
Chair of the UK Statistics Authority, Andrew Dilnot CBE

Rt. Hon. Jeremy Hunt MP
Secretary of State for Health
Department of Health
Richmond House
79 Whitehall
LONDON
SW1A 2NS

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Dear Mr Hunt

REVIEW OF THE ACCESSIBILITY OF OFFICIAL HEALTH STATISTICS

I am writing to draw your attention to the enclosed review of the accessibility of official health statistics for the four UK administrations. There is an exceptionally rich portfolio of official data relating to health and health services in the UK. That is not in question. The problems that the Statistics Authority has highlighted in this review are in fact partly the consequence of the richness and range of that information, and the absence of central co-ordination of its production and public availability.

You will appreciate that whilst these statistics are a vital tool for the management of health services, they are also of much wider relevance to patient choice, social policy and democratic accountability. Without them, the public would know almost nothing of the performance of the NHS at either a local or national level, and analysts would be unable to assess the effectiveness of treatments and interventions.

The review looks at the accessibility of health statistics – in particular how practicable it is to:

- identify the statistics relevant to an issue or decision;
- locate them ;
- access useful information about the quality of the statistics; and
- understand the coherence and completeness of the picture that emerges.

We also looked at whether the dialogue between bodies that produce health statistics and the people who use them is effective in ensuring that any weaknesses are recognised and addressed.

We have identified some 22 UK organisations that produce official statistics relating to health, and a further 21 that publish relevant statistics but which are not currently formally recognised as producers of official statistics. The coverage of 'official statistics' is decided by Ministers rather than the Statistics Authority but we hope that the relevant Ministers will agree to extend that coverage to include many or all of these further 21 organisations. This would help to clarify and enforce the appropriate professional standards, including those relating to accessibility. We will pursue this directly with the appropriate Ministers.

Our other main conclusions are these:

- There is a need to review the coherence of statistical releases (and other statistical publications and websites) about health, both within each administration and across the UK. Information must be packaged in a way that best meets the needs of users.
- There is a need for a published set of statistical indicators on health and health services for the UK as a whole (that is, not on separate bases for England and each of the devolved administrations).
- A web-based directory of health statistics would help answer questions such as who produces what? where is it?; and am I comparing like with like? It could identify and provide links to the available statistics and to supporting information about the statistics.
- It would be helpful to introduce an easily understood and widely used framework of concepts, categories, and terminology.
- We see a good case for a regular and relatively comprehensive statistical analysis of health in the UK that would paint a picture of the nation's health and health services for a broad audience.
- There is a need for high quality information from private sector suppliers of healthcare, produced to NHS standards where it relates to NHS patients.

The review suggests that the best way forward on these matters would be to establish a working group of representatives of the more prominent bodies that produce the statistics and invite that group to bring forward costed proposals. Whilst there would be some costs associated with resolving these matters, the review notes that the statistical data have already been collected at considerable public expense and will only repay that investment to the extent that they are used effectively in the public interest. That requires them to be widely accessible, explained and understood.

I hope that you and Ministerial colleagues in the devolved administrations will give this agenda your full support. That will enable the experts to seek the most practicable solution.

I am copying this letter to Alex Neil MSP (Cabinet Secretary for Health and Well-being, Scottish Government), Lesley Griffiths AM (Minister for Health and Social Services, Welsh Government), Edwin Poots MLA (Minister of the Department of Health, Social Services and Public Safety in Northern Ireland), Stephen Dorrell MP (Chair of the House of Commons Health Committee), and Jil Matheson (National Statistician).

Yours sincerely



Andrew Dilnot CBE

Monitoring Review

Monitoring Review 7/12

October 2012

The accessibility of official statistics on health

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Summary

1. Matters of health and health care touch everybody's lives at some point and official statistics on health necessarily encompass many topics, from the length of time patients wait for treatment, to levels of obesity and smoking, tables of clinical outcomes, and the costs of providing different services.
2. Public expenditure on health in the UK, in cash terms, was estimated as £121.4 billion in 2010/11 (around £2,000 per annum for every individual) – more than one sixth of total public expenditure. Over the past 20 years 'health' has seen the highest rate of real terms growth, of the major functions of government¹.
3. Concepts of competition and choice run through many aspects of government policy on healthcare. Both competition and choice require the ready availability of accessible, comparable and reliable statistical information. However, even where health policy is not explicitly couched in terms of competition or choice, there is a need for comparable and reliable information – whether 'raw' management information or published statistics - to guide operational interventions and resource allocation.
4. Self-evidently, there is much political and public interest in knowing how well health services are working, where improvements could be made, and how the system might be affected by external pressures such as demographic change or policy developments elsewhere. With such considerations in mind, government, health sector managers, researchers, patients and the general public need to get as much value as possible from the available official statistics. We have reviewed the accessibility of health statistics - in the sense of how practicable it is:
 - to *identify* the relevant official statistics in relation to an issue of interest
 - to *locate* the relevant statistics and, for expert users, the associated microdata
 - to *access* useful information about the quality of the statistics

¹ http://www.hm-treasury.gov.uk/d/natstats_statistical_bulletin_april2012.pdf

- to *understand* the coherence and completeness of the picture that emerges from the statistics.

In this context we have also reviewed whether the dialogue between the bodies that produce health statistics and the people who use them is such as to ensure that any weaknesses in relation to the points above are recognised and addressed.

5. Whilst recognising that *healthcare* has become increasingly interlinked with the provision of *social care*, this Review focuses on those official statistics relating to the provision of medical care through the NHS, and those relating to a person's mental or physical condition.
6. It is clear that a wealth of relevant official statistics exists, and that they serve a wide range of different user needs. But this Review also points to the fragmented nature of those statistics, attributable partly (but only partly) to the devolution of health policy in the UK to England, Scotland, Wales and Northern Ireland. The statistics are produced by many different organisations, with different responsibilities and geographical footprints, using different concepts and terminologies; health care itself is provided by a range of NHS bodies but also by the private sector. Some statistics are drawn from surveys, but most are a by-product of administrative systems, and their quality is described variously.
7. Responsibility for coordination of the statistical data on health is unclear. The most comprehensive comparative statistical report about the health in the UK has recently been discontinued. There are thus substantial obstacles facing the would-be user of health statistics whether their interest is in the health of the UK population or the effectiveness of health services across the country.
8. In the light of the evidence reported in this Review, we believe that there is a strong case for some specific but important changes in the way that health statistics are compiled and presented. Given the nature of the problems these changes are designed to address they do not fall to a single producer body. Some of them are likely to have resource implications but these need to be weighed against the public value that would be added to statistical data - data that are collected at considerable public cost and which can only repay that cost if they are used effectively in the public interest. One way forward would be for a working group of representatives of statistical producer bodies to review the following proposals and to discuss plans for implementation with producer bodies, the National Statistician and the Board of the Statistics Authority:
 - a) There are some 22 organisations in the UK that are recognised as producers of official statistics relating to health, and a further 21 public bodies that publish relevant statistics but which are not currently recognised as producers of official statistics. We would propose that the provisions of the Statistics and Registration Service Act that allow non-Crown bodies to be identified as producers of official statistics be used to **extend the scope of official statistics** to include many of these further organisations. This would help to clarify and enforce the appropriate professional standards, and improve the accessibility of these statistics. (Annex A, para 3)
 - b) It would be helpful to review **the coherence of statistical releases** (and other statistical publications and websites) about health, both within each administration and across the UK. Is the information being packaged in a way that best meets the needs of users? (Annex A, para 13)

- c) We think that there is a need for a published **list of statistical indicators on health and health services required for the UK** as a whole (that is, not on separate bases for England and each of the devolved administrations). Such a published list would need to include information about the extent to which the UK indicators are available now. (Annex A, para 15).
 - d) A web-based **directory of health statistics** would help answer questions such as *who produces what? where is it?; and am I comparing like with like?* It could identify and provide links to the available statistics, their geographical coverage and length of time series, and provide access to information about quality and uses, methods, and sources. (Annex A, para 20)
 - e) It would be helpful to have an **easily understood and widely used framework** of concepts, categories, and terminology. This would help those wishing to compare statistics on a particular topic to find the relevant statistics. It might also help the producers of official health statistics to identify gaps in coverage. (Annex A, para 23)
 - f) We see a good case for a **regular and relatively comprehensive statistical analysis** of health in the UK that would paint a picture of the nation's health and health services for a broad audience. (Annex A, para 26)
 - g) There is a need for **high quality information from private sector suppliers of healthcare, produced to NHS standards where it relates to NHS patients**. This could be added to the relevant statistical releases that already exist. (Annex A, para 29)
9. The lack of comparability of many official health statistics across the UK is exacerbated by the focus in each of the four UK administrations on monitoring the performance of health policies separately and in different ways. In the absence of an overarching UK Health Survey, or a repository of all health statistics, there are major obstacles to obtaining a good statistical picture of people's health, at either UK level or for the individual countries on a consistent basis. The National Audit Office (NAO) has reported¹ finding "limited availability and consistency of data across the four nations, restricting the extent to which meaningful comparisons can be made between the health services of the UK. For this reason, and without a single overarching measure of performance, we cannot draw conclusions about which health service is achieving the best value for money." The use, where appropriate, of common concepts and terminology, and an agreed hierarchy and structure in the presentation of health statistics - a framework - would go some way towards enhancing comparability and thus improving the analysis of the statistics produced.
10. A central directory would make the statistics more accessible. A review of the many statistical releases about health might suggest ways to improve their coherence, and in turn their effectiveness in supporting decision making and identifying and building on the respective strengths of the health care system in different parts of the UK. It would also be helpful to have an agreed (and published) picture of the statistics that are demonstrably required at the UK level, and those that are required (only) in each of the four administrations.
11. The NHS in England is in the midst of major organisational change, and there is an argument that this should be allowed to settle down before looking at statistical

¹ <http://www.nao.org.uk/idoc.ashx?docId=46d56025-90c0-400b-a304-b0417cbefdc8&version=-1>

matters. But we see a real risk that, if the broader statistical issues are not addressed at this point, then it may be more difficult to make improvements subsequently².

