

CORPORATE HEALTH INFORMATION PROGRAMME

OUTPATIENT NATIONAL DATABASE DATA VALIDITY STANDARDS

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1. PURPOSE

The purpose of this document is to outline a revised set of data validity indicators for data submitted to the outpatient activity national database. The aim is to ensure that the indicators themselves, and the means by which performance against them is reported, are consistent with those that have already been developed for Admitted Patient Care (APC) data.

For the purposes of this document and associated recommendations, data validity can be defined as being concerned with whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

It is proposed that these revised indicators will form the foundations for future data quality performance monitoring and will be used as a basis to highlight specific validity issues in data submitted to the outpatient activity national database by Welsh NHS Trusts.

2. BACKGROUND

One of the fundamental objectives of the Corporate Health Information Programme (CHIP), as outlined within the Project Initiation Document (PID), is the need to improve confidence in information leading to it being actively used to inform service improvement. An essential component of this aim is the quality of the data that is being used to support decision making within the service.

A programme of Data Accreditation was undertaken in 2002/03 to evaluate NHS Trusts on the capture, reporting and accuracy of a range of information within secondary care, including outpatient activity. In Wales, however, a set of data validity indicators and reports for outpatient data were not established, as an outpatient activity national database was not in existence at the time. NHS Trusts were instead required to submit activity data to individual Business Services Centre offices, which processed the data on behalf of their respective Local Health Boards.

Whilst the outpatient activity minimum dataset has been mandated since April 1999¹, NHS Trusts have only been required to submit monthly extracts detailing outpatient activity to the national database, via Health Solutions Wales (HSW), since December 2004². The data has a range of uses and can be used to support the management, commissioning and planning of healthcare services, the evaluation of NHS performance trends and can be a valuable source of epidemiological data at both a national and local level. High quality data is essential if it is to be relied upon to support such processes in NHS Wales.

CHIP recently published a document titled "*Admitted Patient Care National Database – Data Validity Standards*"³, which outlined a fresh approach to the issue of data quality. Six dimensions of data quality were identified, and the need to address each was highlighted if the service is to genuinely understand how good (or

¹ WHC (98) 60

² WHC (2004) 081

³ <http://howis.wales.nhs.uk/sites3/Documents/460/130607%5FCHIPB%2806%2904.pdf>

bad) its data is. To this end, a set of data validity standards were developed for submitted APC data, which aimed to address the dimensions of timeliness and validity.

The document also provided further background in relation to national programmes that were established with the aim of addressing data quality issues within the service, such as the Data Accreditation Programme, and also outlined the current perception of the quality of submitted Trust data within the service.

In May 2005, approval was given by the Welsh Assembly Government (WAG) to establish an Outpatient Data Quality Project (ODQP) to review and address the quality of the thirteen data items identified as key under the Data Accreditation programme. This project reviewed the quality of submitted outpatient data and, following a wide consultation process, developed an extended set of twenty validity indicators, which included the thirteen original Data Accreditation data items. These were agreed with the service via the all-Wales Secondary Care Steering & Supplier Group meetings.

This document aims to review and develop these indicators in line with current (and future) demands for outpatient information.

3. THE APPROACH

It is essential that data being used for corporate purposes is deemed “*fit for purpose*”. This fact is applicable to any data that is utilised by the service for secondary analysis purposes.

Using the principles outlined in the document “*Admitted Patient Care National Database – Data Validity Standards*”, it was deemed necessary to develop a revised set of data validity standards for outpatient data. These will be used as one of the measures of the quality of submitted outpatient data for corporate uses.

A separate project is also being undertaken by CHIP to identify and review the various sources of outpatient information across NHS Wales. The Outpatient Comparative Project has the aim of ensuring that the data supplied to the national database can be regarded as the definitive source of outpatient data for all-Wales analysis of activity. The revised data validity indicators could be used to inform and support the decisions made by the Outpatient Comparative Project Team in determining whether the data held in the national database can be deemed “*fit for purpose*” and used as the source data for secondary analysis uses (e.g. annual Trust financial returns (TFR)).

As with the work carried out in developing the APC data validity standards, an analysis was undertaken comparing all the data quality reports and documentation currently available to the service to determine what data items were being monitored for validity, how they were being monitored and to whom this information was being reported. This analysis included a comparison with the data quality standards

⁴ <https://www.igt.connectingforhealth.nhs.uk/>

utilised in NHS England (as outlined in the Information Governance Toolkit (IGT)⁴) and NHS Scotland.

Once identified, a rationale was sought aiming to identify why each data item was being monitored. Where it appeared that new quality indicators had been developed, clarification was sought as to how these changes were agreed and by whom.

The documented data quality standards were also compared with the checks found within Validation at Source (VASS)⁵ with a view to determining the levels of commonality between the two quality assurance processes.

