Health Consumer Powerhouse

EURO HEALTH CONSUMER INDEX

2007

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Three years of progress of consumer-focused healthcare - much remains to be done!

In 2005, Health Consumer Powerhouse presented the first Euro Health Consumer Index. Now we have the pleasure of launching the third consecutive Index. In the same period the European Union has continued to grow, putting a focus at the gaps between the systems as well as the emerging EU "healthcare market". All the 27 EU members are of course included in this year's index as well as Switzerland and Norway.

Three index indicators have been removed and eight have been modified or added. To make the design more user-friendly there are a new set of symbols expressing the scoring. The maximum outcomes figure is now expressed as 1 000 points, which makes comparisons more hands-on. This means you can easily find that no country reaches a fulfilment level higher than 81 percent.

The new Index confirms that European healthcare consists of a top group of roughly half a dozen of very well performing nations, internally competing for excellence. The new 2007 EHCI winner, Austria, runs a healthcare system combining excellent outcomes with consumer orientation. Behind the leaders there are many medium-quality countries with some quick climbers, like Estonia. At the low end of the Index there are a group of poor performers.

Consumer and patient rights are improving. In a growing number of European countries there are patients' rights laws and a functional access to your own medical record is becoming standard. Still very few countries have provider catalogues with quality ranking.

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.

In some respects progress is not only slow but lacking. MRSA-infections in hospitals seem to spread and are now a significant health threat in one out of two measured countries. And still half the European governments systematically delay the consumer access to new medicines, and not only for reasons of financial constraints. Hardly the kind of consumer empowerment policy you would expect by 2007…

HCP would claim that the Euro Health Consumer Index is still the best device to compare the evolvement of consumer-friendly healthcare around Europe. And, hopefully, a powerful driver for further improvement!

HCP expresses our thanks to the Index expert panels contributing valuable advice, to the national ministries of health co-operating to provide statistics and to the many individuals simplifying our research.

Brussels October 1, 2007

Johan Hjertqvist
President
Health Consumer Powerhouse

Brussels/Stockholm/Winnipeg

1. Content summary

Austria emerges as the 2007 winner of the Euro Health Consumer Index (EHCI), with a healthcare system providing very good medical results quality and excellent accessibility for consumers/patients. These two sub-disciplines carry a higher weight in the EHCI, as numerous patient surveys show that medical quality and accessibility are highly valued. Austria scores 806 out of 1000 maximum points, 12 points ahead of runner-up The Netherlands.

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 Austria, the Netherlands, France, Switzerland and Germany are really very difficult to separate, and that very subtle changes in single scores modify the internal order of these five top countries.

After the top five, the Nordic countries of Sweden, Norway, Finland and Denmark make up a cluster in positions 6 – 9. It would be easy to say that these countries are known to be very similar. However, looking at the individual scores, it is clear that they achieve their top positions in very different ways. Sweden reaches 6th place almost entirely because of a solid victory in the Medical Outcomes quality discipline, and with very poor performance on Accessibility. (Radically improving Medical Outcomes is a much more laborious and much longer process than reducing waiting times.) This means that if healthcare officials and politicians took to looking across borders, and "steal" good things from their EU neighbours, there is a good chance for a nation to come much closer to the theoretical top score of 1000. If Sweden would have the same accessibility to its healthcare services as Austria or Germany (not to speak of accessibility winner Belgium), Sweden would rank #1 by a margin of ~75 points!

In southern Europe, Spain and Italy do provide good healthcare services. 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 for these countries to reach top scores.

A mixed performance is shown by the UK, which wins out on healthcare information. The overall U.K. score is dragged down by waiting lists and uneven quality performance.

The CEE member states are doing surprisingly well, considering their much smaller healthcare spend in Purchasing Power adjusted dollars per capita. However, readjusting from planned to consumer-driven economies does take time. Estonia, being the smallest ship to turn around, seems to lead this subgroup, and is a very clear winner in the academic exercise in our value-for-money adjusted Index – the "Bang-for-the-Buck" score.

1.1 Changes visible over time

Although the first EHCI was produced as late as 2005, some development trends can already be observed:

1.1.1 Patients' Rights-based healthcare legislation

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.

1.1.2 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 are already a few 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.

1.1.3 Improved equity of access to healthcare

Most notably in parts of Southern and Eastern Europe sizable out-of-pocket payments from patients (both formal and informal "under-the-table") have traditionally accounted for a significant part of healthcare financing. This will take some time to radically change, but improvement trends are visible in the indicators showing what public healthcare offerings include, even in this short time.

1.1.4 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 in Europe. As the research for the EHCI 2007 has shown, there are now several countries who have similar information services available to the public.

1.2 BBB; Bismarck Beats Beveridge!

All public healthcare systems share one problem: Which technical solution should be used to funnel typically 7 – 10 % of national income into healthcare services?

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

Beveridge systems: Systems where financing and provision are handled within one organizational 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 …"

Looking at the results of the EHCI 2007, it is very hard to avoid noticing that the top five countries, which fall within 36 points on a 1000-point scale, all have dedicated Bismarckian healthcare systems. There is a gap of 30 points to the first Beveridge country in 6th place.

Thus, while not at all arguing that the Bismarck-type healthcare systems are in every way superior, it seems that for total customer value, the Bismarck model runs rings around Beveridge!

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. In order to become a powerful actor, building the necessary reform pressure from below, the consumer will need access to knowledge to compare health policies, consumer services and quality outcomes. HCP wants to add to this development.

2.1 Background

Since 2004 we have published the Swedish Health Consumer Index (www.vardkonsumentindex.se, 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.

For the pan-European index in 2005, 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.

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. 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.

2.2 Project Manager

Project Management for the EHCI 2007 has been executed by Arne Björnberg, Ph.D.

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 and 2006 projects.

Ms Raluca Nagy has been Researcher on the project team.

3. 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.

4. Evolvement of the EuroHealth Consumer Index

4.1 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 for 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.

4.2 Scope and content of EHCI 2006

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 subdiscipline "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, or shorter "Provision levels" 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 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 slightly more in Western Europe – slightly 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. Interestingly, Belgium – a country with minimal waiting list problems, and which was most often to us accused of achieving this through restrictiveness, by far has (along with Canada) the highest provision levels for cataract operations in the OECD.

The second indicator selected under Provision levels is "Is dental care a part of the public healthcare offering?" As a measure of this, the very simple indicator "What percentage of public healthcare spend is made up by dental care?" was selected, 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 the public healthcare offering.

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 the 2005 issue. 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, has been good. Written responses have been received from 19 EU member states (see section 5.5.2).

5. EHCI 2007

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 trombolytic 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.

5.1 Indicators discontinued or changed from EHCI 2006 in the 2007 Index

Of the totally 28 indicators used for the EHCI 2006, seven have been discontinued or modified in the 2007 Index:

Is there a patient ombudsman? has been discontinued. In the feedback obtained from the national Ministries of Health contacts, it was made clear that safeguarding of patients' interests is organised very differently in European countries. For this reason, straight answers to this question did not really seem to reflect actual national conditions regarding patients' interests protection.

Repetitive prescriptions available to patients? has been discontinued. The essentiality of having the instrument of drug prescriptions valid for multiple fillings seemed to be inversely proportional to ease of access to doctor appointments. It therefore seems doubtful whether repetitive prescriptions are a consumer advantage, or if they are a way to compensate for difficult access to healthcare.

Access to the e-mail address of family doctor? has been discontinued. This was introduced in 2006 as an "e-Health" indicator. In discussions with the HCP expert panels and with numerous healthcare professionals and administrators, it became evident that there was great ambiguity whether this was a good thing or not: people from countries having access problems to doctors generally thought having e-mail contact with the doctor "a pretty neat idea". People from countries with good access to family doctors thought e-mails were "a terribly primitive form of contact with your doctor".

The waiting time indicators "**Waiting time for heart bypass/PTCA**" and "**Waiting time for knee/hip joint operation**" have been merged into one indicator; "Waiting time for major non-acute operations".

"**Breast cancer mortality**" and "**Colorectal cancer mortality**" have been replaced by the single indicator "**5-year cancer survival** "for all cancers except skin)".

"**Infant poliomyelitis vaccination %**" has been changed to "**Infant 4-disease vaccination %**", which measures the arithmetic mean of vaccination rates for diphtheria, tetanus, pertussis (whooping cough) and poliomyelitis. It was considered to include also rubella vaccination – this was omitted, as we found that there were national differences as to which strategy is best for rubella; let it run rampant, so that most children get it when young, and acquire life-long immunization, or vaccination as a way to protect the risk group, which is adult pregnant women.

5.2 Four new indicators introduced for EHCI 2007

For the area of "e-Health", "**Electronic Patient Record penetration in primary care**", *i.e.* % of primary care doctors having computerized patient records, was chosen as the indicator. The EPR can be considered the core application for all healthcare IT – if that is installed, with its auxiliary systems for booking, referrals, lab test replies, digital imagery etc, new horizons open up for how healthcare services can be operated. A full EPR gives the potential to have the "virtual patient" in one spot, so that better care services can be provided at fewer appointments – a win-win situation for everybody involved.

After our spring expert panel meeting, the indicator "**Is there a registry of legitimate doctors readily accessible by the public?**" was introduced. Particularly in states, where public information systems have weak traditions, it was deemed important for members of the public to conveniently find out whether a healthcare professional is the specialist he/she claims to be. For a country like Sweden, the importance of such information has been underlined by several recent cases of "doctors" having worked for years in a hospital without qualifications. For a state to score green on this indicator it should be easy (on the www or in a widely spread publication) for citizens of a state to find the answer to the question "Is Doctor X a *bona fide* certified specialist in the relevant speciality?"

In the Waiting Times subdiscipline, after merging the heart and hip joint operations indicators into "major operations", as a measure on *waiting time for advanced diagnostics*, was introduced "**Waiting time for Magnetic Resonance Imaging (MRI) examination**". The threshold value to score Green on that indicator was set to 7 days, which proved to be a very demanding time limit, with only two states scoring a Green.

In the "Generosity" sub-discipline was introduced the new indicator "**Kidney donations 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." etc.

5.3 Indicator areas (sub-disciplines)

The 2007 Index is, just like in 2006, built up as a "pentathlon", with indicators grouped in five sub-disciplines. After having had to surrender to the "lack of statistics syndrome", and after scrutiny by our expert panels, 27 indicators survived into the EHCI 2007.

The indicator areas for the EHCI 2007 thus became:

Sub-discipline	Number of indicators
Patient rights and information	9
Waiting time for treatment	5
Outcomes	5
"Generosity"	4
Pharmaceuticals	4

5.4 Scoring in the EHCI 2007

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") earns 1 point.

In the EHCI 2005, the green **3**, amber **2** and red **1** were just added up to make up the country scores.

For the 2006 Index a different methodology was used: For each of the five sub disciplines, the country score was 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 x 5 = 15).

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 multiplied by 100, and rounded to a three digit integer.

5.4.1 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. In the EHCI 2005, the five sub-disciplines were given implicit weights created by the sheer number of indicators under each sub-discipline. For example, in the 2005 Index this meant that "Patient Rights and Information" was given a weight of 1.75, compared with 1.0 for medical Outcomes and 1.25 for Accessibility/Waiting times.

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. Here, as for the whole of the Index, we welcome input on how to improve the Index methodology.

