CORPORATE HEALTH INFORMATION PROGRAMME

EMERGENCY DEPARTMENT DATA SET (EDDS)

DATA VALIDITY STANDARDS

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1.   PURPOSE

1.1   The purpose of this document is to outline the data validity standards for data submitted to the Emergency Department activity national database via the Emergency Department Data Set (EDDS). 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) and outpatient activity data.

1.2   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.

1.3   It is proposed that these indicators will form the foundations for future data quality performance monitoring and will be used as a basis to highlight specific validity issues in EDDS data submitted to the national database by NHS Wales Local Health Boards (LHBs).

2.   BACKGROUND

2.1   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.

2.2   The EDDS was mandated via Ministerial Letter effective 1st April 2009[1], requiring LHBs to submit monthly extracts detailing emergency department activity to the national database, via Health Solutions Wales (HSW). The data set was initially designed to meet the relevant information needs of the Performance Management, Waiting Times & Emergency Care Division of the Welsh Assembly Government as well as the information requirements of the all-Wales Injury Surveillance System (AWISS). The data also has a range of other uses and can be used to support the management and planning of healthcare services, the evaluation of NHS performance and activity trends and can be a useful 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.

2.3   Over the past two years, CHIP has developed a revised approach to tackling data quality. The general approach is described in the document *"Admitted Patient Care National Database – Data Validity Standards"*[2]. 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 bad) its data is. To this end, a set of data validity standards were developed for APC activity data[3], which aimed to address the dimensions of timeliness and validity. In April 2009, a set of data consistency[4] standards were also mandated for APC activity data. Similarly, data validity standards have been

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[1] EH/ML/006/09
[2] http://howis.wales.nhs.uk/sites3/Documents/460/APC%5FNational%5FDatabase%5FData%5FValidity%5FStandards.pdf
[3] WHC (2008) 007
[4] Data consistency refers to whether *related* data items within the APC data set are consistent with one another (e.g. a record that indicates a male patient has given birth)

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developed for outpatient activity data, which are to be mandated effective 1st April 2010 via Ministerial Letter (ML-EH-001-10).

2.4   This document aims to identify and evaluate any current data quality checking processes or national programmes in relation to ED activity data. This includes the evaluation of any such processes currently in place in other UK countries. It goes on to outline a proposed set of data validity standards for EDDS data based on these comparisons and from feedback on the proposals from the Service in Wales.

3.   THE APPROACH

3.1   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.

3.2   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 EDDS activity data. These will be used as one of the measures of the quality of submitted EDDS activity data for corporate uses.

3.3   As with the work carried out in developing the APC and outpatient activity data validity standards, research was undertaken to compare any 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 research included a comparison with any similar data quality standards in place in both NHS England and NHS Scotland.

3.4   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.

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

4.   FINDINGS

4.1   SUMMARY OF FINDINGS

4.1.1   The Emergency Department Data Set (EDDS) is a new data standard, which has been developed by the Corporate Health Information Programme (CHIP) in order to facilitate the capture of more extensive and rich data in relation to patient care delivered in the Accident & Emergency setting. The data set structure and content has been shaped through stakeholders' business requirements that have been developed and understood over the course of the last 2-3 years.

4.1.2   The data set is designed so as to ensure that appropriate data are collected and submitted for each patient attendance to a major Accident and Emergency (A&E) Department in Wales. It is anticipated that mandating the collection will also encourage submission of additional, vital data to support the contemporary research areas addressed via AWISS.

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[5] http://nwdss.hsw.wales.nhs.uk/NwdssMerge/VASS/

4.1.3   The data set was mandated for collection across Wales effective from 1st April 2009. However, the approach being followed is one whereby the mandate to collect and report EDDS activity data is done across two distinct stages:

- **Stage 1 rollout – 1st April 2009 to 30th September 2009**

  A period of live testing whereby the data quality of submitted data is to be reviewed and assessed in order to assure the Service and associated stakeholders that it is "fit for purpose" in terms of the various uses for which it is intended.

- **Stage 2 rollout – 1st October onwards**

  The utilisation of the data set, whereby submitted data is considered to be "fit for purpose" and can be used by a range of stakeholders and end users for a variety of secondary uses[6].

