

3. Index Scope

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

3.1 Indicator areas (sub-disciplines)

The 2007 index was, just as in 2006, built up as a "pentathlon," with indicators grouped into five sub-disciplines. After surrendering to the "lack of statistics syndrome" and after scrutiny by our expert panels, 27 indicators made it into the EHCI 2007.

The indicator areas for the Index thus became:

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

3.2 Scoring

The performances of the national healthcare systems were graded on a three-grade scale for each indicator: Green = good (●), Amber = so-so (●) and Red = not so good (○). A Green score earns 3 points, an Amber score earns 2 points and a Red score (or a not available) earns 1 point.

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

For the EHCI 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 was calculated as a percentage of the maximum $3 \times 5 = 15$).

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.

3.2.1 Weight coefficients

The possibility of introducing weight coefficients was discussed 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, which were 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.

As with the EHCI 2006, explicit weight coefficients for the five sub-disciplines were used. The accessibility and Outcomes sub-disciplines were decided upon as the main candidates for higher weight coefficients based mainly on discussions with expert panels and the experience detailed in a number of patient survey studies. Here, as for the whole of the index, we welcome input on how to improve the index methodology.

Following the EHCI 2006, the scores for the five sub-disciplines in the Euro-Canada index were given the following weights:

Sub-discipline	Relative weight
Patient rights and information	1.5
Waiting times 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 was 250.

These weight coefficients have remained unchanged for the ECHCI. To improve the ease of understanding the index, in 2007, we decided that the perfect healthcare system would get a score of 1,000. Consequently, in the 2007 index, the sum of percentages was therefore multiplied by 133 (.33). *That change did not affect the ranking order of the participating countries.*

It should be noted that since not many countries excel in one sub-discipline and do very poorly in others, the final ranking of countries presented becomes remarkably stable if the weight coefficients are varied within reasonable limits.

The project experimented with other scores for Green, Amber and Red, such as 2, 1 and 0 (which would really punish low performers) and 4, 2 and 1 (which would reward real excellence). The final ranking was remarkably stable during these experiments.

3.2.2 Regional differences

The Health Consumer Powerhouse is well aware that many European states and Canada have decentralized healthcare systems. This is the case as well in the U.K. It is often argued that Scotland and Wales have separate health services and should be ranked separately, while Canada has ten provincial systems that overlap in many ways, but they are not identical. From a comparison standpoint, systems devolution might raise new challenges, but publicly funded and

governed systems have many more features in common than those that are isolated or hard to compare.

Grading healthcare systems 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 a desire to include the United States as one country in a health consumer index. As equity in healthcare has traditionally been high on the agenda in both Canada and Europe, it was judged that regional differences are small enough to make statements about the national levels of healthcare services relevant and meaningful.

Many Canadian indicators are readily available at the national level. For those indicators present only at the provincial level, a national value was obtained by weighting each province's performance according to its share of the total population. It should be noted that even with the large spread in values from province to province for some indicators, the overall score was easy to evaluate. For example, cataract surgery, where even the provinces that carried out relatively few scored high overall, or pharmaceutical coverage, where even the more generous provincial plans required a level of individual spending that qualified for the lowest score in the index.

The forthcoming Canadian province-to-province index will take a closer look at these differences and their impact on healthcare performance. It became clear while evaluating Canada for this Index that there is much room for the provinces to learn from each other's best practices. Extending the Index framework to each province will highlight these potential areas for easy improvements, as well as indicate where the provincial systems consistently fail to meet the needs of healthcare consumers.

3.3 Indicator definitions and data sources for the ECHCI 2008

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 bylaws	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 organizations 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, a survey commissioned by HCP 2006. Personal interviews. Survey of major patient advocacy groups within Canada.
	No-fault malpractice insurance	Can patients get compensation without the assistance of the judicial system to prove that medical staff made mistakes?	Yes	Fair. Less than 25% invalidity covered by the state.	No	Swedish National Patient Insurance Co. (All Nordic countries have no-fault insurance) www.hse.ie www.higa.ie Health Care Renewal In Canada: Clearing the Road to Quality, Health Council of Canada, 2006.
	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, a survey commissioned by HCP 2006. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, PatientView 2005. Personal interviews. Review of legislation and health ministry mandates on a province by province basis.
	Access to own medical record	Can patients read their medical records?	Yes	Yes, but restricted or with an intermediary	No	Patients' Perspectives of Healthcare Systems in Europe, a survey commissioned by HCP 2006. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, PatientView 2005. Personal interviews. www.dohc.ie McInerney v. MacDonald, 1992 (Canadian Supreme Court). Infoway Canada www.infoway-inforoute.ca