In the EHCI 2006, the scores for the five sub disciplines were given the following weights:

Sub discipline	Relative weight
Patient rights and information	1.5
Waiting time for treatment	2.0
Outcomes	2.0
"Generosity"	1.0
Pharmaceuticals	1.0
Total sum of weights	**7.5**

Consequently, as the percentages of full scores were added and multiplied by 100, the maximum theoretical score attainable for a national healthcare system in the 2006 Index was 750, and the lowest possible score 250.

These weight coefficients have remained unchanged for the EHCI 2007. To improve the ease of understanding the Index, it was decided that "the perfect healthcare system" should get a score of 1000. In the 2007 Index, the sum of percentages was therefore multiplied by 133(.33). *That change does not at all affect the ranking order of the participating countries.*

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 2007 is remarkably stable if the weight coefficients are varied within reasonable 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.

5.4.2 Regional differences within European states

The Health Consumer Powerhouse 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 HNS 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 among counties in tiny 9 million population Sweden.

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". 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.

5.5 Indicator definitions and data sources for the EHCI 2007

Sub-discipline	Indicator	Comment	Score 3	Score 2	Score 1	Main Information Sources
Patient rights and information	Patients' Rights Law	Is national healthcare legislation explicitly expressed in terms of Patients' rights?	Yes	Various kinds of patient charters or similar byelaws	No	Patients' Rights Law (Annex 1); http://www.healthline.com/galecontent/patient-rights-1; http://www.adviceguide.org.uk/index/family_parent/health/nhs_patients_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.
	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 2006. Personal interviews.
	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 no fault insurance); www.hse.ie; www.hiqa.ie.
	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 2006. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, Patient View 2005. Personal interviews.
	Access to own medical record	Can patients read their own medical records?	Yes	Yes, but restricted or with intermediary	No	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2006. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, Patient View 2005. Personal interviews; www.dohc.ie.
	Readily accessible register of legit doctors	Can the public readily access the info: "Is doctor X a *bona fide* specialist?"	Yes	Yes, but awkward, costly or not frequently updated	No	Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. National physician registries; http://www.sst.dk/Tilsyn/Individuelt_tilsyn/Tilsyn_med_faglighed/Skaerpet_tilsyn_med_videre/Skaerpet_tilsyn/Liste.aspx; http://www.pkn.dk/offentliggjorteafgoerelser/afgoerelser/afgoerelsermednavn.html; www.medicalcouncil.ie.

	Electronic Patient Record (EPR) penetration in primary care	What % of GP:s use EPR:s?	> 80 %	80% - 50 %	< 50 %	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.
	Provider catalogue with quality ranking	"Dr. Foster" in the U.K. remains the standard European qualification for a "Yes" (green score). The "750 best clinics" published by LaPointe in France would warrant a Yellow.	Yes	"Not really", but nice attempts under way	No	http://www.drfoster.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.
	Web or 24/7 telephone healthcare info	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	No	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2006; Personal interviews; http://www.nhsdirect.nhs.uk/; www.hse.ie; www.ntpf.ie.
Waiting times	Family doctor same day service	Can I count on seeing my primary care doctor today?	Yes	Yes, but not quite fulfilled	No	Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, Patient View 2005. Personal interviews; http://www.nhs.uk/England/Doctors/Default.aspx; http://www.msc.es/estadEstudios/estadisticas/docs/BS_2006_total_mar.pdf.
	Direct access to specialist care	Without referral from family doctor (GP)	Yes	Not really, but quite often in reality	No	Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. Personal interviews with healthcare officials; http://www.im.dk/publikationer/healthcare_in_dk/healthcare.pdf http://www.ic.nhs.uk/; http://www.oecd.org/dataoecd/5/27/26781192.pdf.
	Major non-acute operations	A "basket" of coronary bypass/PTCA and hip/knee joint (values must be verified for all types of operations)	90% <90 days	50 - 90% <90 days	> 50% > 90 days	OECD data: Siciliani & Hurst, 2003 / 2004. Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. www.frittsykehusvalg.no; www.sst.dk; http://sas.skl.se; Personal interviews with healthcare officials; www.ntpf.ie.
	Cancer; radiation / chemotherapy	Time to get radiation / chemotherapy after treatment decision	90% <21 days	50 - 90% <21 days	> 50% > 21 days	OECD data: Siciliani & Hurst, 2003 / 2004. Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. www.frittsykehusvalg.no; www.sst.dk; http://sas.skl.se; http://www.sst.dk/Nyheder/Seneste_nyheder/Ventetider_straalebehl_uge23_24.aspx?lang=da; Personal interviews with healthcare officials.

	MRI (magnetic resonance imaging) scan examination		Typically <7 days	Typically <21 days	Typically > 21 days	Patients' Perspectives of Healthcare Waiting times in Europe; survey commissioned by HCP 2007. www.frittsykehusvalg.no; www.sst.dk; http://www.sst.dk/Nyheder/Seneste_nyheder/Ventetider_straalebehl_uge23_24.aspx?lang=da; http://sas.skl.se; Personal interviews with healthcare officials.
Outcomes	Heart infarct mortality <28 days after getting to hospital		<18%	<25%	>25%	MONICA data. Personal interviews with healthcare officials. European Society of Cardiology have data, but will not reveal country ID:s. For some states, extreme mortaliy values. http://www.folketinget.dk/samling/20051/almdel/SUU/spm/503/svar/endeligt/20060822/300535.PDF; http://www.gardianul.ro/2007/07/04/societate-c12/doar_2_dintre_rom_nii_care_fac_infarct_sunt_tratati_corect-s97335.html.
	Infant deaths / 1 000 live births		<4	< 6	> 6	WHO Europe Health for All mortality database. Latest available statistics; http://www.who.int/whosis/whostat2007_1mortality.pdf; www.cso.ie.
	Cancer 5-year survival rates	All cancers except skin	≥ 60 %	50 - 60 %	≤ 50 %	Eurocare 4; "A pan-European comparison regarding patient access to cancer drugs", Nils Wilking & Bengt Jönsson, Karolinska Institute, Stockholm; http://www.breastcancer.org/press_cancer_facts.html; http://info.cancerresearchuk.org/; www.ncri.ie; http://www.sst.dk/publ/publ2005/plan/kraeftplan2/Kraeftepidemiologi_rapport.pdf.
	Avoidable deaths – Potential years of Life Lost (PYLL)/100 000		< 3 500	3 500 – 4 500	>4 500	OECD. Latest available statistics. For non-OECD, WHO SDR/100000 (all causes); http://www.institute.nhs.uk/safer_care/safer_care/reducing_avoidable_deaths_in_hospital.html.
	MRSA (Methicillin-resistant Staphylococcus aureus) infections		<5%	<20%	>20%	EARSS; latest available data 2005/2006.
"Generosity" of public healthcare systems	Cataract operation rates per 100 000 citizens (age-adjusted)		>700	400 - 700	<400	OECD Health Data 2006; www.actapress.com/PDFViewer.aspx?paperId=19351 (Germany).
	Infant 4-disease vaccination %	Diphteria, tetanus, pertussis and poliomyelitis, arthmethic mean	≥97 %	≥92 - <97%	<92 %	EU Health Portal, 2004 data (some countries 2003); http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4078380; www.hpsc.ie.
	Kidney transplants per million population	Living and deceased donors	≥ 40	40 - 30	< 30	Council of Europe Newsletter 11/2006.

	Is dental care a part of the offering from public healthcare systems?	Public spend on dental care as % of total public healthcare spend	> 9 % of total healthcare spend	9 % - 5 % of total healthcare spend	< 5 % of total healthcare spend	EU Manual on Dental Health, EU Dental Liaison Committee; http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Dental/index.htm; www.hse.ie; www.dohc.ie.
Pharmaceuticals	Rx subsidy %		>90%	60 - 90%	<60%	WHO Health for All database 2005; http://www.laegemiddelstyrelsen.dk/statistik/overvaagning/udgifter/2007-1/2007-1.asp.
	Layman-adapted pharmacopoeia?	Is there an adapted pharmacopeia for persons who are non-expert in healthcare readily accessible by the public (www or widely available)?	Yes	Yes, but not really easily accessible or frequently consulted	No	Patients' Perspectives of Healthcare Systems in Europe; survey commissioned by HCP 2006. Personal interviews. LIF Sweden. http://www.doctissimo.fr/html/sante/sante.htm; http://www.legemiddelverket.no/custom/templates/gzInterIFrame____1548.aspx.; http://medicamente.romedic.ro/; www.vademecum.es.
	Speed of deployment of novel cancer drugs	How quickly are new cancer drugs made available through public healthcare?	Quicker than EU average	Close to EU average	Slower than EU average	"A pan-European comparison regarding patient access to cancer drugs" 2007, Nils Wilking & Bengt Jönsson, Karolinska Institute, Stockholm.
	Access to new drugs	Period between registration and inclusion of drugs in subsidy system	<150 days	<300 days	>300 days	Phase 6 Report Feb 2007. PATIENTS W.A.I.T. Indicator Commissioned by EFPIA. IMS Global Consulting. "A pan-European comparison regarding patient access to cancer drugs", Nils Wilking & Bengt Jönsson, Karolinska Institute, Stockholm.

Table 5.5: Indicator definitions and data sources for the EHCI 2007

5.5.1 Additional data gathering - survey

In addition to public sources, as was also the case for the 2006 Index, an e-mail 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 2007, this survey included the five Waiting Time indicators plus the "Register of legitimate doctors" indicator. A total of 418 patient organisations responded to the survey. The lowest number of responses from any single country was 4.

5.5.2 Additional data gathering – feedback from National Ministries/Agencies

On June 20th, 2007, preliminary score sheets were sent out to Ministries of Health or state agencies of all 29 states, 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 by extensive mail, e-mail, telephone contacts and personal visits to ministries/agencies. Finally, feedback responses have been had from official national sources as illustrated in the following table:

Country	Responded in 2006	Responded in 2007
Austria		√
Belgium	√	
Bulgaria	not applicable	√
Cyprus	√	
Czech Republic	√	
Denmark		√
Estonia	√	√
Finland	√	√
France		√
Germany		
Greece		
Hungary	√	√
Ireland		√
Italy		
Latvia	√	
Lithuania		√
Luxembourg		√
Malta	√	√
Netherlands	√	
Norway	not applicable	
Poland	√	√
Portugal	√	
Romania	not applicable	√
Slovakia		√
Slovenia	√	
Spain		√
Sweden		
Switzerland		
United Kingdom		√

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).

5.6 Threshold value settings

It has not been our 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".

Also, the HCP believes that Patient Organisation involvement in healthcare decision making is a good idea. This indicator was included in 2006, with no country scoring Green. In 2007, Green score is attained by Estonia and Ireland on this indicator.

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 example of this is the new **Cancer 5-year survival** indicator, where the cut-offs for Green and Amber were set at 60 % and 50 % respectively, with the result that only four states score Green.

5.7 Symmetry of in-data

It is important to note that there is absolutely no symmetry in the data used for the scores in the EHCI.

The project has consequently been using "latest available" statistics. As an example, this means that the EHCI compares cancer survival data from 1997 from one country with 2005 data from other countries. We have also allowed ourselves to test official policy decisions in a patient survey, and also by interviews with healthcare officials. In some cases, where real life practice does not coincide with official policy decisions, scores have been modified accordingly.