Background

The administration of health in the UK

12. In 1999 the Scottish Parliament, National Assembly for Wales and Northern Ireland Assembly took control of powers devolved to them from the UK Parliament. The setting of legislation and development of policy for health was one of these powers. As devolution has matured, individual policies and strategies have developed to reflect the disparate needs of each country. As each country has developed its own health strategy, so the 'local' users of the statistics have developed different requirements. As a result there has been a tendency for the statistics to grow apart; in the absence of a clear voice in favour of UK comparability, this has resulted in what might be characterised by some as incoherence and fragmentation, but by others as a system that reflects different countries meeting their own needs.
13. In 2012 the Welsh Government published its five year vision document for the NHS in Wales, *Together for Health*³. It is centred around community services with patients at the centre and places prevention, quality and transparency at the heart of healthcare. Factors driving the need for reform include a rising elderly population, inequalities in health, increasing numbers of patients with chronic conditions, medical staffing pressures and some specialist services being spread too thinly. We were told that *Together for Health* sets out how the NHS in Wales will change over the five years. The main commitments are service modernisation, addressing health inequalities, better IT systems and a public information strategy⁴, improving quality of care, workforce development, instigating a 'compact with the public'; and a changed financial regime.
14. The Healthcare Quality Strategy⁵ for NHSScotland, launched in May 2010, sets the overall direction and focus for the NHS in Scotland. It aims to ensure that activity is integrated and aligned to deliver the "highest quality" healthcare services. The Quality Strategy is underpinned by three Quality Ambitions for person-centred, safe and effective care. A Quality Measurement Framework has been developed which aligns the wide range of measurement across NHSScotland.
15. In Northern Ireland, a 10 year strategy for improving the health service *Quality 2020*⁶ was published in 2011, along with *Transforming Your Care*⁷ a 5 year plan for change. The plan sets out ninety-nine proposals across eleven areas, including Long-term Conditions, Maternity and Child Health, Mental Health and Palliative and End of Life Care.

² DH has published its Information Strategy. This addresses the information required to manage the care of patients and how that might be better shared and used. It is not focused on the publication of official statistics *per se*, but would seem to support the development of statistical analysis in England. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_134181

³ <http://wales.gov.uk/topics/health/publications/health/reports/together/?lang=en>

⁴ <http://wales.gov.uk/topics/health/publications/health/strategies/plan/?lang=en>

⁵ <http://www.scotland.gov.uk/Publications/2010/05/10102307/0>

⁶ <http://www.dhsspsni.gov.uk/quality2020.pdf>

⁷ <http://www.dhsspsni.gov.uk/index/hscreview131211.htm>

16. The Health and Social Care Act sets out the future of the NHS in England, and the White Paper *Healthy lives, healthy people*⁸ sets out the strategy for public health in England. It is intended to make the funding and planning of services more responsive to local needs by reducing the number of centrally set targets and giving local authorities more control. Local authorities will be supported by Public Health England, an Executive Agency which is intended to bring together expert advice, intelligence and evidence from across the health system. Performance will be measured by how successful patients' treatment is, and hospitals will be paid by this performance. This is intended to result in greater competition between healthcare providers, and hence greater choice for patients.
17. Clearly, each country has different priorities for its health service. Different strategies have been developed for meeting those priorities and as a consequence, the administrative systems within each country's health service have developed differently. Producers of official statistics have told us that while they have some influence over the development of systems used to collect and manage information, the provision of data for statistics is not the only consideration. Furthermore, each country is working within constrained resources, so there is a tension between maintaining continuity and coherence, and ensuring that the statistics produced are relevant and provide value for money.

Uses and users of health statistics

18. Major users of official statistics about health in the UK include:
 - The Westminster Parliament and devolved Parliaments/Assemblies – including the specialist committees and individual members of those legislatures – both in holding governments to account and in developing and debating legislation;
 - UK Government and devolved administrations – for developing, monitoring and evaluating health policy;
 - NHS bodies and GPs – as management information and for local health profiles;
 - Local authorities - to assess potential pressure on local services;
 - Insurance companies and actuaries – for formulating premiums;
 - Charities and other third sector organisations involved in health – in providing information about specific health issues;
 - Research organisations and academia – for epidemiological research;
 - Industry – for example, pharmaceutical companies' use of prescribing statistics;
 - The media – in communicating information about health issues and the NHS; and
 - The general public – in informing individuals' choices as actual or potential patients, and in providing information to enable them to hold 'the system' to account.
19. This diversity of users makes it difficult to summarise a user perspective. But it is noteworthy that the list above indicates an interest in: health statistics for a range of different geographies; access to both the statistics and the underpinning detailed microdata; information about health outcomes, specific health issues, and service delivery; and information tailored to meet both policy and operational decision making.

⁸ <http://www.dh.gov.uk/en/Publichealth/Healthyliveshealthypeople/index.htm>

20. In preparing this Review, the issue of access to detailed microdata was raised by several academic users – who themselves noted that it was a highly specialised aspect of accessibility, but who felt that it was important in ensuring that the maximum possible value was extracted from existing statistical information. These users expressed a view that producers’ fears of breaking confidentiality rules and data protection laws has led to “draconian” disclosure controls on access to microdata; they were also concerned that microdata relating to the activity of the independent sector might be difficult to obtain in the future. We understand that different producers of health statistics adopt different approaches to statistical disclosure control; we think that the reasons for such differences could usefully be explained clearly, along with the implications for users.
21. In a similar vein, we understand that some users – including some health professionals – prefer to analyse the raw, underlying data from, for example, the Hospital Episode Statistics, and then to compare their own analyses with the published statistics. Such users are, of course, in a privileged position compared with the public who are reliant on published information.

Evidence and analysis

22. Bearing in mind that we are also considering the perspective of non-specialist users, we also looked at the question of accessibility from the perspective of the general public. In a series of case study investigations we sought to address some questions about health and the health system in the UK that we thought a non-expert user might reasonably ask. The purpose of this case study work was not necessarily to obtain definitive answers to the questions, but rather to appreciate the process that a user would have to go through to be able to answer the questions. We asked an experienced researcher in the Assessment team to address the following questions:
1. How does the proportion of overweight children vary between Wales, Scotland, Northern Ireland and the English Regions?
 2. How does access to GPs and A&E vary between rural and urban areas?
 3. How has the number of people taking up flu vaccines been affected by recent bird and swine flu scares?
 4. How accurate are self-reported smoking, drinking and sexual behaviour statistics?
 5. Which area in the UK has the longest healthy life expectancy?
 6. How do surgical outcomes in the NHS compare with those in the private sector?
23. The findings are detailed in Annex D but some of the more salient learning points arising were:
- a) The National Statistics Publication Hub has considerable limitations, as a definitive gateway to official statistics⁹. It is not comprehensive, and the success of searches depends upon the precise term used.

⁹ As its name suggests, the scope of the Publication Hub was originally National Statistics. Since its inception it has increasingly covered official statistics (OS) which have not been formally designated as National Statistics (NS). In the case of Northern Ireland, more statistical outputs are official statistics than in Great Britain. NISRA has been increasing the number of OS on the Hub, but has not yet achieved full coverage. We were told that this classification issue explains why many statistical outputs were not accessed from the Hub.

- b) Some statistical releases relating to one administration of the UK do not adequately cross refer to corresponding, or related, statistics produced in another.
 - c) There are differences in the concepts, definitions, terminology and methods used to produce statistics in the four administrations of the UK – differences which can make it difficult to produce a UK picture or to compare across the administrations.
 - d) Academic research papers often contain information that is neither covered by releases of official statistics, or is referred to or summarised in the releases.
24. We have also noted that the internet search engine we used sometimes produces different results when a search is repeated – which means that the results described in Annex D might not be exactly replicable.

Main findings

The scope of official statistics about health

1. A range of health statistics for England are produced by the Department of Health¹⁰. Others are the responsibility of the devolved administrations in Scotland, Wales and Northern Ireland and others by individual NHS organisations, such as Information Services Division (ISD) Scotland¹¹ and the NHS Health and Social Care Information Centre¹² (HSCIC) in England. And some others are produced by Office for National Statistics¹³.
2. The division of responsibility for statistical work between these various bodies has evolved over many years and it is not obvious to which body one should turn for specific sets of statistics. The picture is further complicated by the fact that some statistics about specific illnesses, or detailed analyses, are sometimes also available from voluntary bodies or Public Health Observatories¹⁴ which are not included within the formal definition of official statistics. Annex C¹⁵ shows 22 organisations that produce official health statistics in the UK, and a further 21 organisations that lie outside the scope of official statistics but that produce or disseminate important statistics.
3. We would propose that the provisions of the *Statistics and Registration Service Act* that allow non-Crown bodies to be identified as producers of official statistics be used to extend the scope of official statistics to include many of these further organisations. This would help to clarify and enforce the appropriate professional standards, and improve the accessibility of these statistics.

