UK Statistics Authority

Assessment of compliance with the Code of Practice for Official Statistics

Statistics on NHS Waiting Times in Scotland (Phase 2)

(produced by the Information Services Division of NHS National Services Scotland)

Assessment Report 254

May 2013

© Crown Copyright 2013

The text in this document may be reproduced free of charge in any format or medium providing it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.

For any other use of this material please write to Office of Public Sector Information, Information Policy Team, Kew, Richmond, Surrey TW9 4DU or email: licensing@opsi.gov.uk

About the UK Statistics Authority
The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:
1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

Contact us
Tel: 0845 604 1857
Email: authority.enquiries@statistics.gsi.gov.uk
Website: www.statisticsauthority.gov.uk

UK Statistics Authority
1 Drummond Gate
London
SW1V 2QQ

Assessment of compliance with the Code of Practice for Official Statistics

Statistics on NHS Waiting Times in Scotland (Phase 2)

(produced by the Information Services Division of NHS National Services Scotland)

ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

i. factual evidence and assurances by senior statisticians in the producer body;
ii. the views of users who we contact, or who contact us, and;
iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice.*

Contents

Section 1: Summary of findings
Section 2: Subject of the assessment
Section 3: Assessment findings

Annex 1: Suggestions for improvement
Annex 2: Compliance with Standards for Statistical Reports
Annex 3: Summary of assessment process and users' views

1 Summary of findings

1.1 Introduction

1.1.1 This is one of a series of reports[1] prepared under the provisions of the *Statistics and Registration Service Act 2007*[2]. The Act allows an appropriate authority[3] to request an assessment of official statistics against the *Code of Practice for Official Statistics*[4] in order for them to gain National Statistics status. This report is in response to such a request. This report covers the sets of statistics produced by the Information Services Division of NHS National Services Scotland (ISD) and reported in:

- *Emergency Department Activity and Waiting Times*[5] *(Emergency)*;
- *Audiology Waiting Times*[6] (*Audiology*);
- *Cancer Waiting Times in Scotland*[7] (*Cancer*);
- *18 Weeks Referral To Treatment*[8] (*RTT*);
- *National Drug and Alcohol Treatment Waiting Times Report*[9] (*DA)*; and
- *Child and Adolescent Mental Health Services Waiting Times in Scotland*[10] (*CAMHS*).

1.1.2 The Accident and Emergency waiting times statistics in *Emergency* were the subject of Assessment Report 55[11].

1.1.3 This report was prepared by the Authority's Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority confirms that the statistics listed in paragraph 1.1.2 are designated as National Statistics, and has determined that the statistics listed in paragraph 1.1.1 can be designated as new National Statistics products subject to ISD implementing the enhancements listed in section 1.5 and reporting them to the Authority by September 2013.

---

[1] http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html
[2] http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf
[3] Subsection 12(7) of the Act defines 'appropriate authority' as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician
[4] http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
[5] http://www.isdscotland.org/Health-Topics/Emergency-Care/Publications/index.asp
[6] http://www.isdscotland.org/Health-Topics/Waiting-Times/Audiology/
[7] http://www.isdscotland.org/Health-Topics/Waiting-Times/Cancer/
[8] http://www.isdscotland.org/Health-Topics/Waiting-Times/18-Weeks-*RTT*/
[9] http://www.isdscotland.org/Health-Topics/Drugs-and-Alcohol-Misuse/Publications/
[10] http://www.isdscotland.org/Health-Topics/Waiting-Times/Child-and-Adolescent-Mental-Health/
[11] http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html

1.3 Summary of strengths and weaknesses

1.3.1 ISD engages well with key users within NHS Boards and the Scottish Government. The statistical reports include standardised metadata sections containing technical notes, and explanation of key terms in their glossaries.

1.3.2 Several of the sets of waiting times statistics are based on aggregate data supplied by NHS Boards from patient administration systems. Use of the aggregate data means that the statistics are often published at a level which precludes analysis of the performance of different NHS Boards or specialities. For some of these statistics, ISD cannot validate these data and is reliant on the NHS Boards to do so.

1.4 Detailed recommendations

1.4.1 The Assessment team identified some areas where it felt that ISD could strengthen its compliance with the *Code*. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

1.5 Requirements for designation as National Statistics

Requirement 1	Take steps to develop a greater understanding of the use made of the waiting times statistics, publish the relevant information and assumptions and use them to better support the use of the statistics (para 3.1).
Requirement 2	Provide an explanation of the extent of revisions to the statistics at the same time that they are released (para 3.5).
Requirement 3	Publish improved information about the methods used to produce the waiting times statistics and include explanations as to why particular choices were made (para 3.10).
Requirement 4	Publish more detailed information about the quality and reliability of the statistics; make clear their strengths and limitations in relation to use; and ensure that users are informed of all main sources of error and bias (para 3.12).
Requirement 5	Publish information about the coherence of the *RTT* statistics with other official and National Statistics published about these waiting times to aid the use of the statistics (para 3.13).

