviews with healthcare officials.

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
2. Accessibility (waiting times for treatment)	2.1 Family doctor same day access	Can I count on seeing my primary care doctor today ?	Yes	Yes, but not quite fulfilled	No	Survey commissioned from Patient View by HCP 2014. National healthcare agencies.
	2.2 Direct access to specialist	Without referral from family doctor (GP)	Yes	Quite often in reality, or for limited number of specialities	No	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials, feedback from national agencies.
	2.3 Major elective surgery <90 days	Coronary bypass/PTCA and hip/knee joint	90% <90 days	50 - 90% <90 days	> 50% > 90 days	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials, feedback from national agencies.
	2.4 Cancer therapy < 21 days	Time to get radiation/ chemotherapy after decision	90% <21 days	50 - 90% <21 days	> 50% > 21 days	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials, feedback from national agencies. www.socialstyrelsen.se : Väntetider cancervård
	2.5 CT scan < 7days	Wait for advanced diagnostic (non-acute)	Typically <7 days	Typically <21 days	Typically > 21 days	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials, feedback from national agencies. www.socialstyrelsen.se : Väntetider
	2.6 A&E waiting times	"Waiting time": the period between arrival at the hospital door and when a doctor starts treating/attending the problem.	Typically < 1 hour	Typically 1 - 3 hours	Typically > 3 hours	Survey commissioned by HCP from Patient View 2014. Interviews with healthcare officials, feedback from national agencies.
3. Outcomes	3.1 Decrease of CVD deaths	Inclination of ischaemic heart disease death trend line (log values)	Sharp decline	Moderate decline	Weak decline	WHO HfA database, April 2014
	3.2 Decrease of stroke deaths	Inclination of stroke death trend line (log values)	Sharp decline	Moderate decline	Weak decline	WHO HfA database, April 2014
	3.3 Infant deaths	/1000 live births	<4	< 6	≥6	WHO Europe Health for All mortality database April 2014, latest available statistics.
	3.4 Cancer survival	1 minus ratio of mortality/incidence 2012 ("survival rate")	≥ 60 %	59.9 - 50 %	< 50 %	J. Ferlay et al. / European Journal of Cancer 49 (2013) 1374–1403
	3.5 Preventable Years of Life Lost	All causes, Years lost, /100000	< 4500	4501 - 7000	> 7000	WHO Europe Detailed Mortality Database, May 2014

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
		population				
	3.6 MRSA infections	Susceptibility results for S. aureus isolates, %	<5%	<20%	>20%	ECDC EARS-net, September 2014 (most data 2012)
	3.7 Abortion rates	# per 1000 live births; low = Good, Very low=purple	< 200	201 - 300	> 300	WHO Health for All Database April 2014, United Nations Information on Abortion
	3.8 Depression	Average score on 5 mental health questions	≥ 67 %	66 - 55 %	< 55 %	Special Eurobarometer 345, October 2011; www.fhi.no "Psykisk helse i Norge 2011:2", http://worlddatabaseofhappiness.eur.nl/hap_nat/nat_fp.php?mode=8
4. Range and reach of services provided	4.1 Equity of healthcare systems	Public HC spend as % of total HC spend	≥ 80 %	<80 % - >70 %	≤ 70 %	WHO HfA database, April 2014
	4.2 Cataract operations per 100 000 age 65+	Total number of procedures divided by 100 000's of pop. ≥ 65 years	> 5000	5000 - 3000	< 3000	OECD Health Data 2014, WHO HfA database, WHO Prevention of Blindness and Visual Impairment Programme, European Community Health Indicators, national data
	4.3 Kidney transplants per million pop.	Living and deceased donors, procedures p.m.p.	≥ 40	40 - 30	< 30	Council of Europe Newsletter September 2014
	4.4 Is dental care included in the public healthcare offering?	% of average income earners stating unmet need for a dental examination, 2010	< 5 %	5 - 9.9 %	≥ 10 %	OECD Health at a Glance 2014, Eurostat: http://appsso.eurostat.ec.europa.eu/
	4.5 Informal payments to doctors	Mean response to question: "Would patients be expected to make unofficial payments?"	No!	Sometimes; depends on the situation	Yes, frequently	Survey commissioned from Patient View by HCP 2014. National healthcare agencies.
	4.6 Long term care for the elderly	# of nursing home and elderly care beds per 100 000	≥ 6000	5999 - 3000	< 3000	WHO HfA database, April 2014

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
		population 65+				
	4.7 % of dialysis done outside of clinic	% of all Dialysis patients on PD or HD in the home	≥ 15 %	<15 % - 8 %	< 8 %	European Renal Association Annual Report 2012, www.ceapir.org
	4.8 Caesarean sections	# per 1000 live births; low = Good pre-natal care	< 200	201 - 300	> 300	WHO Health for All Database April 2014
5. Prevention	5.1 Infant 8-disease vaccination	Tetanus, pertussis, poliomyelitis, haemophilus influenza B, hepatitis B, measles, mumps, rubella arithmetic mean	≥95 %	≥85 - <95%	<85 %	WHO HfA database, April 2014, http://data.euro.who.int/cisid/?TabID=352277
	5.2 Blood pressure	% of people 25+ with a blood pressure > 140/90	< 25%	25 - 35 %	> 35 %	WHO World Health Statistics 2014
	5.3 Smoking Prevention	Total score on Tobacco Control Scale plus Cigarette absolute consumption and trend line	≥ 61	60 - 51	≤ 50	Joossens, L. & Raw, M. "The Tobacco Control Scale 2013"; Cigarette consumption data WHO HfA April 2014
	5.4 Alcohol	"Binge drinking adjusted" alcohol intake p.p. 15+	< 10 litres pure alcohol p.p.	10 - 13 litres pure alcohol p.p.	> 14 litres	WHO HfA April 2014, Special Eurobarometer 331 April 2010
	5.5 Physical activity	Hours of physical education in compulsory school	≥ 751	750 - 600	< 600	http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/Instruction_Time_2013_14.pdf ; www.vsa.zh.ch
	5.6 HPV vaccination	National programme for teenage girls	Yes, free of charge to patient	Yes; patient pays significant part	No.	European Centre for Disease Prevention and Control. <i>Introduction of HPV vaccines in EU countries – an update</i> . Stockholm: ECDC; 2012. Seme et al.: <i>Acta Dermatovenereologica</i> APA 2013; 22:21-25. www.bag.admin.ch/themen/medizin/00682/00684/03853/ ; feedback

Sub-discipline	Indicator	Comment	 Score 3	 Score 2	 Score 1	Main Information Sources
				of cost		from national agencies.
	5.7 Traffic deaths	SDR/ 100 000 population	< 5	5 - 8	> 8	WHO HfA April 2014
6. Pharmaceuticals	6.1 Rx subsidy	Proportion of total sales of pharmaceuticals (OTC included) paid for by public subsidy	≥ 70%	69.9 - 50 %	< 50%	WHO HfA database April 2014, EFPIA: The pharmaceutical industry in figures - Key Data 2014
	6.2 Layman-adapted pharmacopoeia?	Is there a layman-adapted pharmacopoeia readily accessible by the public (www or widely available)?	Yes, with a visible and accountable information provider	Yes, but difficult to know who is the information provider	No	Survey commissioned from Patient View by HCP 2013. HCP research 2010-2013. National Medical Products Agencies.
	6.3 Novel cancer drugs deployment rate	ATC code L01XC (monoclonal antibodies) Use per capita, MUSD p.m.p.	> 15	15 - 10	< 10	IMS MIDAS database, 12 months ending June 2013, www.nuffieldtrust.org.uk/data-and-charts/prescribing-spend-person-uk
	6.4 Access to new drugs (time to subsidy)	Between registration and inclusion in subsidy system	<150 days	<300 days	>300 days	Patients W.A.I.T. Indicator 2011 and 2012 Reports – based on EFPIA's databases
	6.5 Arthritis drugs	TNF-α inhibitors, Standard Units per capita, prevalence adjusted	> 300	300 - 100	< 100	IMS MIDAS database, eumusc.net: Report v5.0 Musculoskeletal Health in Europe (2012), Special Eurobarometer 272 (2007)
	6.6 Metformin use	Metformin use; SU per diabetic case	> 400	400 - 250	< 250	IMS MIDAS database, full year 2013
	6.7 Antibiotics/capita	DDD/1000 inhabitants per day	≤ 20	20 – 26	≥ 26	Four-fold difference in antibiotic consumption across the European Region – new WHO report 2014-03-17. IMS MIDAS database, 12 months ending June 2013

Table 8.7: Indicator definitions and data sources for the EHCI 2014

8.7.1 Additional data gathering - survey

In addition to public sources, as was also the case for the 2005 - 2013 Indexes, a web-based survey to Patient organisations was commissioned from PatientView, Woodhouse Place, Upper Woodhouse, Knighton, Powys, LD7 1NG, Wales, Tel: 0044-(0)1547-520-965, E-mail: info@patient-view.com. In 2014, this survey included the six Accessibility indicators, two e-Health indicators plus 8 other indicators. The survey can be accessed on https://www.dropbox.com/s/ae670o9pxm63boj/Survey_55014628.pdf?dl=0

A total of 665 patient organisations responded to the survey (**ganska lågt antal?**). The lowest number of responses from any single country was 2 (Albania), except from Slovakia, from where no responses were obtained; SK has therefore kept its scores from 2012 on indicators where new information from national ministries or other sources was not available.

Since 2009, the feedback from National Agencies has been a lot better and more ambitious than for previous EHCI editions. For that reason, the responses from the PV survey have been used very cautiously when scoring the indicators. On any indicator, where the HCP has received substantial information from national sources (*i.e.* information including actual data to support a score), the PV survey results have only been used to modify the score based on national feedback data, when the PV survey responses indicate a radically different situation from that officially reported.

Consequently, the PV survey has essentially been used as a CUTS data source (see section 8.11) only for the waiting time indicators, and for indicator 4.5 Informal payments to doctors.

8.7.2 Additional data gathering – feedback from National Ministries/Agencies

On October 30th, 2014, preliminary score sheets were sent out to Ministries of Health or state agencies of all 37 countries, giving the opportunity to supply more recent data and/or higher quality data than what is available in the public domain.

This procedure had been prepared for during the spring of 2014 by extensive mail, e-mail, telephone contacts and personal visits to ministries/agencies. Finally, feedback responses, in the form of returned "single country score sheets" and/or thorough discussions at personal visits to MoH:s/national agencies, have been had from official national sources.

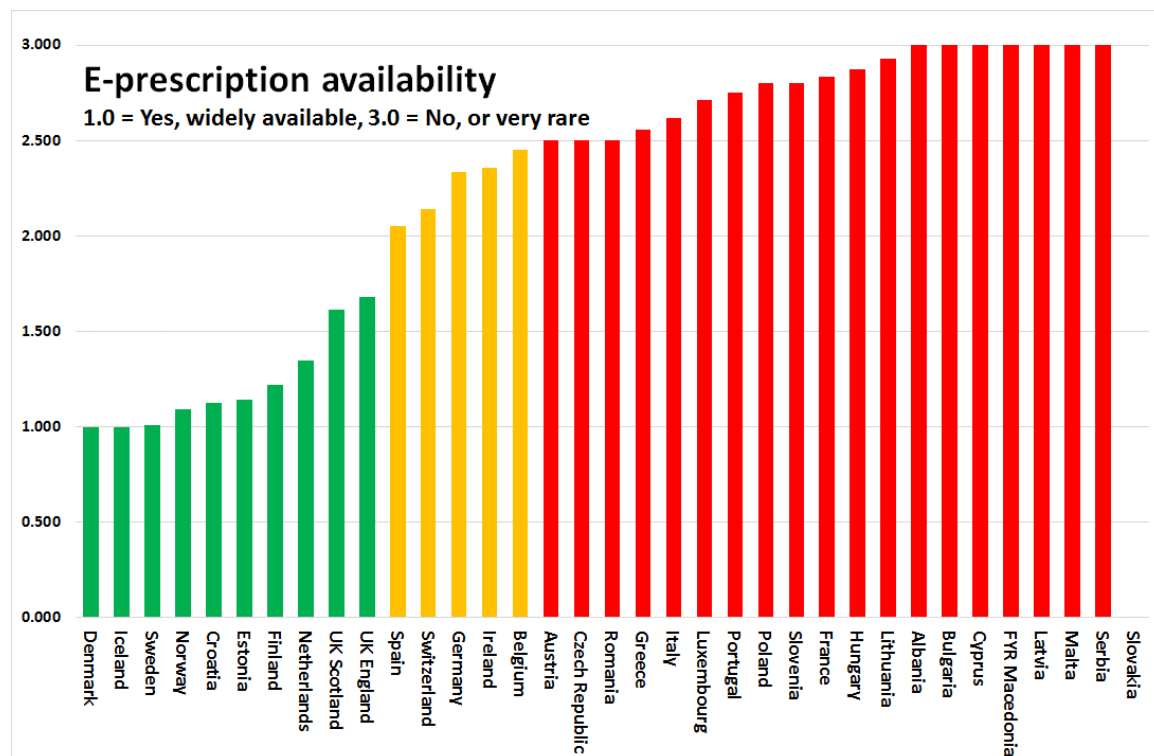
Score sheets sent out to national agencies contained only the scores for that respective country. Corrections were accepted only in the form of actual data, not by national agencies just changing a score (frequently from Red to something better, but surprisingly often honesty prevailed and scores were revised downwards).

8.8 Threshold value settings

The performance of national healthcare systems was graded on a three-grade scale for each indicator (see more information in [Scoring](#) section).

It has not been the ambition to establish a global, scientifically based principle for threshold values to score green, amber or red on the different indicators. Threshold levels have been set after studying the actual parameter value spreads, in order to avoid having indicators showing "all Green" or "totally Red".

Setting threshold values is typically done by studying a bar graph of country data values on an indicator sorted in ascending order. The usually “S”-shaped curve yielded by that is studied for notches in the curve, which can distinguish clusters of states, and such notches are often taken as starting values for scores. A slight preference is also given to threshold values with even numbers. An illustration of this procedure can be the scoring diagram for the indicator 1.10 e-Prescriptions:



Scoring for indicator 1.10. It illustrates the “notches in the S-curve” quite nicely.

Finally, the HCP is a value-driven organisation. We believe in Patient/Consumer Empowerment, an approach that places highest importance on quantitative and qualitative healthcare services. As is illustrated by indicator 1.8 Cross-border care, this sometimes leads to the inclusion of indicators where rather few countries, theoretically none, score Green (in this case only Luxembourg and The Netherlands do). Besides, we also find it evident that individuals are better fit to make decisions about their health and healthcare than rulings driven by moralistic, religious or paternalistic prejudice.

8.9 “CUTS” data sources

Whenever possible, research on data for individual indicators has endeavoured to find a “CUTS” (Comprehensive Uniform Trustworthy Source). If data on the underlying parameter behind an indicator is available for all or most of the 35 countries from one single and reasonably reliable source, then there has been a definitive preference to base the scores on the CUTS. As CUTS would be considered *e.g.* ECDC data, WHO databases, OECD Health data, Special Eurobarometers or scientific papers using well-defined and established methodology.

Apart from the sheer effectiveness of the approach, the basic reason for the concentration on CUTS, when available, is that data collection primarily based on information obtained from 35 national sources, even if those sources are official Ministry of Health or National Health/Statistics agencies, generally yields a high noise level. It is

notoriously difficult to obtain precise answers from many sources even when these sources are all answering the same, well-defined question. For example, in an earlier Index project, it was difficult to ask questions about a well-defined indicator such as “SDR of respiratory disease for males >45 years of age”. For one country protesting violently against their score, it took three repeats of asking the question in writing before the (very well-educated) national representative observed that the indicator was for “males 45+” only, not the SDR for the entire population. It has to be emphasized that also when a CUTS for an indicator has been identified, the data are still reviewed through cross-check procedures, as there have frequently been occasions where national sources or scientific papers have been able to supply more recent and/or higher precision data.

8.9.1 The “Rolls-Royce gearbox” factor

Another reason for preferably using CUTS whenever possible is the same reason why Rolls-Royce (in their pre-BMW days) did not build their own gearboxes. The reason was stated as “We simply cannot build a better gearbox than those we can get from outside suppliers, and therefore we do not make them ourselves”. For the small size organisation HCP, this same circumstance would be true for an indicator where a Eurobarometer question, the WHO HfA database or another CUTS happens to cover an indicator.

8.10 Content of indicators in the EHCI 2014

The research team of the Euro Health Consumer Index 2014 has been collecting data on 48 healthcare performance indicators, structured in a framework of six sub-disciplines. Each of these sub-disciplines reflects a certain logical entity, *e.g.* Medical outcomes or Accessibility.

For reader friendliness and clarity, the indicators come numbered in the report.

Where possible, CUTS - Comprehensive Uniform Trustworthy Sources - were used; see section “[CUTS Data Sources](#)” for more information on this approach, typical for HCP research work.

8.10.1 Patients' Rights and Information

This sub-discipline is testing the ability of a healthcare system to provide the patient with a status strong enough to diminish the information skew walling the professional and patient.

Why does HCP love this sub-discipline? Because it is a GDP non-dependent indicator family. Even the poorest countries can allow themselves to grant the patient a firm position within the healthcare system; and the 2013 Euro Health Consumer Index is proving this observation again.

There are 12 indicators in this sub-discipline:

1.1 Patients' Rights based healthcare law

Is national healthcare legislation explicitly expressed in terms of patients' rights? By law or other legislative act? Are there professional ethical codes, patients' charters, etc.?

This indicator has been in the EHCI since 2005. As the number of countries *not* having adopted such legislation is now down to three, it might be candidate for replacement in 2015.

Sources of data: http://europatientrights.eu/about_us.html ; Patients' Rights Law (Annex 1 to EHCI report, used as starting material); updates through European Observatory HiT reports, National healthcare agencies, web-based research, journals search. Non-CUTS data.

1.2 Patients' Organisations involved in decision making

Do patient organisations have right to participate in healthcare decision making? Sometimes we find that patient's organisations are welcomed to get involved, sometimes they do it by law, sometimes they do it only informally, but usually, sometimes only formally without a real participation, sometimes not at all.

Sources of data: Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. National healthcare agencies. European Observatory HiT reports. Non-CUTS data.

1.3 No-fault malpractice insurance

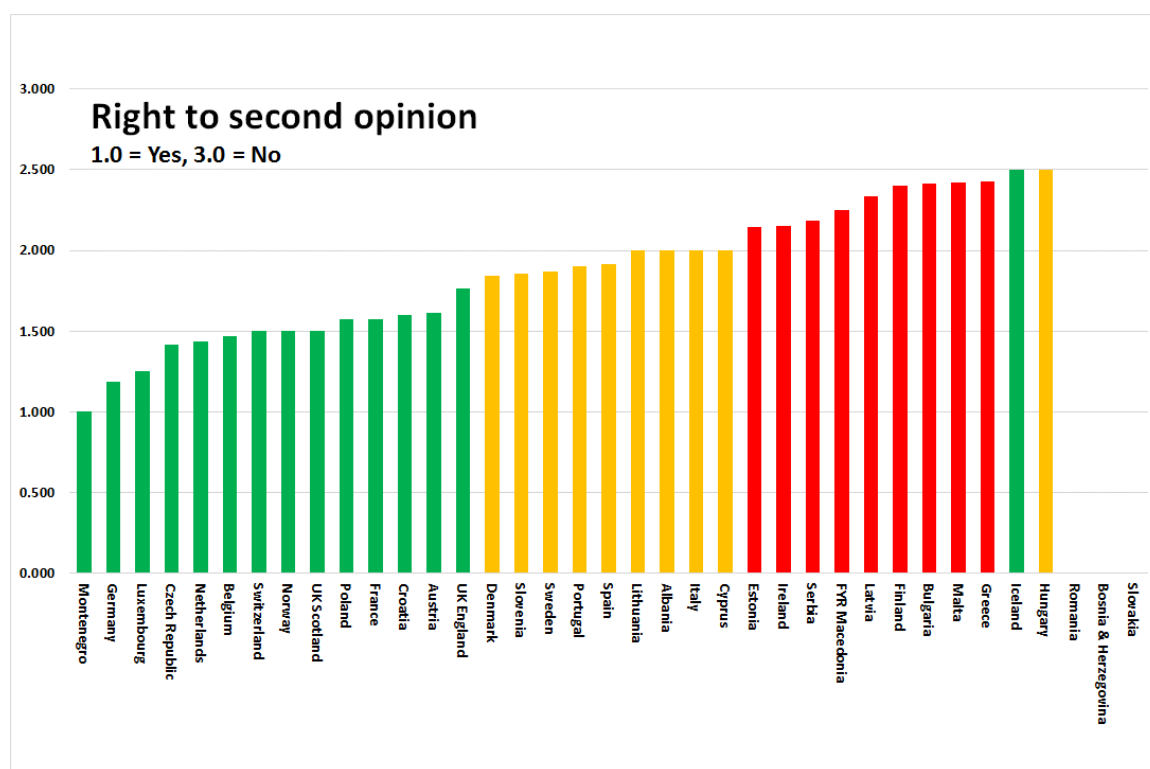
Can patients get compensation without the assistance of the judicial system? Does the compensation prerequisite proving who among the medical staff made a mistake? Each year, the HCP research staff is meeting high healthcare officials who have never heard of no-fault malpractice system, such as that put in place essentially in the Nordic countries. However, since 2009, there has been clear development in this area in a number of countries.