	Readily accessible register of legitimate doctors	Can the public readily access the info: "Is doctor X a <i>bona fide</i> specialist?"	Yes	Yes, but awkward, costly or not frequently updated.	No	Patients' Perspectives of Healthcare Waiting times in Europe, a 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/afgoerelsermedn_avn.html ; www.medicalcouncil.ie ; provincial Colleges of Physicians and Surgeons in Canada
	Electronic Patient Record (EPR) penetration in primary care	What percentage of GPs uses EPRs?	Greater than 80%	50% - 80%	Less than 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. Infoway Canada Annual Report, 2006-7.
	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 warrants a Yellow.	Yes	Not really but attempts are underway	No	http://www.drfooster.co.uk/home.aspx http://www.sundhedskvalitet.dk/ http://www.sykehusvalg.no/sidemaler/VisStatiskInformasjon_2109.aspx http://www.higa.ie/ http://212.80.128.9/gestion/ges161000com.html
	Web or 24/7 telephone healthcare info	Information that can help a patient make decisions of the sort, "After consulting the service, I will take a paracetamol and wait and see." or "I will hurry to the emergency department of the nearest hospital."	Yes	Yes but not generally available	No	Patients' Perspectives of Healthcare Systems in Europe, a survey commissioned by HCP 2006. Personal interviews http://www.nhsdirect.nhs.uk/ www.hse.ie www.ntpf.ie Survey of information provided by provincial health ministries.
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, a survey commissioned by HCP 2007. Health and Social Campaigners' News International: Users' perspectives on healthcare systems globally, PatientView 2005. Personal interviews http://www.nhs.uk/England/Doctors/Default.aspx http://www.msc.es/estadEstudios/estadisticas/docs/BS_2006_total_mar.pdf Statistics Canada, Canadian Community Health Survey, 2005 (CANSIM table 105-3024), and Statistics Canada document 82-575-X.
	Direct access to specialist care	Without referral from family doctor (GP)	Yes	Theoretically not, but quite often in reality	No	Patients' Perspectives of Healthcare Waiting times in Europe, a 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% fewer than 90 days	50% - 90% Fewer than 90 days	More than 50% take more than 90 days	OECD data: Siciliani & Hurst, 2003 / 2004. Patients' Perspectives of Healthcare Waiting times in Europe, a survey commissioned by HCP 2007. www.frittisyekehusvalg.no www.sst.dk http://sas.skl.se Personal interviews with healthcare officials www.ntpf.ie CIHI Provincial Wait Times Report 2006.
	Cancer radiation/chemotherapy	Time to get radiation/chemotherapy after treatment decision	90% fewer than 21 days	50% - 90% fewer than 21 days	More than 50% take more than 21 days	OECD data: Siciliani & Hurst, 2003 / 2004. Patients' Perspectives of Healthcare Waiting times in Europe, a survey commissioned by HCP 2007. www.frittisyekehusvalg.no www.sst.dk ; http://sas.skl.se http://www.sst.dk/Nyheder/Seneste_nyheder/Ventetider_straalebehl_uge_23_24.aspx?lang=da Personal interviews with healthcare officials. Access to Health Care Services Report 2005, Health Canada.
	MRI (magnetic resonance imaging) scan examination		Typically fewer than 7 days	Typically fewer than 21 days	Typically more than 21 days	Patients' Perspectives of Healthcare Waiting times in Europe, a survey commissioned by HCP 2007. www.frittisyekehusvalg.no www.sst.dk http://www.sst.dk/Nyheder/Seneste_nyheder/Ventetider_straalebehl_uge_23_24.aspx?lang=da http://sas.skl.se Personal interviews with healthcare officials. Health Services Access Survey 2005, Statistics Canada.
Outcomes	Heart infarct mortality less than 28 days after getting to hospital		Less than 18%	Less than 25%	Greater than 25%	MONICA data. Personal interviews with healthcare officials. European Society of Cardiology has data, but will not reveal country IDs. For some states, extreme mortality values. http://www.folketinget.dk/samling/20051/almdele/SUU/spm/503/svar/endelig/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 "Healthy Canadians" Comparable Indicators Report 2006, Statistics Canada.
	Infant deaths per 1,000 live births		Fewer than 4	Fewer than 6	More than 6	WHO Europe Health for All mortality database. Latest available statistics http://www.who.int/whosis/whostat2007_1mortality.pdf www.cso.ie OECD Health Data 2007
	Cancer 5-year survival rates	All cancers except skin	Greater than or equal to 60%	50% – 60%	Less than or equal to 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 "Healthy Canadians" Comparable Indicators Report 2006, Statistics Canada.
	Avoidable deaths – Potential years of life lost PYLL/100,000		Less than 3,500	3,500 – 4,500	Greater than 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 Statistics Canada.