Requirement 6	Provide more information about the involvement of users in the development of the *RTT* statistics, and produce a plan to describe how the statistics in *RTT*, Audiology and *CAMHS* will be evaluated (para 3.14).
Requirement 7	Provide information about the comparability of all the waiting times statistics with those produced by the other UK administrations (para 3.15).
Requirement 8	Publish annually the estimated costs to the NHS Boards of responding to statistical returns for waiting times statistics (para 3.17).
Requirement 9	Improve the commentary and analysis in the waiting times reports so that it aids user interpretation of the statistics (para 3.22).
Requirement 10	Ensure that ‘early access’ and pre-release access lists are kept under close review so that this privileged access is granted only where absolutely necessary and for the shortest time possible (para 3.24).
Requirement 11	a) provide details in the Statement of Administrative Sources about the arrangements for auditing the quality of the data that underpin the statistics and b) ensure that all administrative data sources used to produce the waiting times statistics are included in the Statement of Administrative Sources (para 3.26).

2 Subject of the assessment

2.1 The statistics covered in this assessment are part of a suite of statistics on aspects of waiting times in the health service in Scotland published by ISD and produced to measure performance targets Health improvement; Efficiency and governance improvements; Access to services; and Treatment appropriate to individuals[12] (HEAT) developed by the Scottish Government. These statistics are published quarterly and are referred to collectively in this report as waiting times statistics.

2.2 *Emergency Department Activity and Waiting Times (Emergency)* was previously released as two separate reports: *Accident and Emergency Waiting Times*[13] (assessed in Assessment Report 55[14]) and *Emergency Department Activity*[15]. The report presents statistics on the number of new and unplanned attendances at accident and emergency services; performance against targets for waiting times and for attendances; and the proportion of NHS Boards that complied with the HEAT Standard for Accident and Emergency waiting times of four hours[16]. Statistics are derived from the ISD's national data warehouse – the Accident and Emergency (A&E) Datamart[17]. Data are supplied in two forms to the Datamart; larger hospitals with emergency departments generally supply detailed records; smaller sites such as minor injury units submit an aggregate quarterly return.

2.3 *Audiology Waiting Times* (*Audiology*) presents information about how long patients (adults and children) have waited for Audiology assessment and treatment, and the number of patients remaining on the waiting list for treatment at the end of the quarter. Statistics are presented by stages of treatment from referral to the first assessment appointment, followed by possible treatment and fitting of a hearing aid. Statistics for 'one stop clinics', where patients can be assessed and treated at a single appointment, are also included. Audiology services are included in the Scottish Government target of 18 weeks maximum wait from referral to treatment. The statistics in *Audiology* are presented in relation to a 12 week target, which reflects locally agreed NHS Board targets. The report presents figures at Scotland level with statistics at NHS Board level published in supplementary Excel files. ISD classifies Audiology statistics as 'developmental statistics'[18].

---

[12] http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotlandperformance

[13] http://www.isdscotland.scot.nhs.uk/Health-Topics/Waiting-Times/Publications/2011-02-22/2011-02-22-AEWT-Report.pdf

[14] http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html

[15] http://www.isdscotland.org/Health-Topics/Emergency-Care/Publications/

[16] http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotlandperformance/4hrAEStandard

[17] http://www.isdscotland.org/Health-Topics/Emergency-Care/Accident-and-Emergency-Data-Mart/

[18] ISD use the term 'developmental statistics' to describe experimental statistics. Experimental statistics are described in the *Code of Practice* as 'new official statistics undergoing evaluation. They are published in order to involve users and stakeholders in their development and as a means to build in quality at an early stage'. The Authority has published guidance setting out its approach to assessing and designating such statistics http://www.statisticsauthority.gov.uk/news/assessment-and-designation-of-experimental-statistics.html

2.4 *Cancer Waiting Times in Scotland (Cancer)* presents statistics on the percentage of patient waits that meet the two Scottish Government targets presented in *Better Cancer Care, An Action Plan*[19]: the 62-day waiting time standard from referral to first cancer treatment for all patients with an urgent referral; and the 31-day standard from decision-to-treat to treatment for all patients, which does not include other time spent waiting, for example for an outpatients appointment. Staff in each NHS Board area submit the data used to produce cancer waiting times statistics for inclusion in the ISD Cancer Waiting Times Database. *Cancer* presents statistics for each NHS Board area and for the three individual Cancer Networks.