Source of data: Swedish National Patient Insurance Co. (All Nordic countries have no1fault insurance); www.hse.ie ; www.hiqa.ie . National healthcare agencies, web-based research, journals search. Non-CUTS data.

1.4 Right to second opinion

As in other areas of human life, there are not many questions and conditions with only one right answer, in medicine also. Therefore, do the patients have the right to get the second opinion, without having to pay extra? Is it a formal right, but unusual practice, or well-established institute?

Countries where this right exists on paper, but where patient organisations reveal a low degree of knowledge of its existence, have been awarded a Yellow score instead of the Green, which the formal situation would have given.



Sources of data: Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. National healthcare agencies. Non-CUTS data.

1.5 Access to own medical record

Can patients readily get access to, and read, their own medical records? Hard to believe, at some places in Europe, the patient's personal data and integrity is so protected, that she cannot access her own medical record. This is remarkable, as the EU Data protection directive is very clear on the fact that the patient should have this right by law. Elsewhere, she cannot access it either, but at least she is not being told it is for her own good. However, in recent years, this situation seems to have improved significantly in a number of countries!

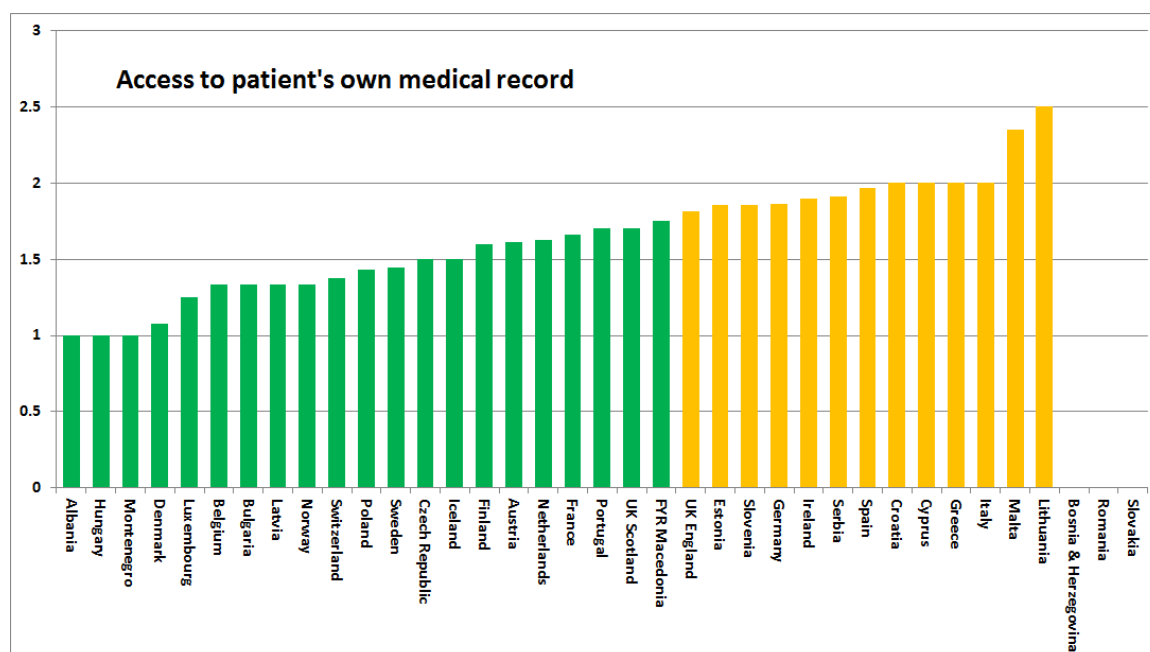


Figure 8.10.1.5. A result of 1.000 means that all respondents of that country answer "Yes". 3.000 means all reply "No". The graph shows that even though patient records are supposed to be available to individual patients, this is still not universally known in several countries.

Sources of data: Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. National healthcare agencies; web and journal research. Non-CUTS data.

1.6 Register of legit doctors

Can the public readily access the information: "Is doctor X a bona fide specialist?" To qualify, this has to be a web/telephone based service.. Yellow pages do not score Green – with an exception for Luxembourg, where the chapter on physicians is yearly reviewed and approved by the Ministry of health. This is a very easy and cheap service to implement, but still it is very difficult to find such sources of information.

Sources of data: Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2014. National physician registries. National healthcare agencies; web and journal research. Non-CUTS data.

1.7 Web or 24-7 telephone healthcare info with interactivity

Simple description of this indicator used in previous years' editions remains the same in 2013: Information which can help a patient take decisions of the nature: "After consulting the service, I will take a paracetamol and wait and see" or "I will hurry to the A&E department of the nearest hospital" The most comprehensive service of this kind is the British NHS Direct. In 2014, several countries have developed decentralized solutions such as "round-the-clock" primary care surgeries, which offer the same service.

Sources of data: Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2014. National healthcare agencies, web search. Non-CUTS data.

1.8 Cross-border care seeking financed from home

The directive **on the application of patients' rights to cross-border healthcare** was decided on 2011-03-09. EU countries had until 25 October 2013 to pass their own laws implementing the Directive. Therefore, the criteria for scores on this indicator were tightened considerably compared with previous ECHI editions. At the time of publication of this report (January 2015), some little progress seems to have happened since autumn 2013.

Still, only Luxembourg and The Netherlands have implemented the directive unreservedly, which is not surprising as both countries had it implemented before March 2011! The Luxembourg Green might strike as "cheating", but in the in-sourcing-prone public sectors, the LUX good common sense to refrain from building their own comprehensive healthcare services (which LUX certainly could have afforded), and let its citizens seek care in neighbouring countries, does deserve recognition.

The subjective view from patient organisations (Graph below) agree well with the real life situation. Several national bodies did argue that the formal inclusion of the EU directive should be a basis for a Green score. As there are significant information gaps and other obstacles, this has not been accommodated. Austrian patients, in particular, seem unaware of the cross-border option.

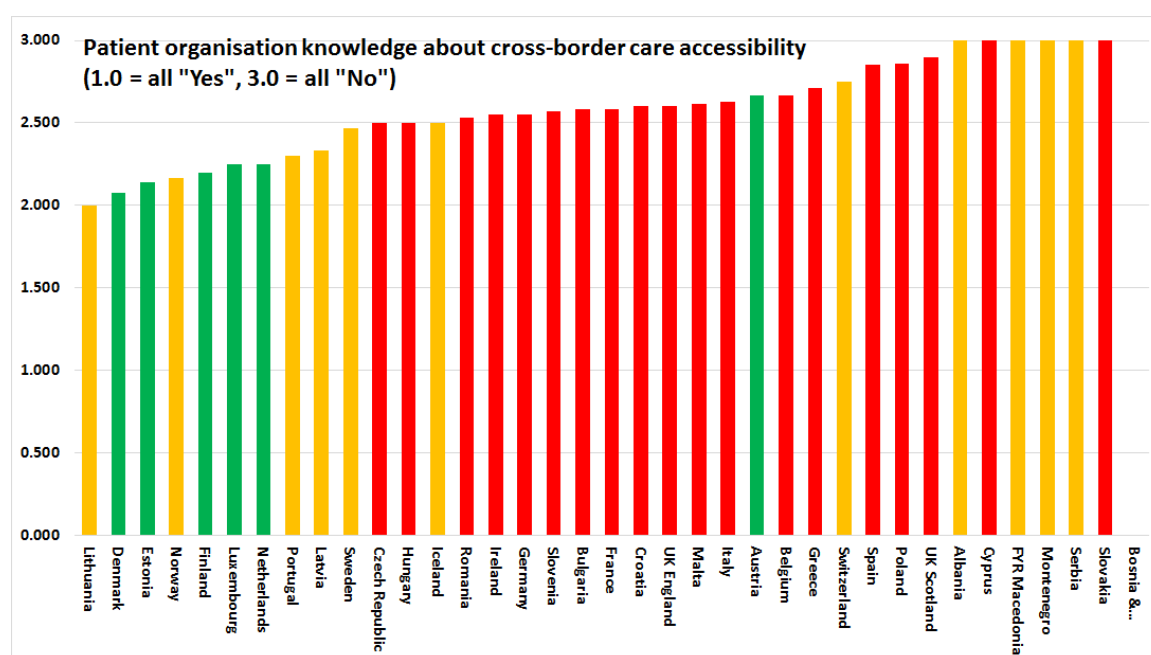


Figure 8.10.1.8 Survey responses to "Can patients in your country choose to be treated in another EU state OF THEIR OWN CHOICE, on the same economic terms as for treatment at home? Non-EU states get a Yellow "Not applicable" score by definition. The Green Bulgarian score from 2013 was deemed to lack credibility, which seems right.

Following on the EU cross-border directive 2011, the real life implementation of the EU cross-border directive will probably take time. With The Netherlands as a notable exception, there seems to be an endemic problem in the form of control freaks (= Over-anxious regulators?) in healthcare administration slowing down the process. Penetration of the Dutch observation that "free access to cross-border care will not exceed 1% of healthcare budgets" seems to require assisted delivery.

The graph above illustrates the results from the HCP Patient Organisation survey. Sources of data: Survey commissioned for Heart Index by HCP from Patient View 2014, http://ec.europa.eu/health/cross_border_care/consultations/cons_implementation_ern_e_n.htm#results , National healthcare agencies.

1.9 Provider catalogue with quality ranking

In 2005, Dr. Foster of the UK was the single shining star on the firmament of provider (hospital) listing, where patients could actually see which hospitals had good results in term of actual success rates or survival percentages. Today, that has evolved into "NHS Choose and Book"¹³.

In 2014, there are still only a few more examples, where the Health Consumer Powerhouse believes that the most notable is the Danish www.esundhed.dk/sundhedskvalitet/Pages/default.aspx, where hospitals are graded from ★ to ★★★★★ as if they were hotels, with service level indicators as well as actual results, including case fatality rates on certain diagnoses. Perhaps the most impressive part of this system is that it allows members of the public to click down to a link giving the direct-dial telephone number of clinic managers.

In 2014, the Danish Sundhedskvalitet and the British NHS Choices remain the standard European qualifications for a green score. The "best clinics" published by the weeklies *LePoint/Figaro* in France gives a Green in 2014, as the HCP survey indicated a high degree of familiarity with that among patients. Also, in 2014 Estonia, The Netherlands, Norway, Portugal and Slovakia score Green. Germany, scoring Yellow in 2012, now scores Green (again) as public access to this information has been restored. Sweden has the information available in a 400+ page book, but that can hardly be described as easily accessed by patients.

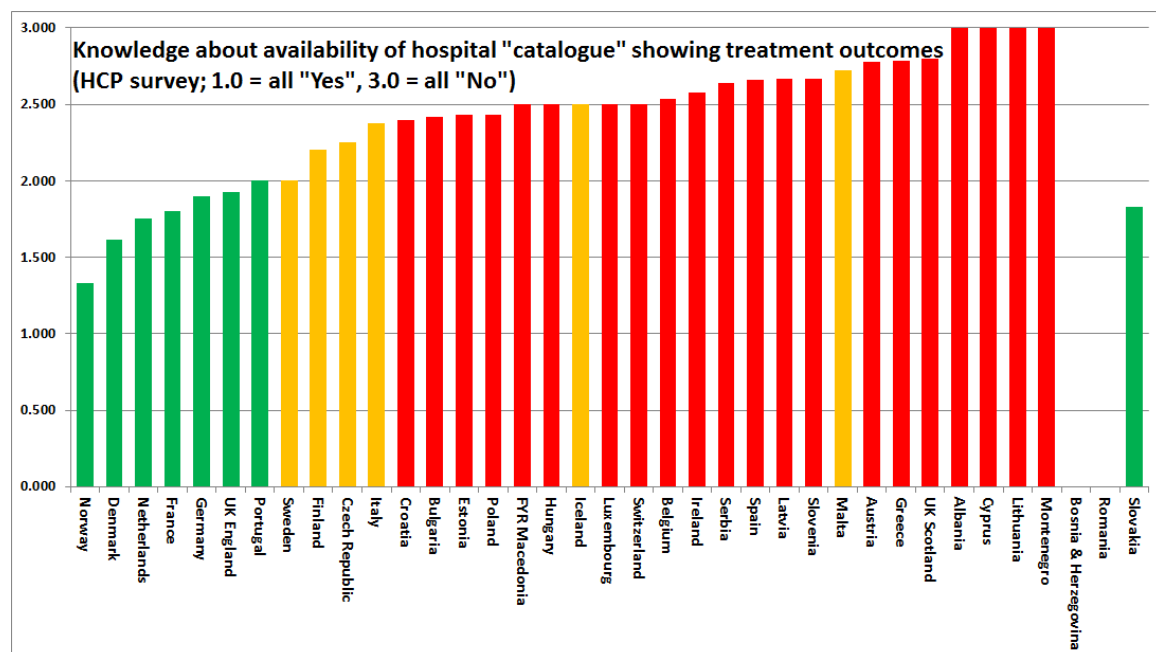


Figure 8.10.1.9 The Yellow scores for Iceland and Malta are awarded not to discriminate against islands having only one real hospital each.

Sources of data: Survey commissioned for Heart Index by HCP from Patient View 2014, www.drfoosterhealth.co.uk/; www.esundhed.dk/sundhedskvalitet/Pages/default.aspx; www.sykehusvalg.no/sidemaler/VisStatiskInformasjon_2109.aspx; www.higa.ie/; <http://212.80.128.9/gestion/ges161000com.html>, www.bqs-institut.de/. Non-CUTS data.

1.10 EPR penetration

¹³ www.chooseandbook.nhs.uk

Percentage of GP practices using computer for storage of individual patient data and communication with other parts of the healthcare system. Finally in 2014, 20 years later than what should have been, this is becoming the norm in Europe!

Sources of data:

http://ec.europa.eu/public_opinion/flash/fl126_fr.pdf ;
<http://www.europartnersearch.net/ist/communities/indexmapconso.php?Se=11> ;
www.icgp.ie ; Commonwealth Fund International Health Policy Survey of Primary Care Physicians "Benchmarking ICT use among GP:s in Europe"; European Commission, April 2008; study made by Empirica, Bonn, Germany (p.60), Gartner Group. CUTS data.

1.11 Do patients have access to on-line booking of appointments?

The supply/demand ratio for specialist appointments or major surgery is very similar to that of hotel rooms or package holidays. There is no real reason why patients should not be able to book available "slots" at their convenience. This exists rather sparingly in Europe; in 2009, one of the only two Green scores went to Portugal, where "4 million people in the Lisbon region" were said to have access to this service. In 2014, thirteen countries have made this service available to sizeable groups of citizens – quite an improvement (2013: 9 countries)! As is illustrated by the Macedonian example, this service has the potential to more or less eradicate waiting lists from a healthcare system!

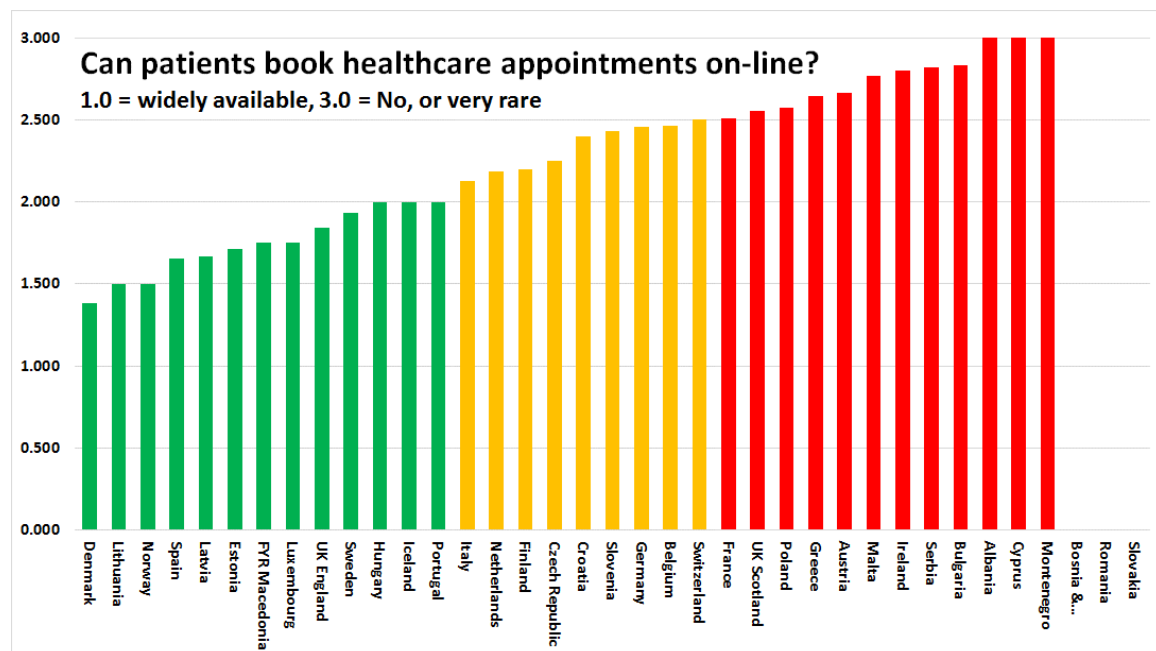


Figure 8.10.1.11 The cut-offs to get a Yellow or Green have been unchanged since 2009.

Sources of data: Survey commissioned by HCP from Patient View 2014. National healthcare agencies.

1.12 e-Prescriptions

HCP survey question:

"Can your country's patients collect drugs from a pharmacy with the prescription being sent electronically? [This is known as 'e-prescriptions', and no paper prescription is issued.]"

1. Yes, this facility is widely available.
2. It does exist, but is only offered by a few pioneering doctors/clinics/ hospitals.
3. No (or it is very rare).

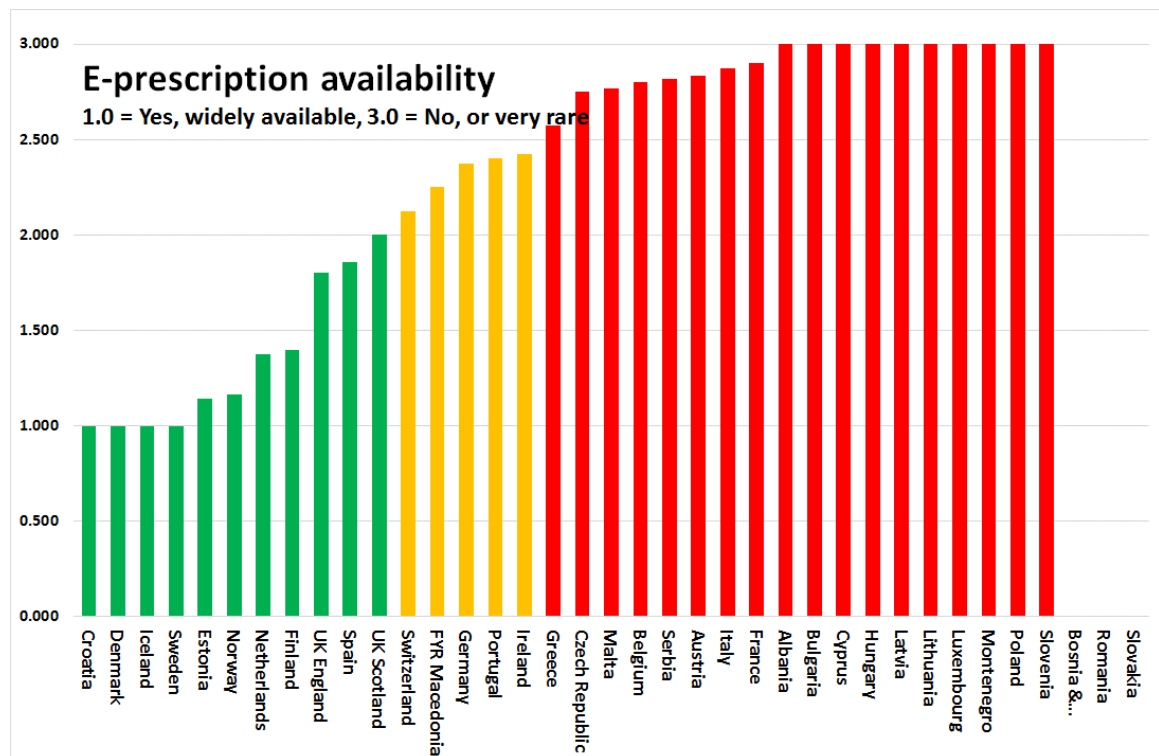


Figure 8.10.1.12 Survey responses to the above question.

Croatia and the Nordic countries are leading Europe.

Sources of data: Survey commissioned by HCP from Patient View 2014. "*The set-up of guidelines in support of European e-Prescription interoperability (2011-2013)*", Empirica, Bonn); National healthcare agencies.

