

# Comparing the Finnish, Danish and British Health Systems

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## The Comparison

When discussing health inequalities in the UK it is thought only 15-20 per cent of differences in observed health are due to healthcare interventions.<sup>1</sup> The remainder is thought to be influenced by socioeconomic<sup>2</sup> and environmental factors.<sup>3</sup> This illustrates the small contribution healthcare makes to a country's overall population health. For this reason, the indicators chosen for the comparison of the three countries have been selected to indicate the quality of healthcare given to those who are already ill rather than giving the general health status of the population (for example using recorded mortality after surgery rather than mortality simply from a certain disease).

Below are listed a collection of common healthcare indicators along with which country performs the worst, middle and best.

Indicator	UK	Denmark	Finland
Maternal mortality ratio (per 100,000 births). <sup>4</sup>	WORST(-1)	BEST(+1)	MIDDLE (0)
Mortality rate, under 5's (per 1,000 live births) <sup>5</sup>	WORST(-1)	MIDDLE (0)	BEST(+1)
Mortality amenable to healthcare (per 100,000) <sup>6</sup>	MIDDLE (0)	WORST(-1)	BEST(+1)
Mortality after surgery <sup>7</sup>	WORST(-1)	MIDDLE (0)	BEST(+1)
Hospital acquired C-difficile 30 day mortality <sup>8</sup>	WORST(-1)	MIDDLE (0)	BEST(+1)
Average* proportional 5 year cancer survival <sup>9,10</sup>	WORST (-1)	MIDDLE (0)	BEST (+1)
Inequality indices for specialist doctor visit probability between high and low income groups. <sup>11***</sup>	BEST (+1)	MIDDLE (0)	WORST (-1)
Postoperative pulmonary embolism or deep vein thrombosis. (per 100,000)	WORST (-1)	BEST (+1)	MIDDLE (0)

discharges) <sup>12</sup>			
Foreign body left in during procedure (per 100,000 discharges) <sup>13</sup>	WORST (-1)	BEST (+1)	MIDDLE (0)
Age-adjusted 30 day In-hospital case-fatality rate following Acute myocardial infarction (per 100 patients) <sup>14</sup>	WORST (-1)	BEST (+1)	MIDDLE (0)
Unplanned schizophrenia*** readmissions within 30 days to same hospital. <sup>15</sup>	BEST (+1)	WORST (-1)	MIDDLE (0)
Unplanned bipolar disorder*** re-admissions to the same hospital within 30 days. <sup>16</sup>	BEST (+1)	WORST (-1)	MIDDLE (0)
Percentage of participants 'fairly satisfied' or 'very satisfied' with their healthcare. <sup>17</sup>	MIDDLE (0)	BEST (+1)	WORST (-1)
Average length of stay for acute myocardial infarction (AMI) (days). <sup>18</sup>	MIDDLE (0)	BEST (+1)	WORST (-1)
Average length of stay for normal delivery (days). <sup>19</sup>	BEST (+1)	MIDDLE (0)	WORST (-1)
Unmet need for a medical examination, total for selected reasons**** for lowest income 5 <sup>th</sup> of population. <sup>20</sup>	BEST (+1)	MIDDLE (0)	WORST (-1)
Total Score	WORST (-3)	BEST(3)	Middle (0)
*Average cancer survival calculated from survival percentages for lung, breast and ovarian cancer: the only three survival rates obtainable for all three countries.**Positive value pro rich, negative value pro poor.***Does not include patients with a secondary diagnosis of mental health.			

Table 3. Comparison of healthcare markers for the UK, Denmark and Finland with points awarded for highest and lowest achievements in each category.

## Analysis

If we award +1 point for when a country performs the best in the category, 0 for being the middle performer and -1 point for performing the worst we find that the UK performs poorest, scoring a total of -3 for all indicators, Finland scores 0, while Denmark with +3 points performs the best. The majority of data is available only for the UK, not England as an individual country. For this reason, and the fact that England makes up the vast majority of the population of the British Isles this section has compared the UK as a whole to the other two countries.