4.1.4   A copy of the NHS Wales EDDS is shown in **Appendix 1** for information.

4.1.5   In England, the A&E Commissioning Data Set is reported monthly by Trusts via the Secondary Uses Services (SUS) and is designed to capture administrative and clinical information relating to an individual visit by one patient to an A&E Department to receive treatment from the accident and emergency service. A copy of the full data set is shown in **Appendix 2** for information.

4.1.6   In Scotland, Trusts are not required to submit a standardised national data set. However, in 2005 the Scottish Executive Health Department commissioned the development of A&E Core Data Standards for NHS Scotland to ensure common information standards for implementation across all clinical domains in which people attend for emergency care. These core standards define common data items recommended for collection in a wide variety of clinical settings, support the exchange of patient information between healthcare providers and support the consistent recording of patient information throughout NHS Scotland. Trusts do not have to record all data items but can record any items where it is considered appropriate as part of a person's care record.

4.1.7   The core standards, as defined by NHS Scotland, are shown in **Appendix 3** for information.

4.1.8   To support the implementation of EDDS through the stage 1 rollout, HSW are producing an interim EDDS Data Validity report, which is produced on a monthly basis following the submission and processing of LHB extracts of EDDS activity data. Through the report, the developer and Data Quality Improvement Manager in CHIP will be able to focus on the areas that require improvement within each LHB, working with them in order to address the highlighted data quality concerns in advance of the main September 2009 stage 2 rollout.

4.1.9   A copy of the December 2009 Interim EDDS Data Validity Report is shown in **Appendix 4** for information.

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[6] The secondary use of healthcare data can be defined as "the use of data for purposes other than direct patient care, such as health research, epidemiology, performance management and healthcare and service planning".

4.1.10 Across the APC and outpatient activity data sets, there are currently two reporting outputs summarising the validity of submitted LHB data. These are:

- APC / OP Data Validity Performance Monitoring Reports[7] - Microsoft Excel spreadsheets summarising data validity performance for the financial year-to-date;

- eWebIndicators[8] - an online portal maintained by HSW and accessible to anyone who can access the Health of Wales Information Service (HOWIS). It presents a range of information, including data quality reports that incorporate the data validity indicators for APC and outpatient activity data.

4.1.11 In England, a suite of data quality 'dashboards' are used to report and provide NHS Trusts, commissioners, stakeholders and other interested parties information pertaining to the validity of APC, outpatient, A&E and maternity activity data[9]. The dashboards summarise performance at both a Strategic Health Authority (SHA) and NHS Trust level, enabling comparisons to be made across geographical and organisational boundaries.

4.1.12 Whilst the NHS England Information Governance (IG) Toolkit has an explicit requirement (#507) for Acute Hospital Trusts to ensure they have passed completeness and validity checks for activity data, at present this only relates to APC and outpatient activity data. There are no specific standards within the IG Toolkit in relation to A&E activity data.

4.1.13 Since there is no requirement on Scottish NHS Trusts to submit a standardised A&E national data set centrally, there are equally no national data quality standards or checking processes applied to any Scottish A&E data.

4.1.14 VASS is an online facility that enables LHBs to validate their data set extracts prior to their submission to the NHS Wales Data Switching Service (NWDSS). When EDDS went live as part of the stage 1 rollout, five load checks[10] and one data validity check[11] were introduced within VASS. These were as follows:

- Load Checks:
  - o Invalid Record ID;
  - o Invalid Local Patient Identifier (CRN);
  - o Invalid Administrative Arrival Date;
  - o Invalid Administrative Arrival Time;
  - o Invalid Provider Code.
- Data Validity Check::
  - o Invalid Administrative End Date.

4.1.15 There are currently no data consistency checks within VASS for EDDS activity data.

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[7] http://howis.wales.nhs.uk/sites3/page.cfm?orgid=527&pid=23755
[8] http://eproducts.wales.nhs.uk/Webindicators/
[9] http://nww.connectingforhealth.nhs.uk/reporting-services/data-quality
[10] A load check is a distinct VASS check that detects key data integrity errors in submitted activity. The presence of a load error on a submitted record results in the rejection of the whole record from the data upload.
[11] A data validity check is a distinct VASS check that detects whether the submitted information/data has been provided in the agreed format and, where applicable, whether it is populated with a nationally-agreed value. The presence of a data validity error on a submitted record does not prevent the record from being uploaded onto the national database.