8.10.2 Waiting time for treatment

2.1 Family doctor same day access

Testing a very reasonable demand: Can patients count on seeing a primary care doctor today, on the *only* indication "The patient suffers from the opinion that he needs to see a doctor"?

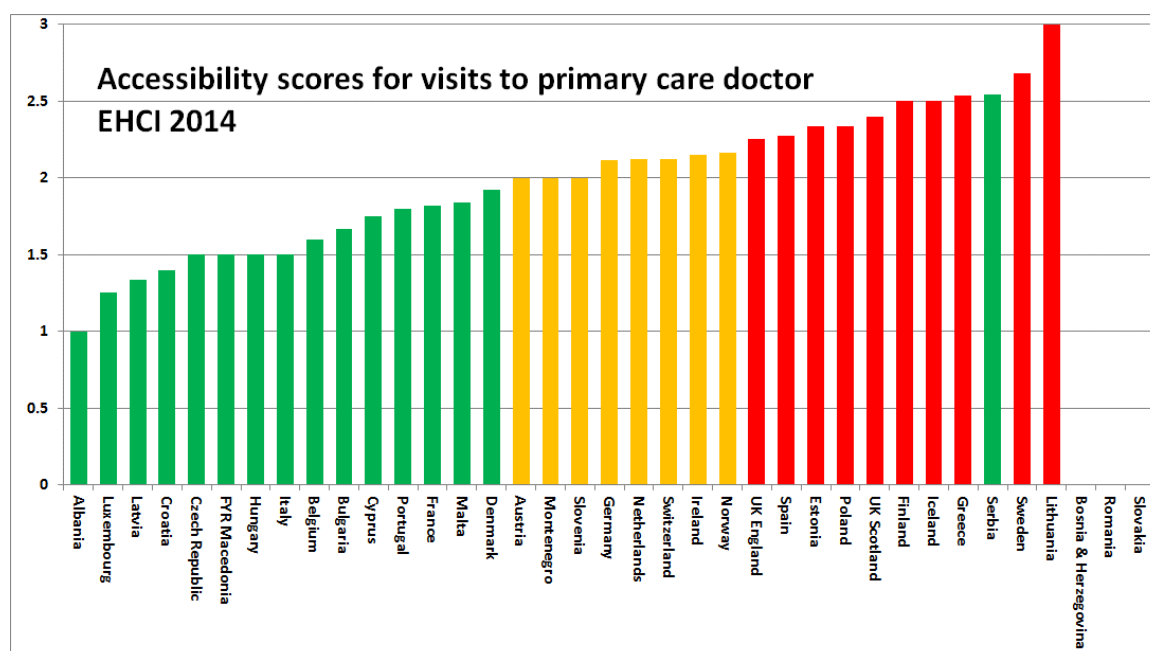


Figure 8.10.2.1a Survey responses to the question: "Can your country's patients see their primary care doctor that same day (with or without an appointment)?" 1.0 = all yes; 3.0 = all "normally not". In Serbia, primary care centres are open for "drop-in" patients 24/7; the negative bias of patient responses is unexplained.

The responses on this indicator basically show that there is no logical explanation for waiting times in primary care; the findings seem to be randomly placed in the order of national wealth; there is no correlation with financial matters (GDP or healthcare spend *per capita*) nor the range of services provided, nor the density of primary care network (see graph below). In some rather unexpected countries, the GP even has the obligation to answer the phone to every patient registered in his practice 24 hours per day, 7 days a week.

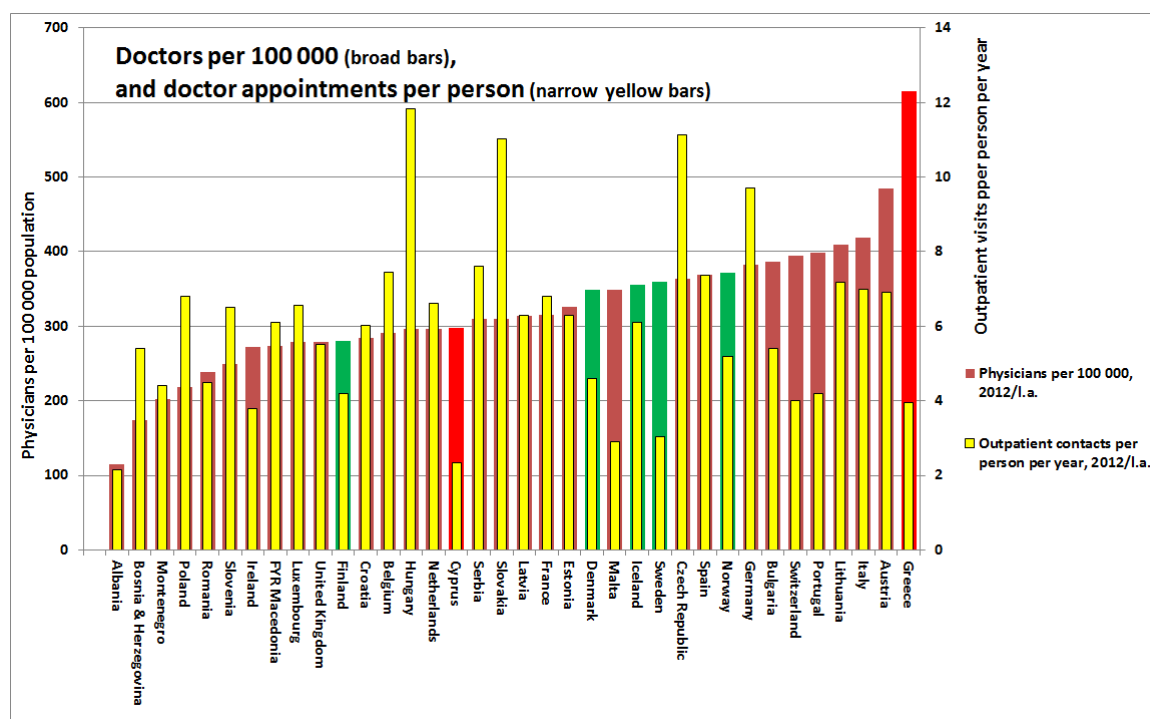


Figure 8.10.2.1b Doctors per 100 000 people (broad bars) and Number of outpatient contacts per person (narrow bars). As the graph shows, there is very poor correlation between doctors *per*

capita and Access to doctor. There are some culture streaks: the Nordic countries (green broad bars) only want patients to see a doctor when really sick. Swiss, Portuguese and Dutch do not disturb their doctors too much, either. The very low numbers of visits per doctor in Cyprus or Greece (which has by far the highest number of doctors *per capita*) could possibly be under-reporting of visits for tax evasion reasons.

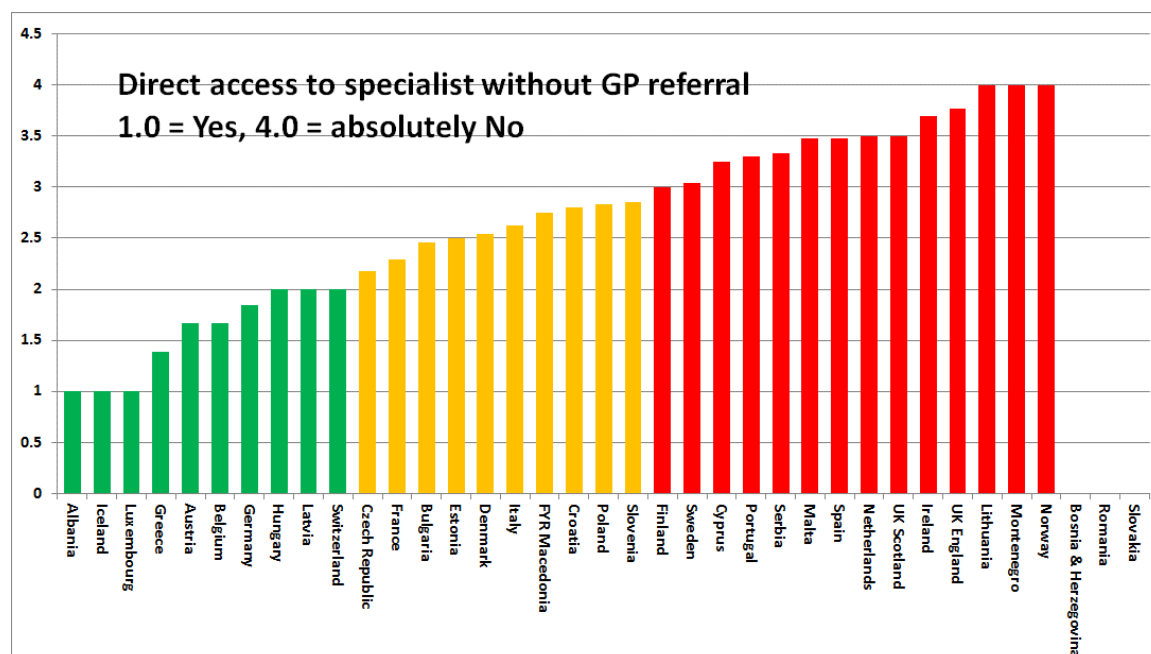
Sources of data: Patients' Perspectives of Healthcare: Waiting times in Europe; survey commissioned by HCP 2014. WHO Health for All database, April 2014. National healthcare agencies; journal search. Non-CUTS data.

2.2 Direct access to specialist

Can patients see a specialist without first having to gain a referral from a primary-care doctor?

This indicator happens to be the most disputed of all in the history of HCP indexes. However, the EHCI research does not take religious beliefs into consideration, be they moslem, catholic or the Faith in GP Gatekeeping. Consequently, it has been kept since 2005, and seems to confirm the notion that "no significant effects of gatekeeping were found on the level of ambulatory care costs, or on the level or growth of total health care expenditure"¹⁴.

Danish patients are particularly sanguine about being able to see a specialist directly; in Denmark, the GP or the A&E department are supposed to be the only points of entry to the healthcare system!



Sources of data: Patients' Perspectives of Healthcare: Waiting times in Europe; survey commissioned by HCP 2014. National healthcare agencies with healthcare officials; www.im.dk/publikationer/healthcare_in_dk/healthcare.pdf ; www.ic.nhs.uk/ ; www.oecd.org, www.vantetider.se . Non-CUTS data.

¹⁴G Van Merode, A Paulus, P Groenewegen: Does general practitioner gatekeeping curb health care expenditure? J Health Serv Res Policy. 2000 Jan ;5 (1):22-6. See also Kroneman et al: Direct access in primary care and patient satisfaction: A European study. Health Policy 76 (2006) 72-79

2.3 Major non-acute operations <90 days

What is the interval between diagnosis and treatment for a basket of coronary bypass/PTCA and hip/knee joint? It is difficult to avoid the observation that countries, which *do* have official waiting time statistics (Ireland, Sweden, UK *etc*), this is in itself a not very flattering circumstance. Countries such as Germany, where waiting times tend to vary in the 2 – 3 weeks range, have never felt the urge to produce waiting time data, for principally the same type of reason that Madrid has less snow-ploughs than Helsinki.

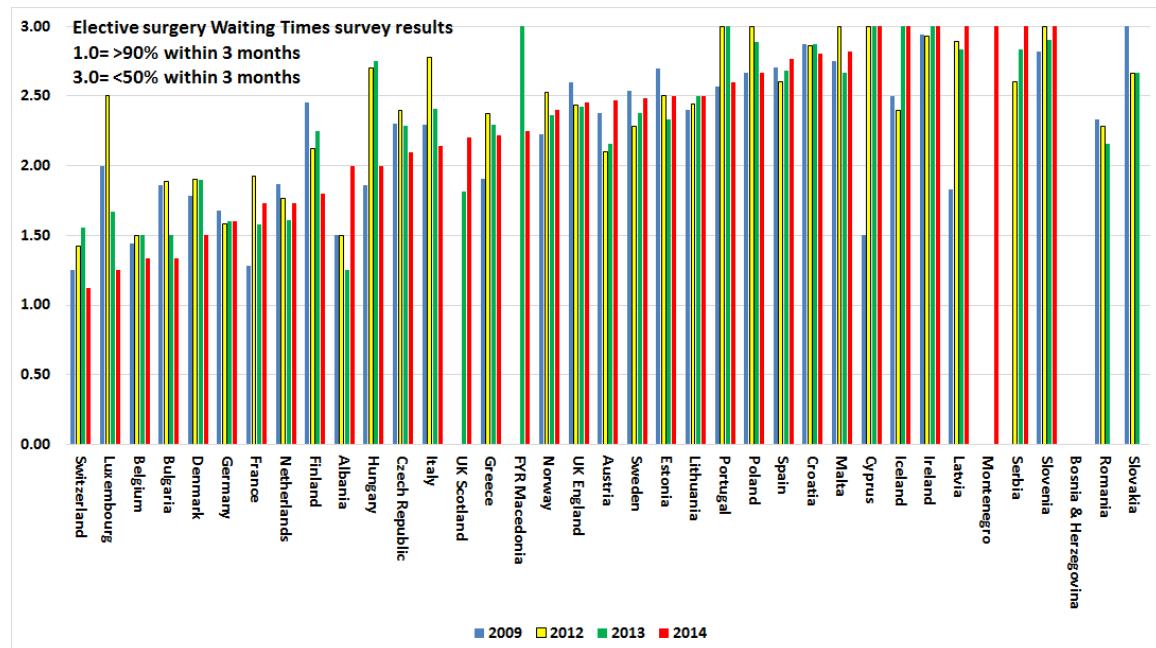


Figure 8.10.2.3 Survey responses on major elective surgery waiting times. If the blue/maroon bars are higher than the green bars, that indicates waiting times having got longer during the “financial crisis years, and with a small improvement in 2014.

As the graph shows, this is one of the few EHCI indicators, where traces of the financial crisis show up: waiting times for (expensive) elective surgery seemed increase slightly between 2009 and 2013, most notably in some countries severely hit by the crisis. However, this effect, if not an artefact, was quite modest, and 2014 seems to show improvement in many countries.

Survey results for small countries should be taken with caution due to the limited number of survey responses!

Sources of data: Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2014. National healthcare agencies. Non-CUTS data.

2.4 Cancer therapies < 21 days

This indicator measures the time to get radiation/chemotherapy after decision to treat (DTT). The time limit for a Green score is, and should be, much tighter for cancer treatment than for elective surgery. Encouragingly, the general level of accessibility to cancer care is superior to that of elective surgery also when the much tighter cut-off for a Green score (21 days *vs.* 90 days) is taken into consideration.

The Patient Organisation survey commissioned by HCP had the same logic as for elective surgery (above) with an average response score of 1.0 *for cancer treatment* meaning essentially “everybody receives treatment within three weeks” to 3.0 meaning “everybody waits more than three weeks. In 2009, the average score was 1.692, in

2012, the average score was 1.789, 1.871 in 2013 and 1.833 in 2014. Interestingly this shows the same tendency as waiting times for elective surgery: an austerity-induced (?) slight increase of waiting time for these costly treatments between 2009 and 2013, and a minor improvement in 2014.

Sources of data: Survey commissioned by HCP 2014. Cancer wait report from the Swedish Board of Health and Welfare (2014). National healthcare agencies. Non-CUTS data.

2.5 CT scan < 7days

As a representative for waiting times for advanced diagnostics was chosen Time to get a CT scan after referring doctor's decision. There proved to be some difficulty making respondents (in national healthcare agencies) not answer in terms of "acute" or "non-acute" examinations. Again, it has to be emphasized that waiting times for a CT scan is both poor service quality and also *increases* costs, not saving money, as the procedure of keeping track of patients for weeks/months is by no means costless, and the examination itself is if anything cheaper if the patient (and the care provider) has the underlying cause fresh in their minds.

The Patient Organisation survey commissioned by HCP had the same logic as for elective surgery (above) with an average response score of 1.0 *for a non-acute CT scan* meaning essentially "everybody receives an examination within one week" to 3.0 meaning "everybody waits more than three weeks".

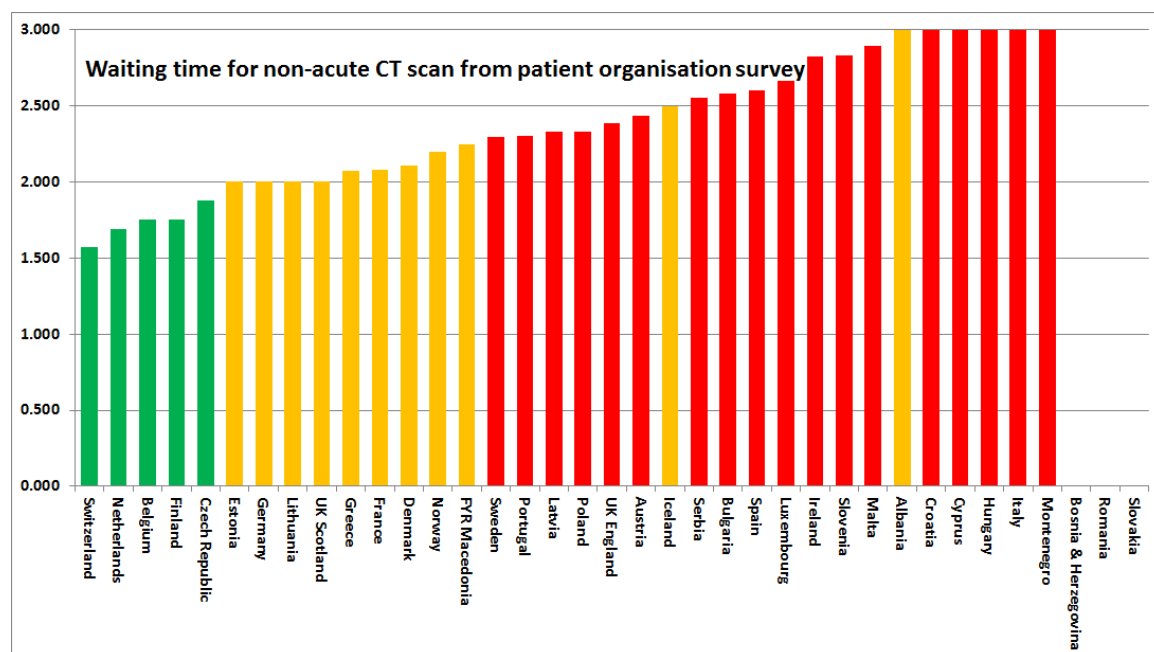


Figure 8.10.2.5 Survey responses non-acute CT scan waiting times. < 7 days for a Green might seem tight, but there is no real life reason to have longer waits. Albanian and Icelandic scores have been modified from national data.

Sources of data: Survey commissioned by HCP 2014. National healthcare agencies. Non-CUTS data.

2.6 A&E department waiting time

New indicator in 2013. HCP patient organisation survey question:

"Which of the following would be the more TYPICAL waiting time in your country for a visit to the Accident and Emergencies department of a hospital? [Please regard "waiting time" as the period between arrival at the hospital door and when a doctor starts treating/attending to your problem.]

1. Typically LESS THAN 1 hour.
2. Typically MORE THAN 1 hour, but LESS THAN 3 hours.
3. Frequently MORE THAN 3 hours."

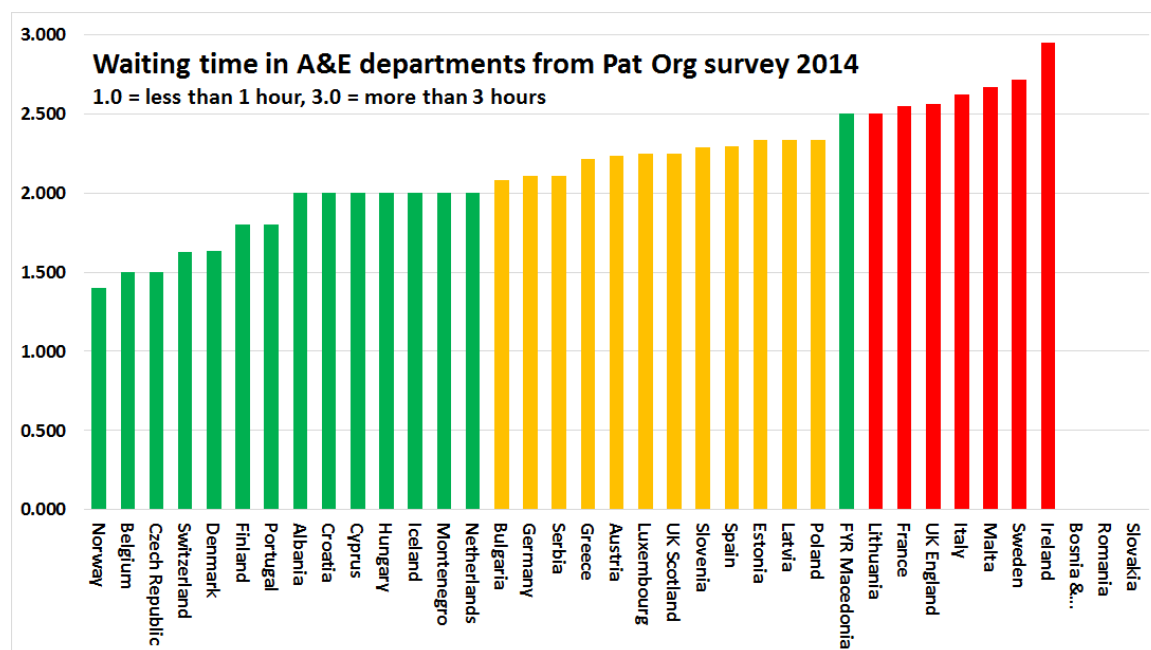


Figure 8.10.2.6 Survey responses on A&E department waiting times

It is probably not a coincidence that for the two countries scoring lowest on Accessibility, Sweden and Ireland, this spills over into long A&E waiting times! The FYROM score has been adjusted based on official data.