6. Where does the European health consumer in 2007 find the most user-friendly healthcare system?

6.1 General overview of European conditions

The current (2005) situation for European healthcare systems is commented on the following quote from the WHO European Health Report:

"Good health is a fundamental resource for social and economic development. Higher levels of human development mean that people live longer and enjoy more healthy years of life.

While the health of the 879 million people in the WHO European Region has in general improved over time, inequalities between the 52 Member States in the Region and between groups within countries have widened. In addition to the east–west gap in health, differences in health between socioeconomic groups have increased in many countries.

Reducing inequality is increasingly vital. As most countries have declining birth rates and growing elderly populations, it is particularly important to help children to avoid ill health and to become resilient enough to remain in good health long into old age."

This and several other reports provide thorough descriptions of the public health situation in European countries.

There is less good availability of reports on the actual performance of healthcare systems, expressed in "customer value" terms such as quantitative and qualitative output, service and information levels and value for money spent. The statistics on European healthcare systems tend to focus on quantitative resource inputs such as staff numbers, beds and bed occupancy, and at best statistics on procedures such as "needle time" or "% of patients receiving trombolysis treatment".

For a country like the USA, where healthcare financing and provision has been looked upon as a service industry, statistics on performance quantity and quality are abundant.

6.2 The Index outcomes

As is illustrated by the Index Matrix, EHCI 2007 consists of a total of 27 indicators in five sub-areas, describing 29 national healthcare systems. The aim has been to select such indicators, which should be relevant for describing a healthcare system viewed from the consumer/patient's angle.

The performance of the respective national healthcare systems was 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 (), equalling 3, 2 and 1 points respectively.

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● = Good
◐ = Intermediary
○ = Poor
n.a = Data not available

SUBDISCIPLINE	INDICATOR	Austria	Belgium	Bulgaria	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia
Patient rights and information	Healthcare law based on Patients' Rights	◐	●	◐	●	○	●	◐	●	●	○	●	●	○	◐	○
	Patient org. involved in decision making?	○	○	○	○	◐	◐	●	◐	◐	◐	○	○	●	○	◐
	No-fault malpractice insurance	○	○	○	○	○	●	○	●	◐	○	○	○	○	○	○
	Right to second opinion	●	●	◐	◐	◐	●	●	◐	●	●	◐	◐	◐	◐	○
	Access to own medical record	●	●	◐	◐	●	●	◐	●	●	◐	◐	●	◐	◐	◐
	Register of legit doctors	●	○	◐	◐	◐	●	●	●	●	◐	◐	○	●	●	○
	Electronic Patient Record (% of GP:s using)	◐	◐	○	n.a.	○	●	◐	●	○	○	○	○	◐	◐	○
	Provider catalogue with quality ranking	○	○	○	◐	●	●	○	○	◐	○	○	○	○	○	○
	Web or 24/7 telephone healthcare info	○	○	○	○	○	◐	●	◐	○	◐	○	○	○	○	○
	Sub-discipline score	17	16	13	15	16	25	20	22	20	15	14	14	16	15	11
Waiting times	Family doctor same day	●	●	◐	●	●	●	◐	○	●	●	○	●	◐	◐	◐
	Direct access to specialist	●	●	○	●	○	○	◐	○	●	●	●	○	○	○	○
	Major non-acute operations <90 days	◐	●	◐	◐	○	◐	○	◐	◐	●	◐	○	○	○	○
	Cancer therapy < 21 days	●	●	◐	●	●	◐	○	●	●	●	◐	◐	○	◐	◐
	MRI scan < 7days	●	●	◐	◐	◐	○	○	○	◐	◐	○	○	○	○	○
	Sub-discipline score	14	15	9	13	10	9	7	8	13	14	9	8	6	7	7
Outcomes	Heart infarct mortality	●	◐	n.a.	○	○	○	○	◐	◐	◐	○	○	◐	◐	○
	Infant deaths/1000 live births	◐	◐	○	●	●	◐	◐	●	●	◐	◐	○	◐	◐	○
	Cancer 5-year survival	●	◐	○	n.a.	○	◐	○	◐	●	◐	○	○	◐	◐	○
	Avoidable deaths – Potential years of Life Lost (PYLL)/100 000	●	◐	○	◐	◐	◐	◐	◐	◐	●	●	○	●	●	○
	MRSA infections	◐	○	○	○	◐	●	●	●	○	◐	○	○	○	○	◐
	Sub-discipline score	13	9	5	8	9	10	9	12	11	11	8	5	10	10	6
"Generosity" of public healthcare systems	Cataract operations per 100 000	◐	●	○	n.a.	n.a.	◐	◐	●	●	●	◐	●	◐	●	n.a.
	Infant 4-disease vaccination	○	◐	◐	●	●	◐	●	●	●	◐	○	●	○	◐	●
	Kidney transplants p.m.p.	●	◐	○	n.a.	●	◐	●	●	●	◐	○	◐	◐	◐	◐
	Dental care in public healthcare system	●	○	○	○	◐	○	○	◐	◐	●	●	●	◐	○	○
	Sub-discipline score	9	8	5	6	9	7	9	11	11	10	7	11	7	8	7
Pharma-ceuticals	Rx subsidy %	◐	◐	○	○	◐	◐	○	○	●	●	◐	◐	●	●	○
	Layman-adapted pharmacopeia?	○	○	○	○	○	●	●	◐	◐	○	○	○	◐	○	○
	New cancer drugs deployment speed	●	◐	○	◐	○	◐	◐	◐	◐	◐	◐	○	◐	◐	○
	Access to new drugs (time to subsidy)	●	○	○	●	○	●	●	◐	○	●	◐	○	●	○	○
	Sub-discipline score	9	6	4	7	5	10	9	7	8	9	7	5	10	7	4
	TOTAL SCORE	806	701	445	629	612	712	633	719	786	767	561	513	592	580	435
	RANK	1	10	28	13	15	9	12	8	3	5	22	24	16	18	29

● = Good
◐ = Intermediary
○ = Poor
n.a = Data not available

SUBDISCIPLINE	INDICATOR	Lithuania	Luxemburg	Malta	Netherlands	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland	United Kingdom
Patient rights and information	Healthcare law based on Patients' Rights	●	○	○	●	●	◐	◐	◐	◐	◐	◐	○	●	◐
	Patient org. involved in decision making?	○	◐	○	◐	◐	○	◐	○	○	○	◐	◐	○	◐
	No-fault malpractice insurance	○	○	○	○	●	○	○	○	○	○	○	●	○	○
	Right to second opinion	●	●	●	●	◐	◐	◐	●	◐	●	◐	◐	●	○
	Access to own medical record	●	●	○	●	●	◐	◐	●	●	●	●	●	◐	◐
	Register of legit doctors	◐	○	◐	●	○	○	○	○	○	◐	○	○	○	◐
	Electronic Patient Record (% of GP:s using)	○	◐	n.a.	●	●	○	◐	○	○	n.a.	◐	●	◐	●
	Provider catalogue with quality ranking	○	○	○	◐	◐	○	○	○	○	○	○	○	○	●
	Web or 24/7 telephone healthcare info	○	○	●	◐	○	○	●	○	○	○	○	◐	◐	●
	Sub-discipline score	16	15	14	22	20	12	16	14	13	15	15	18	16	19
Waiting times	Family doctor same day	○	●	●	●	●	◐	○	●	●	●	◐	○	●	◐
	Direct access to specialist	○	◐	○	○	○	○	○	○	●	○	○	○	●	○
	Major non-acute operations <90 days	◐	○	◐	◐	◐	○	○	◐	○	○	○	○	●	○
	Cancer therapy < 21 days	◐	●	●	◐	●	◐	◐	◐	◐	◐	◐	◐	●	◐
	MRI scan < 7days	◐	◐	○	◐	◐	○	◐	○	◐	○	○	○	◐	○
	Sub-discipline score	8	11	10	10	11	7	7	9	11	8	7	6	14	7
Outcomes	Heart infarct mortality	○	◐	○	●	n.a.	○	○	n.a.	○	●	◐	●	●	●
	Infant deaths/1000 live births	○	●	◐	◐	●	○	●	○	○	◐	●	●	◐	◐
	Cancer 5-year survival	◐	◐	◐	◐	◐	○	◐	○	○	○	◐	●	●	○
	Avoidable deaths – Potential years of Life Lost (PYLL)/100 000	○	●	◐	●	●	○	◐	○	○	◐	◐	●	●	◐
	MRSA infections	◐	◐	○	●	●	○	○	○	◐	◐	○	●	n.a.	○
	Sub-discipline score	7	12	8	13	12	5	9	5	6	10	10	15	12	9
"Generosity" of public healthcare systems	Cataract operations per 100 000	n.a.	●	◐	●	◐	○	○	○	n.a.	n.a.	●	●	◐	◐
	Infant 4-disease vaccination	◐	◐	◐	●	○	●	●	●	●	○	◐	●	◐	○
	Kidney transplants p.m.p.	○	○	n.a.	●	●	○	◐	○	○	○	●	●	◐	◐
	Dental care in public healthcare system	◐	○	●	○	○	●	○	●	○	●	○	◐	○	○
	Sub-discipline score	6	7	8	10	7	8	7	8	6	6	9	11	7	6
Pharma-ceuticals	Rx subsidy %	○	●	◐	●	◐	◐	◐	○	●	●	●	◐	●	●
	Layman-adapted pharmacopeia?	○	○	○	●	◐	○	◐	●	○	○	◐	●	○	○
	New cancer drugs deployment speed	○	●	○	◐	○	○	◐	○	○	○	●	◐	●	○
	Access to new drugs (time to subsidy)	○	○	○	◐	●	○	◐	○	○	○	◐	●	●	●
	Sub-discipline score	4	8	5	10	8	5	8	6	6	6	10	10	10	8
	TOTAL SCORE	496	687	568	794	724	447	570	508	532	564	624	740	770	581
	RANK	26	11	20	2	7	27	19	25	23	21	14	6	4	17

6.3 Results Summary

This third 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 Austria, the Netherlands, France, Switzerland and Germany are really very difficult to separate, and that very subtle changes in single scores modify the internal order of these five top countries.

Austria emerges as the 2007 winner of the Euro Health Consumer Index, with a generously providing healthcare system having good access for patients and very good medical results. Austria scores 806 out of 1000 maximum points closely followed by The Netherlands, France, Switzerland and Germany in 5th place with 767 points.

The four Nordic countries Norway, Sweden, Finland and Denmark come in a cluster in places 6 – 9. It would be easy to say that "Small wonder – everybody knows that the Nordic countries are all very similar!" However, a closer look at the Index shows that they make up this cluster in very different ways, Sweden being EU champions at Medical Quality, and Denmark on Patient Rights and Information.

Behind the leaders there are many medium-quality countries with some quick climbers such as Estonia.

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. Still very few countries have hospital/clinic catalogues with quality ranking.

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.

In some respects progress is not only slow but lacking. MRSA infections in hospitals seem to spread and are now a significant health threat in one out of two measured countries. Half of European governments systematically delay consumer access to new medicines, and not only for reasons of poor national wealth.