2.5 *18 Weeks Referral To Treatment(RTT*) presents statistics on the numbers of patients who waited 18 weeks or less from the date a GP referral was received by a NHS Board to the date that treatment started, including treatment undertaken in an outpatient setting. The report presents statistics on the number of people that this 'patient journey' could be measured for, the number of patients that it could not be measured for, and the number of people who had waited over 18 weeks at the end of the quarter. The statistics are based on aggregate data collected from each NHS Board. IT systems at NHS Boards are being developed to facilitate the future transfer of patient level data to the ISD waiting times data warehouse. ISD classifies RTT statistics as 'developmental statistics'.

2.6 *National Drug and Alcohol Treatment Waiting Times Report (DA)* presents statistics from the Drug and Alcohol Treatment waiting times database on the number of people seen during the quarter, the time waited to start drug or alcohol treatment, and the types of treatment accessed. The information in the database has been supplied by the individual treatment services since April 2011. The statistics are presented at Scotland level only, measured against the Scottish Government target that 90 per cent of people that need help will wait no longer than 3 weeks. Statistics for individual Boards and Alcohol and Drug Partnership areas are included as supplementary Excel tables.

2.7 *Child and Adolescent Mental Health Services Waiting Times in Scotland* (*CAMHS*) was introduced in August 2012. The bulletin presents statistics about how long children and young people waited for mental health services provided by the NHS in Scotland. Statistics are presented on the number of people who started treatment during the quarter; the proportion who waited less than the target; the number still on the waiting list; and the number waiting more than the target time. Statistics are presented on the actual times that people have waited (called 'unadjusted' waiting times) and on the waiting times where people have not been available or have missed appointments (called 'adjusted' waiting times). ISD classifies CAHMS statistics as 'developmental statistics'.

2.8 The statistics are principally used by the Scottish Government and NHS Boards to monitor performance against waiting times targets and for service planning. Statistics are also used to respond to Parliamentary Questions and information requests from the public and media about access to treatment and services.

2.9 Staff resources to produce the waiting times statistics cover data collection, user support such as meetings with NHS Boards, answering queries and the preparation of the statistical reports. ISD told us that the staff resources used to

[19] http://www.scotland.gov.uk/Publications/2008/10/24140351/0

produce these waiting times statistics is approximately 10 full-time equivalent staff across the six reports.

3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

3.1 ISD told us that the primary use of these statistics is by NHS Boards, local authorities and the Scottish Government to monitor progress against national NHS Performance targets (HEAT) and to answer Parliamentary Questions. The ISD statistics teams attend regular meetings with representatives of NHS Boards and the Scottish Government to discuss data collection and the quality of the statistics. The minutes of some of these meetings, such as the Detect Cancer Early Programme Board[20] are published on the Scottish Government's website and could usefully be linked to from ISD's website. The statistics teams also meet bilaterally with the data suppliers at NHS Boards. ISD provided the Assessment team with unpublished minutes of some of these meetings. The statistics teams have taken some steps to engage with other users, for example the team that produces audiology waiting times statistics told us that it has contacted voluntary groups to obtain their views about the statistics. ISD told us that much user engagement is carried out at the organisational level. However, the statistics teams do not regularly engage with a broad range of users outside of NHS and the Scottish Government. The statistics teams told us that they have some knowledge about the potential wider user community for these statistics, but that currently the main contact with users outside government or the NHS is in response to media queries. The statistics teams receive few queries from the public through the dedicated email address advertised in the bulletins and on its website. ISD carries out an annual customer survey[21] which invites respondents to rate various aspects of the waiting times statistics. The metatdata in each of the bulletins notes some uses of the statistics but this is generic and does not provide specific examples of how the statistics have been used by different types of users. As part of the designation as National Statistics, ISD should take steps to develop a greater understanding of the use made of the waiting times statistics, publish the relevant information and assumptions and use them to better support the use of the statistics[22] (Requirement 1). We suggest that in meeting this Requirement ISD should refer to the types of use put forward in the Statistics Authority's Monitoring Brief, *The Use Made of Official Statistics*[23] when documenting use.

3.2 ISD publishes waiting times statistics quarterly. The release timetable is arranged to allow NHS Boards to prepare and submit data, carry out quality checks and obtain sign off from the Chief Executive of the NHS Board. Monthly management data are sent to the Scottish Government and NHS Boards to assist with the monitoring of targets. The Scottish Government has recently

[20] http://www.scotland.gov.uk/Topics/Health/Services/Cancer/Detect-Cancer-Early/Minutes
[21] http://isdscotland.org/ISD-Customer-Survey-Blank.pdf
[22] In relation to Principle 1, Practices 1 and 2 of the *Code of Practice*
[23] http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-6-2010---the-use-made-of-official-statistics.pdf

asked for the some of the statistics in *Emergency* to be released monthly and the statisticians are currently assessing the options for doing so.