The fact that both Denmark's and Finland's health systems appear to perform better than the UK's (even while Finland allocates comparatively less resources to healthcare) certainly supports the view that decentralisation is working well in those countries. Nevertheless, it is hard to directly compare these two Scandinavian countries' health systems with that of the UK due to their differences in population size. Denmark and Finland have 5.6 and 5.4 million inhabitants respectively, whereas the UK has a population of over 64.1 million.<sup>21</sup> In fact both Denmark and Finland have a population roughly equal to that of Scotland ( 5.3 million<sup>22</sup>, England alone has a population of 53 million).<sup>23</sup> In fact, the size of the Greater Manchester district is more akin to the size of Denmark or Finland with its 2.7 million inhabitants.<sup>24</sup> Thus, although the above comparison certainly suggests good health service performance in these decentralised countries, it is hard to ascertain whether or not England's health system would similarly be more effective if it were more decentralised.

We must remember that all three health systems have different levels of government finance and thus this can only be regarded as a rough comparison rather than as a specific indication of what structure of health provision works best. As previously mentioned, the UK's health system also provides services for over 11.5 times more citizens (over 9.5 times more in England alone) than does Finland's. However the fact remains that despite having the lowest expenditure of the three countries (see Table 4.) Finland still manages to outperform the UK. This suggests that the Finnish system is indeed performing well, perhaps due to decentralisation, although this conclusion is impossible to deduce from the indicators used in comparison.

Table 4: Government expenditure on healthcare

Indicator	UK	Denmark	Finland
Government health expenditure as a percentage of total government expenditure	16.1	16.1	12.3
Government health expenditure per capita (PPP int.\$)	2,883.5	4,037	2673.3

The possibilities of differences in other factors influencing each countries' performance must not be ignored. For example, figures for avoidable diabetes admissions, although available for all three countries were not used in this comparison as it has been found that the frequency of recorded hospital admission rates vary according to the prevalence of diabetes in each country's overall population.<sup>25</sup> Possibly, this is because having higher levels of people suffering from a disease in one country makes it harder to treat every patient as effectively or as often.