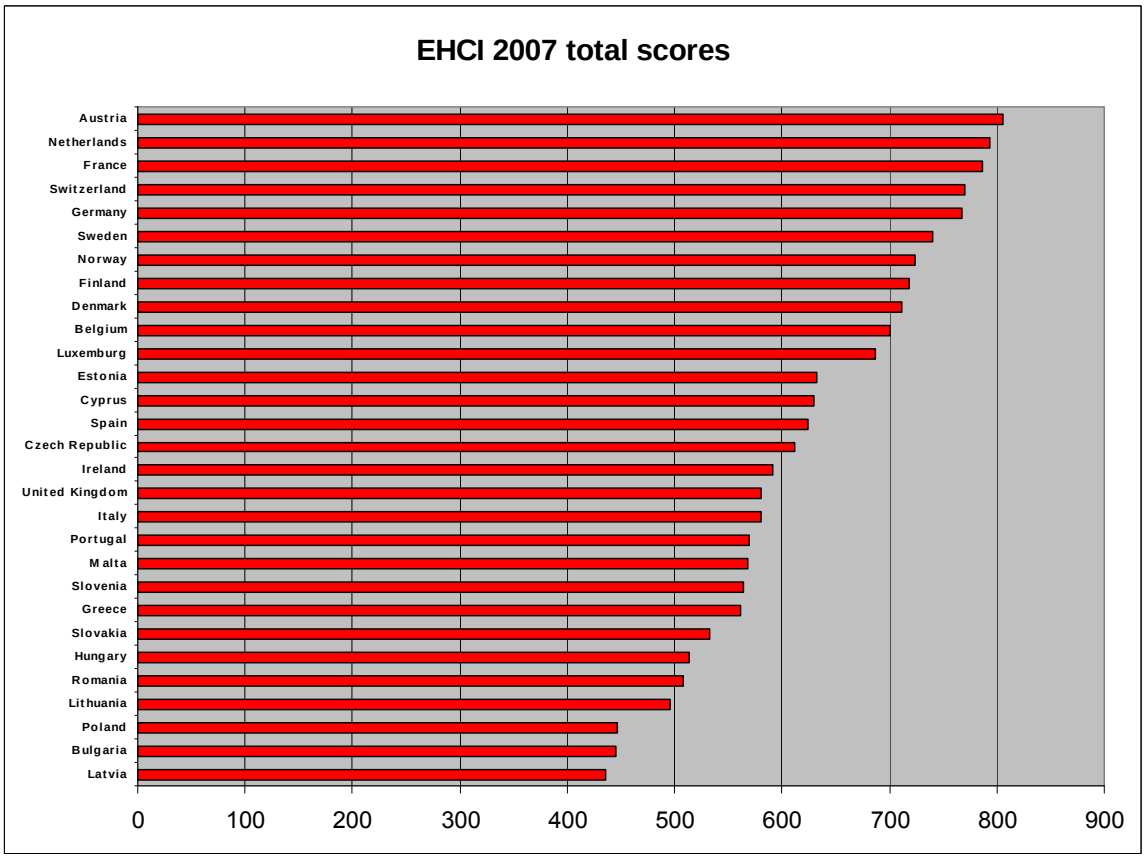
The EHCI does take into account the service quality measured as outcomes where a country such as Belgium, which otherwise scores high on issues of consumer-friendliness, has surprisingly low scores. Sweden, which is the "winner" on medical quality, misses a real top position mainly due to poor accessibility.

In southern Europe, Spain and Italy provide good healthcare services. 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 for these countries to reach top scores. A mixed performance in shown by the U.K; the overall U.K. score is dragged down by waiting lists and uneven quality performance.

Some eastern European EU member systems are doing surprisingly well, 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.

If healthcare officials and politicians took to looking across borders, and to "stealing" improvement ideas from their EU 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 just achieve a German or Austrian waiting list situation, it would beat current winner Austria by a margin of 75 points!

Subsequent versions of the EHCI will in all likelihood have a modified set of indicators, as more data becomes available.



6.3.1 Country scores

There are no countries, which excel across the entire range of 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!

Countries with pluralistic financing systems, *e.g.* offering a choice of health insurance solutions, which also provide the citizen with a choice between providers regardless of whether these are public, private, non-profit or for-profit, generally score high on Patient Rights and Information issues. Under this sub-set of indicators, countries like Denmark and the Netherlands score high on openness and patients' access to their own medical information. Scores of countries, like Germany, France, Italy and Greece suffer from what seems to be an expert-driven attitude to healthcare, where the patients access healthcare information with healthcare professionals as intermediaries rather than directly.

In an attempt to summarize the main features of the scoring of each country included in the EHCI 2007, the following table gives a somewhat subjective synopsis. To the care consumer – *i.e.* most of us – describing and comparing healthcare will require some simplifications. (A medical information system dealing with scientific evidence such as individual diagnosis or medication guidelines of course requires very strict criteria; the EHCI must be regarded as consumer information, and can by no means be considered as scientific research).

Country	**Scoring Synopsis**
Austria	A worthy winner, with very good medical results and excellent accessibility to healthcare. Austria leads the EU on overall cancer survival. Slightly autocratic attitude to patient empowerment?
Belgium	EU Champions at accessibility, suffers on outcome quality
Bulgaria	Not bad, considering the very modest healthcare expenditure.
Cyprus	Problematic, as no other member state has as high a proportion of healthcare being privately funded. The score nevertheless confirms the European Observatory HiT report finding that Cypriotic healthcare is on par with average in the EU.
Czech Republic	Takes care of its citizens – almost Japanese level of visits to doctors per citizen (15 times/year on average). Good on diabetes care (hope for the 2008 Index). Could reconsider resource distribution between healthcare staff and equipment/pharmaceuticals.
Denmark	EU champions at Patient Rights and Information. Danes very satisfied with their primary care, but outcomes not really great.
Estonia	Estonia, with its population of 1½ million people, keeps proving that a small country can do a dramatic change faster than bigger nations. It takes more than a dozen years to change a top-down planned economy to become a customer-driven one. Good on MRSA infections and efficient financial administration of pharmaceuticals. In top of the Value-for-money adjusted scores!
Finland	Not too different from Sweden; really good outcomes. If Finland improves the waiting list situation, they can be a top contender.

France	The WHO (2000) world's #1 on healthcare system performance, and also a top scorer in the EHCI; technically efficient and quite generous. Reasonably good outcomes quality but slightly authoritarian. You want healthcare information – ask your doctor!
Germany	The customer rules! Would be really great, but lacks the cutting edge for quality. You want healthcare information – ask your doctor!
Greece	Doctors rule.
Hungary	It takes more than a dozen years to change a top-down planned economy to become a customer-driven one. 60 years of publicly financed healthcare has resulted in quite good coverage.
Ireland	The Health Service Executive reform seems to have started improving an historically dismal performance. Still severe waiting list problems and less than fantastic outcomes.
Italy	Technically not too bad, but CERGAS, an institute for healthcare management, in Milan confirms that an autocratic attitude from doctors (and other Italians in superior positions, in and out of uniform) prevents Italy from scoring high in a consumer index.
Latvia	At this point in time lacking in resources and organisational culture to be a really consumer-adapted system. The country does consist of more than downtown Riga!
Lithuania	A healthcare system in a state of thorough reformation – hope for better score in 2008.
Luxembourg	Has what it takes in the form of financial resources. Should be a top scorer. Luxembourgers have been shopping for care in bigger neighbouring countries, which might have handicapped development of really superior domestic healthcare.
Malta	Technically Maltese healthcare performs not too bad.
Netherlands	Hangs on to the Silver medal. Runner-up on Patient Rights after new champs Denmark. Openness, many financing options and good on outcomes quality. Scrap GP gatekeeping, do away with waiting times and become Really Great!
Norway	Running outside of EU competition. Generally not too bad. In recent years access problems have been "solved" by pouring money over them – very expensive healthcare!
Poland	It takes more than a dozen years to change a top-down planned economy to a customer-driven one. Poor access to new drugs – a cost saving measure?
Portugal	Not as advanced as Spanish neighbours. Good improvement on infant mortality.

Romania	Not doing too badly – shares the problem of unofficial payments to doctors with several of its neighbours. Good healthcare obtained this way unfortunately does not score in the EHCI.
Slovakia	Not as financially stable as Czech neighbours, and not really consumer-oriented.
Slovenia	Similarities to the Austrian system – does reasonably well in the BFB-adjusted score.
Spain	Rising year by year. It still seems that going for Private healthcare is needed if patients want real excellence.
Sweden	Excels at medical outcomes. Really bad (and worsening!) at accessibility and service.
Switzerland	Running outside of EU competition. In a consumer Index, a system based on individual responsibility since time began does score high. Good but expensive.
United Kingdom	Mediocre overall performer. Good on heart problems. Star performer on healthcare information! The new Freedom of Information Act will hopefully improve score on openness indicators, but that will take time. The NHS shares some fundamental problems with other centrally planned healthcare systems such as Sweden.

6.3.2 Results in "Pentathlon"

The EHCI is made up of five sub-disciplines. As no country excels across all aspects of measuring a healthcare system, it can therefore be of interest to study how the 29 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	Austria	Belgium	Bulgaria	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxemburg	Malta	Netherlands	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland	United Kingdom
Patient rights and information	17	16	14	15	16	25	20	22	20	15	14	14	16	15	11	16	15	14	22	20	12	16	14	13	15	15	18	16	19
Waiting time for treatment	14	15	9	13	10	9	7	8	13	14	9	8	6	7	7	8	11	10	10	11	7	7	9	11	8	7	6	14	7
Outcomes	13	9	5	8	9	10	9	12	11	11	8	5	10	10	6	7	12	8	13	12	5	9	5	6	10	10	15	12	9
Generosity" of public systems	9	8	5	6	9	7	9	11	11	10	7	11	7	8	7	6	7	8	10	7	8	7	8	6	6	9	11	7	6
Pharmaceuticals	9	6	4	7	5	10	9	7	8	9	7	5	10	7	4	4	8	5	10	8	5	8	6	6	6	10	10	10	8

As the table indicates, the total top position of the Austrian healthcare system is to a great extent a product of good accessibility and very good medical quality, which are the two sub-disciplines carrying the highest weight coefficients.

Last year's runner-up Denmark has taken over top position for **Patient rights and information** discipline, where the 2006 Champion The Netherlands and Finland seem to be strong runners up. What is also strongly indicated is that the Swedish healthcare system would be a real top contender, were it not for an accessibility situation, which by Belgian, Austrian, French or German standards can only be described as abysmal. Finally, some countries, most probably Switzerland, would probably do better if healthcare data in Europe were more readily available

6.4 National and organisational cultures

Some indicators seem to reflect national and organisational culture streaks rather than formal legislative or financial circumstances.

Waiting times, usually considered to be of vital interest to healthcare consumers, seems to be one such indicator area. As was also observed by Siciliani & Hurst of the OECD Health Group, the existence of waiting times is strongly correlated to the presence of regulations forcing the patient to access specialist care by going through a primary care procedure in order to get a referral to a specialist (the "gate-keeping" function). In general, countries with gate-keepers exhibit waiting lists – countries where patients are allowed direct access to specialists do not.

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, but also in the readiness to allow the seeking of healthcare in other countries than the patient's homeland.

7. Bang-For-the-Buck adjusted scores

With all 27 EU member states included in the EHCI, it becomes apparent that the Index tries to compare states with very different financial resources. The annual healthcare spend, in PPP-adjusted (Purchasing Power Parity) US dollars, varies from around $ 600 in Bulgaria and Romania to $ 4000 – 5000 in Norway, Switzerland and Luxemburg. Continental Western Europe and Nordic countries generally fall between $ 2500 and $ 3000. As a separate exercise, the EHCI 2007 has had added to it a value for money adjusted score: the Bang-For-the-Buck adjusted score, or "BFB Score".