3.3 ISD has consulted users on some changes made to these statistics; most recently statisticians prepared a mock-up bulletin for public consultation[24] in advance of the first release of CAMHS statistics. ISD received four responses to the consultation and published a summary report[25]. ISD told us that it took account of these responses in deciding the content for the first statistical report in August 2012. ISD carried out a consultation on proposed changes to Emergency Department statistics in 2011 and to Audiology waiting times statistics in 2010, and published summary reports[26] containing plans to address some of the issues raised during the consultation.

[24] http://www.isdscotland.org/Health-Topics/Waiting-Times/Child-and-Adolescent-Mental-Health/CONSULTATION_CAMHS_waiting_times_publication.pdf
[25] http://www.isdscotland.org/Health-Topics/Waiting-Times/Child-and-Adolescent-Mental-Health/CAMHS-consultation-feedback.pdf
[26] http://www.isdscotland.org/Health-Topics/Emergency-Care/Emergency-Department-and-Admissions-Statistics/Consultation%20Report%20feb%202011%20final.pdf and http://www.isdscotland.org/Health-Topics/Waiting-times/Audiology/Audiology_feedback_report_final.

Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

3.4 Waiting times statistics are presented impartially and objectively.

3.5 ISD has published a revisions policy[27] which explains how scheduled revisions are managed. The policy states that where a revision has been made or is planned, the bulletin will explain the impact on the key statistics and findings. Each of the reports, with the exception of *RTT*, contains a statement in the metadata section indicating that the statistics are subject to change. However, the scale of revisions is not noted, for example *CAMHS* notes a revision to figures submitted by one NHS Board but does not provide an indication of the scale of change in the statistics. As part of the designation as National Statistics, ISD should provide an explanation of the extent of revisions to the statistics at the same time that they are released[28] (Requirement 2).

3.6 ISD publishes the statistics free of change on its website, according to a published release timetable.

[27] http://www.isdscotland.org/About-ISD/About-Our-Statistics/ISD-Revisions-Policy-V04.pdf
[28] In relation to Principle 2, Practice 6 of the *Code of Practice*

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

3.7 No incidents of political pressures, abuses of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment team.

3.8 The production of the waiting times statistics reports is a result of co-operation between ISD, the Scottish Government and NHS Boards. For example, for *RTT*, Scottish Government issues guidance to NHS Boards on managing waiting lists[29], NHS Boards collate the data, carry out validation and sign off the data, and ISD collects, analyses and presents the official statistics. However, ISD does not make clear that it has full responsibility for the content of the statistical bulletins. We suggest that ISD publish information about the roles and responsibilities of the organisations involved in the production and publication of waiting times statistics.

[29] http://www.sehd.scot.nhs.uk/mels/CEL2012_33.pdf

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

3.9 Each statistical report includes a brief summary of the data collection procedures. ISD provides some further information on their website, which it links to from the bulletins. *Emergency* is based on data extracted from ISD's Accident and Emergency (A&E) Datamart and supported by published methods documents including a data dictionary[30] and validation rules[31]. *Emergency* provides details about the continuity of the statistics from previous systems and how changes in hospital patient management systems have impacted on the statistics.

3.10 Data used to produce the remaining sets of statistics are sourced from a variety of clinical, administrative and standalone systems used in NHS Boards. Each of these systems records part of a patient's journey. Analysts in NHS Boards combine the data to create aggregate measures of patients' waiting times. NHS staff validate the data prior to submitting them to ISD. *Audiology*, *RTT* and *CAMHS* state that ISD is unable to systematically validate the data; ISD told us that the statisticians carry out quality assurance work such as comparing patterns and trends and raising queries with NHS Boards. ISD does not audit the data. The level of supporting methods documents varies across the statistics:

- Users told us that they had previously been concerned about definitional inconsistencies in the child and adolescent mental health data submitted by NHS Boards but that clearer guidance issued by ISD had helped to remove these inconsistencies. ISD has published a definitions document[32] and the Scottish Government has published further advice on the recording of CAMHS waiting times for NHS Boards[33].
- ISD has published documents describing the methods used to produce cancer waiting times statistics[34]; however suppliers told us that they thought that more guidance was needed especially for applying adjustments to the data prior to submission to ISD.
- The Drug and Alcohol Treatment Waiting Times Database (DATWT) collates information provided by treatment services. Guidance for staff responsible for data input is published on the Drug Misuse Information Scotland website[35]. ISD is currently consulting[36] users about whether to

[30] http://www.datadictionaryadmin.scot.nhs.uk/Other-Standards/index.asp
[31] Section 4 of the Datamart user guide: http://www.isdscotland.org/Health-Topics/Emergency-Care/Emergency-Department-Activity/Data-Quality/AE2-User-Guide.pdf
[32] http://www.isdscotland.org/Health-Topics/Waiting-Times/Child-and-Adolescent-Mental-Health/CAMH-Waiting-Times-Scope-and-Definitions-v1.0.pdf
[33] http://www.isdscotland.org/Health-Topics/Mental-Health/MH_Access_Targets_NHS_Scotland_WT_Guidance_Nov12.pdf
[34] http://www.isdscotland.org/Health-Topics/Waiting-Times/Cancer/Guidance/
[35] http://www.drugmisuse.isdscotland.org/wtpilot/2011-10-18-DATWT-GuidanceNotesWebSystem-v7.pdf

close this website and move the contents to the ScotPHO[37] and ISD websites.