4. FINDINGS

4.1 SUMMARY OF SERVICE CONSULTATION

Eighteen organisations sent comments to CHIP in response to a request for feedback on the draft proposals. A breakdown of those organisations is detailed below:

- Ten NHS Trusts
- Five Local Health Boards (LHBs)
- Health Solutions Wales (HSW)
- Welsh Assembly Government
 - The Health Statistics & Analysis Unit (HSA)
 - Department of Performance & Operations (DPO)
- Swansea University iLab Project

The proposals provoked a range of responses, but there were some areas where organisations across the service agreed and provided consistent feedback about the proposals. These are summarised below:

- All but one organisation, Velindre NHS Trust, were fully supportive of the concept of introducing a standardised range of data validity indicators for outpatient activity data. Velindre NHS Trust objected to their implementation as they felt there were data definitional issues that needed to be resolved *before* any standards were introduced and that the data items being monitored should have genuine value for Trust reporting requirements.
- Four organisations recommended tightening the target percentages for validity. This feedback is consistent with similar comments raised during the consultation on the APC data validity standards.
- Three organisations (DPO, Pontypridd & Rhondda NHS Trust and Ceredigion & Mid-Wales NHS Trust) raised the need to identify which outpatient activity records should have a primary procedure code present, as the proposed indicator for 'Primary Procedure Code' only

⁵ <http://nwdss.hsw.wales.nhs.uk/VASS/default.aspx>

checks the validity of a submitted code if it is present on a submitted record.

- Two responders referenced concerns relating to the data dictionary definition of specific data items, notably 'Medical Staff Type Seeing Patient', 'Outcome of Attendance', 'Referrer Code' and 'Referring Organisation Code'. It was felt that if there were data definitional concerns that were affecting either the ability of Trusts to effectively report the data or the ability of the data to be used effectively for reporting purposes, consideration should be given as to its inclusion in the final proposed lists of data validity indicators.
- Two data provider organisations raised concerns about their ability to correctly report some of the data items in the proposals. This was either due to PAS limitations that do not allow for the recording of the required data item, operational difficulties in accurately collecting the necessary information or a lack of clarity in terms of how the data should be reported (e.g. reporting of consultant code for non-GMC consultants).

4.2 SUMMARY OF FINDINGS

Investigations revealed six major data quality documents or reports relating to outpatient activity data, including a summary of the current standards for NHS England. These are as follows:

- WHC (2005) 102 – Core Information Requirements Specification and Standards to Support the LHB Commissioning Process.
- Data Accreditation for Acute Providers – published by the NHS Information Authority (NHSIA) in September 2000.
- Data Accreditation for Acute Providers in Wales – Version 4.4.
- The Information Governance Toolkit (IGT) – NHS England⁶.
- The National Assembly Chief Executives Group (NACE) Report⁷.
- The eWebIndicators⁸ online data quality reports.

An analysis of the available reports and documentation was undertaken, which showed clear variation in:

- (1) The data items being monitored for validity.
- (2) The methodology around how each data item was being monitored.
- (3) The target, where applicable, required to enable a NHS Trust to achieve the data accreditation standard.

⁶ <https://www.igt.connectingforhealth.nhs.uk/>

⁷ <http://howis.wales.nhs.uk/sites3/page.cfm?orgid=527&pid=16081>

⁸ <http://eproducts.wales.nhs.uk/Webindicators/>

A summary of these findings is presented in Annex 1, which lists the currently available documentation and the data validity indicators listed within each document or report.

Of the twenty validity indicators established by the OPDQ group, only thirteen had a percentage target associated with them, which were derived from the targets specified in the document "*Data Accreditation for Acute Providers in Wales – Version 4.4*". The validity of the remaining seven data items was monitored and reported, but a target percentage for each was not established.

A number of data items that had originally been identified as suitable for monitoring were ultimately considered out of scope by the OPDQ Project Team. There were a range of reasons for this, from disagreements relating to the data definitions to the ability of Trusts to supply the data in the correct format. Those data items considered out of scope for monitoring are listed in the table in Annex 2, along with details of why they were not approved.

In the outpatient minimum dataset, there are currently six data items that are classed as optional. Trusts are not obliged to submit these in their monthly submissions. These data items are 'Healthcare Contract Line Number', 'Carer Support Indicator', 'Local Sub-Specialty' and the primary, secondary and tertiary ICD-10 diagnosis codes. The data item 'Code of Registered GP Practice' is now classed as a mandatory data item following the issue of DSCN (2007) 11 (W). 'Registered GP Code' is being removed from the dataset via instructions in the same Data Set Change Notice.