7.1 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 adjusted, it is obvious that even 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 (latest available numbers, most frequently 2004) as illustrated in the table below:

Country	Total health expenditure, PPP$ per capita	Square root
Austria	3124	55,89
Belgium	3044	55,17
Bulgaria*)	648	25,46
Cyprus	1437	37,90
Czech Republic	1361	36,89
Denmark	2881	53,67
Estonia	771	27,77
Finland	2235	47,28
France	3159	56,20
Germany	3005	54,82
Greece	2162	46,50
Hungary	1323	36,37
Ireland	2596	50,95
Italy	2392	48,91
Latvia	734	27,10
Lithuania	786	28,04
Luxembourg	5089	71,34
Malta	1739	41,70
Netherlands	3041	55,15
Norway	3966	62,98
Poland	805	28,37
Portugal	1813	42,58
Romania*)	566	23,79
Slovakia	777	27,87
Slovenia	1801	42,44
Spain	2094	45,76
Sweden	2825	53,15
Switzerland	4077	63,85
United Kingdom	2546	50,46
Arithmetic mean		44,77

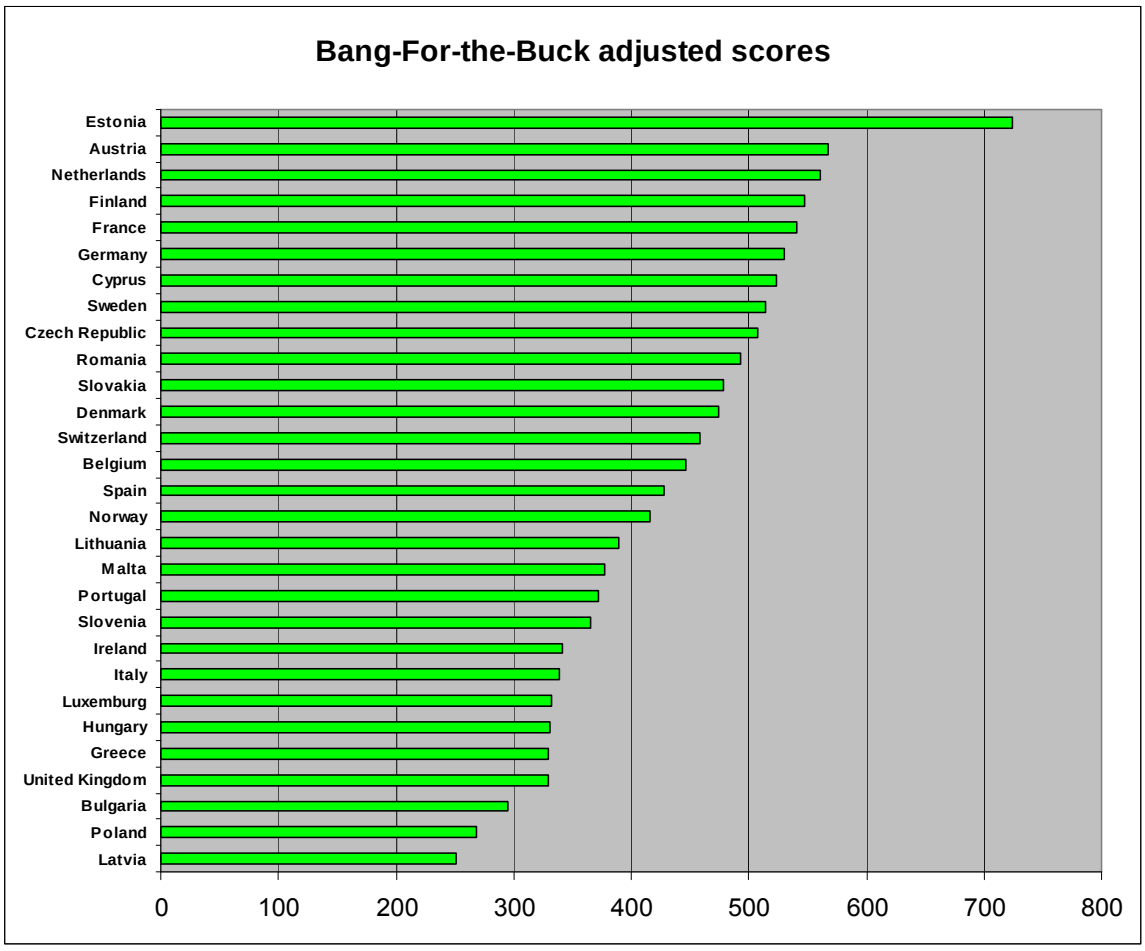
*) For Bulgaria and Romania, the WHO HfA database (January 2007) actually seems to contain errors for the healthcare spend; it is given as $214 and $314 respectively, which are unreasonably low numbers. The European Observatory HiT report (http://www.euro.who.int/Document/E90023brief.pdf) on Bulgaria quotes the WHO, giving the number $648, also confirming the fact that this is slightly higher than the Romanian figure. The number for Romania was taken from a report from the Romanian MoH (http://www.euro.who.int/document/MPS/ROM_MPSEURO_countryprofiles.pdf), also quoting the WHO.

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 change the relative positions of the 29 countries (or at least very marginally), 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 29 square roots (creating the effect that scores are normalized back to the same numerical value range as the original scores).

7.2 Results in the BFB Score sheet

The outcome of the BFB exercise is shown in the table below. Even with the square root exercise described in the previous section, the effect is definitely 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 spend certainly lacks scientific support. After the EHCI research work, however, it does seem that certainly the supreme winner in the BFB score, Estonia, is doing very well within their financial capacity. Naturally, it is easier to reform a country with 1½ million people than one with 40+ million – nevertheless, the Estonian reform work since 1990 deserves admiration!

What 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 Austria, the Netherlands, Finland, France, and Germany.

8. Comments from International Expert Panel members

"The Euro Health Consumer Index 2006 continues to be transparent and the best and most comprehensive tool of its type. The selection categories are more clearly defined and refined. The data is becoming fuller and better. Overall there is a real improvement in quality as a useful tool for policy makers and both consumers and healthcare providers." (Tom Kass)

"Comparing healthcare systems of different countries is very interesting. The process can help to learn about differences and similarities and understand the own health system better. The perspective of the patient has so far been very often neglected so the EuroHealthConsumer Index fills a gap. To make it more useful it might be helpful to have even more in mind that patients are not only consumers.

There are patients who have no choice either because there are chronically ill, have a disability or are poor.

"The indicators are necessary for a comparison. However they imply an objectivity that does not exist. Hence not only the results of the Health Consumer Index are interesting but maybe even more a discussion on the input in the system, *e.g.* the reason why one indicator may be more useful than another." (Katrin Grüber)

9. This is how the EHCI 2007 was built

9.1 Strategy

In April 2004 we first launched the Swedish Health Consumer Index (www.vardkonsumentindex.se, also in a translation to English). By ranking the 21 county councils (the regional parliaments responsible for funding, purchasing and generally also providing healthcare) 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. The presentation of the third annual update of the Swedish index on May 16, 2006 again confirmed to Swedes the low average ranking of most councils revealing the still weak consumer position.

There is a pronounced need for improvement. The very strong media impact of the Index all over Sweden confirmed that the image of healthcare is rapidly moving from rationed public goods into consumer-related services measurable by common quality perspectives,

For the Euro Health Consumer Index, the Health Consumer Powerhouse has been aiming to follow basically 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.

The Index does not take into account whether a national healthcare system is publicly or privately funded and/or operated. The purpose of the EHCI is health consumer empowerment, not the promotion of political ideology. Aiming for dialogue and co-

operation, the ambition of HCP is to be looked upon as a partner in developing healthcare around Europe.

In the initial years of index building, opinions brokers and policy makers -- like journalists, experts and politicians -- will be the key targets for the Index. Gradually, the health consumer could become main users as well as service providers, payors and authorities. Such a development will ask for user-friendly services and a deep knowledge of consumer values. Interactivity with users and others parts of the European healthcare society will be another key characteristic.

9.1.1 The reasoning behind indicator selection

The aim has been to select a limited number of indicators, within a definite number of evaluation areas, which taken together can present a telling tale of how the healthcare consumer is being served by the respective systems. The EHCI work was started in 2005 with a "long-list" of indicator areas as given below:

Information to the healthcare consumer

1. Is there a national healthcare information service, which fulfils requirements x, y and z?
2. Is there a publicly available description of healthcare providers, with indicators of result and outcomes?
3. Are patient/consumer rights clearly defined and easily accessible?

Treatment accessibility

1. Waiting times for a representative selection of treatments (measured how?)
2. Can doctor appointments be set up conveniently?
3. Can prescriptions be renewed over the Internet?
4. Accessibility of a selection of best practice-therapies (operations, tests, drugs)? Or: What is the official policy in these respects (red tape etcetera)?

Medical standards and safety

1. Maltreatment frequencies (MRSA in hospitals, etcetera.)
2. Mortality for conditions where the performance of healthcare services are essential for the outcome (*i.e.* not lifestyle-dependent)

"System information"

1. Patient rights (comprehensive and available?)

2. Provider listings (complete, convenient?)
3. Procedure for filing a complaint (are there meaningful and established channels, or: Is there information on how to proceed?)
4. Are regular citizen/consumer polls on healthcare quality/accessibility/satisfaction made (by whom, at what level)?

"Legal position"

1. Funding alternatives; "opt-out" options?
2. Patient access to medical records (national byelaws?)
3. Patient choice of caregiver (level?)
4. Right and procedure for appeal (of what decisions?)
5. Compensation for maltreatment (cancellations and/or maltreatment)

"Risk information" (can patients access information about):

1. MRSA in a certain hospital?
2. Maltreatment statistics of hospitals (how?)
3. State of the art/best practice-treatment in various hospitals (three representative diagnoses)?
4. Substandard treatments (certain diagnoses/methods; measured how)?

Service/attention

1. Can patients book appointments by e-mail (offered by >x % of caregivers)
2. Prescription renewal -"-
3. Prescription validity (time)?
4. Single room in hospital (extra charge)?
5. Healthcare information service (level, telephone, and web)?

Accessibility

1. Waiting times for treatment (three representative diagnoses)?
2. Time lapse/policy for introduction of new drugs (definition European Observatory?)?
3. Pharmacy shop hours
4. Accessibility to family doctor/equivalent (level; several variables)

Provision levels **"Generosity"** (What and/or how much is included in public healthcare services?)

1. Operation rates per 100 000 citizens for conditions, with reasonably uniform prevalence, and which are not merely a measure on GDP/capita. Hip joint replacements (an expensive but not life-saving operation) were excluded for this reason.
2. Are eyeglasses or dental care parts of the public offering?
3. If a state has very high proportion of healthcare being paid for out-of-pocket, scores in this sub discipline should be reduced down from what official statistics on these parameters would give (Cyprus being the prime example).

9.2 Main content Euro Health Consumer Index 2007

9.2.1 Preliminary selection of indicator areas for study

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

The work on the EHCI 2007 started out from the 2006 Index, with the ambition to retain the main Index structure in order not to destroy the possibilities to make comparisons over time. In addition to the indicator changes described in section 5.1 above, the following indicators were considered for inclusion.