Sources of data: Survey commissioned by HCP 2013. National healthcare agencies. Non-CUTS data.

8.10.3 Outcomes

The Outcomes sub-discipline assesses the performance of different national healthcare systems when it comes to results of treatment. The healthcare professionals sometimes tend to think about the healthcare systems predominantly in the terms of outcomes – saying that what really counts, is the result. We do agree to some extent, and this is reflected in the weight attributed to the outcomes sub-discipline indicators.

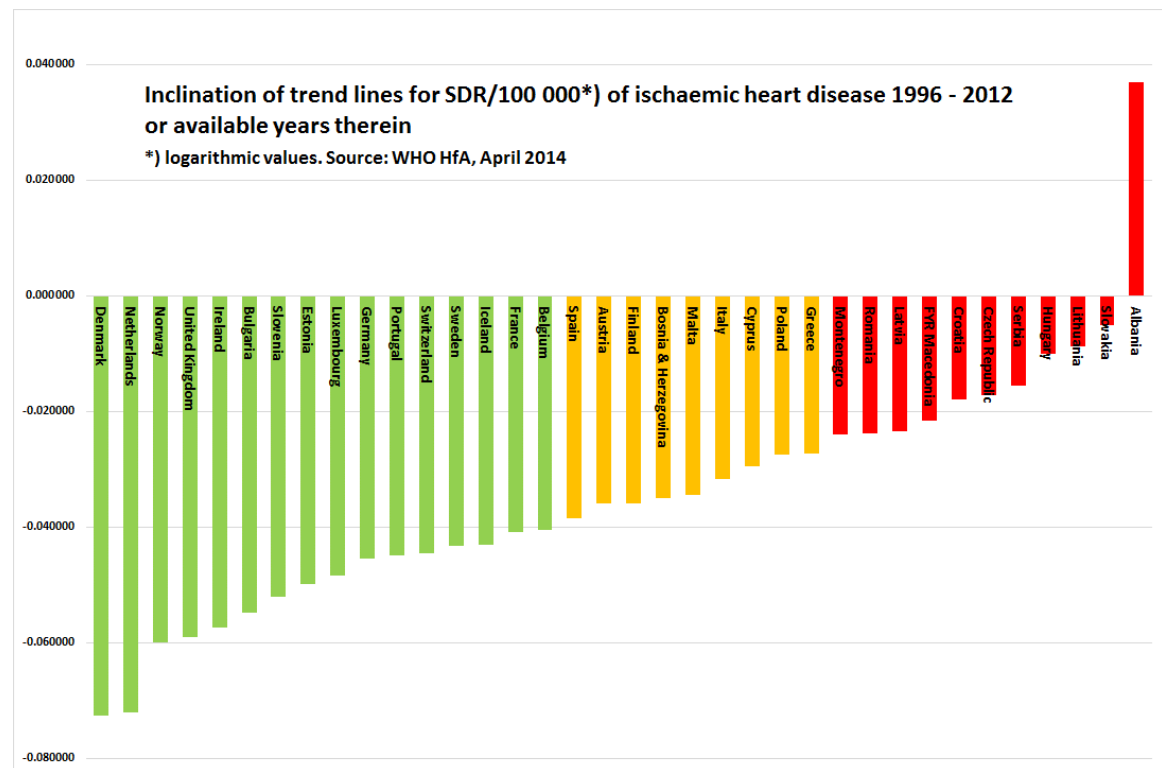
3.1 Decrease of CVD Death Rates

Data availability on the Acute Heart Infarct (AMI) in-hospital case fatality indicator is shockingly fragmented and incoherent over Europe.

For this reason, that indicator has been replaced in the EHCI 2014 by the indicator "Inclination of the long-time trend line for ischaemic heart disease Standardized Death Rates". This is based on the assumption that modern healthcare is the dominating reason for the decrease of cardiac deaths. That lifestyle changes are not the major

factor is supported by the discussion on the Diabetes Epidemic¹⁵. Diabetes shares most of the risk factors with CVD, and with the exception of smoking rates slowly decreasing, other risk factors such as obesity, drinking and sedentary lifestyle are on the increase.

The actual indicator data is the *steepness of the long time trend line inclination*. This calculation has been done on the *logarithmic values* of the SDR numbers to compensate for the fact that *e.g.* France starts the comparison at an SDR around one 6th of some CEE countries (see graph below).

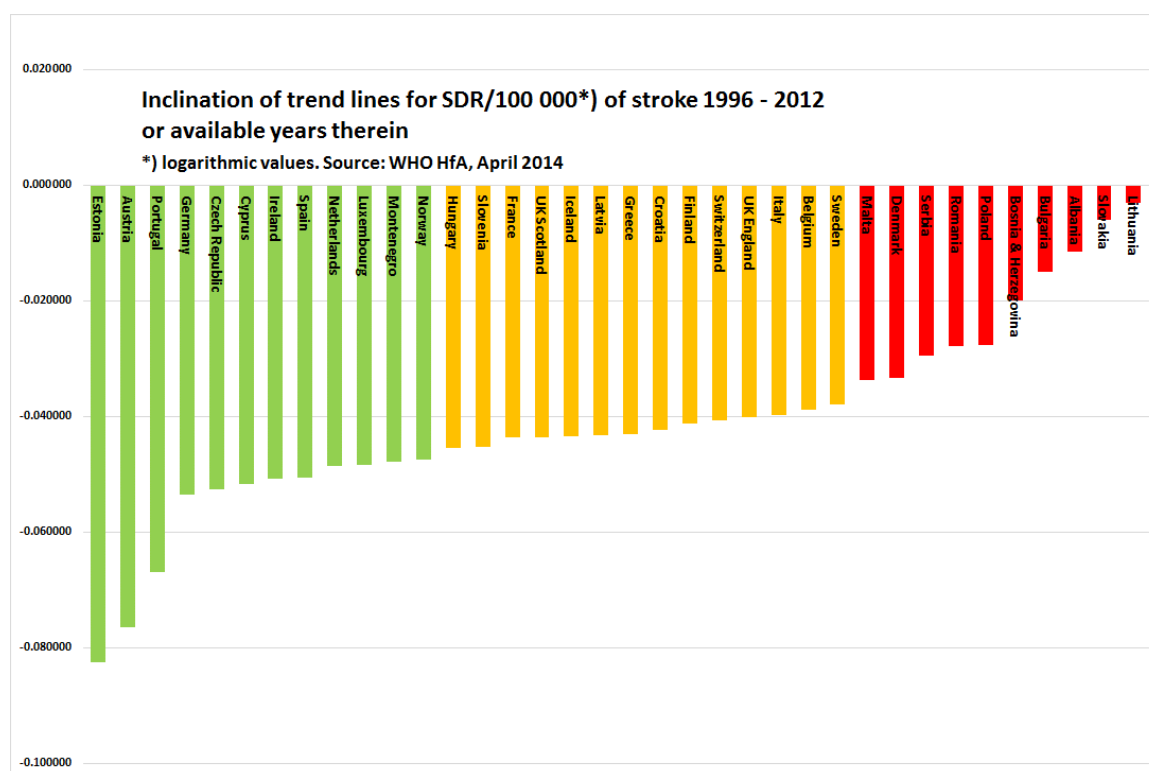


Source of data: WHO Health for All database, April 2014. CUTS data.

3.2 Decrease of stroke death rates

Using the same logic as for CVD finally made it possible to introduce a long wanted indicator for the largest cause of death after CVD and cancers; stroke:

¹⁵ Diabetes Atlas 6th edition; 2013



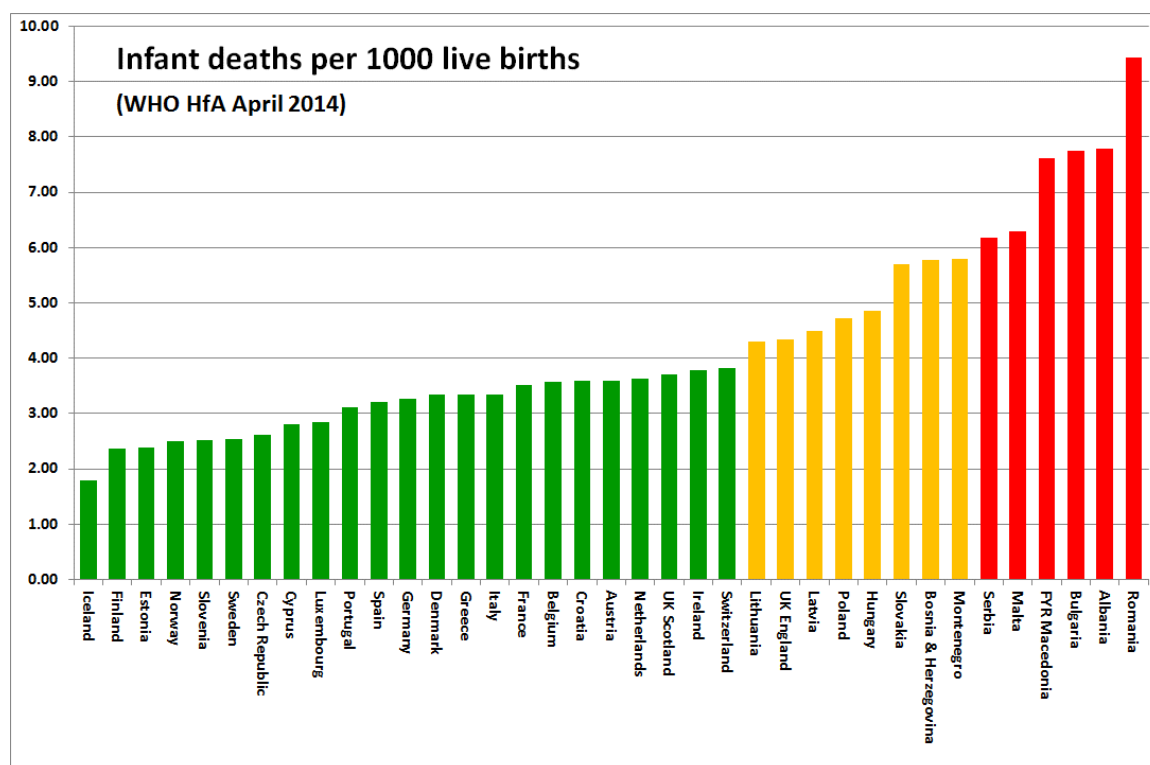
Source of data: WHO Health for All database, April 2014. CUTS data.

3.3 Infant deaths

Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year. In the well developed countries the increased infant mortality occurs primarily among very low birth weight infants, many of whom are born prematurely; in Europe, very low birth weight infants probably account for more than half of all infant deaths. In Europe, with infant deaths normally counting below 6/1000, good check-ups during pregnancy and access to state-of-the-art delivery care are probably the key factors behind attaining really low numbers. Iceland has the lowest infant death rate on Earth, less than 2/1000.

This indicator might be the best single indicator, which could be used to judge the overall quality of a healthcare system. It is interesting to note that this indicator seems totally resilient to effects of financial crises; infant mortality numbers have been, and still are, steadily improving since 2005! The Green/Yellow/Red cut-offs have been kept the same since the start of the EHCI. The number of countries scoring Green has increased from 9 in 2006, to 22 in 2014, (plus Scotland)!

The country average keeps dropping, in spite of any "financial crisis": from 4.49 in EHCI 2012, to 4.22 in 2014, in spite of introducing two new countries with infant deaths close to 6.



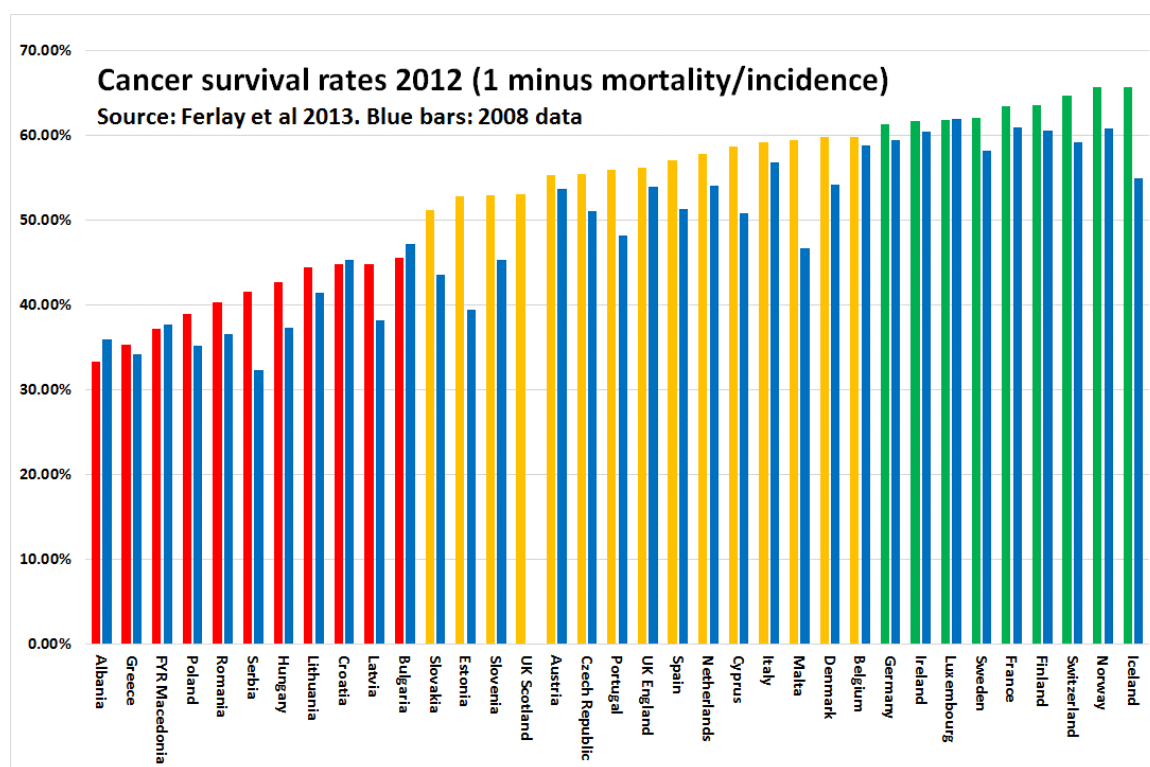
Sources of data: WHO Europe Health for All mortality database April 2014, latest available statistics. Later data for some countries reported by national bodies. CUTS data.

3.4 Ratio of cancer deaths to incidence 2012

The EHCI 2008 indicator on cancer outcomes was the more conventional 5-year survival rates of cancer (all types except skin). As no more recent data than EUROCare-4, (patients diagnosed 1995 – 1999) data was available in the spring of 2012, the very comprehensive paper by J. Ferlay *et al*, listing cancer incidences and cancer deaths in **2008** for all 34 countries was chosen as 2012 indicator data. In this indicator, a ratio of less than 0.4 for Deaths/Incidence, would in principle be equal to a survival rate > 60%.

As there was a 16-month interval between the EHCI 2012 and EHCI 2013, fate arranged that Ferlay *et al* published a paper based on the same data for the year **2012** in time for this report. This means that the data in the graph below shows the situation in 2008 and 2012, *i.e.* two years “straddling” the financial crisis. Unfortunately, this data is still in 2014 the most recent comprehensive cancer mortality data.

As this report has observed numerous times, it is very difficult to trace any effects of financial austerity on Outcomes of treatment of serious diseases! Cancer survival keeps improving, also in countries known to be hit particularly hard by austerity.

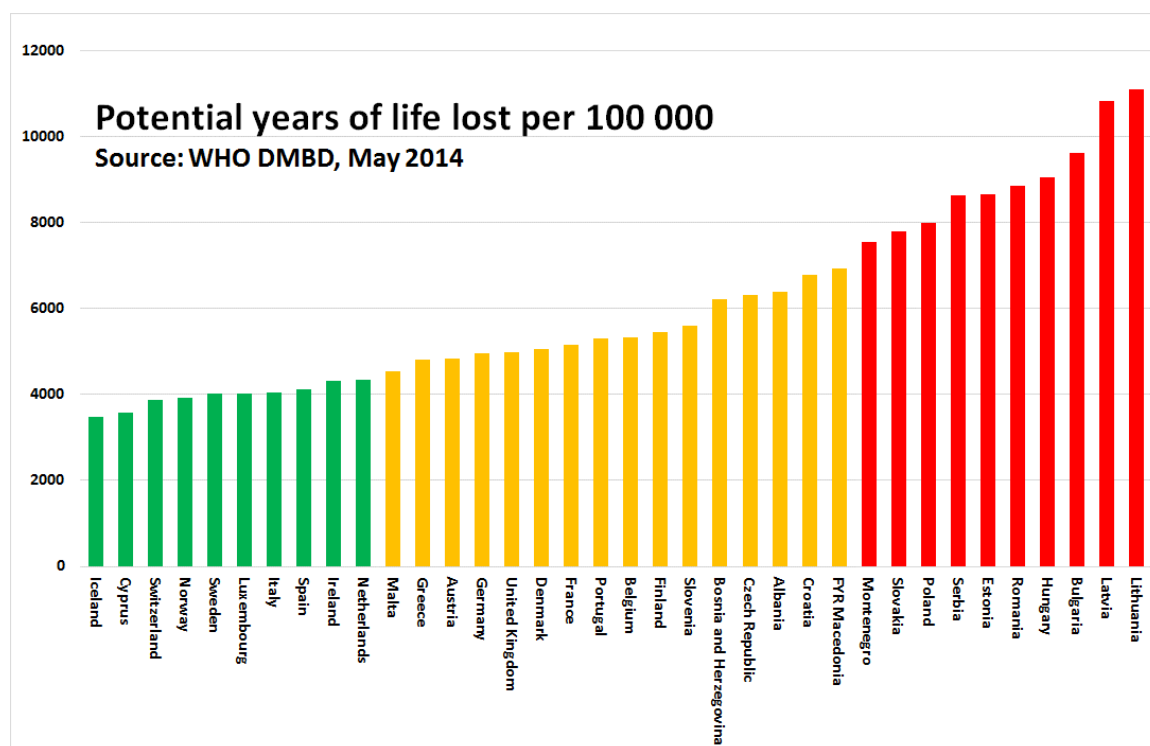


Sources of data: J. Ferlay et al., *Annals of Oncology*, 2010, J. Ferlay et al. *European Journal of Cancer* 49 (2013) 1374–1403. CUTS data.

3.5 Preventable Years of Life Lost

This indicator measures Years lost per 100.000 population 0-69, all causes of death. Potential Years of Life Lost (PYLL), used by the WHO and OECD, take into account the age at which deaths occurs by giving greater weight to deaths at younger age and lower weight to deaths at older age.

Potential Years of Life Lost are calculated from the number of deaths multiplied by a standard life expectancy at the age at which death occurs. PYLL is preferred as an indicator for the EHCI over and above the popular “Healthcare Amenable Deaths”, as that indicator automatically gives low values to states with a low CVD death rate, such as the Mediterranean states, most obviously France.