Performance against the data validity indicators was found to be reported via two principal reporting tools:

- 1) An outpatient version of the NACE (National Assembly for Wales Chief Executives Group) report was developed. In its current form, it provides a monthly summary of performance against the agreed data validity indicators. The NACE Group no longer exists and has been superseded by the Communications Group, which incorporates policy leads from Welsh Assembly Government.
- 2) eWebIndicators is an online portal maintained by HSW and accessible to anyone who can access the Health of Wales Information Service (HOWIS) intranet site. It presents a range of information, including data quality reports that incorporate the outpatient data validity indicators.

Validation at Source (VASS) is an online facility that enables Trusts to validate their dataset extracts prior to their submission to the NHS Wales Data Switching Service (NWDSS). The service went live for outpatient data in December 2004. However, no VASS checks were applied to the data until the data validity indicators were developed and ratified by the OPDQ in 2005/06.

Investigations also highlighted several issues that have already been identified in the document *“Admitted Patient Care National Database – Data Validity Standards”*. These are:

- NHS Trusts can make informal requests to HSW to deactivate individual VASS checks.
- New VASS checks can be requested by NHS Trusts.
- The means by which Trusts ‘sign off’ data submitted via VASS to the outpatient National Database.
- The renaming of the NACE report and its inclusion as an agenda item at senior all-Wales groups.

5. CONCLUSIONS

The proposal is that a standardised set of data quality indicators should be adopted for submitted outpatient data. These indicators will be for validity only and will be applied to all data loaded into the outpatient National Database by Welsh NHS Trusts. A revised list has been developed based on discussions and investigations into which data items within the dataset are of real corporate value to the service and/or are being used or could be used for performance monitoring purposes (e.g. the productivity and efficiency indicators, or “core measures”).

The full, revised list of data validity indicators for submitted outpatient data is shown in Annex 3.

It is accepted that any revised set of indicators for outpatient data may not be an exhaustive list and are subject to change. It is likely that, as a dataset develops and new healthcare initiatives are introduced, it may be necessary to add (or remove) quality checks to ensure all data items that are of corporate use to the service are fully represented by any data quality performance monitoring, since the corporate/service need is one that is not set in stone, but continually changing.

It is also acknowledged that further investigation will be required to assess performance in relation to other data quality dimensions (e.g. data consistency) in order to obtain a more complete picture of the quality of submitted outpatient data. It will also be necessary to apply similar detailed analyses to other national datasets once they have validity indicators associated with them.

When compared with the twenty indicators that were established by the OPDQ group, there are an additional ten data items proposed for the monitoring of validity of submitted outpatient data. These extra data items are outlined in a table in Annex 4, which also details the reasons why they should now be monitored and provides an APC equivalent, where applicable, of each data item for comparative purposes. The NHS Wales Data Dictionary specification of the outpatient activity minimum dataset is outlined in Annex 5, including summary information detailing which data items are being monitored for validity and which are not.

Since only thirteen of the indicators established by the OPDQ project have a percentage target associated with them, it is recommended that all the indicators

proposed in Annex 3 have targets associated with them. Wherever possible, these should mirror those established for similar data items outlined within the “*Admitted Patient Care National Database – Data Validity Standards*” document, thus ensuring consistency in terms of the data items being monitored across datasets and in the targets themselves. The service itself has also raised the issue of revisiting the targets in order to bring them in line with current demands for accurate healthcare information and analysis.

Despite the concerns relating to the data definition of the data item ‘Medical Staff Type Seeing Patient’, it was felt appropriate to include a check for its validity in the final data validity standards. The current definition only allows for the identification of “consultant”, “member of consultant firm” or “not applicable” as the member of staff seeing a patient. Given the nature of service delivery in the outpatient setting, there is a clear need to revisit this data item, possibly leading to its expansion in terms of the number and type of staff that it can identify. This is likely to be influenced by the Outpatient Comparative Project that is currently being led by CHIP, which has the aim of enabling NHS Wales to use the outpatient activity national database as the reliable source data for all Wales analysis of outpatient activity. Despite the current limitations of the data item, it is clear that there are genuine secondary analysis uses for it, both at present and in the near future. It is also a mandatory data item within the outpatient activity minimum data set and has been since the dataset was established. For these reasons, a target percentage of 95% will be applied to its validity. This ensures the completion of the data item remains in focus of those Trusts who are currently failing to provide the data item correctly in its current format.

Although three organisations stated that they would like to see the introduction of an indicator that details whether a primary procedure code should be present on an outpatient activity record, this will not be introduced as part of the data validity standards. The primary procedure code check which will only check for the validity of any code that is submitted. A blank (or null) primary procedure code is considered a valid submission, since not all outpatient attendances will involve a procedure that can be clinically coded.