Improving the coherence of statistical releases

4. There are over 200 separate National Statistical releases about health produced in the UK each year and hundreds more that are not released under the National Statistics banner – rather more than one release of statistics each working day. Annex B sets out the statistical releases badged as National Statistics published by the main producers of official health statistics. We have presented them using the categories¹⁶ in the ONS publication UK Health Statistics¹⁷; we recognise that other categories may be more appropriate to some users and producers but feel that this presentation

¹⁰ <http://www.dh.gov.uk/en/index.htm>

¹¹ <http://www.isdscotland.org/>

¹² <http://www.ic.nhs.uk/>

¹³ <http://www.ons.gov.uk/ons/index.html>

¹⁴ <http://www.apho.org.uk/>

¹⁵ The Health and Care Act will result in new organisations, such as the NHS Commissioning Board and Public Health England (PHE); at the same time the Health Protection Agency will be abolished, with most of its functions moving to PHE.

¹⁶ Two categories in UK Health Statistics have not been included: Health in the Environment (statistics on for instance on drinking water and bathing water quality) and International Comparisons (for instance statistics about life expectancies and infant mortality). These have been excluded as the themes are not broadly replicated by the other producers. One category not included in the table, as it is not used in UK Health Statistics, is Social Care statistics. Many of the producers publish Social Care statistics although they sometimes adopt different terminology

¹⁷ <http://www.ons.gov.uk/ons/rel/ukhs/united-kingdom-health-statistics/2010/edition-4--2010.pdf>

illustrates the potential similarities and differences between the types of statistics published by the different producers¹⁸.

5. Our research suggests that in a number of respects, official health statistics are not as easy to navigate and relate to each other as one would hope. The main reason for this seems to be that, having been developed for different reasons or in response to different policy and user needs, responsibility for producing them is divided between many organisations, and the existing co-ordinating mechanisms seem to lack the authority that would be needed to pull the statistics together.
6. The National Statistics Health and Social Care Theme Group (of the Government Statistical Service (GSS)) was set up to support the National Statistician in developing long-term strategy and planning for statistics and information relating to health and social care. The group is made up of representatives from the main producers of health and social care statistics. In a paper¹⁹ presented to the Committee for Official Statistics in 2010, the then Chair of the Group reported that the Group had identified four emerging issues, one of which related to “the tension between seeking UK-wide comparability and user preferences for diverse systems.” However, it was also noted that the absence of a strong user voice does not mean there is no user need for comparable data (but that such an absence does make the provision of comparable data a lower priority). Furthermore, with access to microdata, academics and other third parties could potentially enhance the comparability of the data.
7. Public Health Observatories²⁰ are another attempt to bring some coherence to information about public health, though not necessarily wider health issues. They provide information, data and intelligence about people’s health and healthcare for practitioners, policy makers and the wider community. Data and statistics are analysed and re-presented in formats more relevant and useable by a variety of users. However, these have a sub-national focus – although the North West PHO has a national focus in relation to alcohol - so it is still necessary to access each of them to be able to compile a coherent UK picture. We understand that in future the functions of the (English) PHOs will largely be subsumed into Public Health England. There are also Observatories with specialist functions, for example the National Obesity Observatory – although ‘national’, in this context, means ‘England’.
8. A recent report²¹ by the National Audit Office sought to compare the four nations of the UK by setting out comparable data, where available, on health outcomes, and on the delivery and performance of the health services. It concluded (para 22-24 of *Healthcare across the UK*) that:

The health departments in the four nations are charged with securing value for money for the significant amounts of public money that they spend. We publish this report at a time when health services across the UK are under increasing pressure to use resources more productively. Funding is becoming tighter and ageing populations, and advances in drugs and technology, contribute to continued growth in the demand for healthcare.

¹⁸ Annex B lists National Statistics publications rather than all publications available – so for example information about sexually transmitted diseases and HIV is available in Northern Ireland, but as Official statistics

¹⁹ <http://www.statisticsauthority.gov.uk/about-the-authority/board-and-committees-documentation/minutes-and-papers/papers-from-the-committee-for-official-statistics-meeting-on-5-october-2010.pdf>

²⁰ <http://www.apho.org.uk/>

²¹ <http://www.nao.org.uk/idoc.ashx?docId=46d56025-90c0-400b-a304-b0417cbedfc8&version=-1>

We found limited availability and consistency of data across the four nations, restricting the extent to which meaningful comparisons can be made between the health services of the UK. For this reason, and without a single overarching measure of performance, we cannot draw conclusions about which health service is achieving the best value for money. Where comparative data are available, we found that no one nation has been consistently more economic, efficient or effective across the indicators we considered.

The shared history and similarities between the four health services mean they offer a natural starting point to better understand the factors that affect value for money and the impact of divergent health policies and systems on performance. We consider there would be value in the four health departments carrying out further comparative work to evaluate the variation in, and understand the drivers of, value for money. To take this work forward, the health departments would need to:

- confirm that there is a desire at a national level to compare performance with a view to learning lessons and identifying good practice;
- agree the specific indicators that would provide the most insight;
- establish what data would be required to make comparisons and identify how to collect and collate these data proportionately and cost-effectively; and
- use the comparisons as a starting point to draw out key factors that drive performance and value for money.

9. We think these the NAO conclusions are important and also relevant to the production of official statistics.
10. The different organisational models, strategies, targets and indicators adopted by the four UK administrations lead to some of the statistics being produced using different concepts, definitions, and methods; at different levels of coverage; and being reported in different ways. Furthermore, producers must meet these priorities and requirements within ever-reducing resources, and take account of the administrative burdens they place on data providers, which constrains development and expansion.
11. It would be reasonable to assume that the policy-making and organisational models of the devolved administrations will continue to diverge as time goes on and so it is likely, and probably necessary, that the related statistical data for the four administrations will also diverge. There is thus a structural incoherence between statistics that inform national (England, Wales, Scotland, Northern Ireland) needs, those statistics required to compare across the UK, and (potentially) those that support international comparisons.
12. While the diversity of sources could be seen as enriching the available data, it can also confuse the user. There are differences in the statistics available in the four administrations and, where the same statistics are available, the nomenclature can differ. Some seemingly comparable statistics, such as Referral to Treatment Times, are not in fact fully comparable because different definitions and methods are used²². These sorts of differences between the administrations' statistics make it harder to derive a statistical picture of the health of the nation and to relate health outcomes to differences in health services, and so risk reducing the opportunity to identify the strengths and limitations of the health care system in different parts of the UK.

²² Each country has a different way of measuring how long a patient waits between being referred for treatment and receiving treatment. In particular, there are differences in the ways that the 'clock' can be paused or reset. Referral to Treatment statistics methods for Wales makes no mention of clock pauses or resets, although it has published a helpful Quality Report <http://wales.gov.uk/docs/statistics/2012/120130referralqualityen.pdf>

13. It would be helpful to review the coherence of statistical releases (and other statistical publications and websites) about health, both within each administration and across the UK. Is the information being packaged in a way that best meets the needs of users?

Statistics at a UK level and for the four administrations of the UK

14. As well as 'national' uses of health statistics identified earlier, health statistics are also used by international organisations including Eurostat²³, the Organisation for Economic Co-operation and Development²⁴ (OECD) and the World Health Organisation (WHO)²⁵ to provide comparisons across countries and to help develop international health strategies. For example, Eurostat aims to provide comparable data on health and health-related behaviour, diseases and systems through its European Community Health Indicators²⁶. Across the EU, the implementation of the 2008 framework Regulation²⁷ for statistics concerning public health, and health and safety at work, is considered a key statistical element of the creation of a sustainable European health monitoring system. A major part of this is the European Health Interview Survey²⁸ (EHIS), which is scheduled to be run every five years²⁹ from 2014. The EHIS aims to measure, on a harmonised basis and with a high degree of comparability among Member States, the health status, lifestyle (health determinants) and health care services use of EU citizens.
15. These international requirements might be viewed as the 'core' of the statistical information required at the level of the UK by the EU; there are likely to be other 'national' requirements for UK-level information too. We think that there is a need for a published list of statistical indicators on health and health services required for the UK as a whole (that is, not on separate bases for England and each of the devolved administrations). Such a published list would need to include information about the extent to which the UK indicators are available now. Reaching a consensus on what is needed at the UK level may not be easy but it is likely to prove to be an important debate.

Identifying and locating statistical information about health

16. In the course of producing this Review we conducted a number of case study investigations (see annex D); we found this to be a very valuable and illuminating exercise. We found that different websites and publications adopt different taxonomies to categorise official health statistics. Some of these map easily to each other, but in other cases similar statistics are in different categories. Finding and accessing the relevant statistics can require not only a degree of knowledge about health matters and terminology – for example, 'primary care', and 'public health' – but also about the way that different producers categorise their statistics.

²³ <http://epp.eurostat.ec.europa.eu/portal/page/portal/health/introduction>

²⁴ http://www.oecd.org/document/16/0,3746,en_2649_37407_2085200_1_1_1_37407,00.html

²⁵ <http://apps.who.int/ghodata/>

²⁶ http://ec.europa.eu/health/indicators/policy/index_en.htm

²⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:354:0070:0081:EN:PDF>

²⁸ http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm

²⁹ ONS will be responsible for implementing EHIS across the UK. The survey was implemented between 2006 and 2009 in 19 countries on a voluntary basis; however, the UK did not take part in this first wave.