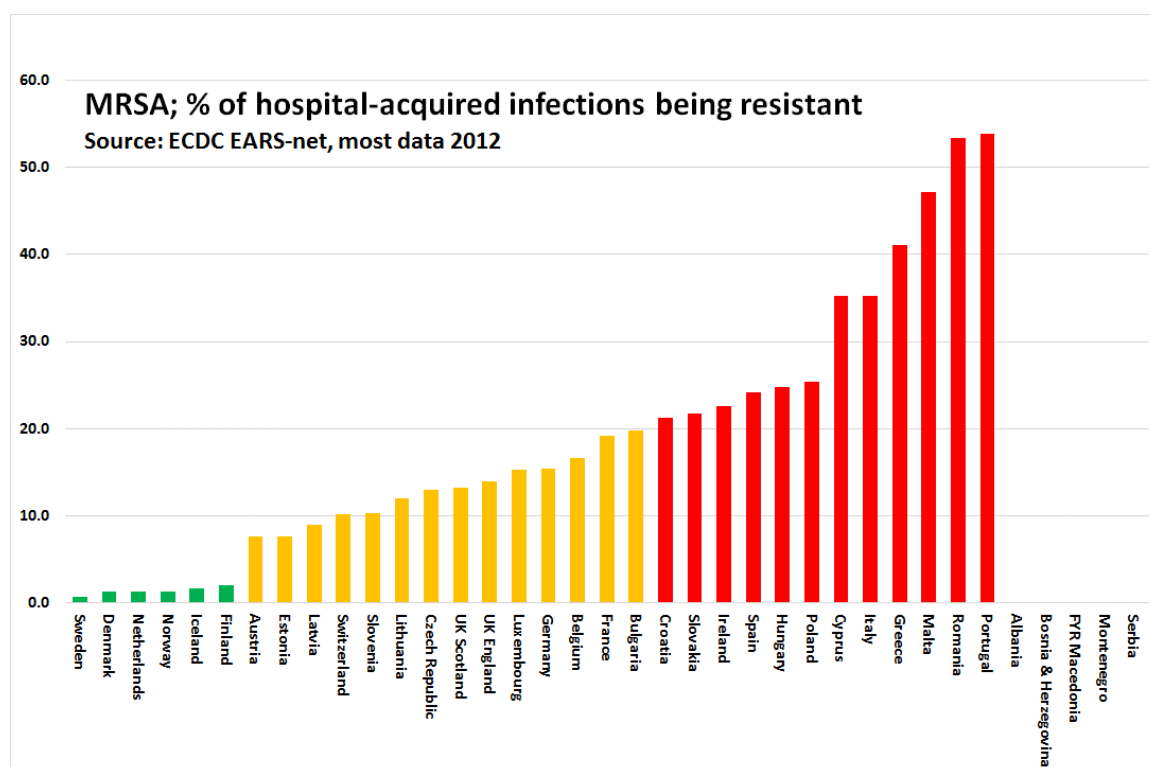
Source of data: WHO Detailed Mortality Database, excerpt May 2014. CUTS data.

3.6 MRSA infections

This indicator measures the percentage of hospital-acquired strains being resistant. The aim of this indicator is to assess the prevalence and spread of major invasive bacteria with clinically and epidemiologically relevant antimicrobial resistance. As in the previous year's indexes, The European Antimicrobial Resistance Surveillance System (ECDC EARS-net) data is used. The data is collected by 800 public-health laboratories serving over 1300 hospitals in 31 European countries.

The share of hospital infections being resistant has been uncannily stable over time in many countries, which is slightly surprising: One would think that either a country has the problem fairly well under control (such as the Nordics and The Netherlands) or one would expect fluctuation over time. Why countries like Germany and France can have this rate stable at just over or under 20 % remains a mystery.

The real improvement has been achieved in the British Isles: through a very dedicated effort, both Ireland and the U.K. have brought their resistance rates down from 40 – 45 % in 2008 into the low 20's (Ireland) and less than 15 % (UK).



Sources of data: ECDC EARS-net database, accessed October 8, 2014 (most data 2012). CUTS data.

3.7 Abortion rates

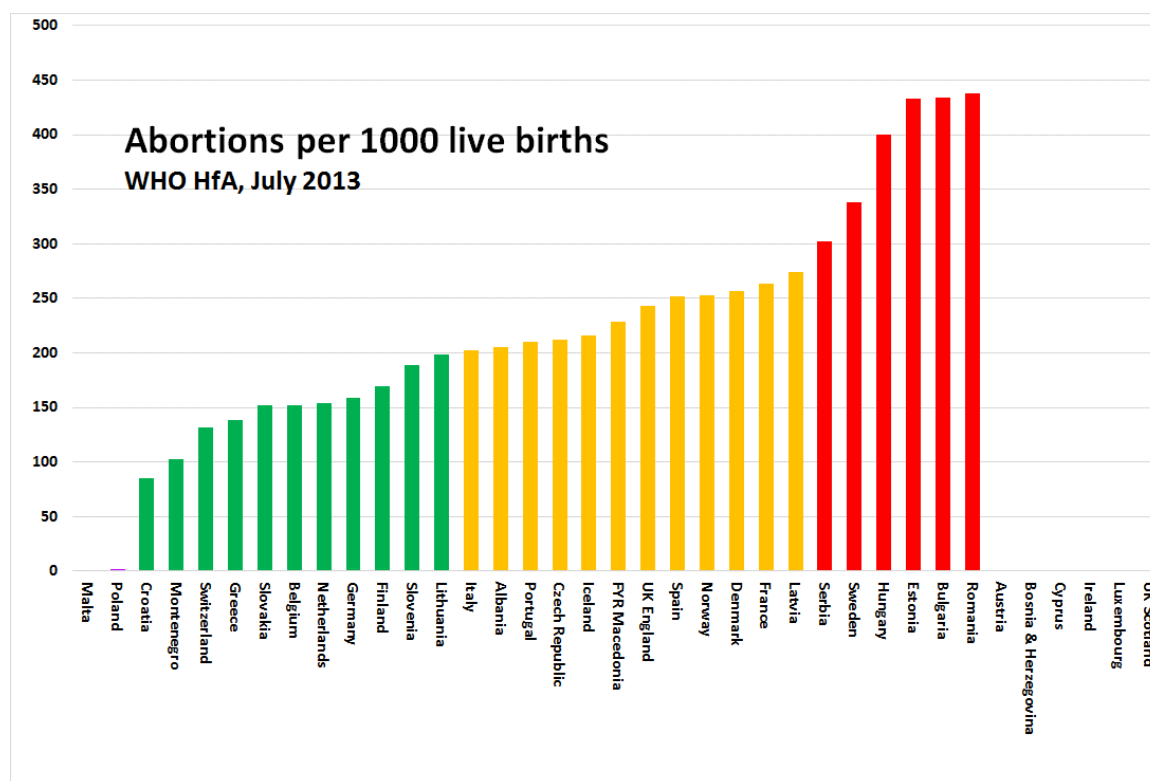
New indicator for EHCI 2013.

The scoring of this indicator is somewhat complex. The scores are fundamentally based on the principle that free, legally defined abortion should be available for women in any country¹⁶. At the same time, using abortion as a contraceptive must be regarded as very undesirable. This is illustrated by Russia, where the abortion rate in the mid-1990's was ~160 abortions per 100 live births, and still today is in a league of its own at 95 per 100. Remnants of the same practice can be discerned in former Warsaw pact countries (see Graph below).

There are four countries in Europe, where free abortion rights do not exist: Cyprus, Ireland, Malta and Poland. These countries have been given the unique new Purple score (= 0 points), even though new Irish legislation allows for abortion in extreme circumstances and subject to external verdict. It has been well known for centuries that stigmatizing or banning abortion results in tragedies such as the female dentist, who died in a Galway hospital because doctors did not dare/want to perform an abortion on her (already dying) foetus. Legal bans do not prevent abortions but rather turns them into a major health risk, forcing women to go abroad or having an abortion under obscure, insecure conditions.

Austria does not ban abortion, but it is not provided by public hospitals, which results in defunct abortion statistics.

¹⁶ European Parliament REPORT on Sexual and Reproductive Health and Rights, (2013/2040(INI)), Committee on Women's Rights and Gender Equality, Rapporteur: Edite Estrela, 2013-09-26



Source: WHO Health for All database, April 2014. CUTS data.

3.8 Depression

Since 2005, HCP has wanted to introduce an indicator on quality of psychiatric care. Due to substantial methodological and definitions problems, resulting in gross inconsistencies of data, we rejected the usual indicators as psychiatric beds per population, mental disorders hospitalisation, drug sales and many others. The decline of suicide in a ten year period, e.g. since 1995, somehow returned, every year, to the [expert panel's](#) working sessions. But, adding to uncertain data reliability, there was a practical problem to solve: taking into account the very significant peak of suicide in Eastern European countries in 1991-1995, how to make the indicator fair for the whole European region? In 2008, following long and vivid discussions, the indicator "inclination of e-log line for suicide SDR:s 1995 – l.a." was introduced, being fully aware of its interpretative limitations.

In 2012, it became evident that general improvement in living conditions, particularly in CEE, and later the effects of the financial crisis in countries such as Greece outweighed the effects of psychiatric care on suicide rates. In the intense search for a relevant indicator on mental health, we finally elected to combine (arithmetic average) the 5 questions in the table below from a Special Eurobarometer on Mental Health:

How often during the past 4 weeks ...? % "all the time" + % "most of the time"		How often during the past 4 weeks ...? % "never" + % "rarely"		
Have you felt happy	Have you felt calm and peaceful	Have you felt so down in the dumps that nothing could cheer you up	Have you felt downhearted and depressed	Have you felt particularly tense

For Norway, not being included in the Eurobarometer, we found a national study directly comparing with the same Eurobarometer.

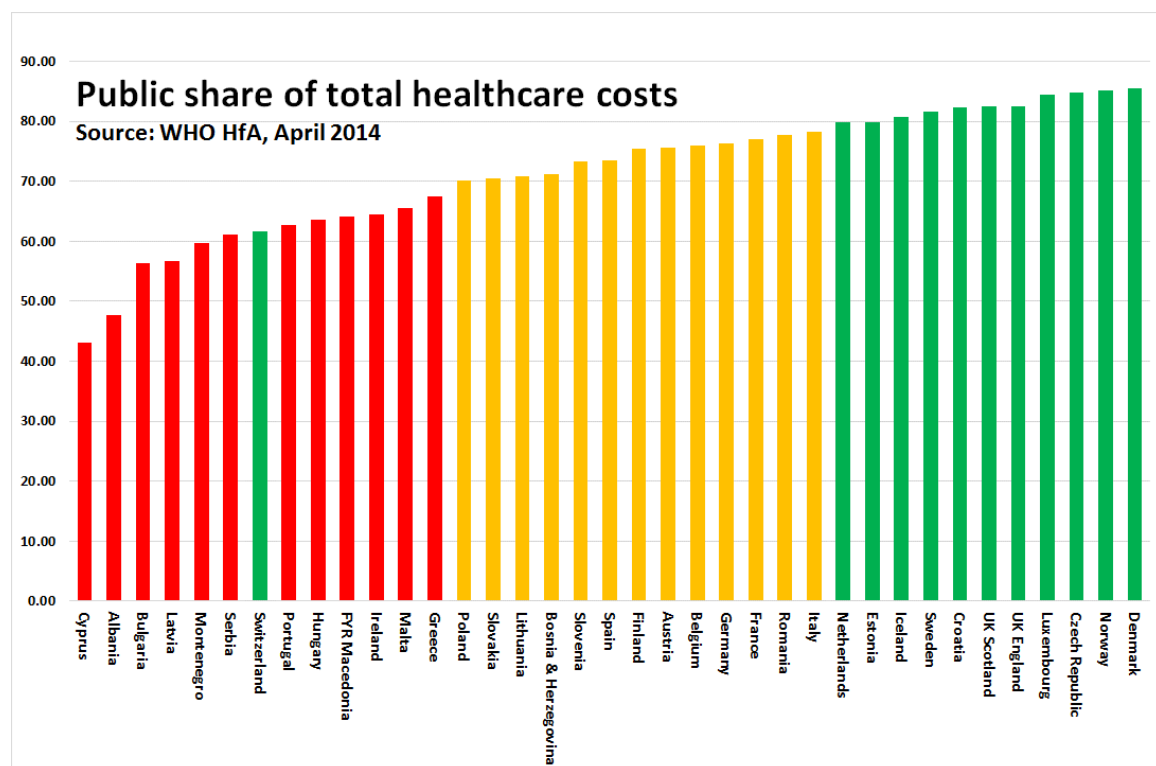
Sources: Special Eurobarometer 345, October 2010. "Psykisk helse i Norge", report 2011:2, www.fhi.no, WHO World Database on Happiness, 2011, WHO Mental Health Atlas, 2012. Strongly non-CUTS.

8.10.4 Range and reach of services provided

4.1 Equity of healthcare systems

The simple indicator "What % of total healthcare spend is public?" was introduced in 2009 as a measure on equity of healthcare systems. Switzerland was judged to be a victim of the same kind of definition problems as pre-reform (2006) Netherlands, where on formal grounds a large part of the common health insurance was reported as private spend, and given a Green score.

In some countries, the public share of healthcare financing has decreased slightly, most notably in Ireland. According to official data, Greece is not in that group, which is interesting.



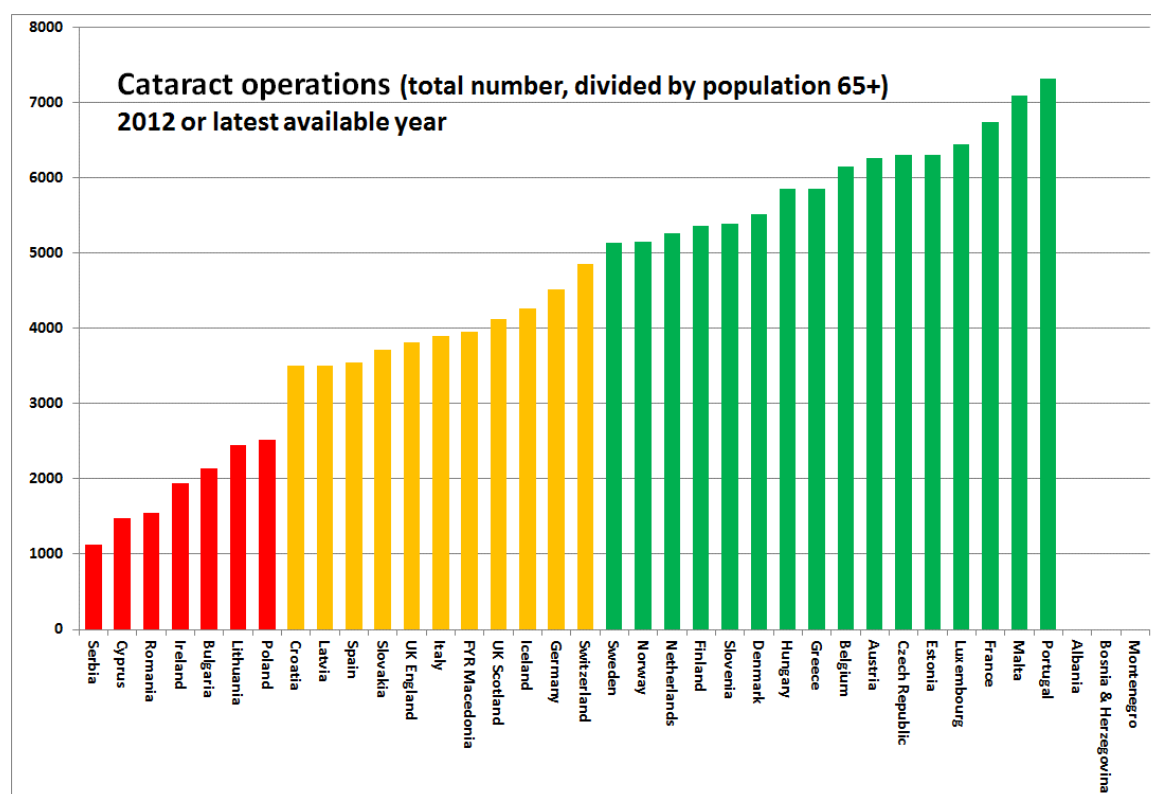
Sources of data: WHO HfA database, April 2014. CUTS data.

4.2 Cataract operations per 100 000 age 65+

Surgical procedures by ICD-CM, Cataract surgery, Total procedures performed on patients of all ages, but divided by 100 000's of population over 65. Few cataracts are performed on patients under 65, and age-separated data is not available.

Cataract operations per 100 000 total population has been continuously used in previous EHCI editions as a proxy of the generosity of the healthcare systems to provide non-lifesaving care aimed to improve the quality of life of the patient. Cataracts have been selected because they are relatively inexpensive and provide large improvement in patient Quality of Life, thus being fairly independent on GDP/capita of a country. Since

2008, the indicator has been age-adjusted following a suggestion made by Irish officials (which is not surprising, as the non-age standardized indicator would have disadvantaged Europe's youngest nations; Macedonia, Ireland and Romania).



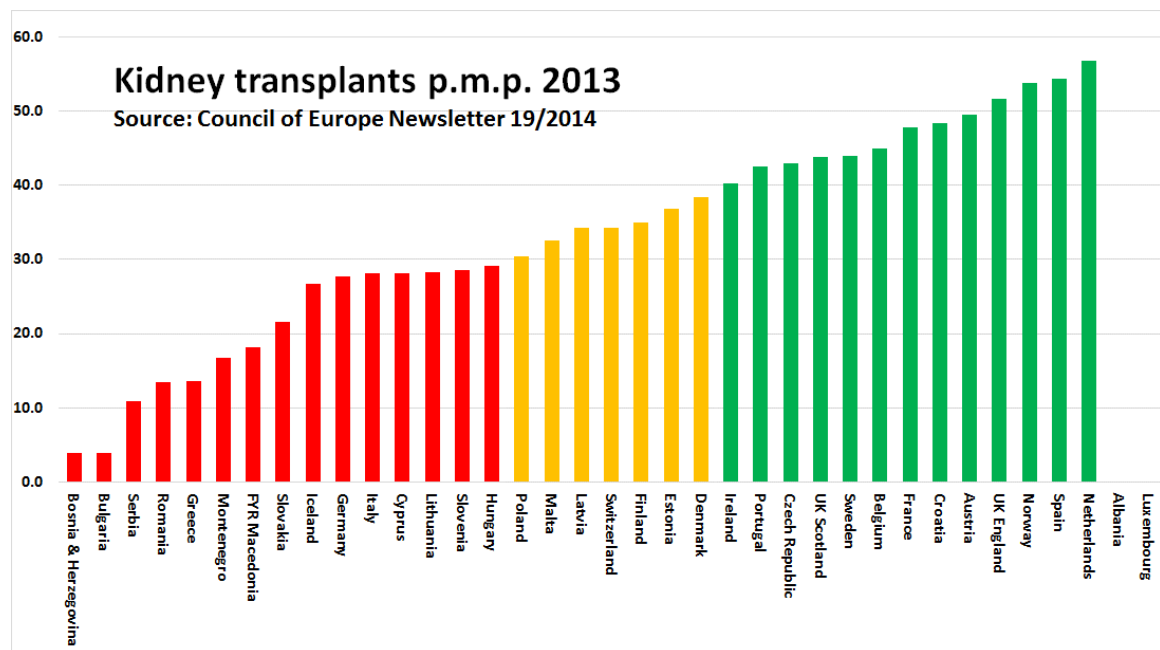
This indicator did prove unexpectedly complicated. Some data faithfully reported to and quoted by the OECD turned out to be totally off the mark: the OECD Health Data number for Belgium used to be 204 868 cataract operations/year. Considering that an annual cohort of Belgians 65+ is not much greater than 100 000, that number would mean that eventually every single elderly Belgian would have cataract ops on both eyes! The Belgian Ministry of Health agreed about the absurdity of the number, and rapidly reported what they considered the accurate number: 107 056 operations, a number the research team could believe! This awkward procedure puts the searchlight on the fact that very strange data can be accepted in official sets of data, as it looks without further consideration.

Belgian data has lately been corrected also in international databases.

Sources of data: OECD Health Data 2012, WHO HfA database April 2014, WHO Prevention of Blindness and Visual Impairment Programme, European Community Health Indicators, National healthcare agencies. Non-CUTS data.

4.3 Kidney transplants per million population

This indicator measures procedures per million population. There is a commonly encountered notion that this number is greatly influenced by factors outside the control of healthcare systems, such as the number of traffic victims in a country. It must be judged that the primary explanation factors are inside healthcare, such as "the role and place of organ donation in anaesthesiologists' training", "the number of Intensive Care Unit beds p.m.p.", the organisation of healthcare to optimise the handling of organs, etc. Experience tells that well-implemented national strategies can significantly increase donations.

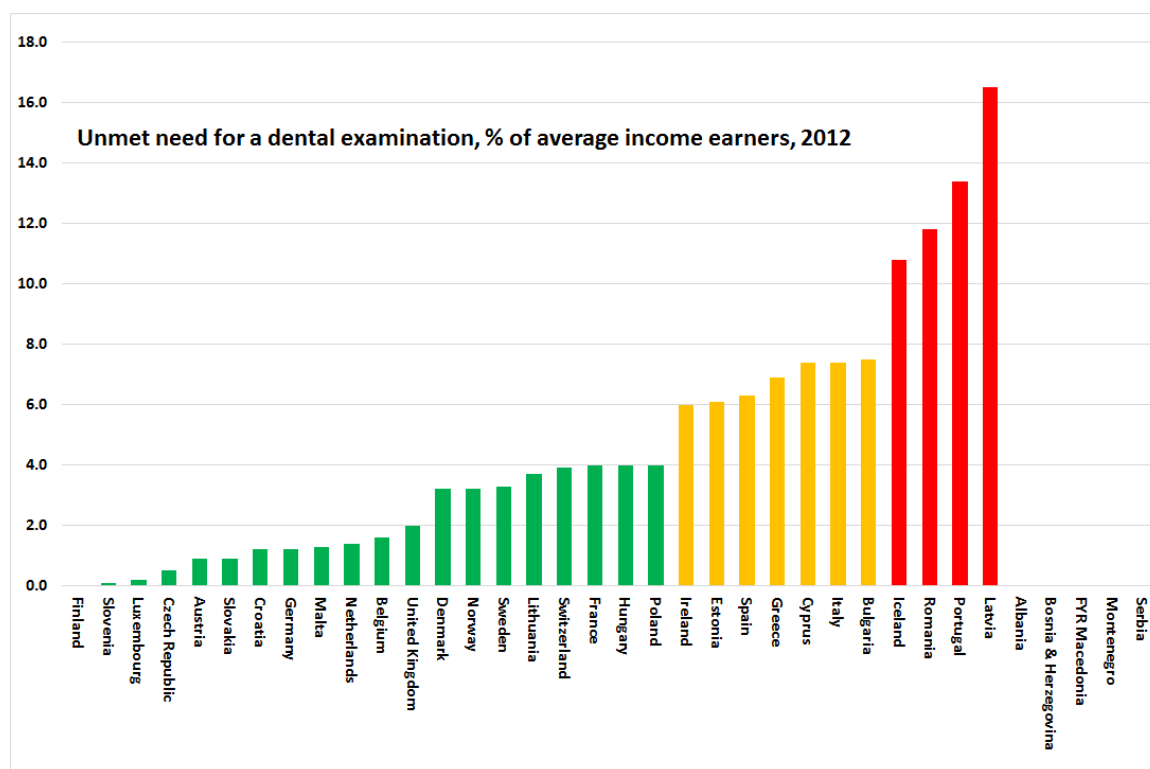


Sources of data: Council of Europe Newsletter INTERNATIONAL FIGURES ON DONATION AND TRANSPLANTATION 19 (2014), Ministries of Health direct communication. CUTS data.