- ISD has published a supporting definitions document to accompany *Audiology*[38] but no further methods documents are published.
- No information is published about the methods used to produce the referral to treatment waiting times statistics. ISD told us that NHS Boards currently submit aggregated data for *RTT* as an interim measure while NHS IT systems are being upgraded to facilitate the measurement of the 18 Weeks referral to treatment waiting time target (including that for audiology services) for individual patients.

As part of the designation as National Statistics, ISD should publish improved information about the methods used to produce the waiting times statistics and include explanations as to why particular choices were made[39] (Requirement 3).

3.11 ISD publishes comprehensive information about the quality of the statistics in *Cancer,* which includes: a fit for publication exercise summary report[40]; a data quality assurance audit[41]; and the results of a further data quality project[42]. Developmental statistics are presented in *RTT*, *Audiology* and *CAMHS* and caution is advised in the use of these (incomplete – see paragraph 3.14) statistics. These reports include sections about quality which either present tables indicating which NHS Boards have submitted data, or provide updates on the development of the patient tracking systems for each NHS Board. The reports include no indication about the scale of missing data and the impact that could have on the use of the statistics or on the time series presented in the bulletins.

3.12 There are some other factors affecting the statistics covered by this report which are not adequately documented or explained: the impact of manual coding of data onto patient administrative systems at NHS Boards; the inability of ISD to systematically validate aggregated data; and how variations in the quality of the data supplied by NHS Boards could impact on the statistics and on their use. ISD acknowledges a range of issues which affect the consistency of data submitted by the Health Boards in relation to the experimental statistics. An aggregated measure may not therefore offer an accurate representation of the target. For example:

- Models of service delivery vary between Health Boards, but data are aggregated into a single national measure. *DA* notes that the impact of single specialised services in some areas mean that comparisons across boards 'may be misleading'. *CAMHS* reports that services are not using a consistent definition of children and young people, including different age

---

[36] http://www.drugmisuse.isdscotland.org/
[37] http://www.scotpho.org.uk/
[38] http://www.isdscotland.org/Health-Topics/Waiting-Times/*Audiology*/*Audiology*-Waiting-Times-Monthly-Data-Submission-Guidance-V1%200.pdf
[39] In relation to Principle 4, Practice 1 of the *Code of Practice*
[40] http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2012-03-27/Fit_for_Purpose_Exercise.pdf
[41] http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2011-06-28/NCWT%20DQA%20Scotland%20Report%20v1%200_Final.pdf
[42] http://www.isdscotland.org/Health-Topics/Waiting-Times/Cancer/Data-Quality/

groups, and thus it is not possible to give a direct comparison of referral rates across the NHS Boards.

- Data adjustments are not consistently applied by Boards. *CAMHS* reports that unadjusted waiting times are not available for all NHS Boards, and that some Boards are not able to make all the appropriate adjustments. *RTT* comments that Boards are using different collection systems for measuring patient journeys, and are adjusting the standard methodology in order to improve the data collection.

- Data completeness and exclusions vary between Boards. For example, *Cancer* excludes some patients due to clinical reasons, death or refusal. The rate of exclusions varies from 0 to 10 per cent. *RTT* comments that complete journeys could not be measured fully for 8.5 per cent of patients. It is not clear whether this impacts on estimates of performance against the overall target or individual Board results.

As part of the designation as National Statistics, ISD should publish more detailed information about the quality and reliability of the statistics; make clear their strengths and limitations in relation to use; and ensure that users are informed of all main sources of error and bias[43] (Requirement 4).

3.13 *RTT* presents statistics on the patient journey from initial GP referral to the start of treatment. ISD also publishes statistics on *Inpatient, Day Case and New Outpatient Stage of Treatment Waiting Times*[44] which relate to different government targets but cover some of the same stages of treatment. ISD told us that the statistics are not comparable due to the many variations that a patient can have in the course of treatment, and that the data are collected using different methods. During the course of the Assessment, ISD shared an unpublished document with the Assessment team outlining work that ISD carried out to compare the data held in the ISD waiting times data warehouse with NHS Boards submissions for *RTT*. As part of the designation as National Statistics, ISD should publish information about the coherence of the RTT statistics with other official and National Statistics published about hospital waiting times to aid the use of the statistics[45] (Requirement 5).