	MRSA (Methicillin-resistant Staphylococcus aureus) infections		Less than 5%	Less than 20%	Greater than 20%	EARSS, latest available data 2005/2006 CMAJ, July 10, 2001. 165(1):21-6.
Generosity of public healthcare systems	Cataract operation rates per 100,000 citizens (age-adjusted)		Greater than 700	400 - 700	Fewer than 400	OECD Health Data 2006 www.actapress.com/PDFViewer.aspx?paperId=19351 (Germany)
	Infant 4-disease vaccination %	Diphtheria, tetanus, pertussis and poliomyelitis, arithmetic mean	Greater than or equal to 97%	92% - 97%	Less than 92%	EU Health Portal, 2004 data (some countries 2003) http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4078380 www.hpsc.ie Public Health Agency of Canada, CCDR 2006, Statistics Canada, Statistical Report on the Health of Canadians, 1999.
	Kidney transplants per million people	Living and deceased donors	Greater than or equal to 40	30 – 40	Fewer than 30	Council of Europe Newsletter 11/2006. Canadian Organ Replacement Register, CIHI 2007.
	Is dental care part of the offering from public healthcare systems?	Public spending on dental care as a percentage of total public healthcare spending	Greater than 9% of healthcare spending	5% - 9% of total healthcare spending	Less than 5% of total healthcare spending	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 OECD Health Data 2005
Pharmaceuticals	Prescription subsidy percentage		Greater than 90%	60% - 90%	Less than 60%	WHO Health for All database 2005 http://www.laegemiddelstyrelsen.dk/statistik/overvaagning/udgifter/2007-1/2007-1.asp OECD Health Data 2005
	<i>Layman-adapted pharmacopoeia</i>	Can the public easily access a pharmacopoeia for persons who are not experts in healthcare? (World Wide Web or widely available)	Yes	Yes, but not easily accessible or frequently consulted.	No	Patients' Perspectives of Healthcare Systems in Europe, a 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://medicamento.romedic.ro/ www.vademecum.es Survey of provincial health ministries in Canada.
	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. "Market uptake of new oncology drugs," Annals of Oncology vol. 18 Supplement 3, June 2007.
	Access to new drugs	Period between registration and inclusion of drugs in subsidy system	Less than 150 days	Less than 300 days	Greater than 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. Pharmaceutical Pricing and Reimbursement Policies in Canada, Valérie Paris and Elizabeth Docteur, OECD 2006.

3.3.1 Additional data gathering - survey

In addition to public sources, as was also the case for the 2006 index, an e-mail survey for organizations for patients was commissioned from PatientView for all the European countries. (Woodhouse Place, Upper Woodhouse, Knighton, Powys, LD7 1NG, Wales Tel: 0044-(0)1547-520-965 E-mail: info@patient-view.com)

In 2007, the European survey included the five Waiting times and the Register of legitimate doctors indicators. Four hundred and eighteen organizations responded to the survey, and the lowest number of responses from any single country was four.

3.3.2 Additional data gathering - feedback from national ministries/agencies

Over the years, HCP has established relations with several ministries of health in order to involve them in data gathering and evaluation.

On June 20, 2007, preliminary score sheets were sent to ministries of health or state agencies in all 29 European states, giving them the opportunity to supply more recent data and/or higher quality data than what was available in the public domain. Canadian federal and provincial health agencies will be invited to

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		√

participate in subsequent editions of the ECHCI.

This procedure was prepared for during the spring by extensive mail, e-mail, telephone contact and visits to ministries and agencies. Feedback was received from official national sources as illustrated in the adjoining table.

Score sheets sent to national agencies contained only the scores for that 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).

The majority of the data concerning Canada was checked against another source. Where this was not possible, experts in the public and private sectors were consulted to verify that values corresponded to their observations of the reality of

healthcare in Canada. In future iterations of the Euro-Canada Index, authorities at the federal and provincial levels will be invited to correct their scores, subject to the same scrutiny. The creation of the intra-Canada index, which will compare

provincial healthcare systems, will involve contact with ministries of health in each province as well as with regional representatives of national groups, such as associations of healthcare professionals and patient advocacy groups.

3.4 Threshold value settings

It was not our ambition to establish a global, scientifically based principle for threshold values to score Green, Amber or Red on the different indicators. Threshold levels were set after studying the actual parameter value spreads in order to avoid having indicators showing all Green or completely Red.

The HCP believes that the involvement of patients' organizations in healthcare decision-making is a good idea. This indicator was included in 2006, with no country scoring Green. In this Index, a Green score is attained only by Estonia and Ireland.

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 scored Green.

3.5 Symmetry of in-data

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

The project consequently used the latest available statistics. This means that the Index compares cancer survival data from 1997 from one country with 2005 data from other countries. We tested official policy decisions in a patient survey and by interviews with healthcare officials. In cases where real-life practice did not coincide with official policy decisions, scores were modified accordingly.