The potential for an indicator that examines whether a primary procedure code should be present on an outpatient activity record will be explored in the outpatient data consistency indicators, which are currently in development. However, it should be noted that there are a range of significant issues that may affect an organisations ability to code outpatient procedures. OPCS-4.4 was introduced in NHS England in April 2007 and subsequently introduced in NHS Wales on 1st October 2007⁹. There are an additional 241 codes (representing a 3% increase) and 207 refinements to existing OPCS-4.3 codes and descriptions to clarify meaning or to provide new includes/excludes notes, as well as improvements to sequencing notes. Whilst these additional codes are designed to better reflect the wide variety and delivery methods of procedures, especially in the outpatient setting, the requirement to capture a greater number of procedures could have significant resource implications in Welsh Trusts and consideration will be given to the ability of organisations to code **all** outpatient activity when deciding upon the potential for introducing a measure to

⁹ DSCN (2007) 14 (W)

check for a primary procedure code. Given the increase in codes in OPCS-4.4, there are also ongoing concerns as to the manner in which outpatient procedure codes should be sequenced. Furthermore, the ability to undertake a satisfactory cross-check to see if a code should be present will also need to be taken into account, since the manner in which certain data items are populated in many Trust PAS and coding systems may not allow for such a check to be carried out centrally in a satisfactory manner.

It was felt that an inability to provide a specified data item should not influence the final list of proposed data validity indicators. The data items that NHS Trusts stated they could not populate were all mandatory data items, as outlined in the data dictionary. Therefore, despite the difficulties they may have in providing the information required it is felt the standards should remain unaffected by these local system and/or user restrictions.

Once the data validity standards and reporting tools have been agreed for both APC and outpatient data, a review of the percentage targets is recommended, with the aim of ensuring that they are representative of the importance of the individual data items and the manner in which they are collected. It was decided not to do this at the same time as the implementation of the new data validity standards, as it was felt that doing so may considerably delay their agreement. Should it be decided that validity targets (or deadlines) need to be tightened, there is the possibility that this could have a significant impact on resources in data provider organisations, which would require a full impact assessment. Therefore, a decision was made to establish the concept of the data validity standards themselves and to review the targets for validity at a later date once the standards have been introduced and have been accepted by the service.

When comparing the proposed data validity indicators with those currently in place in NHS England, there are a total of seventeen differences. These differences and the reasoning behind them are outlined in Annex 6.

The tools used to report data quality performance for outpatient activity data (eWebIndicators and NACE) are not consistent with one another. Furthermore, information relating to data quality performance is available via sites on the Health of Wales Information Service (HOWIS) intranet website. A standardised set of reports, available via a single, online data quality "portal" is recommended.

There are a number of recommendations outlined in the document "*Admitted Patient Care National Database – Data Validity Standards*" that are equally applicable to outpatient data. It is proposed that they should be supported and, where appropriate, applied to the monitoring and reporting of submitted outpatient activity data. These proposals relate to:

- The scope of Validation at Source (VASS).
- The means by which NHS Trusts can deactivate or activate individual VASS checks.
- The responsibility for sign-off of submissions to the national database.

- The renaming of the NACE report and its inclusion as an agenda item at the all-Wales Communications Group meetings.

Full descriptions of the proposals are outlined in the recommendations section below.

6. RECOMMENDATIONS

In summation the following recommendations are made, and timescales around the implementation of these recommendations are included within Annex 6:

- 6.1 A single, standardised set of data quality indicators *for validity** should be adopted for submitted outpatient data. These are detailed in Annex 3.**

** A data validity indicator will check whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.*

- 6.2 The reporting of performance against these targets should be standardised so that both the online reporting tool (eWebIndicators) and the published report (NACE or its equivalent) only report the data validity indicators. All the data quality reports should be accessible via a single data quality “portal”, thus ensuring access to the necessary reports is made easier for interested parties.**
- 6.3 A review of the percentage targets for validity should be undertaken once the data validity standards for APC and outpatient data have been agreed. This should have the aim of ensuring that the targets relate to the importance of the individual data item and the manner in which it is collected by NHS Trusts.**
- 6.4 Validation at Source (VASS) should be redeveloped to ensure users are able to identify data validity. A further programme of redevelopment will be undertaken to support the future implementation of the data consistency standards and to determine whether the software should retain its broader scope with regards to the reporting of errors in submitted outpatient activity data.**
- 6.5 NHS Trusts are not to be allowed to informally deactivate VASS checks for their organisation. CHIP will explore whether a formalised process for the deactivation of specific checks can (or should) be developed.**

- 6.6** In keeping with NHS Wales Annual Operating Framework 2008/09 (section 3.74) guidance¹⁰, further work will be undertaken to ensure senior management are held accountable for the data quality of their organisation, with particular consideration given the manner in which data is signed off and submitted to the national database via the NHS Wales Data Switching Service (NWDSS) and VASS.
- 6.7** The NACE report should be renamed to reflect the changing nature of data quality performance monitoring of outpatient activity data. A title of 'Data Validity Performance Monitoring Report' is suggested as a working title.