17. In the UK some organisations which provide official health statistics or related information have developed central databases, or portals or directories of health statistics, sometimes aimed at specific users. For example:
- The Scottish Public Health Observatory (ScotPHO) provides web links to key data sources^{30,31} for Scottish statistics and international resources³².
 - HSCIC's guide for journalists England 2010/11³³ provides pointers to journalists to where to find information about specific topics for England. This is available free-of-charge on the website. The Health and Social Care Act³⁴ will require HSCIC to maintain and publish an 'Information Register' which provides a description of information obtained in connection with the provision of health services or of adult social care in England.
 - The Office of Health Economics Guide to UK Health and Health Care Statistics³⁵ provides statistics, information about sources and selected facts and issues. However, some UK comparisons provided may not be valid³⁶, as statistics have been presented without harmonising definitions across data sources³⁷. The publication is available free-of-charge to registered users of the website.
 - NHS Evidence³⁸, managed by the National Institute for Health and Clinical Excellence (NICE), provides access to clinical and non-clinical evidence through a web-based portal. It is aimed at users within the NHS and public health and social care sectors to enable better evidence-based decision making, although it is also available to the public, free-of-charge.
 - Dr Foster³⁹ provides straightforward statistics, in easy-to-view graphics, about health trusts in England. The site is aimed at the public to help patients to make choices about potential healthcare providers. Comparative statistics, for example about post-operative mortality, waiting times and infection rates, are provided by postcode area for the five nearest providers of each procedure.
 - ONS publishes summary quality reports on a range of topics – such as cancer incidence, survival and mortality – in which information about comparability is provided with links to publications produced by other organisations.
18. Similarly in Ireland, the All-Ireland Health Data Inventory⁴⁰ was developed in response to Ireland's National Health Information Strategy⁴¹. It is one of a number of health inventories in Ireland. Responsibility for managing and updating it lies with Health information and Quality Authority and it is linked to existing systems.

³⁰ <http://www.scotpho.org.uk/home/resources/OverviewofKeyDataSources/Nationaldataschemes/Introduction.asp>

³¹ http://www.scotpho.org.uk/home/resources/OverviewofKeyDataSources/Surveys/surveys_intro.asp

³² http://www.scotpho.org.uk/home/resources/OverviewofKeyDataSources/international_data_sources.asp

³³ <http://www.ic.nhs.uk/healthinfo/guide>

³⁴ <http://www.legislation.gov.uk/ukpga/2012/7/part/9/enacted>

³⁵ <http://www.ohe.org/publications/article/ohe-guide-to-uk-health-and-health-care-statistics-2.cfm>

³⁶ For example, Table 3.11 presents attendances at hospital outpatient clinics in each UK country, but the definition of 'outpatient' differs. Statistics for England and Wales include allied health professionals (physiotherapists etc) but those for Scotland and Northern Ireland do not. Northern Ireland statistics include A&E attendances. The time periods are also slightly different in each country for some of the historical statistics.

³⁷ Nevertheless, this example gives further weight to the question of "why can't statistics from the various official sources be put together into one table and be comparable?"

³⁸ <http://www.evidence.nhs.uk/about-us>

³⁹ <http://www.drfoosterhealth.co.uk/>

⁴⁰ <http://www.publichealth.ie/news/allirelandhealthdatainventorypart1metadatarforkeydatasources> and <http://data.thehealthwell.info/NT1/indicators/tables.php?resID=1985>

⁴¹ <http://www.dohc.ie/publications/pdf/nhis.pdf?direct=1>

19. The development of the UK National Statistics Publication Hub⁴² is one step towards centralising access to health statistics across the UK. However, there are some limitations with the Hub at present, not least that finding the relevant statistics can be a convoluted process: we have found that internet search engines were more efficient at retrieving appropriate statistics than the Publication Hub. The level of functionality required by a directory of health statistics is probably beyond the current capacity of the Hub.
20. The portals, directories and guidance referred to above have been tailored to meet specific users' needs. A comprehensive web-based directory of health statistics would help answer questions such as who produces what? where is it?; and am I comparing like with like? It could identify and provide links to the available statistics, their geographical coverage and length of time series, and provide access to information about quality and uses, methods, and sources. Such a directory might be free-standing or an extension of the National Statistics Publication Hub.

A conceptual framework

21. The Health Statistics User Group⁴³ (HSUG) is an independent user group affiliated, through the Statistics Users' Forum, to the Royal Statistical Society. The group aims, amongst other things, to: foster appropriate use of statistics; encourage effective and useful collaboration between the GSS and other producers of statistics and users; and encourage the maintenance and improvement of health information. HSUG has developed a framework to help the GSS Theme Group to identify strategic priorities: an additional by-product of its use would be the identification of gaps in coverage. HSUG would like producers to map their outputs onto the framework; this would help them to understand how the data are used, by whom and for what purpose. Furthermore, providers could indicate other potential uses, thereby increasing the value of the data.
22. The strategic framework developed by the NS Theme group and adapted by HSUG has already shown that a framework can be a useful tool for both producers and users of health statistics. The greater harmonisation of concepts and terminology across all producers would help users to readily identify appropriate statistics and also ways in which the statistics could (and perhaps shouldn't) be used for comparative purposes. An agreed framework would:
 - identify the uses of health statistics;
 - provide producers with an integrated picture of health statistics, thereby enabling them to see whether the reduction or removal of certain statistics would have a detrimental effect on the coverage of the sector as a whole;
 - help understand the linkages between "health" and statistics about other domains – most obviously population statistics (that are often used as denominators in calculating rates and proportions) but also statistics about , for example, income and education;
 - encourage international comparability;
 - help producers and users identify duplication, and gaps, in coverage;
 - help inform decisions about the allocation of resources to health statistics;
 - provide a foundation for a review of the coherence of statistical releases about health;

⁴² <http://www.statistics.gov.uk/hub/index.html>

⁴³ <http://www.rss.org.uk/site/cms/contentviewarticle.asp?article=1043>

- encourage the provision of comparable statistics for the independent sector;
 - facilitate the development of a coherent and consistent approach to describing the quality of (the different sources of) health statistics, including those related to the independent sector; and
 - help users, especially non-experts, to understand how the different elements of health statistics fit together.
23. It would be helpful to have an easily understood and widely used framework of concepts, categories, and terminology. This would help those wishing to compare statistics on a particular topic to find the relevant statistics. It might also help the producers of official health statistics to identify gaps in coverage.
24. There are clear overlaps between the directory of health statistics (para 16 of this Annex) and a conceptual framework. International practice demonstrates how the two elements can work together. In Spain, harmonisation of statistics is required from central government producers to ensure comparability. In addition, an inventory of statistics published by the Autonomous Communities is produced to help users to easily identify and access additional appropriate statistics. Similarly in Germany, harmonised statistics for the country, Länder and smaller areas are available on the Statistics Portal⁴⁴ while the Federal Health Monitoring System⁴⁵ provides access to other statistics about health produced by a variety of organisations. More detail is provided in Annex E.

A statistical analysis of health in the UK

25. Until 2010, ONS published *UK Health Statistics*⁴⁶, a compendium which provides comparisons of health statistics across the UK, drawn from the many hundreds of individual statistical releases. It was produced under the guidance of a steering group representing the Department of Health, HSCIC, Scottish Government, ISD, Welsh Government, the Department of Health, Social Services and Public Safety in Northern Ireland, and ONS. It is a well-regarded publication, providing statistics about ten general topics, many of which cannot easily be compared. For example, it includes the results of an analysis (by the UK Comparative Waiting Times Group) of the length of time waited for specific procedures, from the initial decision to treat, to the date of admission. The definition of 'length of time waited' includes periods of suspension, to ensure that the statistics across the four countries are comparable, but means they are not comparable to the Referral to Treatment statistics used for monitoring targets⁴⁷.
26. However, in the response to the consultation⁴⁸ on the work programme 2011/12 – 2014/15, ONS said that the level of health analysis will reduce as work is focused on EU requirements and key health outputs. As a result *UK Health Statistics* has been discontinued in its previous form. Nevertheless, we see a good case for a regular and relatively comprehensive statistical analysis of health in the UK that would paint a picture of the nation's health and health services for a broad audience. The Statistics Authority encourages the NS Theme Group to consult widely with potential users of UK-level health statistics, to inform its proposals. For example, it might explore

⁴⁴ <http://www.statistik-portal.de/Statistik-Portal/en/>

⁴⁵ http://www.gbe-bund.de/gbe10/pkg_isgbe5.prc_isgbe?p_uid=gastd&p_sprache=E

⁴⁶ <http://www.ons.gov.uk/ons/rel/ukhs/united-kingdom-health-statistics/2010/edition-4--2010.pdf>

⁴⁷ It has been pointed out to us that the difficulty of making comparisons across countries is not so much a result of the different methods of collecting statistics but rather the different measures of performance required by each of the UK administrations.

⁴⁸ <http://www.ons.gov.uk/ons/about-ons/consultations/closed-consultations/2010/work-programme-consultation/index.html>

whether a focus on health outcomes – as opposed to performance measures – might be appropriate: these are frequently relatively comparable as they are based on population indicators such as survival rates.