### Health Consumer Powerhouse results

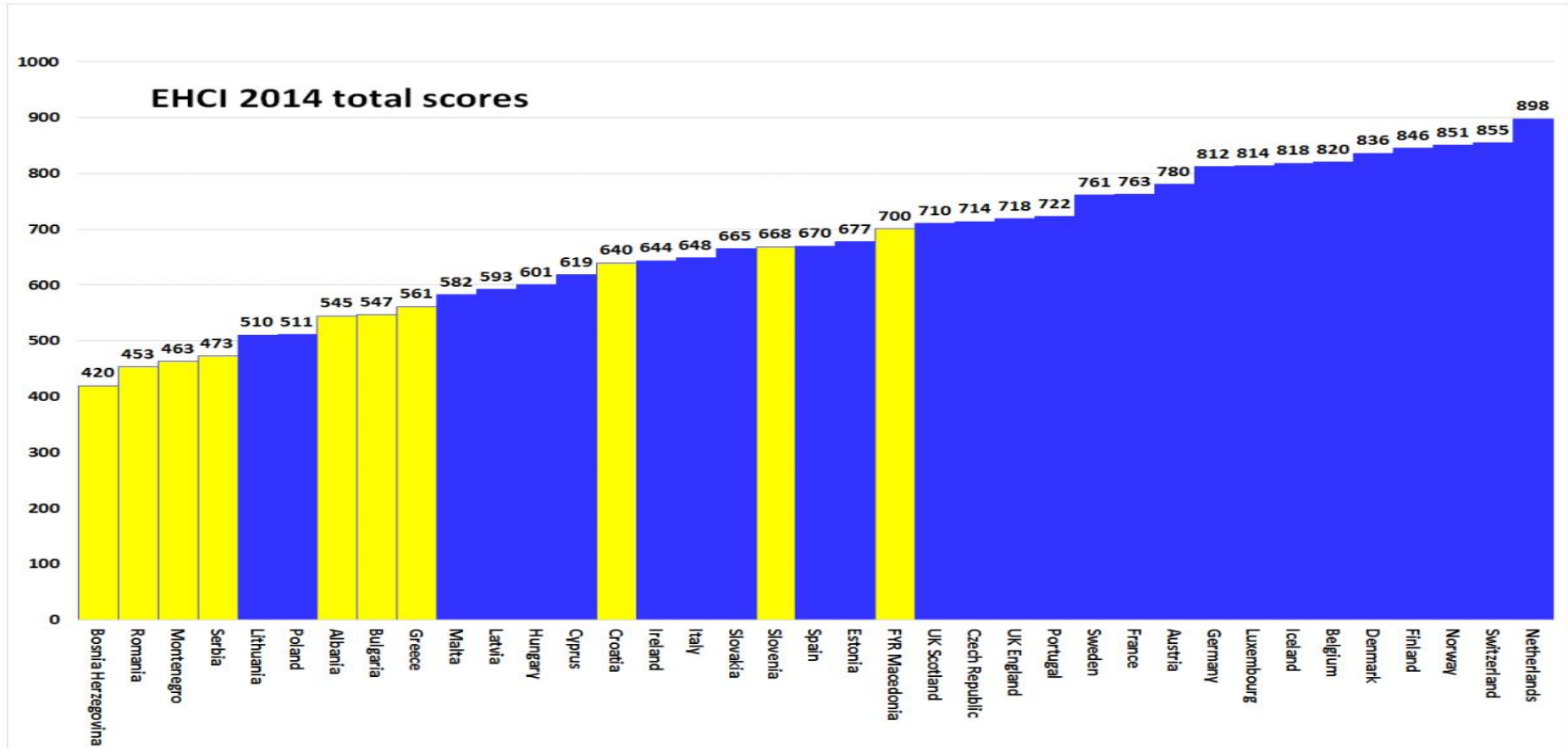
In their Euro Health Consumer Index, the Health Consumer Powerhouse report of 2014 ranked European counties according to their success in offering the best healthcare against cost (see figure 3).<sup>26</sup> Finland was placed fourth in their rankings, and was described as the 'leader in value-for-money healthcare.'<sup>27</sup> As England is currently making great efforts to achieve more cost-effective healthcare, Finland could certainly provide a suitable model for it to follow. However, there are complicating factors which need to be considered. Possibly as a result of the limited budget it receives, Finnish healthcare appears to be less consumer sensitive. For example, Finnish waiting times are long, and access to comfort care such as cataract surgery and dental procedures is limited, with user charges often being applied. Some extremely expensive treatments are also strictly rationed there.

Danish healthcare was catapulted into second place in the 2008 Euro Health Consumer Index largely due to its e-health programme initiative. However since then, other countries have equalled Danish performance. Nevertheless, Denmark still ranks fifth in the index and is one of only three countries scoring highly in the 'free choice of EU caregiver' category. Denmark is also commended for having freely available Internet data revealing which hospitals achieve the best results. A similar transparency of information has been advocated for introduction in England by many stakeholders and prominent public figures such as the journalist and campaigner, Dr Phil Hammond.<sup>28</sup>

The Index analyses England and Scotland separately. It praises Scotland for its excellent and freely available digital healthcare data, and acknowledges the fact that Scotland spends approximately ten per cent more on healthcare per capita than does England. However overall, the index ranks England 14<sup>th</sup> as compared to Scotland at 16<sup>th</sup>.

The fact that both Denmark and Finland score consistently higher in the index than does England or Scotland is interesting even though Scotland is of a similar population (though not a fully autonomous nation). As Denmark spends more than England on its healthcare it is perhaps not surprising that its healthcare outperforms that of England according to the index. However Finland's 'value for healthcare model' may be worth serious consideration as providing initiatives possible for England to follow and involving a similar level of per-capita funding.