¹⁰ WHC (2007) 086 – [http://howis.wales.nhs.uk/doclib/WHC\(2007\)086-Correction.pdf](http://howis.wales.nhs.uk/doclib/WHC(2007)086-Correction.pdf)

Annex 1

COMPARISON BETWEEN AVAILABLE DATA QUALITY DOCUMENTATION AND REPORTS

Data Quality Indicator (% Valid)	Proposed Outpatient Data Validity Indicators	Data Accreditation for Acute Providers	NACE Report	eWebIndicators	English Data Accreditation Standards	WHC (2005) 102
% Active Consultant Code			✓	✓		
% Administrative Category	✓	✓	✓	✓	✓	✓
% Attendance Date	✓				✓	
% Attended or Did Not Attend	✓	✓	✓	✓	✓	✓
% Birth Date	✓		✓	✓	✓	
% Clinical Referral Date	✓	✓	✓	✓	✓	✓
% Code of Commissioner		✓				✓
% Consultant Code	✓		✓	✓	✓	
% Date of Patient Referral	✓					
% First Attend	✓	✓	✓	✓		✓
% GP Code			✓	✓		✓
% GP Practice Code	✓	✓	✓	✓	✓	
% Last DNA or Patient Cancelled Date					✓	
% Local Health Board of Residence	✓	✓				✓
% Location Type Code	✓					
% Main Specialty (of Consultant)	✓		✓	✓		
% Medical Staff Type Seeing Patient	✓					
% NHS Number	✓	✓	✓	✓	✓	✓
% NHS Number Status Indicator	✓		✓	✓	✓	
% Valid NHS Number & Traced	✓					
% Operation Status						
% Organisation Code (Code of Provider)	✓					
% Outcome of Attendance	✓	✓			✓	✓
% Patient's Usual Address						✓
% Postcode of Usual Address	✓	✓	✓	✓	✓	
% Primary Procedure Code (validity check only)	✓					

Continued...

Data Quality Indicator (% Valid)	Proposed Outpatient Data Validity Indicators	Data Accreditation for Acute Providers	NACE Report	eWebIndicators	English Data Accreditation Standards	WHC (2005) 102
% Priority Type (new patients)	✓		✓	✓		
% Referrer Code	✓		✓	✓		
% Referring Organisation Code	✓		✓	✓		
% Sex	✓		✓	✓	✓	
% Serial Number		✓				
% Site Code (of Treatment)	✓		✓	✓		
% Source of Referral: Outpatients	✓	✓	✓	✓	✓	✓
% Treatment Function Code	✓	✓	✓	✓	✓	✓
% Waiting List Date						
Total Number of Indicators	27	13	20	20	15	12

A data validity indicator will check whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

Annex 2

DATA ITEMS CONSIDERED FOR VALIDITY MONITORING BY OPDQ PROJECT IN 2005/06 BUT DETERMINED TO BE 'OUT OF SCOPE' AT THAT STAGE

Data Item	Reason for Exclusion by ODPQ Project	In Current Proposals?
Carer Support Indicator	This is an optional data item within the outpatient minimum dataset. Not recorded and reported by all Trusts.	No
Date of Patient Referral	The completion of this data item was inconsistent across NHS Wales and there was concern within NHS Trusts as to how they could accurately identify this data.	Yes
Last DNA or Patient Cancelled Date	A number of Trusts did not collect the data item.	No
Location Type Code	Two Trusts indicated that they were not able to record this data item on PAS.	Yes
Medical Staff Type Seeing Patient	One Trust indicated that they could not record data item on PAS. Another indicated that it was possible to document the data item but use of it by administrative staff is poor. One Trust concerned that it is a difficult data item to populate as often numerous clinicians may see a patient in an OP clinic.	Yes
Outcome of Attendance	RTT was not in place during the OPDQ review and population of the data item was inconsistent across Wales.	Yes
Service Type Requested	Two Trusts indicated that they cannot document this data item on PAS	No

A data validity indicator will check whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