Statistics about the independent sector

27. According to the HSCIC independent sector information programme⁴⁹ in 2008, 10 per cent of elective treatments and 20 per cent of diagnostics were provided to the NHS in England by the independent sector. In some areas and in certain specialties such as orthopaedics, the independent sector provides the majority of NHS funded care. In Northern Ireland⁵⁰, the independent sector provided around seven per cent of outpatient appointments, and around eleven per cent of inpatient appointments between 2008 and 2010.
28. In 2006 the House of Commons Select Committee on Health and Social Services⁵¹ reported that data from independent sector providers about NHS funded care was poor but that these data are needed to support key areas such as commissioning, performance monitoring, regulation, and planning in public health. An independent sector information programme was completed in 2009 by public health agencies in England including HSCIC, the Department of Health, the Healthcare Commission (now the Care Quality Commission), NHS Connecting for Health⁵² and the independent sector. Its aims included gaining alignment of good quality data to provide comparable assessment between independent sector and NHS providers.
29. By the end of the project, we were told, the quality of data from the independent sector was comparable with that from the NHS. However public reporting on this progress by HSCIC has not been updated since 2009 and it is still not straightforward to find such comparative statistics in those statistical releases where this might be expected. We have been told that the Health and Social Care Act will permit HSCIC to require information for each independent sector organisation providing NHS services, although it does not cover information about private providers of private care. We see a need for high quality information from private sector suppliers of healthcare, produced to NHS standards where it relates to NHS patients. This could be added to the relevant statistical releases that already exist.

Engagement between producers and users

30. A primary aim of HSUG is to ‘encourage effective and useful collaboration between the GSS and other producers and users of statistics in the health and health services field’. We were told by HSUG representatives that relationships with producers are good but that they would like producers to engage with them more collaboratively and interactively; they feel that traditional ‘engagement exercises’ have limited effectiveness and can sometimes seem to be ‘tick-box exercises’. Numerous consultations can be very burdensome for users and very often do not ask the questions necessary to establish users’ needs and to address their concerns. It was felt that producers dedicate very little resource to user engagement, even though it should be a natural part of the development, production and use of statistics.

⁴⁹ <http://www.ic.nhs.uk/services/independent-sector-information-programme>

⁵⁰ http://www.dhsspsni.gov.uk/index/stats_research/hospital-stats/waiting_times_main/stats-waiting-times.htm

⁵¹ House of Commons Health Committee. Independent Sector Treatment Centres. Fourth Report of Session 2005-06. Volume I. HC 934-I. 2006. London, The Stationery Office

⁵² <http://www.connectingforhealth.nhs.uk/>

31. HSUG has been at the forefront of the development of StatsUserNet⁵³ (SUN) in collaboration with the Statistics User Forum⁵⁴ (SUF). The main purposes of SUN are to facilitate discussion amongst users of statistics and to encourage relationships between users and producers. SUN provides the (often hidden) non-expert user community with access to expert user knowledge, creating discussions around topics and queries. These discussions could potentially be used by producers to further their understanding of the way statistics are accessed, understood and used in the wider world.
32. The need for better user engagement is recognised by producers in all sectors. The GSS and SUF held a user engagement event⁵⁵ during March 2012 to evaluate the current state of user engagement, to review what works and what does not, and to establish ways of improving it for all official statistics. The Statistics Authority supports such initiatives; a more constructive and collaborative approach to engagement with users of health statistics could help producers to package statistical information in more accessible and useable ways. Furthermore, it could provide invaluable evidence with which to inform a review of the coherence of statistical releases.

⁵³ <http://www.statsusernet.org.uk/Home/>

⁵⁴ <http://www.sufenews.org.uk/categories/about-us>

⁵⁵ <http://www.statsusernet.org.uk/StatsUserNet/Events/EventDescription/?CalendarEventKey=6fcc3ec4-9291-44d7-a27e-9d333fe312c4>

Statistical releases (badged as National Statistics) published by the main producers of official health statistics in the UK⁵⁶

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland⁵⁷	Scotland⁵⁸
1. People at work: Population, socio-economic status, people with a disability, geographical deprivation	Births and Deaths in England and Wales Vital Statistics: Population and Health Reference Tables	Registered Blind and Partially Sighted People		Local Authority Registers of People with Disabilities	Registrar General Quarterly reports; Registrar General Annual Report	Scotland's Population – The Registrar General's Annual Review of Demographic Trends Vital Event Reference Tables Weekly Data on Births and Deaths registered in Scotland Births, Marriages and Deaths - Preliminary Annual Figures Births, Marriages and Deaths - Quarterly Figures Registered Blind and Partially Sighted, Scotland

⁵⁶ It should be noted that this annex does not include the many non-National Statistics releases of official health statistics; The Health and Safety Executive and National Treatment Agency are also producers of National Statistics (see Annex D)

⁵⁷ Northern Ireland Statistics and Research Agency and Department of Health, Social Services and Public Safety

⁵⁸ Scottish Government, Information Services Division, Scotland and National Records Scotland

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
2. Pregnancy & Childbirth: fertility, conceptions, abortions, birth weight, infant mortality	<p>Birth summary tables (provisional) Birth summary tables (final) Births in England and Wales by characteristics of birth Births in England and Wales by characteristics of mother Births in England and Wales by parents' country of birth Characteristics of births 1 Characteristics of births 2 Characteristics of mother 1 Characteristics of mother 2 Cohort fertility Live births by usual area of residence Live births by Socio-economic status of father, England and Wales Childhood, Infant and Perinatal Mortality in England and Wales Conceptions Statistics Annual reference volume Conceptions to women aged under 18 by local authority Gestation-specific Infant Mortality in England and Wales Infant and Perinatal Mortality in England and Wales by Social and Biological Factors Live births, Still births and Infant deaths: Babies born in England and Wales Quarterly conceptions to women under 18 (provisional) Unexplained deaths in infancy: England and Wales</p> <p>Gestation-specific Infant Mortality in England and Wales.</p>	<p>Infant Feeding Survey Family Planning</p>	<p>Abortion Statistics</p>	<p>Births and Infant Mortality Statistics Teenage Conceptions Births in Wales: Data from the National Community Child Health Database Maternity Statistics: Method of Delivery NHS Community Contraceptive Services</p>	<p>Births in Northern Ireland Still births and Infant Deaths</p>	<p>Births in Scottish Hospitals Scottish Perinatal and Infant Mortality and Morbidity Report Teenage Pregnancies Abortion Statistics Breastfeeding Statistics Key Clinical Indicators for Sexual Health: Population-based Indicators report: Termination of Pregnancy data Time-Series Data: Births</p>

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
3. General health and morbidity: Self-assessed general health, health expectancies, GP consultations, cases of cancer, communicable diseases, STIs, HIV, mental health, road accident casualties, health and safety at work	Cancer registrations in England Cancer statistics – registrations Cancer survival in England Cancer survival in former Spearhead Primary Care Trusts in England Relative survival from cancer in English regions Health expectancies at birth and at age 65 in the United Kingdom	Adult dental health survey Health Survey for England Health Survey for England: Trend Tables Adult Psychiatric Morbidity in England Autism Spectrum Disorders in adults living in households in England Children Dental Health survey Ethnic Minority Psychiatric Illness rates (EMPIRIC) The mental health of young people looked after by local authorities in England		Health Statistics Wales Health Trends Welsh Health Survey; Welsh Health Survey : Initial Headline Results Welsh Health Survey: Local Authority / Health Board Results	Northern Ireland Fireworks Injuries	Scottish Health Survey Cancer Incidence Cancer Survival Statistics Key Clinical Indicators for Sexual Health: Population-based Indicators report: Chlamydia data Key Clinical Indicators for Sexual Health: Population-based Indicators report: HIV Therapy data Scotland Sexual Health Information Unintentional Injuries Heart Disease statistics update Stroke statistics update

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
4. Health-Related Behaviour: Smoking, drinking, drugs, body mass index, physical activity, food and nutrition	General Lifestyle Survey Overview Report	National Child Measurement Programme, England Statistics on Alcohol England Statistics on Drug Misuse, England Statistics on obesity, physical activity and diet, England Statistics on Smoking, England Smoking, Drinking and Drug Use among Young People in England		As per theme 3, above		Scottish Health Survey Alcohol Statistics Scotland Drugs Misuse Statistics Scotland Primary 1 Body Mass Index (BMI) statistics for school year Schools Adolescent Lifestyle and Substance Use Survey (SALSUS) Primary 1 Body Mass Index (BMI) statistics for school year 2008/09; Schools Adolescent Lifestyle and Substance Use Survey (SALSUS); Scotland Sexual Health Information.

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
5. Preventative Healthcare: Immunisation, influenza, contraception, cervical and breast-screening		Breast Screening Programme, England Cervical screening programme England NHS Immunisation Statistics, England		NHS Immunisations (Public Health Wales also publishes immunisation surveillance statistics). NHS Community Contraceptive Services. Statistics from screening programmes are published by Public Health Wales.		Scottish Bowel Screening Programme Statistics Scottish Cervical Screening Statistics Key Clinical Indicators for Sexual Health: Population-based Indicators report: Long Acting Reversible Contraception (LARC) data Childhood Immunisation Statistics; Stroke Statistics Update; Teenage Pregnancies; Unintentional injuries.