3.14 *RTT*, *Audiology* and *CAMHS* are released as developmental statistics. ISD has published reports for *CAMHS*[46] and *Audiology*[47] demonstrating the involvement of users in the development of these statistics, but there is no equivalent report for *RTT*. ISD has not published any information, or produced plans, to describe how *RTT*, *Audiology* and *CAMHS* will be evaluated (with a view to no longer being regarded as 'developmental'). As part of the designation as National Statistics, ISD should provide more information about the involvement of users in the development of the *RTT* statistics, and produce a plan to describe how the statistics in *RTT*, *Audiology* and *CAMHS* will be evaluated[48] (Requirement

---

[43] In relation to Principle 4, Practice 2 of the *Code of Practice*
[44] http://www.isdscotland.org/Health-Topics/Waiting-Times/Inpatient-Day-Cases-and-Outpatients/
[45] In relation to Principle 4, Practices 3 and 4 of the *Code of Practice*
[46] http://www.isdscotland.org/Health-Topics/Waiting-Times/Child-and-Adolescent-Mental-Health/
[47] http://www.isdscotland.org/Health-Topics/Waiting-Times/Audiology/
[48] In relation to Principle 4, Practice 5 and Protocol 1, Practice 5 of the *Code of Practice*

6). We suggest that, in meeting this Requirement, ISD use the term ‘experimental’ to describe the statistics in *RTT*, *Audiology* and *CAHMS*.

3.15 *Audiology, CAMHS* and *Cancer* each note that comparative information is not available across the four UK countries due to definitional differences within the data. A collaborative effort by the health departments (the UK Comparative Waiting Times Group) had produced comparable figures. However, no further information is provided about the current work of this group. *DA* includes a note in the metadata that no comparable data are available outside Scotland, while *RTT* notes that collection methods vary across the four nations meaning that the statistics are not comparable. *Emergency* refers users to hesonline.nhs.uk for further information about comparability. None of the reports offer further explanation for the lack of comparability. As part of the designation as National Statistics, ISD should provide information about the comparability of all the waiting times statistics with those produced by the other UK administrations[49] (Requirement 7). We suggest that in meeting this Requirement ISD make clear that targets differ across UK administrations, and provide links to the most relevant statistics in other administrations and to previous or ongoing work by UK comparability groups.

[49] In relation to Principle 4, Practice 6 of the *Code of Practice*

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

3.16 The Assessment team was assured by ISD that the waiting times statistics adhere to ISD's published statement on confidentiality.

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

3.17 ISD produces the waiting times statistics from a range of administrative data systems using pre-defined spreadsheet returns and submissions to data warehouses. Data suppliers told us that they collect some of these data as part of their routine work, but that the increased level of detail required by ISD and the frequency of the submission timetable creates a substantial resource burden, and that this prevents resources being used to improve the source data. ISD has not published any assessment of the burden on NHS Boards to supply the data in the format requested by ISD, or demonstrated any steps taken to minimise the burden on data suppliers. As part of the designation as National Statistics, ISD should publish annually the estimated costs to NHS Boards of responding to statistical returns for waiting times statistics[50] (Requirement 8). We suggest that in meeting this Requirement, ISD investigate ways to assess and reduce the burden on data suppliers of supplying waiting times data.

[50] In relation to Principle 6, Practice 1 of the *Code of Practice*

Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

3.18 ISD told us that it agrees priorities annually with the Scottish Government and stakeholders. ISD's Strategic Oversight Group then assigns resources accordingly. These priorities feed into a work programme, which is monitored monthly against the allocated budget and staff time spent, utilising reports available from the finance department.

3.19 The statistics team responsible for cancer waiting times statistics told us that it felt that *Cancer* includes surplus information, relative to known user requirements, and that less detail should be included. A forthcoming user review during 2013 will consider the content of the report with users. We suggest that ISD publish the results of the forthcoming review along with an outline of the impact on the report and corresponding resources.

Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

3.20 The reports have a uniform layout with an introduction and key points followed by the results, commentary and a glossary explaining technical terms. The language used is generally straightforward and includes references to the appropriate Scottish Government policy. Supporting data are provided in Excel charts and tables linked to from the bulletins.

3.21 The waiting times reports include key points about the percentage of cases that meet each target, but they do not provide a broader operational context outside of these targets. There is scope for improvements in the analysis and presentation of the statistics; for example *CAMHS, Emergency* and *RTT* could be improved by presenting distributions showing the time waited for all patients and the time spent on the waiting lists for those who have yet to receive treatment.