Annex 3

PROPOSED DATA VALIDITY INDICATORS FOR OUTPATIENT DATA

Data Item / Quality Indicator	Why monitor this data item for quality?	Target (% Valid)
Administrative Category	Enables corporate analysis of activity by patient type – NHS patient, private patient etc.	98%
Attendance Date	Important data item in measuring activity levels over time and in resource and service planning.	98%
Attended or Did Not Attend	Indicates whether a patient attended for an appointment or not. Essential in measuring productivity and is used in service planning and demand management.	98%
Birth Date	Essential for calculating age-based indicators. Used in studies looking at activity rates within various age groups and can also be used to look at casemix by age. Also used in the tracing and validation of the NHS number.	98%
Clinical Referral Date	Marks the clinically significant date marking the start of a period of waiting for an OP appointment. Provides an indication of the efficiency of referral processes when compared to 'Date of Patient Referral'.	98%
Code of Registered GP Practice	Ensures that communication is sent to the correct GP. Also enables corporate analysis of admitted patient activity at GP practice level. Important for epidemiology and cross-border commissioning.	98%
Consultant Code	Used for consultant and/or independent nurse specific analysis from the outpatient National Database. Impacts on national monitoring of consultant performance against the consultant contract.	98%
Date of Patient Referral	An indicator of the efficiency of referral processes when compared to 'Clinical Referral Date'. Also, an indicator of the uptake of outpatient activity when compared to counts of the number of referrals to the outpatient setting.	98%
First Attend	Essential for identifying whether a record is a new or follow-up attendance. Important in service and healthcare planning at local and national level.	98%
Local Health Board of Residence	Enables LHB-based epidemiology and activity analysis. Essential for service planning and the commissioning process.	95%
Location Type Code	Identifies the setting in which an outpatient attendance took place. Useful in terms of service and workforce planning and an indicator of shift in working practices and community-based working.	98%
Main Specialty (of Consultant)	Affects clinical audit data and assignment of the patient to a healthcare agreement. Important for service, healthcare and workforce planning.	98%
Medical Staff Type Seeing Patient	Enables analysis of activity by staff type. A useful indicator for measuring activity carried out by clinical staff other than consultants. Expected to become of greater significance in forthcoming years.	95%
NHS Number	If incorrect, activity may be assigned to the wrong health record. Central to the Informing Healthcare (IHC) and Individual Health Record (IHR) projects.	95%
NHS Number Status Indicator	Important field for ensuring the validity of the NHS number is maintained and validated.	95%

Continued...

Data Item / Validity Indicator	Why monitor this data item for quality?	Target* (% Valid)
Valid NHS Number & Traced	Provides a check on the validity and accuracy of the patient's NHS number.	95%
Organisation Code (Code of Provider)	Enables activity analysis by the organisation responsible for providing the patient care. Important for service and workforce planning and the commissioning process.	98%
Outcome of Attendance	Essential data item for measuring RTT performance and useful for service and resource planning.	98%
Postcode of Usual Address	Essential for epidemiology studies and resource allocation investigation. Provides detailed information as to the geographical distribution of patients attending for outpatient appointments,	98%
Primary Procedure Code	Essential information for clinicians and epidemiology studies. Provides important information on clinical efficiency and productivity by detailing the types of procedures being carried out in the outpatient setting.	95% (validity only)
Priority Type (New Patients)	Essential data item for demand and casemix management.	98%
Referrer Code	Important for service and healthcare analysis and planning. Provides important information for measuring demand by and is used for measuring referral rates in the outpatient setting.	98%
Referring Organisation Code	Important for service and healthcare analysis and planning. Provides important information for measuring demand by and is used for measuring referral rates in the outpatient setting.	98%
Sex	Used for epidemiology studies and also used in the tracing and verification of the NHS number.	98%
Site Code (of Treatment)	Enables activity analysis by the site actually providing the patient care. Important for service and workforce planning and the commissioning process.	98%
Source of Referral: Outpatients	An essential data item for monitoring demand. Provides high-level information about the source of a referral and is central to the monitoring of referral rates.	98%
Treatment Function Code (Specialty of Treatment)	The specialty under which a patient is treated. Important for service, healthcare and workforce planning and is central to the commissioning process.	98%

A data validity indicator will check whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

** The target refers to the percentage of patient records on the outpatient activity national database that should be correctly populated with an acceptable value for the associated data item at any point in time.*

Annex 4

PROPOSED DATA ITEMS THAT ARE NOT CURRENTLY BEING MONITORED FOR VALIDITY

Proposed Data Validity Check	Equivalent within the APC Data Validity Standards	Justification for monitoring in OP DV Standards	APC Data Validity % Target
Attendance Date	Admission Date	Essential data item when undertaking any activity analysis of outpatient data.	98%
Date of Patient Referral	None	Indicator of efficiency of referrals processing when compared to 'Clinical Referral Date'.	-
Local Health Board of Residence	Local Health Board of Residence	Enables LHB-based epidemiology and activity analysis. Essential for service planning and commissioning.	95%
Location Type Code	None	An indicator of use of Trust premises, both on- and off-site.	-
Medical Staff Type Seeing Patient	None	An indicator of the utilisation of supporting staff to conduct outpatient consultations. Possible that data item is expanded in the future to incorporate wider range of staff.	98%
Valid NHS Number & Traced	Valid NHS Number & Traced	Provides a check on the validity and accuracy of the patient's NHS number.	95%
Organisation Code (Code of Provider)	Provider Code	Enables activity analysis by the organisation responsible for providing the patient care. Important for service and workforce planning and the commissioning process.	98%
Outcome of Attendance	Discharge Method	Vital component of RTT monitoring.	98%
Primary Procedure Code	Principal Operation Code 3 Months After Episode End Date	Essential information for clinicians and epidemiology. Essential for analysis of outpatient activity and a vital component in the commissioning process.	95%