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
6. Use of Services: Hospital activity, mental health activity, time waited, prescriptions and medicines		General Pharmaceutical Services Prescription Cost Analysis, England Prescriptions Dispensed in the Community, England Ambulance Service, England Guardianship under the Mental Health Act 1983 Hospital Episode Statistics; Admitted patient care Hospital Outpatient Activity Inpatients formally detained in hospitals under the Mental Health Act 1983 and patients subject to Supervised Community Treatment	NHS Referral to treatment Waiting Times NHS Referral to Treatment Waiting Times Annual Report Cancer Waiting Times Waiting Times for suspected and diagnosed cancer patients: Annual report Patient Experience Overall Measure Elective Admission Events Imaging and radio diagnostics Cancelled Operations	Ambulance Services in Wales NHS Cancer waiting times GMS Quality and Outcomes Framework Community Pharmacy Services Prescriptions by General Medical Practitioners Prescriptions dispensed in the community in Wales Ophthalmic statistics Calls to NHS Direct Wales Time spent in NHS Wales Accident and Emergency Departments NHS Wales Referral to Treatment Times NHS Wales Diagnostic and Therapy Services Waiting times Delayed Transfers of Care in Wales	Inpatient Waiting times Outpatient waiting times Northern Ireland Hospital Statistics: Emergency Care Northern Ireland Hospital Statistics: Inpatient and Daycase Activity Northern Ireland Hospital Statistics: Mental Health and Learning Disability Northern Ireland Hospital Statistics: Outpatient activity Northern Ireland Waiting Time Statistics: Diagnostic Waiting times	NHS Scotland Waiting Times NHS Scotland Prescribing Statistics Delayed Discharges in NHS Scotland Alcohol related hospital statistics Acute Hospital Activity and NHS Beds information

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
7. Mortality and life expectancy: Mortality, death by cause, life expectancy	<p>Life expectancy at birth and at age 65 by local areas in the UK</p> <p>A cancer survival index for primary care trusts</p> <p>Cancer incidence and mortality in the UK</p> <p>Deriving trends in life expectancy by NS-SEC using the ONS Longitudinal Survey</p> <p>Life expectancy by NS-SEC</p> <p>Social Inequalities in alcohol-related Adult Mortality by NS-SEC</p> <p>Social Inequalities in Fatal childhood accidents and assaults: England and Wales</p> <p>Trends in social inequalities in male mortality</p> <p>Trends in social inequalities in female mortality</p> <p>Alcohol-related deaths in the UK</p> <p>Deaths registrations by single year of age</p> <p>Deaths registrations summary tables</p> <p>Deaths involving Clostridium Difficile: England and Wales</p> <p>Deaths involving MRSA: England and Wales</p> <p>Deaths related to drug poisoning in England and Wales</p> <p>Excess Winter Mortality in England and Wales</p> <p>Injury and poisoning mortality in England and Wales</p> <p>Deaths Registered by Usual Area of Residence: England and Wales</p> <p>Suicide rates in the UK</p> <p>Weekly provisional figures on deaths registered in England and Wales</p>				<p>Alcohol and Drug Related Deaths</p> <p>Deaths in Northern Ireland</p> <p>Deaths Registered with Clostridium Difficile Mentioned on the Death Certificate</p> <p>Deaths Registered with MRSA Mentioned on the Death Certificate</p> <p>Drug Related Deaths and Deaths due to Drug Misuse Registered in Northern Ireland</p>	<p>Drug-Related Deaths in Scotland</p> <p>Increased Winter Mortality</p> <p>Monthly Data on Deaths registered in Scotland</p> <p>Reports on specific causes of death: Alcohol-related Deaths</p> <p>Reports on specific causes of death: Clostridium Difficile Deaths</p> <p>Reports on specific causes of death: Deaths which are the Result of Intentional Self-harm or Events of Undetermined Intent (Probable Suicides)</p> <p>Reports on specific causes of death: MRSA Deaths</p> <p>Time-Series Data: Deaths</p> <p>Life Expectancy Scotland</p>

UK Health Statistics Themes	ONS Themes	HSCIC	DH	Wales	Northern Ireland	Scotland
8. Health and Care Resources: Available beds, health sector staff, GPs, dentists and opticians, expenditure on health and personal social services		Data on written complaints in the NHS General ophthalmic services activity statistics General ophthalmic services workforce statistics Personal social services: Expenditure and unit costs		General Medical Practitioners in Wales NHS dental services (quarterly) NHS dental statistics (annual) Ophthalmic statistics Welsh Local Government Financial Statistics		Child and Adolescent Mental Health Services workforce in NHS Scotland NHS Scotland workforce statistics Workforce planning for psychology services in NHS Scotland Findings from the balance of care/continuing care census Dental statistics: fees and treatments Dental statistics: registrations General Practice: GP workforce and practice population statistics Ophthalmic workload statistics Practice team information Quality & Outcomes Framework (QOF) – practice achievement data Scottish health service costs Free personal and nursing care Scotland

Organisations that produce or disseminate health statistics in the UK

Official Statistics producers⁵⁹

1. Department of Health*
2. Office for National Statistics*
3. Scottish Government*
4. Welsh Government*
5. Northern Ireland Statistics and Research Agency*
6. Department of Health, Social Services and Public Safety, Northern Ireland*
7. NHS Information Centre (Health and Social Care Information Centre)*
8. Information Services Division (a division of NHS National Services Scotland)*
9. National Records of Scotland (NRS)*
10. Health and Safety Executive⁶⁰
11. National Treatment Agency⁶¹
12. Health Protection Agency
13. Care Quality Commission
14. National Patient Safety Agency
15. NHS Business Services Authority
16. NI Cancer Registry, Queens University Belfast
17. Regional Business Services Organisation, Northern Ireland
18. Regional Agency for Public Health and Social Wellbeing, Northern Ireland
19. Scottish Consortium for Learning Disability
20. Health Protection Scotland (a division of NHS National Services Scotland)
21. Scottish Ambulance Service
22. NHS24

Other statistics producers

1. Healthcare Improvement Scotland
2. NHS Direct
3. NHS Wales Informatics Service
4. NHS Wales
5. Public Health Wales
6. All Wales Perinatal Survey (Cardiff University - School of Medicine)
7. Welsh Oral Health Unit (Cardiff University - School of Dentistry)
8. National Obesity Observatory
9. Injury Observatory for Britain and Ireland
10. ChiMat - the Child and Maternal Health Observatory
11. Mental Health Observatory
12. South East Regional Public Health Observatory
13. South West Regional Public Health Observatory
14. Eastern Regional Public Health Observatory
15. West Midlands Regional Public Health Observatory
16. East Midlands Regional Public Health Observatory
17. Yorkshire & Humber Regional Public Health Observatory
18. North West Regional Public Health Observatory
19. North East Regional Public Health Observatory
20. NHS Health Scotland (including – Scottish Public Health Observatory (ScotPHO))
21. Ireland and Northern Ireland's Public Health Observatory (INIsPHO)

⁵⁹ Those marked * publish statistics which have been assessed and badged as National Statistics

⁶⁰ HSE publishes: Health and Safety Statistics (Compendium); Mesothelioma deaths; Reports of work-related ill health by doctors and specialist physicians (known as the THOR schemes); Self-reported work-related illness and workplace injury from the Labour Force Survey; Statistics of Fatal Injuries in the workplace; Statistics on worker blood-lead levels; Workplace injuries reported by employers under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).

⁶¹ NTA publishes: Drug Treatment Statistics Monthly; Drug Treatment Statistics Annual.

Case Study # 1. How does the proportion of overweight children vary between Wales, Scotland, Northern Ireland and English Regions?

Search engine: The National Statistics Publication Hub⁶²

Search term: Child Obesity

Prime result: *Statistics on Obesity, Physical Activity and Diet, England 2012*⁶³ published by the Health and Social Care Information Centre (HSCIC).

Response to the research question: This release addresses the research question for England and discusses headline results for Wales and Scotland. It uses data from the *Health Survey for England* (HSE 2010)⁶⁴ and also data from the *National Child Measurement Programme* (NCMP)⁶⁵. It cross-refers to the Welsh statistics from the *Welsh Health Survey 2010*⁶⁶ and to the *Scottish Health Survey*⁶⁷.

Limitations

1. The existence of the comparative statistics for other GB countries is not evident from the abstract about the statistics given on the Publication Hub.
2. The 2012 release has a caveat that “*details of the methodologies used by each country are contained within the publications. They will need to be considered when attempting comparisons*”.
3. The release does not present comparative statistics for Northern Ireland.

Further search: The Publication Hub did not list any relevant statistics for Northern Ireland so a search was initiated on the website of the Department for Health, Social Services and Public Safety, Northern Ireland. This revealed the relatively new release of statistics from the *Health Survey, Northern Ireland 2010/2011*⁶⁸ which gives child obesity statistics for Northern Ireland. These statistics are not listed on the Publication Hub, which means that a researcher has to spend more time researching diverse sources to discover particularly relevant statistics. Additionally the measurement reference criteria used for child obesity for the Northern Ireland survey is an international one and results are not given using the UK criteria (the so-called UK90 reference curves⁶⁹) used in Wales (which reports against the International and UK approaches), Scotland and England. No reason is given in the publication for the use of the international, rather than UK, approach.