3.22 The usefulness of the reports is limited by the amount of missing data and inconsistencies in the quality of some of the statistics; this means that changes in the statistics, particularly in the experimental statistics, are often as a result of improved data collection and do not reflect actual changes in the population being measured. The commentary accompanying the time series identifies rises and falls in the statistics, but does not provide any information about the impact that the lack of reliable estimates of actual change could have on the use of the statistics. The commentary in the bulletins advises caution due to missing data or different service delivery models (for example in *DA*) but no objective measures of the accuracy of the estimates are presented. The commentary does not explain how these different delivery models could affect user interpretation of the statistics. The commentary in *Emergency* does not sufficiently explain the reasons that two data sources are used for time series and the differences between these. *Audiology* and *RTT* present statistics only for Scotland as a whole, with a breakdown by NHS Board in supplementary Excel tables. Statistics in *RTT* are not presented by speciality which limits the value of the statistics to users outside the NHS and the Scottish Government. As part of the designation as National Statistics ISD should improve the commentary and analysis in the waiting times reports so that it aids user interpretation of the statistics[51] (Requirement 9). We suggest that in meeting this requirement, ISD should consider the points detailed in annex 2.

[51] In relation to Principle 8, Practice 2 of the *Code of Practice*

Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.23 The requirements for this Protocol are covered elsewhere in this report.

Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

3.24 Pre-release access arrangements are detailed in the back of the reports. This explains that Scottish Government analysts have eight days pre-release access to the statistics. ISD told us that there is an agreement between the ISD statistical Head of Profession and the Scottish Government to allow access to statistical reports eight days before publication; this access is to statistical colleagues within Health Analytical Services Division (ASD) and ISD told us that it is for the purpose of enabling ASD to gain a full understanding of the statistics to prepare briefings. However, the reasons for extending the time limit from the standard maximum limit of five working days are not made clear. As part of the designation as National Statistics, ISD should ensure that 'early access' and pre-release access lists are kept under close review so that this privileged access is granted only where absolutely necessary and for the shortest time possible[52] (Requirement 10).

3.25 ISD told us that it publishes these statistics at the standard time of 9.30am.

[52] In relation to Protocol 2, Practice 7 of the *Code of Practice*

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

3.26 ISD has a published Statement of Administrative Sources[53] (SOAS). This does not include the sources used to produce CAMHS and states that this is currently included as part of a list of developing data collection. The SOAS does not adequately explain the arrangements for auditing the quality of the waiting times data. As part of the designation as National Statistics ISD should a) provide details in the SOAS about the arrangements for auditing the quality of the data that underpin the statistics and b) ensure that all administrative data sources used to produce the waiting times statistics are included in the SOAS[54] (Requirement 11).

[53] http://www.isdscotland.org/About-ISD/About-Our-Statistics/ISD-Statement-of-Administrative-Sources-v2.0-Mar2012.pdf

[54] In relation to Protocol 3, Practices 5a and 5e of the *Code of Practice*

Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to ISD's waiting times statistics, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

Suggestion 1	Refer to the types of use put forward in the Statistics Authority's Monitoring Brief, *The Use Made of Official Statistics* when documenting use (para 3.1).
Suggestion 2	Publish information about the roles and responsibilities of the organisations involved in the production and publication of waiting times statistics (para 3.8).
Suggestion 3	Use the term 'experimental' to describe the statistics in *RTT*, *Audiology* and *CAMHS* (para 3.14).
Suggestion 4	Make clear that targets differ across UK administrations, and provide links to the most relevant statistics in other administrations and to previous or ongoing work by UK comparability groups (para 3.15).
Suggestion 5	Investigate ways to assess and reduce the burden on data suppliers of supplying waiting times data (para 3.17).
Suggestion 6	Publish the results of the forthcoming review of *Cancer* along with an outline of the impact on the report and corresponding resources (para 3.19).
Suggestion 7	Consider the points detailed in annex 2 in seeking to improve the statistical reports (para 3.22).

Annex 2: Compliance with Standards for Statistical Reports

A2.1 In November 2012, the Statistics Authority issued a statement on *Standards for Statistical Reports*[55]*.* While this is not part of the *Code of Practice for Official Statistics,* the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical reports associated with the waiting times statistics presented in this Assessment, this annex comments on compliance with the statement on standards.

A2.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical reports, we encourage the producer body to apply the standards as fully as possible.

Include an impartial narrative in plain English that draws out the main messages from the statistics

A2.3 The reports contain impartial commentary that is accessible to users and each includes a summary of the key findings. The commentary provided is brief and is focused on the extent to which headline targets are met, providing little additional contextual information or comparative analysis between NHS Health Boards or types of conditions. Targets are generally well explained, but the commentary describes rises and falls in the numbers without offering explanations for changes.