A data validity indicator will check whether submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

Annex 5

NHS WALES OUTPATIENT ACTIVITY MINIMUM DATASET ¹¹

Rating 1=mandatory 2=optional	Title	Format/Length	Data Validity Standard?	Reason for exclusion from Data Validity Standards
1	Record Id	an1	No	VASS Load Error
1	Organisation Code (Code of Provider)	an5	Yes	-
1	Code of Commissioner	an5	No	Poorly populated and not used by end-users for analysis purposes
1	Commissioning Serial Number	an6	No	Locally-defined code – validity check not appropriate
2	Health Care Contract Line Number	an10	No	Optional Data Item
1	Commissioners Reference Number	an17	No	Locally-defined code – validity check not appropriate
1	NHS Number	n10	Yes	-
1	NHS Number Status Indicator	n2	Yes	-
1	Patient's name	an70 or structured name with 2 an35 elements	No	Free text field
1	Name Format Code	n1	No	Data item of no use to end users
1	Patient's Usual Address	an175 (5 lines each an35)	No	Free text field
1	Postcode of Usual Address	an8	Yes	-
1	Local Health Board of Residence	an3	Yes	-
1	Sex	n1	Yes	-
2	Carer Support Indicator	an2	No	Optional Data Item
1	Birth Date	ccyymmdd	Yes	-
1	Birth Date Status	n1	No	Data item of no use to end users
2	† (see below)	an8	No	Optional Data Item
1	Code of Registered GP Practice	an6	Yes	-
1	Local Patient Identifier	an10	No	Locally-defined code – validity check not appropriate
1	Referrer Code	an8	Yes	-
1	Referring Organisation Code	an6	Yes	-
1	Service Type Requested	n1	No	Data item of no use to end users
1	Date of Patient Referral	ccyymmdd	Yes	-
1	Patient Referral Date Status	n1	No	Data item of no use to end users
1	Clinical Referral Date	ccyymmdd	Yes	-
1	Clinical Referral Date Status	n1	No	Data item of no use to end users

¹¹ <http://datadict.hsw.wales.nhs.uk/Current/htm/opmds.htm>

Rating 1=mandatory 2=optional	Title	Format/Length	Data Validity Standard?	Reason for exclusion from Data Validity Standards
1	Priority Type (new patients)	n1	Yes	-
1	Source of Referral: Outpatients	an2	Yes	-
1	Main Specialty (consultant)	n3	Yes	-
1	Treatment Function Code	n3	Yes	-
2	Local Sub-Specialty	an3	No	Optional Data Item
1	Clinic Purpose	an15	No	Locally-defined data – validity check not appropriate
1	Consultant Code	an8	Yes	-
1	Attendance Identifier	an12	No	Locally-defined data – validity check not appropriate
1	Administrative Category	n2	Yes	-
1	Location Type Code	n2	Yes	-
1	Site Code (of Treatment)	an5	Yes	-
1	Medical Staff Type Seeing Patient	an2	Yes	-
1	Attendance Date	ccyymmdd	Yes	-
1	Attendance Date Status	n1	No	Data item of no use to end users
1	First Attendance	n1	Yes	-
1	Attended or Did Not Attend	n1	Yes	-
1	Outcome of Attendance	n1	Yes	-
1	Last DNA or Patient Cancelled Date	ccyymmdd	No	Data item of no use to end users
1	Last DNA or Patient Cancelled Date Status	n1	No	Data item of no use to end users
2	Primary (ICD)	an6	No	Optional Data Item
2	Subsidiary (ICD)	an6	No	Optional Data Item
2	1st Secondary (ICD)	an6	No	Optional Data Item
1	Operation Status (per attendance)	n1	No	Data item of no use to end users
1	Primary Procedure Code (OPCS)	an4	Yes (validity only)	-
1	Procedure Code 2 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 3 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 4 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 5 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 6 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 7 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 8 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 9 (OPCS)	an4	No	Only Primary Code to be Monitored

Rating 1=mandatory 2=optional	Title	Format/Length	Data Validity Standard?	Reason for exclusion from Data Validity Standards
1	Procedure Code 10 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 11 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Procedure Code 12 (OPCS)	an4	No	Only Primary Code to be Monitored
1	Waiting List Date	ccyymmdd	No	Feedback indicated 'Clinical Referral Date' was the recognised field for monitoring waiting times under RTT
1	Waiting List Date Status	n1	No	Data item of no use to end users

† Where no data is present, the field must be populated with spaces due to the fixed field length format of the submitted file. However, if necessary 'General Medical Practitioner (Code of Registered GMP)' may still be included in the submitted file.