9.2.2 Indicators considered but not inserted

Patient Rights and Information:

- *Free choice of provider* (*i.e*. Do patients have a free choice of which hospital or clinic they want to go to?) Long discussed with the expert panels, but finally omitted because of ambiguities in several national healthcare systems, which made it difficult to evaluate.
- *Number of adverse events reported per 1000 hospital admissions*. (This could be considered an Outcomes indicator. At the present time, however, only three countries; Finland, France and Spain were capable of reporting the number at all, which indicates that the parameter should still be classified as an Information issue.)
- *E-prescription penetration?* Was suggested as an alternative indicator in the area of "e-Health". Was deemed to be of less interest than the vital core application Electronic Patient Record.

Medical Outcomes

- *Revisions of hip joint operations* (% of implants having to be redone). This indicator was omitted, as data could be obtained for only 9 countries.
- As an indicator on psychiatry: "*Relative reduction of suicide rates (SDR/100 000) since 1990 until latest available statistics*". This indicator was suggested by psychiatric specialists to be considered, and was evaluated using data from the MINDFUL project. After an intense discussion in the EHCI International Panel, the conclusion was that this could be a very interesting indicator, but that the existence of confounding factors was so high that using this indicator as a measure of the quality of psychiatric care could not be justified. (As an item of curiosity, countries that would have got a Green score were the Nordic countries, Hungary, Germany, Austria, the Czech Republic and Slovakia.)

"Generosity"

- *Breast/cervical cancer screening coverage*. An interesting indicator for preventive medicine. It has a noticeably less favourable cost/benefit ratio than vaccination, and is therefore much more correlated to GDP/capita. This is one basic reason for excluding indicators from the EHCI, as there is a strong wish to avoid repeatedly measuring national wealth.
- *Informal payments to doctors* to get better care, jump waiting lists or indeed to be treated at all! This would have been a very interesting indicator to include. It was omitted for two main reasons: some rather obvious data collection problems, and for the risk of stigmatising a number of eastern European states, where informal payments are not confined to healthcare services. (As a second item of curiosity, there are some indications that the healthcare system of 2007 EHCI winner Austria is less free from informal payments to doctors than most western and north European states.)

  Informal payments to doctors are a problem for the EHCI, as the fact that money can buy excellent healthcare is not really a sensation. This is true even in 3rd-world countries. The EHCI aims to measure the performance and consumer friendliness of healthcare systems as they function for the average citizen. For countries where informal payments are commonplace, there has been a determined effort to evaluate how healthcare systems work for patients not paying under the table.

Pharmaceuticals

- Are *Antibiotics available without a prescription?* This indicator was omitted (a "Yes" would have given a Red score), as it is closely correlated to the existing indicator MRSA infections in such a way, that it borders on measuring the same thing twice – something that the EHCI tries to avoid.
- *Free establishment of pharmacies*. Many European states still have geographical restrictions and application procedures for establishment of pharmacies. This

indicator was suggested for inclusion. However, this was considered to be more important for pharmacists than for consumers, as countries with very high density of pharmacies like Spain or Greece do still have these restrictions.

9.3 Production phases

EHCI 2007 was constructed under the following project plan:

9.3.1 Phase 1

Mapping of existing data

Initially, the major area of activity was to evaluate to what extent relevant information is available and accessible for the selected countries. The basic methods were:

- Web search
- Telephone and e-mail interviews with key individuals
- Personal visits when required

Web search:
a) Relevant byelaws and policy documents
b) Actual outcome data in relation to policies

Information providers:

a) National and regional Health Authorities

b) Institutions (EHMA, Cochrane Institute, Picker Institute, University of York Health Economics, others)

c) Patient associations ("What would you *really* like to know?")

d) Private enterprise (IMS Health, pharmaceutical industry, others)

Interviews (to evaluate findings from earlier sources, particularly to verify the real outcomes of policy decisions):
a) Phone and e-mail

b) Personal visits to key information providers

9.3.2 Phase 2

- Data collection be undertaken to assemble presently available information to be included in the EHCI 2007.
- Identification of vital areas, where additional information needed to be assembled was performed.
- Collection of raw data for these areas
- A round of personal visits by the EHCI researchers to Health Ministries and/or State Agencies for supervision and/or Quality Assurance of Healthcare Services.

9.3.3 Phase 3

- "Score update sheet" sendout.

On June 20, 2007, all 29 states received their respective preliminary score sheets (with no reference to other states' scores) as an e-mail sendout asking for updates/corrections by July 31. The sendout was made to contacts at ministries/state agencies as advised by states during the contact efforts of the spring of 2007. Two reminders were also sent out, on July 19th and August 3rd. Corrective feedback from states was accepted up until September 10th, by which time replies had been received as listed in section 5.5.2 above.

- EHCI construction
- Web solution building
- Consulting European patient advocates and citizens through HCP surveys, performed by external research facilities (Patient View, U.K.).

The 2007 survey was dedicated to the Waiting time indicators, plus the indicator "**Readily accessible register of legit doctors**". 418 patient organisations responded. The lowest number of patient organisations responding from any one country was 4. The consistency between responses from different organisations was surprisingly good, as was the consistency with data from public sources. This survey was therefore used as the main data source for the waiting time indicators.

For the "**Readily accessible register of legit doctors**" indicator, the survey responses showed a slightly negative bias. For states such as Bulgaria and Italy, where web-based registries of legitimate specialists (in the case of Bulgaria not yet including speciality qualifications) are readily accessible, most patient organisations replied that this information was difficult to access. In cases like these, it was decided to be generous in the awarding of country scores.

9.3.4 Phase 4

Project presentation and reports

- A report describing the principles of how the EHCI was constructed
- Presentation of EHCI 2007 at various events on October 1 and the following weeks in Brussels and other venues.

On-line launch on www.healthpowerhouse.com .

9.4 External expert panels

Two informal Euro Health Expert Panels were recruited, one International Panel and one Swedish Panel. The majority of panel members participated also in the EHCI 2006 project. The two panels met at two sittings each, the Panel Members having been sent the EHCI 2007 working sheets in advance. The following persons have taken part in the International Panel Work:

Name	**Affiliation**
Dr. Juan Acosta	Best Doctors, Inc. (Europe), Madrid, Spain
Dr. Frank Ahedo	EVP Global Business Development, Best Doctors, Inc. (Europe), Madrid, Spain
Dr. Katrin Grüber	Institutsleiterin, Institut Mensch, Ethik und Wissenschaft, Berlin, Germany
Dr. Tom Kass	Senior Vice President, EFG Private Bank SA, Zürich, Switzerland
Dr. Meni Malliori	Ass. Professor of Psychiatry, Athens, Greece
Dr. Leonardo la Pietra	Chief Medical Officer, European Institute of Oncology, Milan, Italy
Ms. Denitsa Sacheva	International Healthcare and Health Insurance Institute, Sofia, Bulgaria

The Swedish panel has had the following persons participate in the work:

Name	**Affiliation**
Johan Calltorp, MD, Professor of Healthcare Administration	Association of Swedish Counties and Municipalities
Stig Nyman	Councillor, Stockholm County Council
Anne-Marie Pernulf, MD	Head of Oncology Division, Academic Hospital, Uppsala
William Thorburn, MD	Chief Medical Officer of the University Hospital of Northern Sweden (retired), Umeå
Lennart Welin, MD	Head of Internal Medicine, Lidköping Hospital
Elisabet Wennlund	Chief Medical Officer/COO, Stockholms Sjukhem Geriatric Hospitals

The HCP wishes to extend its sincere thanks to the members of both panels for very valuable contributions and discussions.

Experience from the three consecutive annual Swedish Health Consumer Index editions has been evaluated and applied when designing the EHCI.

10. European data shortage

10.1 Medical outcomes indicators included in the EHCI

There is one predominant feature, which characterizes European public healthcare (and other welfare state), systems as opposed to their more industrialised counterparts in countries such as the U.S.A.: there is an abundance of statistics on input of resources, but a traditional scarcity of data on quantitative or qualitative *output*.

Organisations like the WHO and OECD are publishing easily accessible and frequently updated statistics on topics like:

- the number of doctors/nurses per capita
- hospital beds per capita
- share of patients receiving certain treatments
- number of consultations per capita
- number of MR units per million of population
- health expenditure by sources of funds
- drug sales in doses and monetary value (endless tables)

Systems with a history of funding structures based on grant schemes and global budgeting often exhibit a management culture, where monitoring and follow-up is more or less entirely focused on input factors. Such factors can be staff numbers, costs of all kinds (though not usually put in relation to output factors) and other factors of the nature illustrated by the above bullet list.

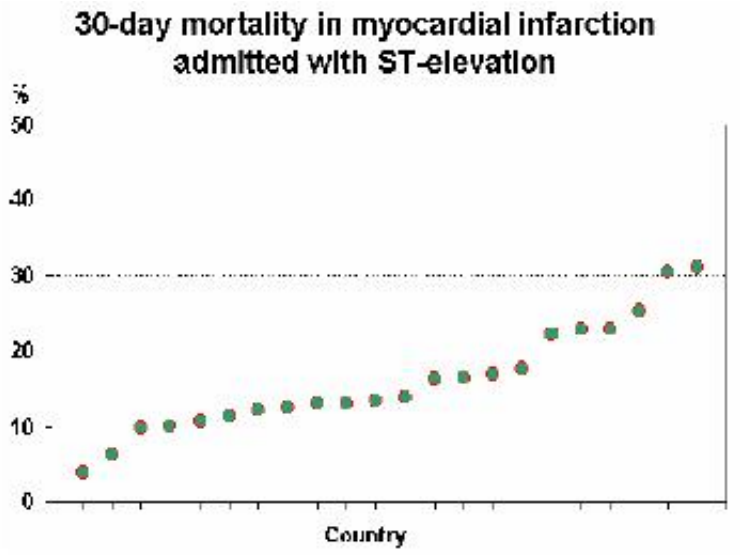
Healthcare systems operating more on an industrial basis have a natural inclination to focus monitoring on *output*, and also much more naturally relate measurements of costs to output factors in order to measure productivity, cost-effectiveness and quality.

The EHCI project has endeavoured to obtain data on the quality of actual healthcare provided. Doing this, the ambition has been to concentrate on indicators, where the contribution of actual healthcare provision is the main factor, and external factors such as lifestyle, food, alcohol or smoking are not heavily interfering. Thus, the EHCI has also avoided including public health parameters, which often tend to be less influenced by healthcare performance than by external factors.

The chosen quality indicators have become:

- Heart infarct mortality <28 days after hospitalisation (de-selecting such parameters as total heart disease mortality, where the Mediterranean states have an inherent, presumably life-style dependent, leading position). The data used were those from the so-called MONICA study, completed with data obtained directly from healthcare authorities of countries not part of MONICA. For Sweden, Finland, Denmark and Austria much more recent data from national sources have been used, but with the cut-off to get a Green score set at 12% case fatality rather than 18%.

There is a surprising lack of more recent data on this the #1 killer disease in modern-day Europe. The graph shown below is in its original form from material published by the European Society of Cardiology, (with the identities of countries not given) based on what is by now very ancient MONICA data.



The Health Consumer Powerhouse wishes the best of success to the European Society of Cardiology in its efforts on the Euro Heart Survey, the EUROASPIRE and EUROCISS projects (the two latter of which were started fairly recently), which will in all likelihood remedy the lack of outcomes data in this very vital field.