4.4 Is dental care included in the public healthcare offering?

In past years, the very simple indicator “What percentage of public healthcare spend is made up by dental care?” was selected as a measure of affordability of dental care, on the logic that if dental care accounts for close to 10 % of total public healthcare expenditure, this must mean that dental care is essentially a part of a fair public healthcare offering.

2014, data on this indicator comes mainly from the OECD Health at a Glance 2014: “Unmet needs for dental examination”. Albania, FYROM and Serbia retain their EHCI 2013 scores.

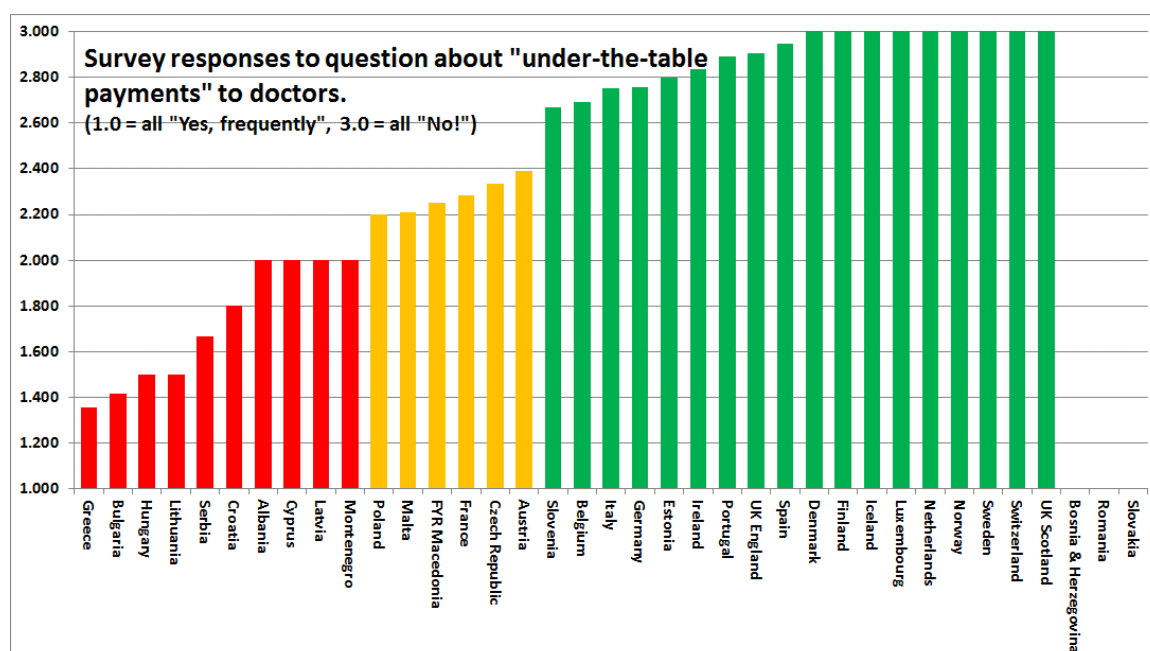


Sources of data: OECD Health at a Glance 2014, Eurostat: <http://appsso.eurostat.ec.europa.eu/> . European Observatory HiT reports. National healthcare agencies. CUTS data.

4.5 Informal payments to doctors

Mean response to question: "Would patients be expected to make unofficial payments?" with range of answers: plain "No!", "Sometimes, depends on situation" and "Yes, frequently". The indicator was first introduced in 2008. As an informal payment was considered any payment made by the patient in addition to official co-payment. That survey on informal payments was the first cross-European survey done ever on this problem, and was repeated in 2009 and 2012 - 2013, with highly compatible results compared with 2008.

In 2014, the countries fall in three distinctive groups, making the R/Y/G scoring natural. These results have also been remarkably stable over the years, *e.g.* with Portugal and Spain scoring Green, and France and Austria scoring Yellow.



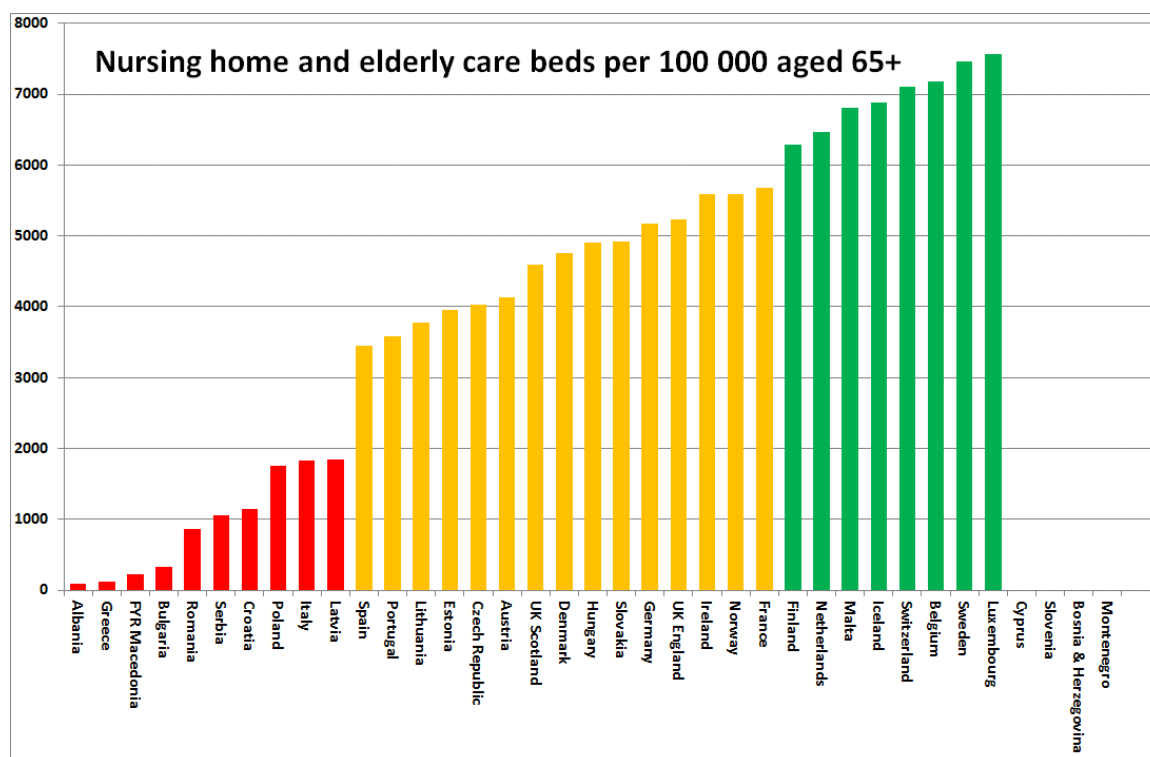
Sources of data: Survey commissioned from Patient View by HCP 2014. National healthcare agencies. Non-CUTS data.

4.6 Long term care for the elderly

This indicator looks into what is often referred to as a historic challenge for Europe: how to care for the rapidly aging population? The result reflects not only today's investment in care, and accordingly, the future needs for coping with the growing demand. It also shows the imbalance between public caring and unofficial contributions. It can be assumed that in all countries elderly people are given some kind of attention; should the family and informal networks take the burden or can they trust public systems to assist?

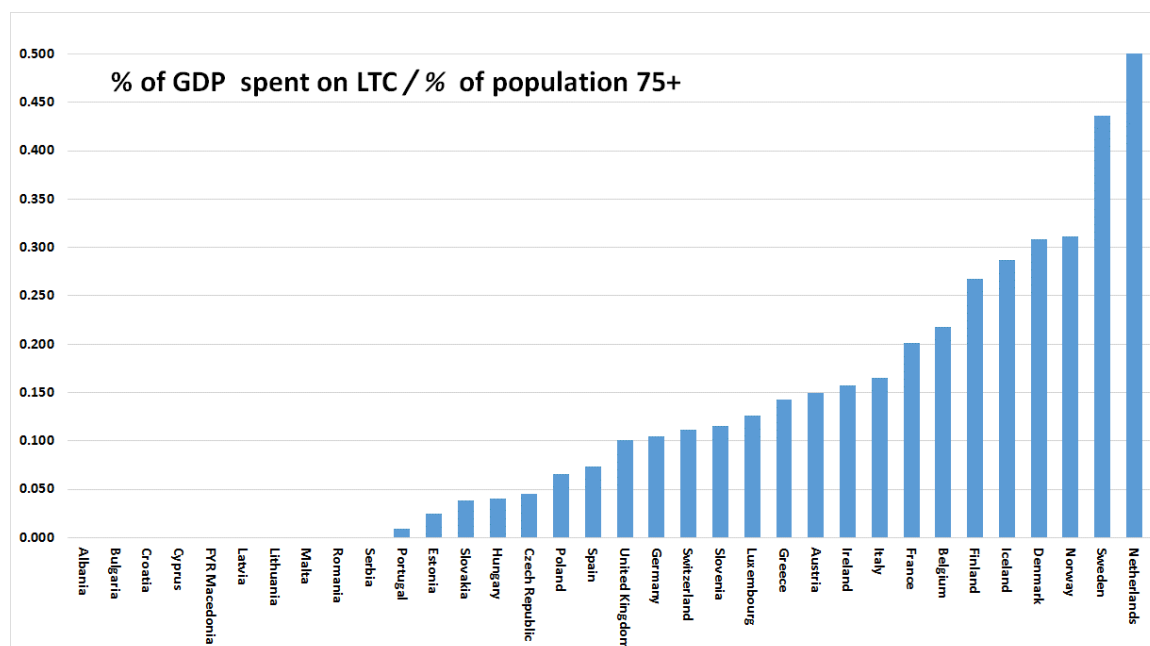
This is a notoriously difficult indicator, not least as long term elderly care is reported under social services rather than under healthcare in many countries.

The HCP team made considerable effort to find more outcomes-related data. Since 2012, we have had to settle for "# of nursing home and elderly care beds per 100 000 population 65+".



In 2013, this was corroborated against the parameter "*% of GDP spent on Long Time Care*", divided by "*% of population ≥ 75 years of age*" (see graph below).

The beauty of the "*% of GDP / % of population 75+*" parameter is that it is self-calibrating, *i.e.* there is no need for calculating Purchasing Power Parity or other *radio noise*-enhancing operations. As institutional care is costly, it came as no surprise that the two parameters show noticeable correlation.



Source: WHO Health for All database, April 2014. Eurostat, Eurohealth 17 No. 2-3 (2011), OECD Health at a Glance 2014. CUTS data.

4.7 Share of dialysis done outside of clinics

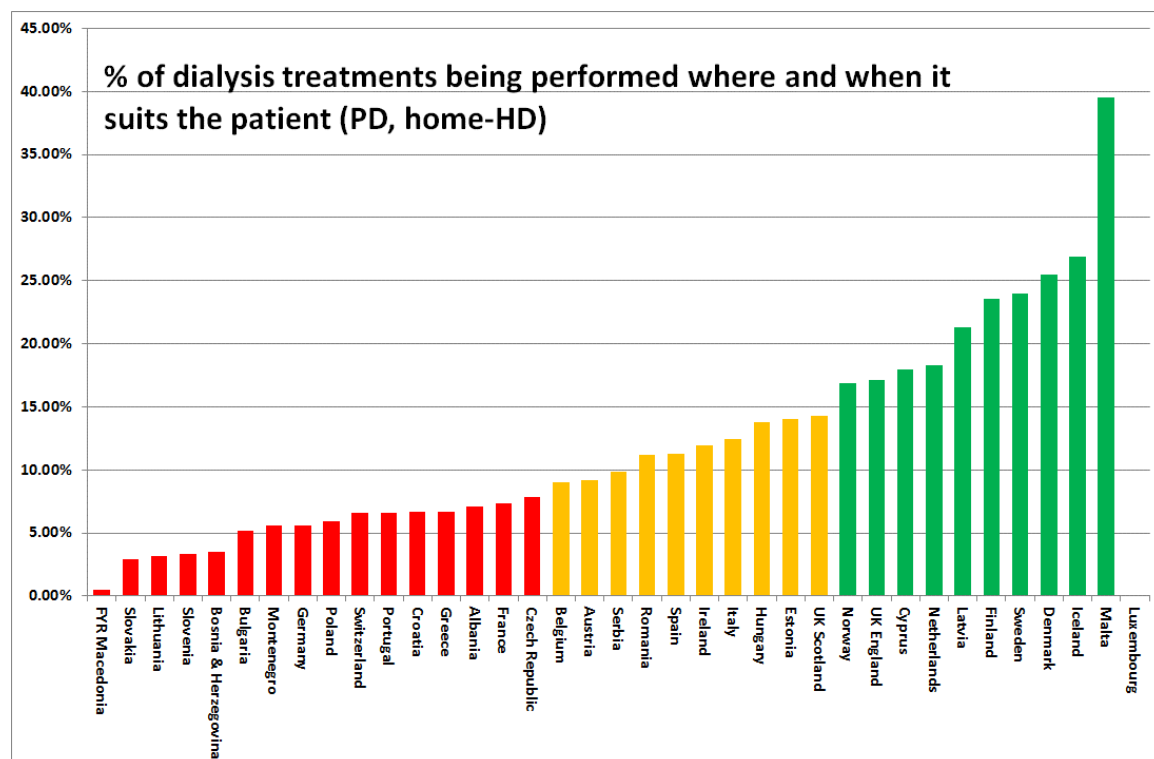
Dialysis is necessary for the survival of patients with renal and liver malfunctions. There are a few ways to perform this treatment. Dialysis performed as clinic-bound dialysis (hemo-dialysis: HD) has several drawbacks:

- Treatment episodes are usually 3x4 hours per week, which is a far cry from the 168 hours per week of functioning healthy kidneys. Patients who do home dialysis (Peritoneal dialysis; PD, or HD in the home) frequently treat themselves up to 7 x 6 hours, *i.e.* nightly, with better treatment outcomes.
- Patients have great difficulties keeping a job, as dialysis requires presence in a clinic essentially three days a week.
- Dialysis in a clinic is much more expensive, typically kEUR 50 – 60 per patient per year.

It seems that a *low* rate of home dialysis is not mainly due to preferences/capabilities of patients, but rather due to either

- Lack of professionalism of local nephrologists (there are centres of excellence around which close to 50% of dialysis patients dialyse themselves in the home), or
- Greed (clinic dialysis is very profitable for the clinics).

For these reasons, a high share of home dialysis gives a Green score on this indicator.



Sources: European Renal Association-EDTA Annual Report 2012. www.ceapir.org. National Ministries. Basically CUTS data.

4.8 % of births by Caesarean section

New indicator for the EHCI 2012. In scoring, it has been assumed that high Caesarean rates are an indication on poor pre-natal support and poor baby delivery services – consequently, a high Caesarean rate has been given a Red score. The general recommendation is that a woman should not have more than two Caesarean deliveries,

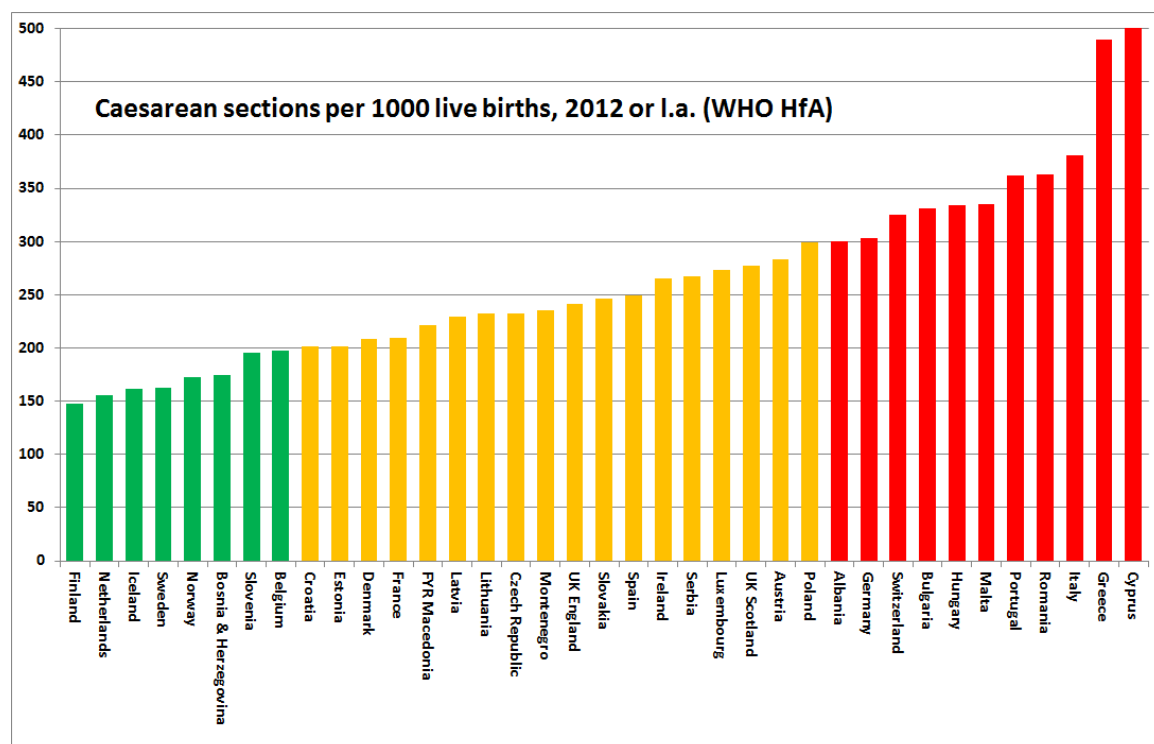
which strongly indicates that complete recovery cannot be expected. Also, the typical French practice for getting back in shape after a delivery – post-natal physiotherapy – seems both more humane and more economical than invasive surgery.

This way of delivery can be medically important and should of course be available. But HCP suspects that Caesarean section may camouflage a lack of good information and support before delivery as well as lack of access to pain control.

The highest rates of Caesareans in the world are found in Cyprus, Greece and Latin America (Brazil and Venezuela also close to 50 %).

Please note in the graph below that even though a Caesarean is costly, there is definitely no correlation between national wealth and high Caesarean rates!

Source: WHO Health for All database, April 2014. CUTS data.