Figure 3. Total scores from European Health Consumer Index (Balkan states in yellow)





## References

- <sup>1</sup> National Audit Office. (2010). Tackling inequalities in life expectancy in areas with the worst health and deprivation:  
<http://www.nao.org.uk/wpcontent/uploads/2010/07/1011186.pdf>
- <sup>2</sup> Marmot, M. Atkinson, T. Bell, J. Black, C. Broadfoot, P. Cumberlege, J. Diamond, I. Gilmore, I. Ham, C. Meacher, M. Mulgan, G. (2010). Fair Society, Healthy Lives: Strategic Review of Health Inequalities. <http://www.instituteofhealthequity.org/projects/fair-societyhealthy-lives-the-marmot-review>
- <sup>3</sup> Jones, A., Bentham, G., Foster, C., Hillsdon, M., & Panter, J. (2007). Tackling Obesities: Future Choices – Obesogenic Environments – Evidence Review Government Office for Science. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/295681/07-735-obesogenic-environments-review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/295681/07-735-obesogenic-environments-review.pdf)
- <sup>4</sup> Data: Health. (2015) The World Bank. (see earlier).
- <sup>5</sup> Data: Health. (2015) The World Bank. (see earlier).
- <sup>6</sup> Gay, J. G et al (2011). Mortality Amenable to Health Care in 31 OECD Countries: Estimates and Methodological Issues. OECD Health Working Papers. No. 55 OECD Publishing. Retrieved from <http://www.oecd-ilibrary.org/docserver/download/5kgj35f9f8s2.pdf?expires=1426008133&id=id&accname=guest&checksum=105FA68034FAB78842573D18A7F916FC>
- <sup>7</sup> Pearse, R. Moreno, R. Baver, P. Pelosi, P. Metnitz, P. Spies, C. Vallet, B. Vincent, J-L. Hoefft, A. Rhodes, A. (2012). Mortality after surgery in Europe: a 7 day cohort study. *The Lancet*. 380: pp 1059-65. Retrieved from [http://ac.els-cdn.com/S0140673612611489/1-s2.0-S0140673612611489-main.pdf?\\_tid=99f55732-c801-11e4-bbb9-00000aacb35e&acdnat=1426087173\\_89a931bc6760cba3bb1d1451c7824ea6](http://ac.els-cdn.com/S0140673612611489/1-s2.0-S0140673612611489-main.pdf?_tid=99f55732-c801-11e4-bbb9-00000aacb35e&acdnat=1426087173_89a931bc6760cba3bb1d1451c7824ea6)
- <sup>8</sup> Wiegand, P. Nathwani, D. Wilcox, M. Stephens, J. Shelbya, A. Haider, S. (2012). Clinical and economic burden of *Clostridium difficile* infection in Europe: a systematic review of healthcare-facility-acquired infection. *Journal of Hospital Infection*. 81 pp1-14. Retrieved from [http://ac.els-cdn.com/S0195670112000631/1-s2.0-S0195670112000631-main.pdf?\\_tid=7ad9c17e-c7fe-11e4-a3d1-00000aacb360&acdnat=1426085832\\_f9af3d74e81f619b4e4313b65e795c7c](http://ac.els-cdn.com/S0195670112000631/1-s2.0-S0195670112000631-main.pdf?_tid=7ad9c17e-c7fe-11e4-a3d1-00000aacb360&acdnat=1426085832_f9af3d74e81f619b4e4313b65e795c7c)
- <sup>9</sup> Coleman, P.M. et al (2011). Cancer survival in Australia, Canada, Denmark, Norway, Sweden and the UK, 1995-2007 (the International Cancer Benchmarking Partnership): an analysis of population-based cancer registry data. *The Lancet*.377(9760). Retrieved from [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)62231-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)62231-3/fulltext)
- <sup>10</sup> Cancer in Finland 2006 and 2007: Cancer Statistics of the National Institute for Health and Welfare. (2009). Finnish Cancer Registry. (see earlier).
- <sup>11</sup> Van Doorslaer, E. Masseria, C. Koolman, X. (2006). Inequalities in access to medical care by income in developed countries. *CMAJ*. 174(2) pp177-183. Retrieved <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1329455/pdf/20060117s00017p177.pdf>