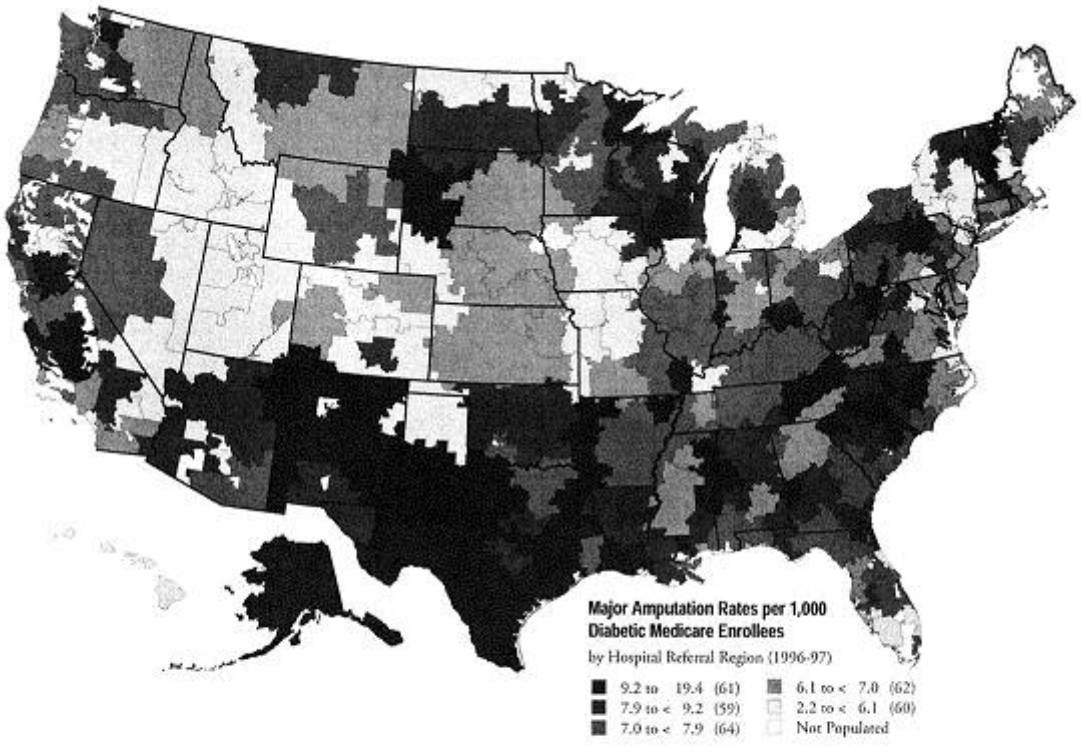
- Infant mortality/1000 live births (presumed to be to a large degree dependent on the quality of healthcare services)
- 5-year cancer survival (all cancers except skin).
- MRSA infections; EARSS statistics - for patients, who get a Hospital Acquired Infection; what % of these cases is infected by bacteria which are resistant to conventional treatment with antibiotics? This is probably the medical quality indicator, which has the most systematic follow-up and reporting in public form in European healthcare. Unfortunately, Switzerland does not report to EARSS.
- Potential years of life lost (PYLL).

10.2 Medical outcomes indicator not included in the EHCI

For QA on the total diabetes care, the OECD work mentioned in section 10.3 has suggested "% of diabetics with elevated HbA1c levels". This project would have dearly liked to include this parameter, but as the data are not yet good enough for comparison between countries.

Diabetes complication data are readily available for the USA, as is shown in the following graph. After intensive research and interviews to find similar European

statistics, several experienced medical researchers in different European countries confirmed that reliable statistics for Europe in fact do not exist in readily available form.



Wrobel *et al.*, American Journal of Public Health 24(5), 860

We sincerely want to wish the national healthcare authorities, the EU DG5, the WHO, the OECD and the medical specialist associations the best of success in their ongoing efforts to provide good quality statistics on the performance of healthcare systems. The better data coverage, the more optimistic you can be regarding the potential access by consumer to important information, eventually building knowledge to manoeuvre the healthcare systems optimizing the outcomes for the individual.

10.3 The OECD Healthcare Quality Indicators Project

The Healthcare Quality Indicators Project released their Initial Indicators Report (Edward Kelley and Jeremy Hurst) in March 2006. This project was guided by an expert group made up of representatives from OECD countries participating in the project. Presently, this group includes representatives from 23 countries.

The indicators recommended by this project for retention in an initial HCQI indicator set are listed below.

- Breast Cancer Survival
- Mammography Screening
- Cervical Cancer Survival
- Cervical Cancer Screening
- Colorectal Cancer Survival
- Incidence of Vaccine Preventable Diseases
- Coverage for basic vaccination
- Asthma mortality rate
- AMI 30-day case fatality rate
- Stroke 30-day case fatality rate
- Waiting time for femur fracture surgery
- Influenza vaccination for adults over 65Smoking rates

Data on HbA1c levels for diabetics were included in the March 2006 report, but were presented to illustrate comparability issues and are not currently appropriate for use in cross-country comparisons. This indicator has been considered for inclusion in the EHCI. In the EHCI 2006, it was included outside of the total scoring for the above reason.

As is described in section 9.2.2, in 2007 there are more quality indicators, which have had to be omitted for similar reasons. For clarity, they have all been left out of the score sheet.

The HCP enthusiastically welcomes this OECD project, and we sincerely wish it great success.

11. How to interpret the Index results?

The first and most important consideration on how to treat the results is: “With great care and restrictions for drastic conclusions!”

The EHCI 2007 is an attempt at measuring and ranking the performance of healthcare systems from a consumer viewpoint. The results definitely contain information quality problems. There is a shortage of pan-European; uniform set procedures for data gathering.

But again, we find it far better to present our outcomes to a 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 you had better keep it in the closet. Again we want to stress that the Index displays consumer information, not medically or individually sensitive data.

11.1 Compatibility with similar study

As one measure of the connection between EHCI results and reality, we would like to introduce a comparison between the EHCI ranking, and that found in the "Inequality in responsiveness" ranking provided by the European Observatory[1]. Based on population surveys, that ranking is:

1. Germany
2. Netherlands
3. France
4. Belgium
5. Finland
6. United Kingdom
7. Spain
8. Ireland
9. Luxembourg
10. Sweden
11. Italy
12. Portugal
13. Greece

The correlation between that study and the EHCI 2005 – 2007 is fairly good. The main reason for Belgium scoring worse and Sweden scoring better in the EHCI is the inclusion of outcomes quality indicators.

While by no means claiming that the EHCI 2007 results are dissertation quality, the findings should not be dismissed as random findings. On the contrary, the Swedish experience reflects that consumer ranking by similar indicators is looked upon as an important tool to display healthcare service quality. We hope that the Euro Health Consumer Index results can serve as inspiration for where European healthcare systems can be improved.

12. References

12.1 Main sources

The main sources of input for the various indicators are given in Table 5.4 above. For all indicators, this information has been supplemented by interviews and discussions with healthcare officials in both the public and private sectors.

[1] *Social Health Insurance Systems in Western Europe*, European Observatory on Health Systems and Policies (2004), page 97.

12.2 Useful links

Web search exercises have yielded useful complementary information from, among others, these websites:

http://www.aesgp.be/

http://www.wrongdiagnosis.com/a/amputation/stats-country_printer.htm

http://www.easd.org/

http://www.diabetes-journal-online.de/index.php?id=1

http://www.drfoster.co.uk/

http://www.rivm.nl/earss/

http://www.eudental.org/index.php?ID=2746

http://europa.eu/abc/governments/index_en.htm

http://europa.eu/pol/health/index_en.htm

http://ec.europa.eu/public_opinion/index_en.htm

http://europa.eu.int/youreurope/index_sv.html

http://www.eurocare.it/

http://www.ehnheart.org/content/default.asp

http://www.euro.who.int/observatory

http://www.escardio.org/

http://epp.eurostat.cec.eu.int/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL

http://ec.europa.eu/health-eu/index_en.htm

http://www.who.dk/eprise/main/WHO/AboutWHO/About/MH#LVA (Health Ministries of Europe addresses)

http://www.hospitalcompare.hhs.gov/

http://www.hope.be/

http://www.activemag.co.uk/hhe/error.asp?m=2&productcode=&ptid=3&pid=2&pgid=34&spid= (Hospital Healthcare Europe)

http://www.idf.org/home/

http://www.eatlas.idf.org/

http://www.hospitalmanagement.net/

http://www.lsic.lt/html/en/lhic.htm (Lithuanian Health Info Centre)

http://www.lse.ac.uk/collections/LSEHealthAndSocialCare/

http://www.medscape.com/businessmedicine

http://www.oecdbookshop.org/oecd/display.asp?TAG=XK4VX8XX598X398888IX8V&CID=&LANG=EN&SF1=DI&ST1=5LH0L0PQZ5WK#OtherLanguages (OECD Health Data 2005)

http://www.oecd.org/department/0,2688,en_2649_33929_1_1_1_1_1,00.html (OECD Health Policy & Data Department)

http://www.medscape.com/medline/abstract/15176130 (Patient Ombudsmen in Europe)

http://aitel.hist.no/~walterk/wkeim/patients.htm (Patients' Rights Laws in Europe)

http://www.patient-view.com/hscnetwork.htm

http://www.pickereurope.org/

http://www.vlada.si/index.php?gr1=min&gr2=minMzd&gr3=&gr4=&id=&lng=eng (Slovenia Health Ministry)

http://www.lmi.no/tf/2004/Engelsk/Chapter%206/6.20.htm (Tall og fakta)

http://www.100tophospitals.com/

http://www.worldcongress.com/presentations/?confCOde=NW615

http://www.who.int/healthinfo/statistics/mortestimatesofdeathbycause/en/index.html

http://www.who.int/topics/en/

http://www.who.int/healthinfo/statistics/mortdata/en/

http://www.euro.who.int/hfadb (WHO "Health for All" database)

http://www.who.dk/healthinfo/FocalPoints (addresses to Health Statistics contacts in Europe)

http://www.who.int/genomics/public/patientrights/en/

http://www.waml.ws/home.asp (World Association of Medical Law)

http://www.wrongdiagnosis.com/risk/geography.htm

13. FAQ:s

Why is the EHCI produced, and for whom?

The HCP provides the EHCI – as the title suggests – to empower consumers of healthcare services. HCP believes that increasing transparency in healthcare systems can only benefit consumers; insight into differing levels of performance will help healthcare delivery to improve all over.

The main audiences are those involved in healthcare policy formation: civil servants and clinicians and, of course, journalists. However, the HCP also continually strives to reach the consumer directly via media coverage – hence the press launch!

Improved insight into to the standards of our European neighbours will support patient mobility within the EU.

It is called a Consumer Index –can consumers understand this information easily?

Rankings of consumer services – be it housing, mobile phones or cars – are increasingly becoming important news. Healthcare consumers have a clear interest in learning more to enable them to make the best possible choice.

Although HCP communicates a great deal of relatively complex information, HCP does so in a condensed way, and in a format that illustrates clearly the good and the bad. In addition, the HCP is working to ensure our information is as consumer-friendly as possible. For professional services, which are often complex to explain, there is always the challenge of balancing between ease of understanding and being accused of 'dumbing down'.

This is now the 3rd year of the Index. What concrete difference have the Index findings made to date?

The index has made concrete improvements to healthcare investment in a number of countries, For instance, following on our 2006 Index the Danish government added more money to improve Danish healthcare. Last year in Ireland, the poor ranking caused a media outcry and intense political debate, pressuring for reform. In Sweden significant steps towards public ranking of healthcare have been taken following on our action.