Format/Length Code Key

Code	Description
n	Numeric Field
an	Alphanumeric Field
ccyymmdd	Date Field (e.g. 31 st March 2007 = 20070331)

Annex 6

DIFFERENCES BETWEEN THE PROPOSED DATA VALIDITY INDICATORS FOR NHS WALES AND THOSE MONITORED IN NHS ENGLAND

Indicator	Included within proposed NHS Wales Data Validity Indicators?	Included within NHS England IGT Data Quality Indicators?	Reason for Difference
Date of Patient Referral	Yes	No	Not collected in the NHS England outpatient dataset.
First Attend	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Last DNA or Patient Cancelled Date	No	Yes	Not considered to be of significant corporate use in NHS Wales. Capacity planning information can be derived using other, more appropriate fields.
Local Health Board of Residence	Yes	No	Not monitored within NHS England data accreditation data quality indicators. In England, Commissioning is based on registered GP practice – not postcode.
Location Type Code	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Main Specialty (of Consultant)	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Medical Staff Type Seeing Patient	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Organisation Code (Code of Provider)	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Primary Procedure Code	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Priority Type (new patients)	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Referrer Code	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Referring Organisation Code	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Site Code (of Treatment)	Yes	No	Collected but not currently monitored within NHS England data accreditation data quality indicators.
Valid NHS Number & Traced	Yes	No	Not monitored within NHS England data accreditation data quality indicators.

It should be noted that whilst many of the data items above are not actively monitored for validity in NHS England, certain errors within these data items can result in the total failure of the load into the Secondary Uses Service (SUS). For example, the presence of text in any date field results in an automatic failure of the entire data load, not just one record. The table above only shows the differences in the reporting of validity between NHS Wales and NHS England.

Annex 6

PROPOSED IMPLEMENTATION PLAN

Recommendation Number	Finding	Recommendation	Timescales
6.1	Multiple reports and documents relating to data quality for outpatient information, all of which differ in terms of the indicators they report and the way they monitor them.	A single, standardised set of data quality indicators <i>for validity</i> should be adopted for submitted outpatient data. These are detailed in Annex 3.	January 2008
6.2	Several different data quality reports are produced, which differ from the proposed data validity indicators. These are found in several different places on the intranet.	The reporting of performance against these targets should be standardised so that both the online reporting tool (eWebIndicators) and the published report (NACE or its equivalent) only report the data validity indicators. All the data quality reports should be accessible via a single data quality "portal", thus ensuring access to the necessary reports is made easier for interested parties.	Aug/Sep 2008* [NACE report] Late-2008* [eWebIndicators]
6.3	The service has raised the issue of revisiting the validity targets in order to bring them in line with current and future demands for accurate healthcare information and analysis.	A review of the percentage targets for validity should be undertaken once the data validity standards for APC and outpatient data have been agreed. This should have the aim of ensuring that the targets relate to the importance of the individual data item and the manner in which it is collected by NHS Trusts.	March 2008
6.4	The range and type of errors in Validation at Source (VASS) differs to that of the proposed data validity standards, with a greater range and type found in VASS.	Validation at Source (VASS) should be redeveloped to ensure users are able to identify data validity errors. A further programme of redevelopment will be undertaken to support the future implementation of the data consistency indicators and to determine whether the software should retain its broader scope with regards to the reporting of errors in submitted outpatient activity.	Aug/Sep 2008*
6.5	NHS Trusts have been able to informally deactivate VASS checks for their organisation through HSW.	NHS Trusts are not to be allowed to informally deactivate VASS checks for their organisation. CHIP will explore whether a formalised process for the deactivation of specific checks can (or should) be developed.	Ongoing

Recommendation Number	Finding	Recommendation	Timescales
6.6	It is unclear who is responsible for the signing off of outpatient activity data in VASS and where final responsibility for data quality lies within an organisation.	In keeping with NHS Wales Annual Operating Framework 2008/09, further work will be undertaken to ensure senior management are held accountable for the data quality of their organisation, with particular consideration given the manner in which data is signed off and submitted to the national database via the NHS Wales Data Switching Service (NWDSS) via VASS.	Ongoing
6.7	The NACE Group (National Assembly for Wales Chief Executives Group) report provides a monthly summary report detailing performance against some, but not all, of the data accreditation indicators. Whilst this report is published on HOWIS, it is not formally presented to any all-Wales groups or meetings. The NACE Group no longer exists.	The NACE report should be renamed to reflect the changing nature of data quality performance monitoring of outpatient activity data. A title of 'Data Validity Performance Monitoring Report' is suggested as a working title.	Aug/Sep 2008*

* The timescales stated are subject to change depending on agreement being reached between Welsh Assembly Government and Health Solutions Wales as to the authorisation and prioritisation of the development work required to support the introduction of the outpatient activity data validity standards and their associated reporting and monitoring tools (e.g. VASS).