- <sup>12</sup> Health at a Glance 2011: OECD Indicators. (2011). OECD. Retrieved from [http://www.oecd-ilibrary.org/sites/health\\_glance-2011-en/05/03/02/index.html?itemId=/content/chapter/health\\_glance-2011-45-en](http://www.oecd-ilibrary.org/sites/health_glance-2011-en/05/03/02/index.html?itemId=/content/chapter/health_glance-2011-45-en)
- <sup>13</sup> Health at a Glance 2011: OECD Indicators. (2011). OECD. (see earlier).
- <sup>14</sup> Health at a Glance 2011. (2011). OECD. Retrieved from <http://www.oecd-ilibrary.org/docserver/download/8111101ec042.pdf?expires=1428597003&id=id&accname=guest&checksum=C32F9CC67DBCD87895E6842E596F8FA8>
- <sup>15</sup> Unplanned hospital re-admissions for mental disorders. (2011). Health at a Glance OECD Indicators. OECD. Retrieved from <http://www.oecd-ilibrary.org/docserver/download/8111101ec046.pdf?expires=1428666411&id=id&accname=guest&checksum=26A8F333235CA4C0F8D6B1700462EC95>
- <sup>16</sup> Unplanned hospital re-admissions for mental disorders. (2011). Health at a Glance OECD Indicators. OECD. (see earlier).
- <sup>17</sup> Papanicolas, I. & Smith, P. (2013). Health System Performance Comparison: Agenda for policy, information and research. European Observatory on Health Systems and Policies Series. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/244836/Health-System-Performance-Comparison.pdf](http://www.euro.who.int/__data/assets/pdf_file/0009/244836/Health-System-Performance-Comparison.pdf)
- <sup>18</sup> Average length of stay in hospitals. (2013). Health at a Glance 2013. OECD Indicators. Retrieved from <http://www.oecd-ilibrary.org/docserver/download/81113161ec036.pdf?expires=1429261102&id=id&accname=guest&checksum=3606060DA54AD6E36130AD7E8398D724>
- <sup>19</sup> Average length of stay in hospitals. (2013). Health at a Glance 2013. OECD Indicators. Retrieved from <http://www.oecd-ilibrary.org/docserver/download/81113161ec036.pdf?expires=1429261102&id=id&accname=guest&checksum=3606060DA54AD6E36130AD7E8398D724>
- <sup>20</sup> Health at a Glance. OECD Indicators (2011). OECD. Retrieved from <http://www.oecd.org/els/health-systems/49105858.pdf>
- <sup>21</sup> Population, total. (2015). World Bank. Retrieved from <http://data.worldbank.org/indicator/SP.POP.TOTL>
- <sup>22</sup> Statistical Bulletins. (2014). Scotland's Census 2011. Retrieved from <http://www.scotlandscensus.gov.uk/statistical-bulletins>
- <sup>23</sup> 2011 Census: Population Estimates for the United Kingdom. (2012). Office for National Statistics. Retrieved from [http://www.ons.gov.uk/ons/dcp171778\\_292378.pdf](http://www.ons.gov.uk/ons/dcp171778_292378.pdf)
- <sup>24</sup> Public Intelligence Population Publications. (2015). Manchester City Council. Retrieved from [http://www.manchester.gov.uk/downloads/download/4220/public\\_intelligence\\_population\\_publications](http://www.manchester.gov.uk/downloads/download/4220/public_intelligence_population_publications)
- <sup>25</sup> Avoidable admissions: Uncontrolled diabetes. (2012). Health at a Glance. OECD. Retrieved from <http://www.oecd->

ilibrary.org/docserver/download/8112121ec041.pdf?expires=1428667490&id=id&accname=guest&checksum=AB146184667DCAC213C97BD3D74B11B4

<sup>26</sup> Euro Health Consumer Index. (2014). Health Consumer Powerhouse. Retrived from [http://www.healthpowerhouse.com/files/EHCI\\_2014/EHCI\\_2014\\_report.pdf](http://www.healthpowerhouse.com/files/EHCI_2014/EHCI_2014_report.pdf)

<sup>27</sup> Euro Health Consumer Index. (2014). Health Consumer Powerhouse. (see earlier).

<sup>28</sup> Episode 5 (2015). Page 94. The Private Eye Podcast. Retrieved from <https://soundcloud.com/privateeyenews/page-94-episode-5>