A2.4 The reports which contain developmental statistics (*RTT*, *Audiology* and *Cancer*) describe substantial data quality limitations in separate sections of the commentary. However, ISD does not consistently provide information about the extent to which these quality issues impact upon the interpretation of individual tables or charts. It is therefore unclear whether they present genuine trends, or simply reflect changes in data quality or completeness. For example, for the most recent reports:

a. The commentary in *CAMHS* (February 2013) describes a decrease in the percentage of people seen within 26 weeks compared with the previous quarter, referring to Chart 1. However, Chart 1 does not present a consistent time series, as the bars do not all include the same group of Health Boards.

b. *Audiology* (February 2013) comments on a slight decrease in the last year in waits for assessments across Scotland, referencing Chart 1. However, the data completeness table on page 14 makes clear that consistent data are not available over this period for Lanarkshire and Ayrshire & Arran. Furthermore, the data in Chart 1 appear to show seasonal patterns, so a longer time series is needed for clarity.

c. *RTT* (November 2012) presents trend figures in a chart on page 4, commenting that this only includes patients whose entire journey could be measured. ISD does not provide commentary on the variation in data

[55] http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html

completeness over this period or its impact until page 11, though Table 1 on page 5 does include the raw percentages. The Assessment team considers that some users may incorrectly regard these statistics as providing a consistent trend.

A2.5 *Audiology, Cancer* and *DA* provide supplementary tables providing the full distribution of waiting times around the target; the Assessment team regards this as good practice. *CAMHS, Emergency* and *RTT* include information about performance against the waiting times target, but do not provide any supplementary distributions to inform the extent to which the target was missed for some patients.

Include information about the context and likely uses of the statistics

A2.6 The waiting times reports all give descriptions of what they are measuring and why, as well as descriptions and explanations of the concepts. The introduction sections provide some of the operational context in which these statistics have been produced, such as the HEAT targets for waiting times, and their development. The reports explain why these statistics are important to the NHS, as well as their known uses. ISD does not publish assumptions about the potential or actual uses of the statistics by users outside the NHS.

Include information about the strengths and limitations of the statistics in relation to their potential use

A2.7 *Audiology* and *CAMHS* present developmental statistics, but are only labelled as such in the metadata at the back of the report. ISD has not made this developmental status sufficiently clear throughout the reports. *RTT* also presents developmental statistics, referencing this status in the main commentary, the data quality annex and the metadata.

A2.8 ISD acknowledges a range of issues which affect the consistency of data submitted by the NHS Boards in relation to waiting times. However, ISD does not offer sufficient information about the potential impact of these issues on the statistics and their likely implication for use.

A2.9 All of the waiting times reports, with the exception of *RTT,* include brief references to revisions. However, ISD does not provide information about the scale of these revisions in the report or in supporting documentation.

Be professionally sound

A2.10 The descriptive statements in the waiting times reports are demonstrably consistent with the statistics and descriptions of proportions, changes, trends and patterns. However, the commentary does not always reflect the uncertainty in the figures.

Include, or link to, appropriate metadata

A2.11 All of the waiting times reports have titles describing the coverage of the statistics and the point in time or period to which the latest statistics relate. All

sets of statistics are clear about the frequency of publication. The name of the producer body as well as contact details for the responsible statisticians, are prominent in the reports.

A2.12 The reports or accompanying documentation on ISD's website, provide some background information about definitions, data sources and methods.

A2.13 The reports, with the exception of *Emergency*, comment that figures are not comparable with other parts of the UK due to definitional issues, but do not provide sufficient information about the key areas of difference.

Annex 3: Summary of assessment process and users' views

A3.1 This assessment was conducted from November 2012 to April 2013.

A3.2 The Assessment team – Emily Gleeson and Russell Whyte – agreed the scope of and timetable for this assessment with representatives of ISD in November. The Written Evidence for Assessment was provided between in January. The Assessment team subsequently met ISD during February to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

A3.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.

A3.4 The Assessment team received 43 responses from the user consultation. The respondents were grouped as follows:

NHS	32
Local government	6
Scottish Government	4
Voluntary organisations	1

A3.5 NHS users told us that they used the statistics to monitor targets and to compare with other NHS Boards: for this purpose they were content with the statistics and found them easy to use. Some users identified a need for further detailed commentary to aid interpretation of the statistics, and how they might be used to improve patient care. Users identified a need for more detailed disaggregation of statistics, including: demographic breakdowns by patient age and gender in *Emergency, Cancer* and *DA*; further information about diagnosis and survival rate in *Cancer;* and number of repeated treatments in *DA*. Conversely, one user noted that they did not require statistics about the individual stages of audiology treatment. Users also noted some difficulty interpreting adjustments in *Cancer* and *CAMHS,* and with definitions in *RTT* and *CAMHS.*

A3.6 Data suppliers reported that they collect the data routinely for their own purposes, but not necessarily in the same level of detail or frequency as required by ISD. Some suppliers noted difficulty submitting data due to the lack of a standard submission template, and several reported that the resources needed to complete and submit the data means that they have less time to devote to improving the data quality and linkages. Suppliers also noted some

issues with clarity in the guidance, relating to treatment of adjustments and definitions, though they were happy with ISD's level of engagement with them.

Key documents/links provided

Written Evidence for Assessment document

www.statisticsauthority.gov.uk