Analysis: Overall the Publication Hub led quickly to a release which largely addressed the research question and which references recent statistics. Whilst there is a caution given in this release about different methodologies adopted in Wales, Scotland and England, the measurement of child obesity used in the GB countries is coherent. Since Northern Ireland does not additionally present statistics using the UK criteria, comparison between all four UK countries is not straightforward. We think that it would be helpful if the producer took steps to enhance the coherence of these statistics with other GB countries. The title of the most relevant release (*Obesity, Physical Activity and Diet, England 2012*) does not immediately

⁶² <http://www.statistics.gov.uk/hub/>

⁶³ <http://www.ic.nhs.uk/pubs/opad12>

⁶⁴ <http://www.ic.nhs.uk/pubs/hse10report>

⁶⁵ <http://www.ic.nhs.uk/ncmp>

⁶⁶ <http://wales.gov.uk/topics/statistics/headlines/health2012/120919/?lang=en>

⁶⁷ <http://www.scotland.gov.uk/Publications/2010/09/23154223/33>

⁶⁸ http://www.dhsspsni.gov.uk/health_survey_northern_ireland_-_first_results_from_the_2010-11_survey.pdf

⁶⁹ http://www.noo.org.uk/uploads/doc/vid_11601_A_simple_guide_to_classifying_BMI_in_children.pdf

convey that a researcher would find comparative data for child obesity statistics across GB. We think that it would be helpful if this was detailed in the abstract on the Publication Hub.

Case Study # 2. How does access⁷⁰ to GPs and A&E vary between rural and urban areas?

Search engine: Publication Hub

Search term: Rural Services

Prime result: *Rural Scotland – key facts 2011*⁷¹.

Response to the research question: The release presents statistics on access and convenience of services, including access to the GP as well as to Hospital Outpatients Departments. These statistics provided a useful response to the research question.

Limitations: We did not find statistics on the key differences between urban and rural communities for Wales, Northern Ireland and England via the Publication Hub.

Further searches: Further searches using terms such as ‘GP Patient Surveys’ and ‘GP Access Surveys’ through the Publication Hub quickly revealed statistics for Wales⁷², Northern Ireland⁷³, Scotland^{74,75}, and England⁷⁶.

In regard to access to A&E departments, statistics found through the Publication Hub which on first appearance seemed relevant, are the ‘*Accident and Emergency-Patient Journey 2007-08*’⁷⁷. However these statistics are on a patient’s ‘journey’ once they had reached A&E - presenting waiting times etc rather than physical journeys to and from A&E. *Health Statistics, Wales*⁷⁸ presents statistics about patient transport, such as response to emergency ambulance calls and proportions of urgent patient journeys arriving less than 15 minutes late. These statistics were given for local authority areas but an urban: rural classification is not adopted.

Limitations: The ‘Access to GPs’ and ‘GP Patient Experience’ surveys tended to take, as their definition of access, the responsiveness of GPs (i.e. how quickly an individual could see a GP after contacting their surgery). None of these statistics were given using an urban:rural classification although they are presented using Local Health Board and Local Authority Area categories. If a more generic search term is used to look up through the Publication Hub such as ‘Access to Healthcare Services’ fewer results are yielded. None of these statistics reported upon access based on physical distances to, or transport issues involved in accessing, GP surgeries.

Best result: The most relevant statistics to the research question were the Department for Transport’s *Accessibility Statistics 2010*⁷⁹, which provides statistics on access to key services by public transport and by walking including to GPs surgeries and to Hospitals.

Analysis: Depending on the search terms used, results differ based upon the definition of the term ‘access’, the limited extent to which the urban:rural classification is adopted, and various levels of geographical coverage.

⁷⁰ It has been pointed out to us that in NHS terms, “access” is often interpreted in relation to ‘waiting times’ and the availability of appointments’- and that it could also be interpreted in terms of access for people with disabilities, as well as physical distance from the service.

⁷¹ <http://www.scotland.gov.uk/Publications/2011/09/291337477>

⁷² <http://wales.gov.uk/topics/statistics/headlines/health2011/110606/?lang=en>

⁷³ http://dhsspsni.gov.uk/index/hss/gp_contracts/gp_contract.qof/gp_patient_survey.htm

⁷⁴ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/Access2011.pdf>

⁷⁵ http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/GPPatientExperienceSurvey/GPPatientExperienceSurvey1112ss/gp_contracts/gp_contract-qof/gp_patient_survey.htm

⁷⁶ http://www.gp_patient.co.uk/

⁷⁷ <http://www.ic.nhs.uk/pubs/aepatientjourney0708>

⁷⁸ <http://wales.gov.uk/topics/statistics/headlines/health2011/110728/?lang=en>

⁷⁹ <http://www.dft.gov.uk/statistics/releases/accessibility-2010>

Case Study # 3. How has the number of people taking up flu vaccines been affected by recent bird and swine flu scares?

Search Engine: Publication Hub

Search term: Flu Vaccinations

Prime result: *Influenza Update*⁸⁰ from ISD Scotland.

Response to the research question: This release presents commentary about the uptake of flu vaccinations (among those aged 65 and over and the under 65s) in Scotland and the possible impacts of the H1N1 programme (H1N1 is the strain of swine flu).

Limitations

1. The coverage is for Scotland only and no comparative results are given in the publication for other GB countries or for Northern Ireland.
2. The Commentary speaks about the potential impacts of H1N1 'programmes' to encourage the uptake of vaccinations by those deemed to be 'at risk'. There is no evidence of reflection in the commentary about the impact of the bird and swine flu scares on the propensity of people to take up vaccination opportunities.

Further searches: Further searches on the Publication Hub revealed HSCIC's *Immunizations Statistics England*⁸¹ which presents statistics on the adult uptake of seasonal flu vaccinations. It does not reflect on the factors influencing changes in the uptake rates.

Using Google, we found statistics for Northern Ireland from the Public Health Agency⁸². Its *Surveillance of Influenza in Northern Ireland 2010-11*⁸³ provides uptake figures for flu vaccination. The commentary within the release does not discuss the extent to which take up of vaccination has been affected by the scares but did comment on changes to take up due to changes in the definition of those seen to be most at risk, as well as to the campaigns run to help achieve national targets for take up. These Northern Ireland statistics also provided comparative uptake figures for other UK countries. Public Health Wales⁸⁴, part of the NHS in Wales, has also published vaccine uptake statistics for Wales in 2009/10.

Limitations: Neither the Wales nor the Northern Ireland statistics could be found from the Publication Hub.

Other statistics researched: A Government level enquiry⁸⁵ into the 2009 Flu Pandemic made recommendations relating to the surveillance information across the UK due to concerns about the lack of coherence in the data being collected and the data collection methods. The Health Protection Agency⁸⁶ has information on its website about sources of UK flu data. Relevant statistics for uptake rates across the UK were found on this website in *Surveillance of influenza and other respiratory pathogens in the UK*⁸⁷ which reviews UK seasonal influenza data and presents comparative vaccine uptake statistics. It does not comment on the extent to which the scares have influenced uptake rates.

⁸⁰ <http://www.isdscotlandarchive.scot.nhs.uk/isd/6365.htm>

⁸¹ <http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/immunisation/nhs-immunisation-statistics-england-2010-2011>

⁸² <http://www.publichealth.hscni.net/about-us>

⁸³ <http://www.publichealth.hscni.net/publications/surveillance-influenza-northern-ireland-2010-2011>

⁸⁴ [http://www2.nphs.wales.nhs.uk:8080/VaccinationsImmisationProgDocs.nsf?3dc04669c9e1eaa88025706003b246b/7f8b679297887fdb802577660033baa1/\\$FILE/Wales%20influenza%20pandemic%20influenza%202009%20H1N1%20immunisation.pdf](http://www2.nphs.wales.nhs.uk:8080/VaccinationsImmisationProgDocs.nsf?3dc04669c9e1eaa88025706003b246b/7f8b679297887fdb802577660033baa1/$FILE/Wales%20influenza%20pandemic%20influenza%202009%20H1N1%20immunisation.pdf)

⁸⁵ http://www.dhsspsni.gov.uk/the2009influenzapandemic_acc.pdf

⁸⁶ www.hpa.org/uk

⁸⁷ http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317134705939

Analysis: Several producers were able to give detailed statistics about vaccine uptake rates (national targets for such rates exist). The HPA publication came closest to satisfying the research question but fell short of comment about the impact of the public scares relating to swine flu and bird flu upon such rates. Statistics sourced through the Publication Hub were limited in reporting about specific countries only. The Researcher found official statistics about influenza vaccination uptake in some UK countries which are not listed on the Publication Hub. Success in finding relevant statistics through the Publication Hub and through other search facilities was found to be related to using search terms including the terms 'vaccination' and 'immunization'. It would seem that, until well after the last flu pandemic threat in 2009, aggregated statistics on this subject were more likely to be found through academic research than via statistical releases. Due to the variety of health statistics providers it can take some time to discover the most likely source of the most relevant statistics. The commentary does not particularly help decision makers trying to consider the reasons why take up rates might have changed. It is encouraging however that, should a further pandemic occur, it will be easier to monitor uptake rates across the UK than it was when a flu pandemic last threatened.

Case Study #4. How accurate are self-reported smoking (or drinking, or sexual behaviour) levels?

Search engine: Publication Hub

Search terms: Health and Social Care theme: Lifestyles and Behaviour

Prime Response: No obvious prime response, so checked the *Scottish Health Survey*⁸⁸ which provided some material relevant to the research question. Subsequently checked other potentially relevant health statistics but did not find information directly relevant to the research question.