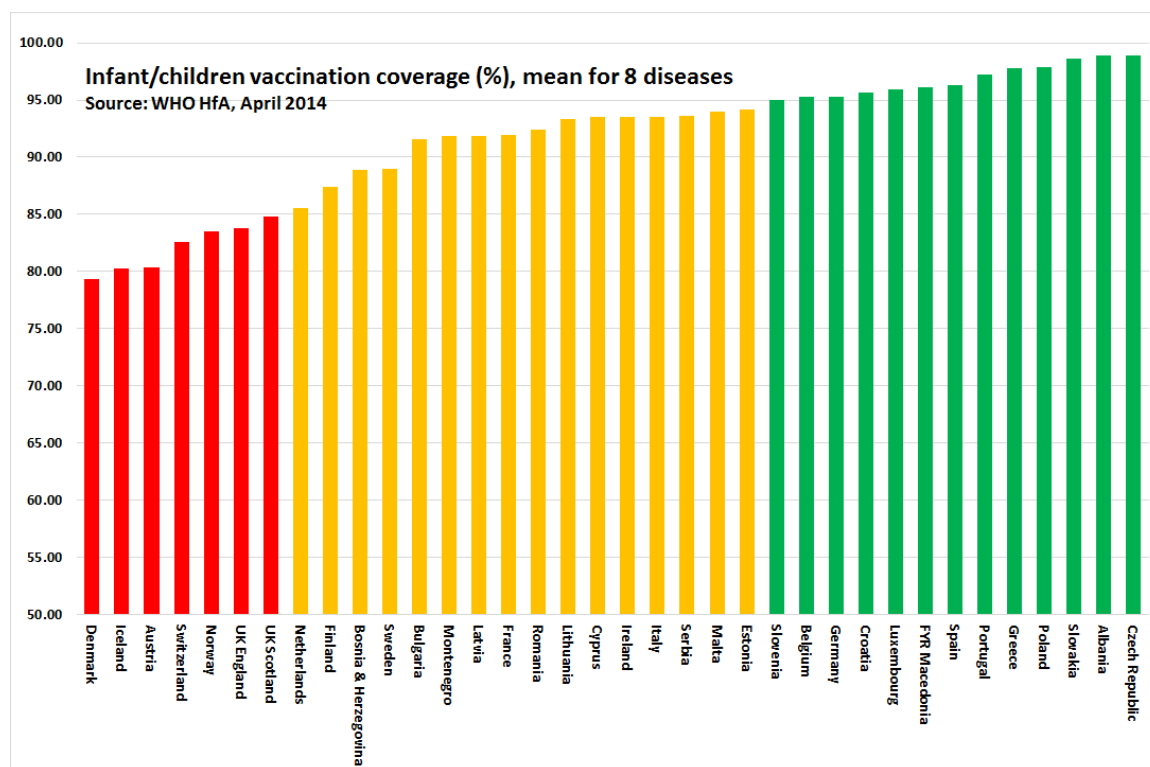


8.10.5 Prevention

5.1 Infant 8-disease vaccination

Percentage of children vaccinated (Diphtheria, tetanus, pertussis, measles, poliomyelitis, rubella, hepatitis B and haemophilus influenza B, arithmetic mean).

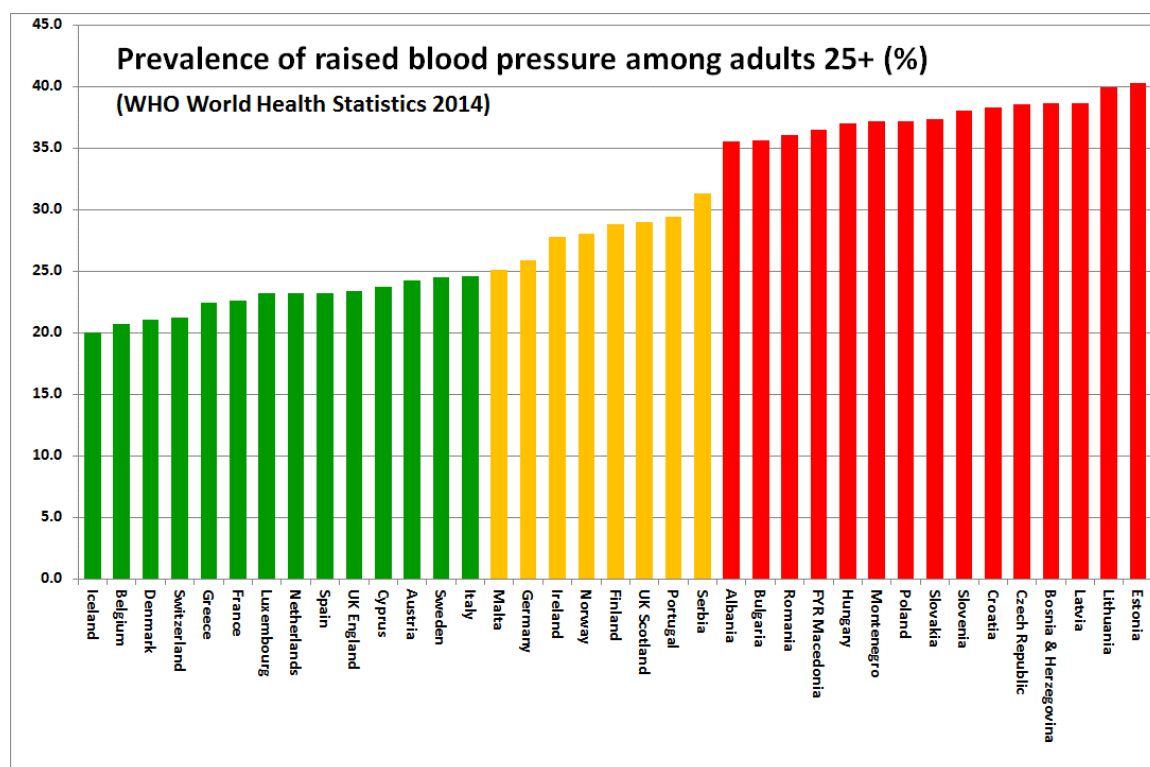
Vaccination is generally regarded as cost-effective prevention, which is reflected by several less wealthy countries scoring Green.



Sources of data: WHO HfA database, April 2014. National vaccination registries. National healthcare agencies. CUTS data.

5.2 Blood pressure

This indicator measures the % of adult population registering high blood pressure (> 140/90).



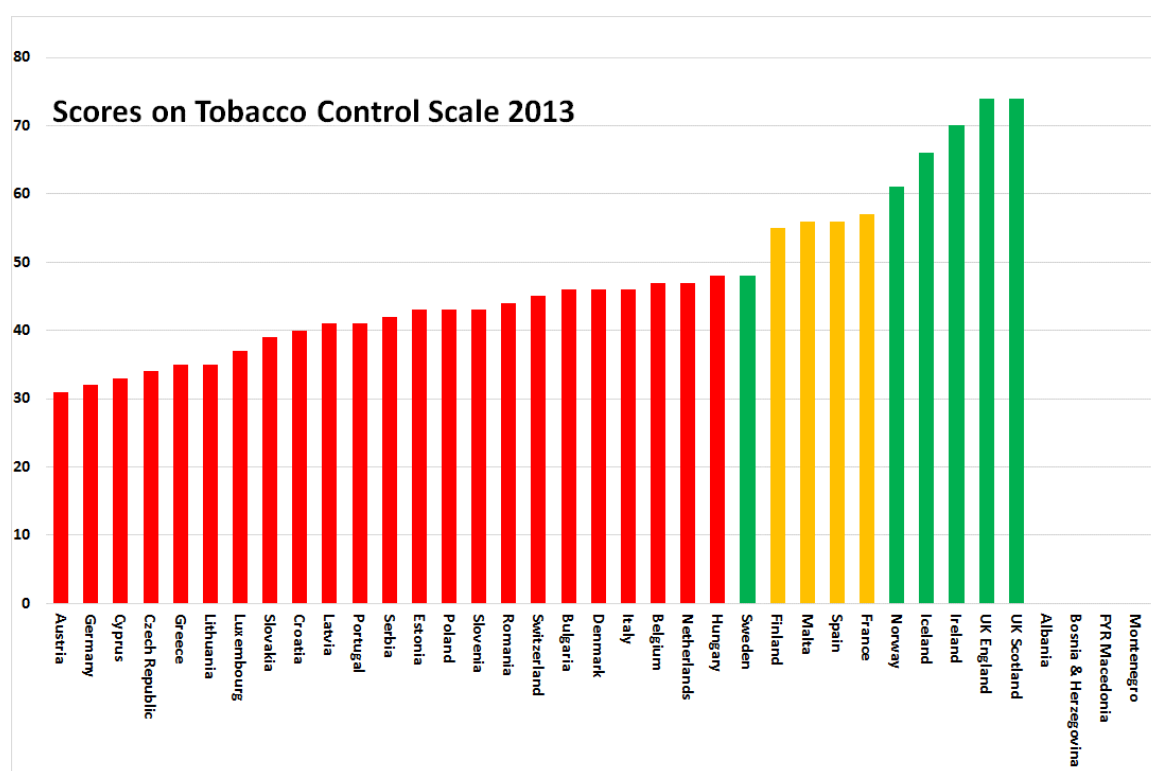
As is evident from the graph, hypertension in Europe is not associated with high standard of living, but rather a combination of lifestyle factors (CEE food, smoking and drinking habits) and a lack of treatment tradition – hypertension treatment is not expensive.

Source: WHO World Health Statistics 2014. CUTS data.

5.3 Smoking prevention

The Tobacco Control Scale (TCS) has been used as a measure of countries' efforts on smoking prevention. It is made up by six indicators: Price (30), Public place bans (22), Public information campaign spending (15), Advertising bans (13), Health warnings (10) and Treatment (10). Numbers in parentheses denote the weight (contribution of a Full score to the TCS maximum total of 100).

Red/Yellow/Green scores have been taken from the Source publication, with the exception of the Green score for Sweden – a Red score to the country having the lowest smoking prevalence in Europe would be ludicrous!



Source: Joossens, L. & Raw, M.: Tobacco Control Scale 2013 in Europe.

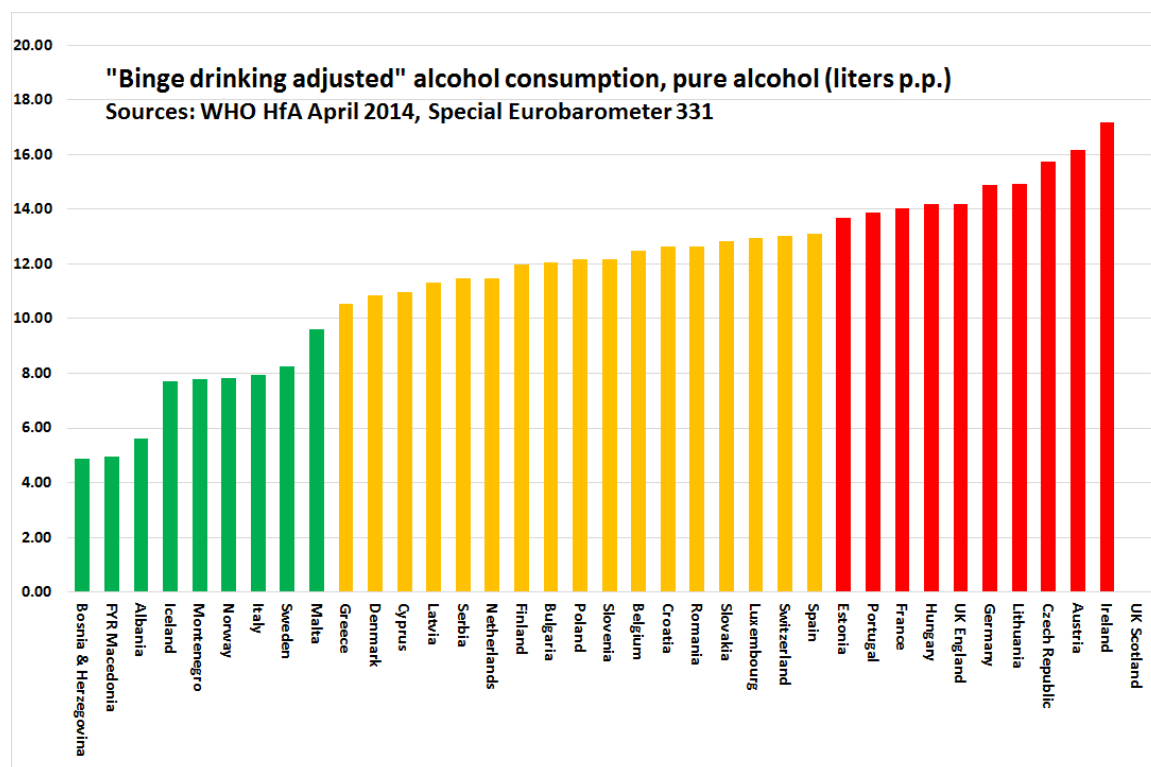
5.4 Alcohol consumption

Unlike cigarette smoking, alcohol as a risk factor is not always harmful. It has been shown in numerous studies that a modest alcohol intake (the equivalent of one glass of wine per day for women, and 1 – 2 glasses per day for men) reduces the risk of death from CVD enough to result in a lower mortality than for total abstainers.

On the other hand, drinking vast quantities of alcohol on single occasions ("binge drinking") is a known risk factor for CVD, and also for some cancer forms. This seems particularly true for binge drinking involving hard liquor consumption.

For these reasons, this indicator is based on “hard liquor consumption (litres of pure alcohol), binge drinking adjusted”. The adjustment is made by multiplying the nominal consumption by $1 + [\text{percentage of population having had } \geq 5 \text{ drinks on their latest drinking occasion}]$. According to NHS Health Scotland, “Scotland has 70% more alcohol-related deaths than England”, why Scotland receives a Red score.

Note the low alcohol consumption of the three countries having the highest share of moslem population!



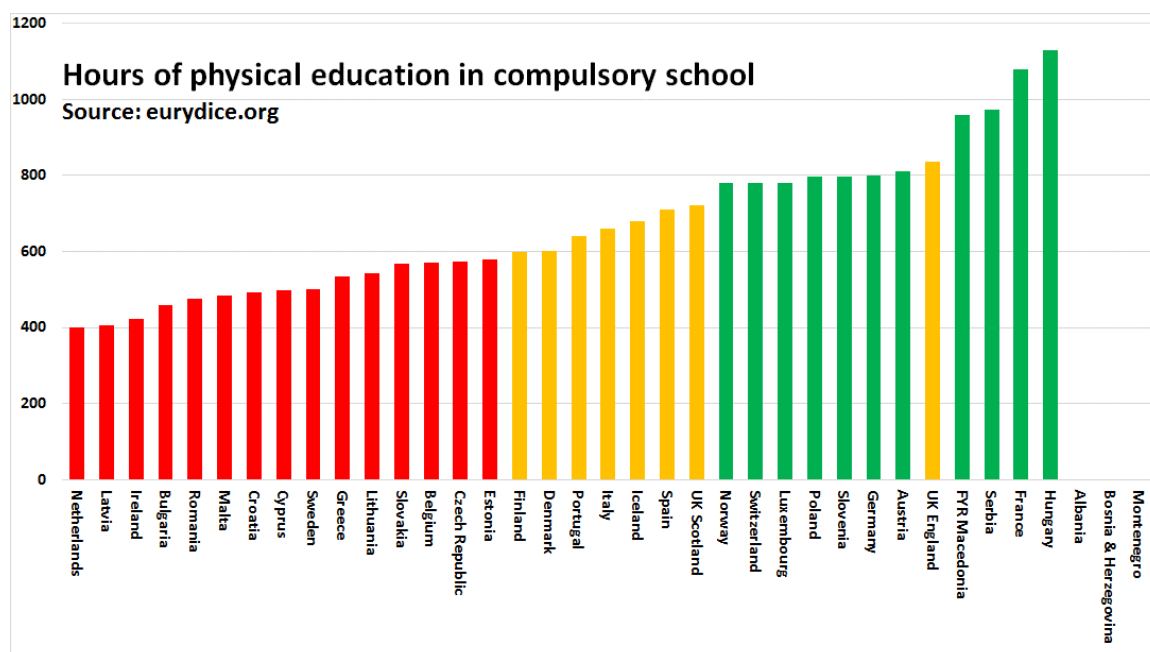
Sources: WHO HfA April 2014, Special Eurobarometer 331 April 2010 (for binge drinking habits). National reports. Mainly CUTS data.

5.5 Physical activity

Physical exercise is beneficial to reduce risk for illness for a vast spectrum of diseases. There is statistics on parameters such as “number of hours of jogging or similar per person per week” for many countries. However, the radio noise level of this data is probably quite high. Also, this is a parameter which is very difficult for any decision makers to change for a significant part of a population within a reasonable time frame.

Therefore, the physical exercise parameter chosen for the EHCI 2014 is “number of hours of physical exercise in compulsory school” (counting a maximum of 10 school years). This is a parameter that *e.g.* a government has the power to change.

England gets a Yellow score for not having a set national level for number of hours.



Source: www.eurydice.org; *Recommended Annual Instruction Time in Full-time Compulsory Education In Europe 2013/14*. National Scottish and Swiss data. CUTS data.

5.6 HPV vaccination

In recent years, many countries have included HPV vaccination for girls in their lower teens in national vaccination programmes. This indicator has been scored as:

Green: National programme for HPV vaccination in place, free of charge to patient.

Yellow: National programme for HPV vaccination, patient pays (significant part of) cost.

Red: No national HPV vaccination programme.

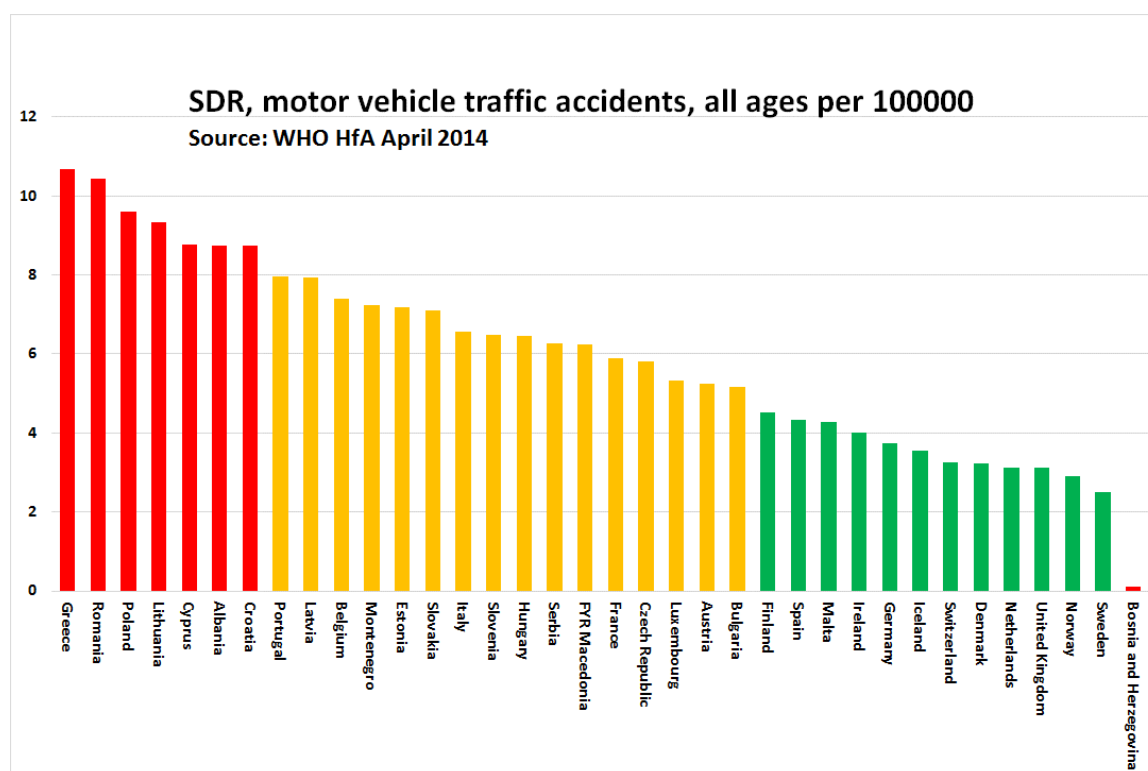
It would have been desirable to measure the degree of coverage of these vaccination programmes – such data is not yet available.

Sources: European Centre for Disease Prevention and Control. *Introduction of HPV vaccines in EU countries – an update*. Stockholm: ECDC; 2012. Seme et al.: *Acta Dermatovenerologica* APA 2013; 22:21-25.

www.bag.admin.ch/themen/medizin/00682/00684/03853/. National healthcare agencies. Mainly CUTS data.

5.7 Traffic deaths

This is a new prevention indicator introduced in 2014. It is not really healthcare dependent, but nevertheless amenable to decision making by humans. Traffic deaths, and also personal injuries due to traffic accidents, have been much reduced over the last 30 – 40 years in almost all countries in Europe. There still are large variations between European countries, as is shown by the Graph below. The graph should also eliminate any speculation that the high organ transplant rates of Spain is due to a high number of traffic victims!



Source: WHO Health for All database, April 2014.

8.10.6 Pharmaceuticals

For reasons of copyright, HCP is not in a position to include graphs showing the actual data behind the drug use indicators, only relative comparisons.

6.1 Rx subsidy %

What percentage of total drug sales (including OTC drugs) is paid by public subsidy?

Sources of data: WHO HfA database April 2014, EFPIA: The pharmaceutical industry in figures - Key Data 2013. EFPIA: Personal Communication. National healthcare and medical products agencies.

Non-CUTS data.

6.2 Layman-adapted pharmacopoeia

Is there a layman-adapted pharmacopoeia readily accessible by the public (www or widely available)? The existence of these (a comprehensive data collection on all drugs registered and offered for sale in a country, searchable both on chemical substance and brand name, and containing at least the same information as do the packing leaflets, written in a way to be understandable by non-professionals) has grown considerably from 2005, when essentially only Denmark and Sweden had them.

Today, 26 of the 36 countries plus Scotland in Europe have Internet pharmacopoeias.

For all these countries, the information is traceable to the package leaflet texts provided by the drug manufacturers. France and Germany (not counted among the 26 above)

deviate – the information in their respective websites is every bit as comprehensive as in most countries, but it is very difficult to see who is the sender of the information. Spain seems to be a real hard-core country when it comes to allowing pharma companies to inform about prescription drugs direct to the public. This is probably not a big obstacle for Spanish members of the public – due to the high share of Hispanics among Americans, prescription drug information is readily available in Spanish on U.S. pharma company websites.