One of the biggest differences the Index has made is to improve the transparency of information required to make such comparisons. Ireland, for instance suffered in the 2006 Index by furnishing out-of-date and incomplete information. As a result, they – and many other countries – have been much more forthcoming in supplying this information. This in turn improves the reliability of the Index.

The European Commission declares that transparency and competition are essential elements to make European healthcare more efficient. The 2006 Index has been downloaded almost 140 000 times since the launch! People have also rapidly accepted they concept that comparisons in healthcare performance increases transparency and supports consumer choice – two key ingredients to improve access and outcomes.

What kind of impact can be expected this year?

The HCP now expects governments to look into the findings, draw conclusions and take appropriate action to remedy the problems in their healthcare systems. Following on from our analysis, HCP has a set of recommendations addressing those areas that the Index has identified as severe problems.

What kind of action should governments take in those countries with low scores?

The whole set of recommendations can be found on the website www.healthpowerhouse.com.

It is not a simple as making blanket recommendations for low-scoring countries; therefore the HCP makes recommendations for each country, as each has its own specific

challenges which they need to face; some of these are failings which are common to many healthcare systems (lack of information, access to new medicines). The logic behind the granular nature of the index is to make it easy to see where the strengths and weaknesses are.

Can all countries really afford to follow the recommendations?

Once again, it differs from country to country. Some of the actions proposed do not cost much, such as introducing patients' rights-based legislation and transparent information systems. Other steps are more demanding, such as improving quality of outcomes or attacking hospital acquired 'killer bug' infections. Providing poor access to care, i.e. running long waiting lists, hardly saves money – it just postpones the costs and ignores the fact that waiting has a price for the patient (cost for suffering, treatments and medicines while waiting, sick-leave etc.).

How can the consumer use the Index?

The consumer can use the Index to learn about the strong and weak aspects of their national healthcare system. This can provide a foundation for making informed choices; for example if one needs to go abroad to find treatment. At the same time it also assists in building action to demand better access, improved quality of care or increased levels of information.

What will be the next step?

In a few years the HCP hopes to be providing distinct consumer services, such as guidebooks and report systems , which will provide hands-on support to care consumers. HCP is also working on pan-European disease-specific indexes, such as heart disease and diabetes.

Is it really possible to measure and compare healthcare in this way?

The HCP believes so, yes. You can measure and compare in many ways; the HCP feels the advantage of this way is that it:

Focuses on measures which impact the ability of the consumers to use their healthcare services,

Focuses on the difference between countries, to help consumers understand where they could and should reasonably expect more from their providers.

Do WHO or the EU not already deliver this kind of data?

HCP data is complementary to theirs. The WHO and the EU provide statistical information, which the HCP also uses, but HCP wants qualitative data also. Their focus is on overall public health, the focus of the EHCI is on providing consumer information. The comparative analyses provided by the Index are not delivered by other institutions.

How reliable are EHCI data?

As reliable as the HCP can possibly make them. HCP brings data together from public statistics and our own investigations and research. The access to public data in many fields is not only slow but also appallingly poor around Europe. This means that for one country the latest data may be quite recent, for another one several years old. The HCP has a system to assess and validate all data, but of course there might be uncertain data. National Ministries of Health or state agencies are also been given the opportunity to correct/update/validate the results.

How are care consumers involved in the Index development process?

The HCP would love to have national consumer organisations represented in our expert panels. Sadly, these groups seldom engage in healthcare matters. It means that HCP consults individual care consumers and patient organisations. The latter are included in a major study commissioned from Patient View. For next year, HCP hopes to involve consumers directly, through, for example, patient focus groups.

How are the indicators selected?

They are developed through dialogue with numerous stakeholders and the Index expert panels. Since the initial Index in 2005, the HCP has looked into five areas: patient rights and information, waiting times, medical outcomes, the generosity of the healthcare system and access to medicines.

How has the range of indicators changed?

Between 2006 and 2007 three indicators have been excluded and four new ones introduced (and two pairs of indicators have been merged into one) after discussion with expert panels and authorities. There are more indicators the HCP would like to include, but often there are difficulties to access relevant data (see Index report). Also, for practical reasons the Index matrix has limits.

Some of the data used for the indicators is relatively dated; other sources are very current. Why such a variation?

The Index always uses “latest available” data. Highlighting the fact that such data can be quite dated is one purpose of the entire Index exercise. This is consumer information, and the philosophy is that presenting data – even where inconsistent – is better than saying

nothing at all. This poor reporting of public data is mainly a challenge to European governments and institutions than part of an Index weakness. It highlights the situation that, for example, the most up-to-date information that Belgian nationals can access about their healthcare system is from the late 1990s!

Differing weights are given to indicators. Why?

There are numerous surveys that show that patients generally value medical results quality and accessibility to healthcare as the most important aspects on healthcare services. This is true also for countries, where waiting list problems are moderate.

What is measured – public health or health care performance?

Definitely the latter. Governments, EU and WHO deliver data on public health – undeniably important at the policy level. For consumers, HCP finds that assessment of what is delivered by national healthcare is more relevant.

Is this really research?

The Euro Health Consumer Index is compiled consumer information. It is not clinical or quantative research and is not to be looked upon as research in the true academic sense.

Who is behind the EHCI?

The Index was initiated by, and is produced by, the Health Consumer Powerhouse, who holds the copyright to the EHCI. The HCP is a private healthcare analyst and information provider, registered in Sweden, with offices in Brussels and Stockholm.

Who supports the EHCI?

The HCP accepts unrestricted research or educational grants from institutions and companies and also sell healthcare-related information in the competitive intelligence market. The HCP does not accept grants from any entities measured in the indexes.

Annex 1: Source document for the Patients' Rights Indicator **(in addition to feedback from national authorities).**

Patients' Rights Laws

Country	Name with Link	Language
Finland, 1992	**Lag om patientens ställning och rättigheter** (785/1992): http://www.mhbibl.aland.fi/patient/patientlag.html	Swedish
Netherlands, 1994	**Dutch Medical Treatment Act 1994**: http://home.planet.nl/~privacy1/wgbo.htm	English
Israel, 1996	**Patient´s Rights Act**: http://waml.haifa.ac.il/index/reference/legislation/israel/israel1.htm	English
Lithuania, 1996	**Law on the Rights of Patients and Damage Done to Patients:** http://www3.lrs.lt/c-bin/eng/preps2?Condition1=111935&Condition2=	English
Iceland, 1997	**Lög um réttindi sjúklinga**: http://www.althingi.is/lagas/123a/1997074.html	Swedish
Latvia, 1997	**Law of Medicine** (= The law on medical treatment): http://aitel.hist.no/~walterk/wkeim/files/Latvia_The_law_of_Medicine.htm	English
Hungary, 1997	**Rights and Obligations of Patients** (According to Act CLIV of 1997 on Public Health): http://www.eum.hu/index.php?akt_menu=4863. The Szószóló Foundation supports patients' rights.	Hungarian / English
Greece, 1997	**Law 2519/21-8-97**	
Denmark, 1998	**Lov om patienters retsstilling, LOV nr 482 af 01/07/1998**	
Norway, 1999	**Pasientrettighetsloven**: http://www.lovdata.no/all/hl-19990702-063.html. Other Norwegian Health laws.	Norwegian
Georgia, 2000	**The Law of Georgia on the Rights of patients**	
France, 2002	**LOI n° 2002-303 du 4 mars 2002 relative aux droits des malades et à la qualité du système de santé (1):** http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=mesx0100092l#	French
Belgium, 2002	**Act on Patients' Rights**: http://www.lachambre.be/	Dutch / French
Switzerland, 2003	**Patientenrechtverordnung 1991, Patientenrechtsgesetz ist in Vorbereitung**: http://www.zh.ch/gd/aktuell/news/presseberichte/news_21_12_00_1a.htm	German

Russia	**Fundamentals of The Russian Federation Legislation**: On protection of citizens' health.	
Estonia, 2002	**Draft of the Act on Patients' Rights PATSIENDISEADUS:** http://www.riigikogu.ee/	Estonian
Romania, 2003	**Legea nr 46/2003, legea drepturilor pacientului (Law of Patients' Rights)**: http://www.dreptonline.ro/legislatie/legea_drepturilor_pacientului.php	Romanian
Cyprus, 2005	**European Ethical-Legal Papers N° 6 Patient Rights in Greece**: http://www.eurogentest.org/web/info/public/unit4/ethical_legal_papers.xhtml#legal_5	English

Charters of the Rights of Patients

Country	Name with Link
France 1974 and 1995	Charte du Patient Hospitalisé: http://www.ch-erstein.fr/charte/chartepatient.html
UK, (1991), 1997	The Patient's Charter for England: http://www.pfc.org.uk/medical/pchrt-e1.htm
Czech Republic, 1992	
Spain, 1994	Charter of Rights and Duties of Patients
Ireland, 1995	Charter of Rights for Hospital Patients
South Africa, 1996	PATIENTS RIGHTS CHARTER: http://www.hst.org.za/doh/rights_chart.htm
Portugal, 1997	Patients' Rights Charter: Carta dos Direitos e Deveres dos Doentes http://www.dgsaude.pt
Honk Kong, 1999	Patients' Charter: http://www.ha.org.hk/charter/pceng.htm
Poland, 1999	Karta Praw Pacjenta: http://wojtas_goz.webpark.pl/karta.html Polish Patients Association: Letter to Commissioner for Human Rights.
Slovakia,	Charter on the Patients Rights in the Slovak Republic: http://www.eubios.info/EJ143/ej143e.htm

2001	
Austria, 2001	Vereinbarung zur Sicherstellung der Patientenrechte (Patientencharta): http://www.noel.gv.at/service/politik/landtag/LandtagsvorlagenXV/WeitereVorlagenXV/795/795V.doc
Germany, 2001	Experts support patients' rights law: Sachverständigenrat tritt für Patientenrechte-Gesetz ein. The German health system is most expensive in EU, but only under average (World Health Report 2000: Rank 25) in quality of services. Petition der Bundesarbeitsgemeinschaft der Notgemeinschaften Medizingeschädigter: http://www.patientenunterstuetzung.de/Grundsaetzliches/Petition.pdf
Cyprus, 2001	Cyprus Patients Rights' Charter: http://www.activecitizenship.net/documenti/Cyprus Charter Patients' Rights.doc
Germany, 2002	Patientenrechtscharta: http://www.bag-selbsthilfe.de/archiv/jahr-2002/patientencharta/patientenrechte-in-deutschland/
Europe, 2002	Active Citizenship Network: European Charter of Patients Rights http://www.activecitizenship.net/projects/europ_chart.htm
Italy	Active Citizenship Network: Italian Charter of Patients Rights http://www.activecitizenship.net/health/italian_charter.pdf

Six years after the WHO *Declaration on the Promotion of Patients' Rights in Europe* (Amsterdam, 1994), more than eight countries (Denmark, Finland, Georgia, Greece, Iceland, Israel, Lithuania, the Netherlands and Norway) have enacted laws on the rights of patients; and four countries (France, Ireland, Portugal and the United Kingdom) have used Patients' Charters as a tool to promote patients' rights. (German version). *European Journal of Health Law* 7: 1-3, 2000: Lars Fallberg: Patients' Rights in Europe: Where do we stand and where do we go?