Response to the research question: The *Scottish Health Survey* included some information about the inaccuracies of self-reported measures in respect of smoking and alcohol consumption. Relevant information was found in the 2012 *Scottish Health Survey* about the extent of differences between statistics measuring self-reported smoking prevalence and measures of cotinine⁸⁹ (which are regarded as an objective measure of smoking prevalence and the impact of second hand smoke). The *Health Survey for England*⁹⁰ also presents smoking prevalence using self-reports and by measures of cotinine (although the latter is not presented as a more accurate method but rather as an alternative measurement).

Limitations: The *Welsh Health Survey*⁹¹ and the *Northern Ireland Health Surveys*⁹² only provide measures based on self-reports and do not give information about perceived inaccuracies using such methods. A number of UK Statistics Authority assessments have included requirements for producers of health statistics to provide more information about the quality and reliability of these types of statistics (for example Assessment Report 121 on Statistics on Sexual Health Information and Assessment Report 129 on Statistics from Lifestyles Surveys). Users who contacted the Authority during assessments have told us that they could not find basic quality information such as confidence intervals and sources of bias. Others noted conflicting data, about smoking for instance, between the General Lifestyle Survey⁹³ from the ONS and those published in the *Health Survey for England*.

Analysis: The extent to which users are warned about the potential inaccuracies in behavioural estimates drawn from self-reporting, be it of smoking or drinking, varied considerably - as did information about the quality and reliability of the statistics more generally. Academic sources gave more relevant information than official statistics and the results of such research are referred to in some health statistics publications such as the *Scottish Health Survey*. We think that it would be helpful to provide links from statistical publications to relevant academic research, together with a suitable summary.

⁸⁸ see footnote 68

⁸⁹ Cotinine, a derivative of nicotine, is an objective measure of smoking. Levels above a certain threshold indicate that someone has smoked recently while levels below the threshold are a measure of exposure to second-hand smoke.

⁹⁰ see footnote 65

⁹¹ see footnote 67

⁹² see footnote 69

⁹³ <http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2010/index.html>

Case Study # 5. Which area in the UK has the longest healthy life expectancy?

Search engine: Publication Hub

Search Term: Population Theme, Life Expectancies

Prime Response: *Life Expectancy: Healthy and Disability-Free Years*⁹⁴ from ONS

Response to the research question This report presents statistics for England and Wales at Local Government District and Government Office Region with a time series from 2001.

Limitations: Our query was related to areas in the UK so the Researcher selected *Life Expectancies at birth and age 65 by local areas in the UK 2004-2006 to 2008-2010*⁹⁵. The commentary in this release states:

“For local areas, life expectancy at birth for both males and females in 2007–09 was highest in Kensington and Chelsea (84.4 years and 89.0 years respectively) and lowest in Glasgow City (71.1 years and 77.5 years respectively).”

Analysis: The answer to the initial query was arrived at from statistics published in October 2011. The whole query took less than 15 minutes and was found relatively easily – reflecting the fact that there are no definitional differences in ‘life expectancy’ across the UK.

⁹⁴ http://data.gov.uk/dataset/life_expectancy_-_healthy_and_disability-free_years

⁹⁵ <http://www.ons.gov.uk/ons/rel/subnational-health4/life-expec-at-birth-age-65/2004-06-to-2008-10/index.html>

Case Study # 6. How do surgical outcomes in the NHS compare with those in the private sector?

Search engine: www.data.gov.uk (no relevant statistics were found through the Publication Hub)

Search term: used the research question

Prime Response: *Patient Reported Outcome Measures April 2010-March 2011*

Response to the research question: Whilst the data were broken down to individual surgical units, there was no discrimination between private and public providers (the data refers to any patient whose care is funded by the NHS). Due to data suppression, information from a number of units was not available.

Limitations: An inquiry by the Commons Select Committee on Health and Social Services⁹⁶ published in 2006 concluded that the quality of care provided by Independent Sector Treatment Sectors (ISTCs) could not be properly evaluated because of the poor quality of the data collected by the Centres and the historical lack of routine data on outcomes collected by the NHS. The Committee recommended that comparable and standardised data be collected.

A Kings Fund⁹⁷ Briefing paper of October 2009 on Independent Sector Treatment Centres (ISTCs)⁹⁸ states that these Centres must report to the Department of Health on 26 key performance indicators. These indicators are reported at least once per month, with some being reported on a daily basis. The paper states that data submitted to DH are not made public, as it is argued that this information is commercially sensitive. The Kings Fund concluded that the information in 2009 was not adequate to support conclusive assessment of the impact of the ISTC programme. In September 2012 in an answer to a Parliamentary Question⁹⁹ Bob Ainsworth MP was told "The quality of the TC [Treatment Centre] returns are such that data may not be complete. Some NHS Trusts have not registered their TC as a separate site and it is therefore not possible to identify their activity separately. Data from independent sector providers, where the onus for arrangement of data flows is on the commissioner, may be missing. Care must be taken with this data as the counts may be lower than true figures".

Other searches: Using the research question in Google found *The Patient Outcomes in Surgery* (POiS) audit¹⁰⁰. This was established to compare operative characteristics of patients and outcomes reported by patients, adjusted for case mix and complication rates for hip and knee replacement, inguinal hernia repair, and varicose vein surgery undertaken by ISTCs compared with those undertaken by NHS providers. The POiS audit built on a pilot study examining the feasibility of the routine collection of patient-reported outcome measures (PROMs) after elective surgery in 769 patients treated in six ISTCs and 1,895 patients treated by 20 NHS providers.

Results published by the Royal College of Surgeons in October 2011¹⁰¹ appear to be the first definitive results from the POiS audits. The pilot study found that patient-reported outcomes were slightly better in ISTCs than in the NHS, but these results were preliminary

⁹⁶ House of Commons Health Committee. *Independent Sector Treatment Centres. Fourth Report of Session 2005-06. Volume I.* HC 934-I. 2006. London, The Stationery Office

⁹⁷ www.kingsfund.org.uk/

⁹⁸ www.kingsfund.org.uk/publications/briefings/independent_sector.html

⁹⁹ www.publications.parliament.uk/pa/cm211213/cmhansard/cm12090/text/120907w0007.htm

¹⁰⁰ <http://www.hqip.org.uk/patient-outcomes-in-surgery-pois-audit/>

¹⁰¹ www.rcseng.ac.uk/surgical_research.../POiSAuditReport2011.pdf

as there were concerns about their generalisability, poor statistical power, and the limited adjustment for differences in case mix.

Analysis: It was quickly realised that official statistics did not present relevant data to respond to this research question, despite the recommendations made in 2006 by the Select Committee on Health and Social Services for the publication of more comparable data. However academic research was found fairly quickly on the web, which to some extent answers the research question. We have been told that comparisons of outcomes following NHS and private sector surgical interventions are particularly difficult since the private sector tends to carry out the least complicated procedures on the least complicated cases.

International Practice – some examples

1. Many other countries also have decentralised statistical structures but in some cases manage a more integrated approach. Germany has a Federal Statistical Office¹⁰² while the provincial governments, or Länder, have their own statistical offices¹⁰³. Regionalised federal statistics, and Länder statistics, are disseminated by the statistical offices of the Länder; national statistics, (which are also available at Länder level) are produced by the Federal office. Harmonised statistics for the country, Länder and smaller areas are available on the Statistics Portal¹⁰⁴. The portal provides central access to basic statistical information and facilitates comparisons across Länder. This is complemented by the Federal Health Monitoring System¹⁰⁵ (FHMS) which brings together all health statistics produced by the Federal Statistical Office and the statistical offices of the Länder, as well as statistics produced by other institutions in the health sector. While not harmonised, the statistics on the FHMS provide important contextual data and allow gaps in provision to be identified.

2. In Spain, national health statistics (which are also available by Autonomous Communities (ACs)) are produced by the National Institute of Statistics¹⁰⁶ (INE) and the Ministry of Health and Social Policy and Equality¹⁰⁷. All statistics produced by Central Government must adhere to a single set of concepts, definitions, statistical units and classifications to allow comparability, integration and analysis¹⁰⁸. ACs have their own regional ministries and also their own statistics offices to collect their own statistics for some purposes. In many cases these statistics may overlap totally or partially with the national ones but do not necessarily use the same methods. However, the AC statistical offices meet the Ministry of Health regularly to produce an updated inventory of statistics at the regional level¹⁰⁹. The inventory is updated every two years and provides users with details of all health statistics published by each AC including the agency responsible for implementing the data collection, the periodicity, purpose and main theme, and links to the outputs where available. Information is also provided about regional laws and policies which relate to the statistics. This inventory allows users to easily identify and access comparable statistics, and ascertain areas where comparable statistics are not available and potential underlying reasons for a lack of comparability.

¹⁰² http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Navigation/Homepage_NT.psm

¹⁰³ <http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Content/Service/Links/National.templateId=renderPrint.psm>

¹⁰⁴ <http://www.statistik-portal.de/Statistik-Portal/en/>

¹⁰⁵ http://www.gbe-bund.de/gbe10/pkg_isgbe5.prc_isgbe?p_uid=gastd&p_sprache=E

¹⁰⁶ <http://www.ine.es/welcoing.htm>

¹⁰⁷ <http://www.msps.es/en/estadEstudios/estadisticas/sisInfSanSNS/home.htm>

¹⁰⁸ Article 5 of The Government Statistics Act 1989:

http://www.ine.es/en/normativa/leyes/11289_en.htm

¹⁰⁹ <http://www.mspsi.gob.es/en/estadEstudios/estadisticas/estadisticas/infEstadisticasCCAA.htm>