Sources of data: HCP research 2010 – 2014. National healthcare agencies. Non-CUTS data.

6.3 Novel cancer drugs deployment rate

This indicator measures the use, in MUSD p.m.p., of the ATC code group L01XC (monoclonal antibodies). The measure DDD (Defined Daily Doses) rather than monetary value would have been preferable, but unfortunately the volume data contained inconsistencies.

Sources of data: The IMS Health MIDAS database. CUTS data.

6.4 Access to new drugs (time to subsidy)

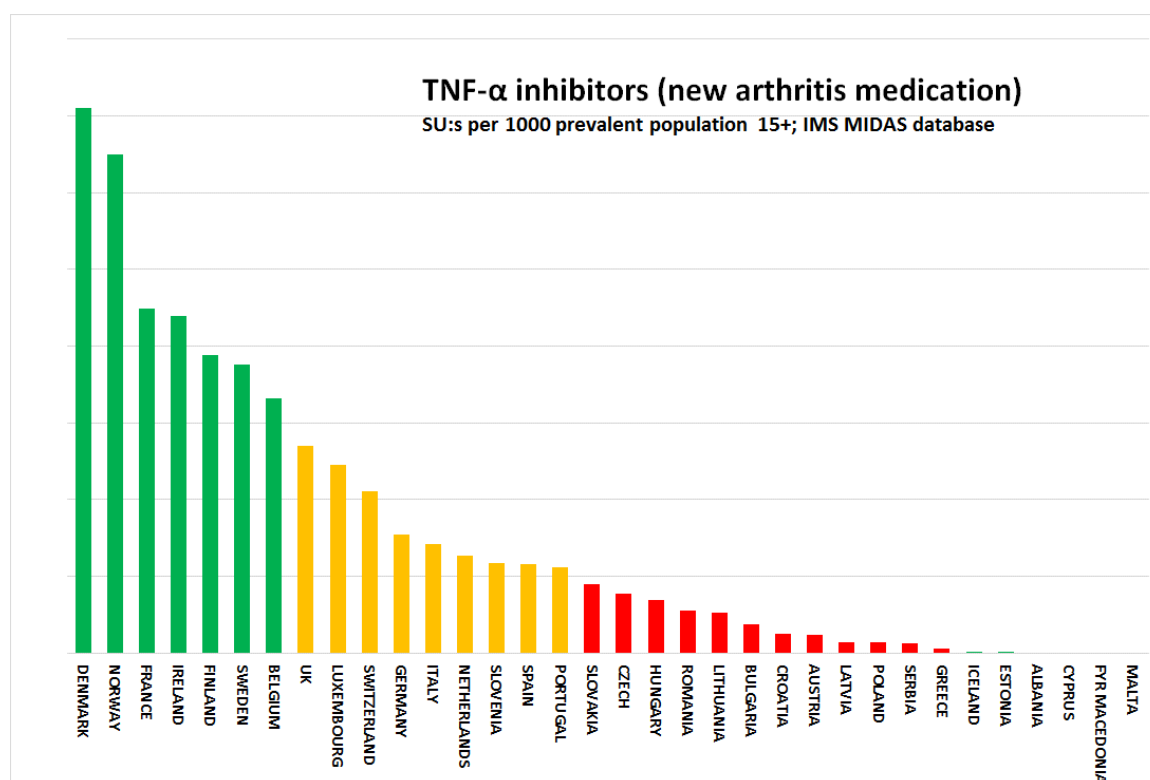
The indicator measures the time lag between registration of a drug, and the drug being included in the national subsidy system.

This is one indicator, where the financial crisis effects show very clearly. Even in affluent countries such as Sweden or Switzerland, there has been a significant increase in the time lag between registration of a drug, and admission of the drug into national Pharmacy Benefits Systems (drug subsidy system).

Sources of data: PATIENTS W.A.I.T. INDICATOR 2012 Report – based on EFPIA's database (first EU marketing authorisation in the period 2009 – 2011). EFPIA: The pharmaceutical industry in figures - Key Data 2013. EFPIA: Personal Communication National Ministries of Health. Non-CUTS data.

6.5 Deployment of arthritis medication

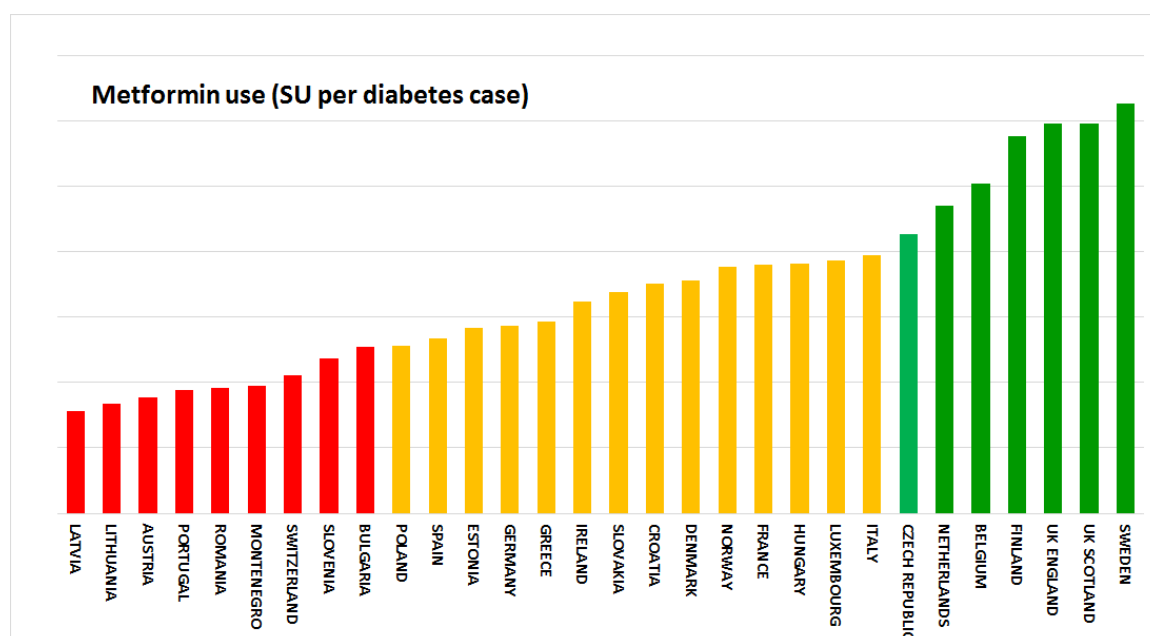
The arrival of TNF- α inhibitor drugs (ATC code L04AB) meant a dramatic improvement for arthritis patients. Some countries are still restrictive on the use of these drugs, and as the graph below shows, this is not tightly correlated with GDP/capita. Drug volumes are expressed as Standard Units (an IMS Health measure, close but not identical to DDD:s) per 1000 prevalent population ≥ 15 years. (DDD = Daily Defined Dose.)



Sources of data: IMS MIDAS database. For prevalence data: eumusc.net: Report v5.0 Musculoskeletal Health in Europe (2012). Special Eurobarometer 272 (2007). National agencies. CUTS data.

6.6 Metformin use

Metformin is generally agreed to be the first-line medication for diabetics. It is also off-patent, and therefore quite inexpensive. Therefore, it should be expected to find that all countries would have a similar level of metformin deployment *per diabetic*. AS can be seen from the graph below, in real life there is a four-fold difference in the prevalence adjusted *per capita* use of metformin.



It should be noted that the relative difference of national diabetes prevalence is only $\pm 15\%$ from the European average, which makes it unlikely that the difference in metformin use is due to errors in the prevalence numbers.

In the work on the HCP Euro Diabetes Index 2014¹⁷ it was observed that countries who use a lot of metformin and insulin (Sweden, the UK, The Netherlands *et al*) were frequently very restrictive with innovative modern diabetes drugs such as gliptins!

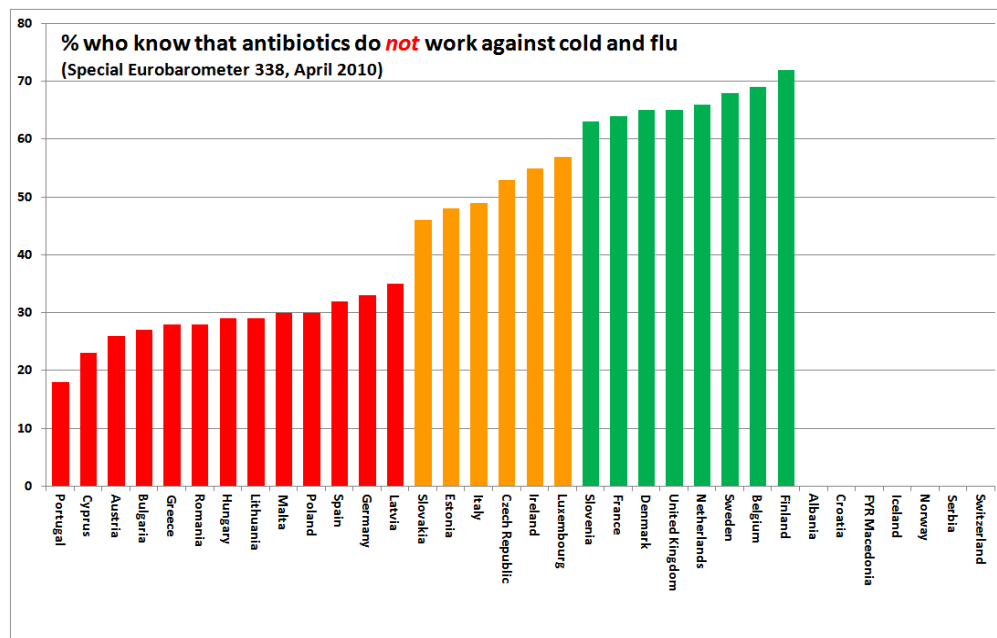
Sources of data: The IMS Health MIDAS database, IDF Diabetes Atlas 6th edition. National agencies. Mainly CUTS data.

6.7 Antibiotics consumption

As the following graphs will show, there is shocking disagreement between different sources regarding antibiotics consumption. The 2014 indicator is based on "Antibiotic use in eastern Europe: a cross-national database study in coordination with the WHO Regional Office for Europe"¹⁸ (3rd Graph below). That was used as a CUTS.

The fact that this WHO report (based on wholesaler reports) disagrees violently with both the Eurobarometer on beliefs about antibiotics helping against viruses (2012), and with IMS Health pharmacy sales data (2013) makes the HCP team inclined to regard the WHO report as not trustworthy. A 2015 EHCI will revert to the 2013 methodology.

In 2012, the indicator used was "% of population who know antibiotics are *not* effective against cold and flu". EHCI 2013 uses actual *per capita* sales of antibiotics, with the assumption that a restrictive use is good from a resistivity point of view.



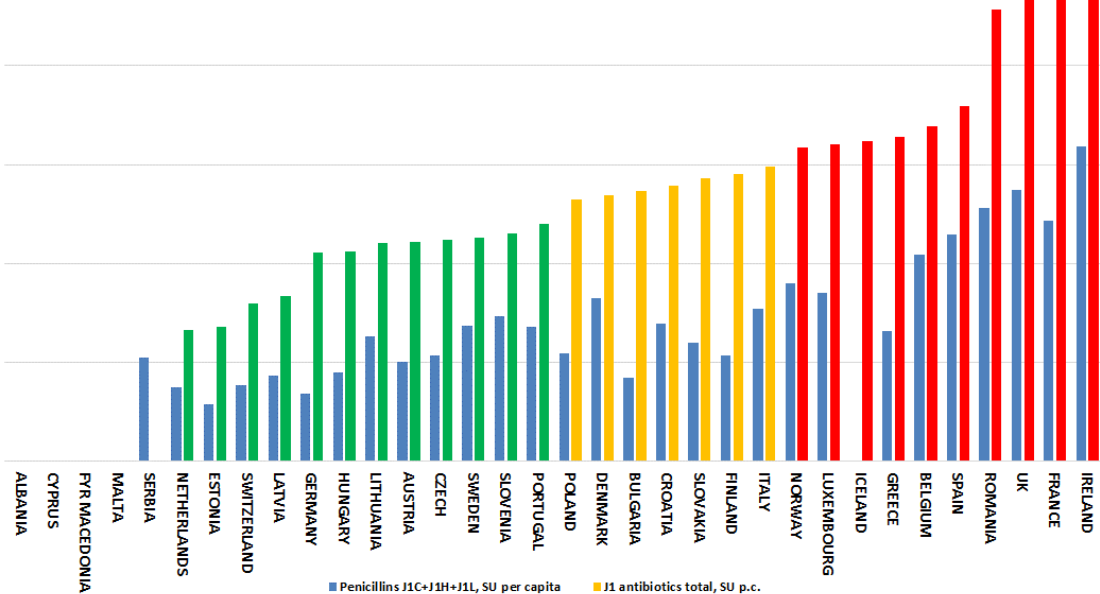
The EHCI 2012 indicator.

Source: Special Eurobarometer 338, April 2010. CUTS data.

¹⁷ <http://www.healthpowerhouse.com/files/EDI-2014/EDI-2014-report.pdf>

¹⁸ *The Lancet Infectious Diseases*, 2014-03-20

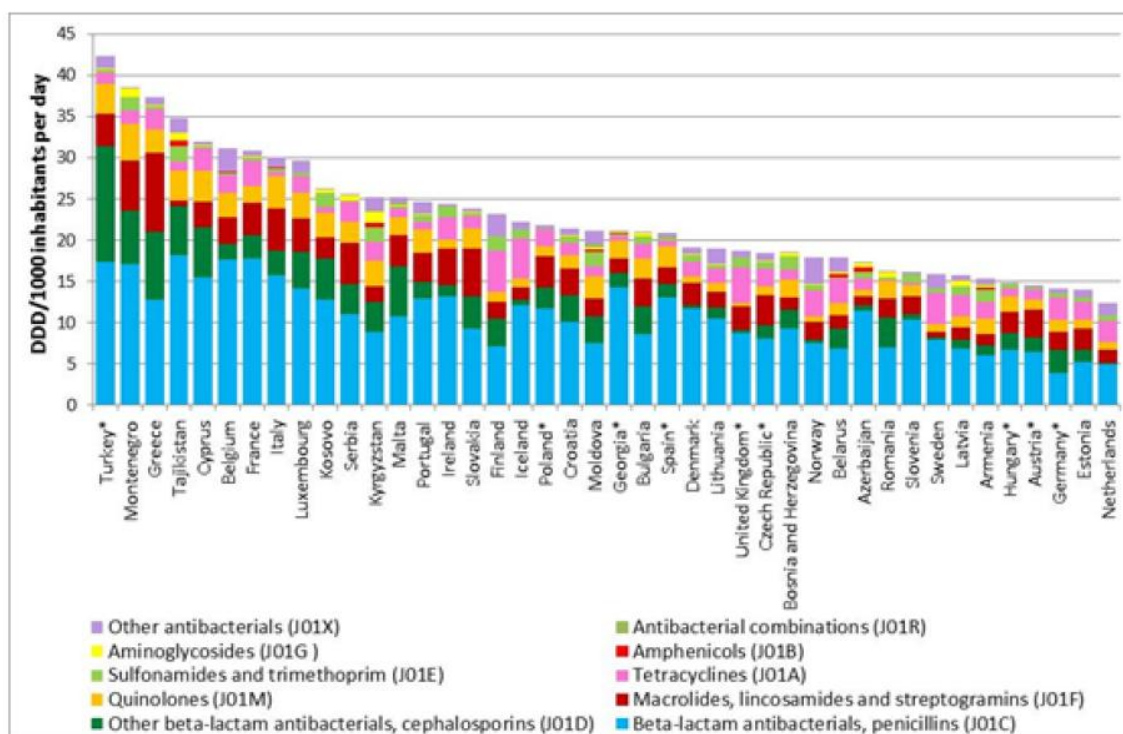
Antibiotics use, SU/capita 12 months ending June 2013 IMS MIDAS database



The EHCI 2013 indicator.

If the French, Brits and Belgians really do know that antibiotics do *not* work against viral infections: How come they use so much?

The graph below illustrates the data of the 2014 WHO report. It probably has large errors!



Total antibiotic use in 2011, expressed in number of DDD per 1000 inhabitants per day in 12 European countries and Kosovo as compared to 29 ESAC-Net countries.

The EHCI 2014 indicator.

Source: "Antibiotic use in eastern Europe: a cross-national database study in coordination with the WHO Regional Office for Europe", Lancet, 2014. CUTS data.

8.11 External expert reference panel

As is the standard working mode for all HCP Indexes, an external Expert Reference Panel was recruited. The panel met for two 6-hour sittings during the course of the project, the Panel Members having been sent the Index working material in advance. The following persons have taken part in the Expert Reference Panel work for EHCI 2014:

Name	Affiliation
Ulrik Bak Dragsted, MD, PhD	Head of Infectious Diseases Unit, Roskilde Hospital, Denmark & President, The Danish Society of Internal Medicine
Filippos Filippidis, Dr.	School of Public Health, Imperial College, London
Ian Graham, Professor Dr.	Trinity College, Dublin
Ulrich Keil, Professor Em. Dr. Dr.	Institut für Epidemiologie und Sozialmedizin, Medizinische Fakultät der Westfälischen Wilhelms Universität Münster, Germany
Lennart Welin, Associate Professor Dr.	Lidköping Hospital, Sweden

The Expert Reference Panel for a HCP Index has two core tasks:

- A. To assist in the design and selection of sub-disciplines and indicators. This is obviously of vital importance for an Index, if the ambition is to be able to say that a state scoring well can truly be considered to have good, consumer-friendly healthcare services.
- B. To review the final results of research undertaken by HCP researchers before the final scores are set. If the information obtained seems to clash too violently with the many decades of healthcare experience represented by the panel members, this has been taken as a strong signal to do an extra review of the results.

The HCP wishes to extend its sincere thanks to the members of the panel for their fundamentally important contribution to the Index work, and for very valuable discussions.

9. References

9.1 Main sources

The main sources of input for the various indicators are given in Table 8.7 above. For all indicators, this information has been supplemented by interviews and discussions with healthcare officials in both the public and private sectors.

The "Single **Indicator** Score Sheets" are published on the Internet, so that all can see what *main* data have been used, and also the scoring methodology. These sheets are on www.healthpowerhouse.com/ehci2014-indicators/ .



Indicators, for which data could not be converted to straightforward numbers are missing on that site. Also, for copyright reasons, so is numerical data for indicators based on drug sales numbers, which are illustrated in a Powerpoint presentation on the website.

Appendix 1. The True Saga About Werner's Hip Joint, or What Waiting Times Should Be In Any Healthcare System

This is a true story, which happened in July 2013 in a small town of 8000 (winter) inhabitants in Languedoc, 50 km south of Montpellier. Werner, (not his real name) is a German military man who has retired with his wife to the south of France. The services described below were paid for by Werner's normal German health insurance with no private top-up. Here goes:

Like most expats in the little town, Werner was sitting on a Tuesday afternoon outside the Marine Bar taking a refreshment. Werner tells his wife:

- Helga, dear, I believe I should have somebody look at my left leg. I have been having these pains for a year and a half now.
- Werner, dear, that door across the street has a brass plate on it. It looks just like a doctor's surgery!

Werner limps across the street and finds that the brass plate adorns the door of the surgery of Dr. B, a local GP. Werner rings the bell, and explains his problem to the nurse/secretary opening.

- Could Dr. B possibly have a look at my problem?
- Not right now, but please come back in half an hour!

Werner limps back across the street, finishes his beer, and goes to see Dr. B. Dr. B examines Werner and says:

- I am afraid that this looks as if you might need a new hip joint. We will have to take a closer look. Are you doing anything special tomorrow?
- No, I am retired, so I am very flexible.

Dr. B picks up his phone, speaks for a couple of minutes, puts the receiver down and says to Werner:

- You are booked for a CT scan tomorrow morning at 10:00 in Agde Radiology Centre (7 km away). After that, come and see me again on Thursday at 3 pm! We should have the results by then.

Werner goes and has the CT scan and reappears at Dr. B's on the Thursday. Dr. B says:

- I am afraid it seems that my first diagnosis was correct. You need your hip joint replaced. Are you doing anything special next week?
- No, I am retired, so I am very flexible.

Dr. B picks up the phone again, speaks for a few minutes and turns back to Werner.

- You are expected in the Orthopaedic Clinic of the University Hospital of Montpellier¹⁹ at 09:00 on Monday. Bring a small overnight bag with your necessities for a four-day stay!

On the following Friday, Werner is discharged from the hospital, spick and span with a new hip joint. Calendar time for the entire sequence of events: 10 days!

The important morale of the story: The big part of healthcare costs is always man-hours put in by healthcare staff. The 10-day procedure above has precious little room for man--hours at all. That is why it is *cheaper* to operate a healthcare system without waiting lists, than to have waiting lists!

¹⁹ The oldest medical faculty in Europe. The 6th best hospital in France, according to a recent ranking.