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4.2 SUMMARY OF SERVICE CONSULTATION

4.2.1   A total of nine responses were received. These can be broken down as follows:

- Welsh Cancer Intelligence & Surveillance Unit (WCISU);
- Powys LHB;
- Betsi Cadwaladr University LHB (East);
- Betsi Cadwaladr University LHB (Central) x 2;
- Hywel Dda LHB;
- Financial Information Strategy (FIS) Programme, WAG;
- Corporate Analysis Team (CAT), WAG;
- Aneurin Bevan LHB.

4.2.2   Despite the disappointing number of responses, there was overall support for the introduction of the standards amongst those that did provide feedback. However, there were a number of issues highlighted in the returns and in a range of national forums. These are summarised as follows:

- The inclusion of a check for the data item 'Accident & Emergency Investigation 1' was queried by Betsi Cadwaladr University LHB, who noted that this may not always be completed, since not every patient will undergo investigations.
  Response: This check was considered to be valid – a value of '399 – Observation, Unspecified' should be recorded against any patients who do not undergo formal investigation.

- Betsi Cadwaladr highlighted concerns with the data items 'Activity at Time of Injury', 'Mechanism of Injury', 'Road User' and 'Sport Activity', stating that their A&E system does not fully capture this information.
  Response: Whilst it is accepted that some systems may not be able to fully capture all the data items within the data set, it is still considered appropriate to monitor them for data validity, since they are critical to some specified secondary uses as stated by the Project stakeholders. It is anticipated that future upgrades of PAS / IT systems will enable full completion of the data items specified.

- Hywel Dda LHB raised concerns around the 95% target for completion of NHS Number, stating that *"it isn't always possible to obtain this in a pressurised environment. This may have to be retrospective, prior to submission, in order to achieve this level of completeness."*
  Response: The difficulty in obtaining accurate patient demographic information in the A&E environment has been recognised by a number of organisations in national forums and meetings. However, recent guidance issued by the National Patient Safety Agency (NPSA), who have recognised the importance in using the NHS Number to assuring patient safety, stated that NHS organisations must:

> *"Use the NHS Number as the national patient identifier;*
> *OR the NHS Number as the national patient identifier in*
> *conjunction with a local hospital numbering system (NB*

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where local hospital numbers are used they must be used alongside and not instead of the NHS Number)."[12]

Whilst it is recognised that the capture of this data item may not take place immediately in an A&E Department, its crucial role in ensuring the safety of direct patient care means it has been decided to retain this target.

- Betsi Cadwaladr (East) raised concerns with the standards associated with the data items 'Alcohol Indicator' and 'Appropriateness of Attendance', stating that *"… A&E staff are concerned that are not able to make a judgement to record these indicators correctly."*
  Response: Both these data items have been determined to be mandatory requirements of the data set, as set out by the Project Sponsor – WAG – and are likely to be highly topical in terms of monitoring the nature of A&E attendances. For this reason, they are to be retained within the standards.

5. CONCLUSIONS

5.1 To progress to a position whereby submitted EDDS activity data can be used for reasons for which it has been developed, it is considered appropriate to introduce data quality checking and assurance measures to assess whether it can be considered safe and of sufficient quality to use. This requirement of the developer has been made by the Welsh Information Governance and Standards Board (WIGSB) following initial consideration of the implementation plan.

5.2 The proposal is that a standardised set of data quality standards adopted for submitted EDDS activity data. These indicators will be for validity only and will be applied to all data loaded into the emergency department activity national database by LHBs. The proposed set of indicators has been developed based on discussions and investigations into which data items within the data set are of real corporate value to the service and/or are being used or could be used for performance monitoring purposes.

5.3 **The full list of data validity indicators for submitted EDDS activity data is shown in Appendix 5.**

5.4 It is accepted that any set of indicators for EDDS activity data may not be an exhaustive list and are subject to change. It is likely that, as a data set 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.

5.5 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 EDDS activity data.

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[12] NPSA Safer Practice Notice - Risk to patient safety of not using the NHS Number as the national identifier for all patients (June 2009)

5.6   It is recommended that all the indicators proposed in **Appendix 5** have targets associated with them. Wherever possible, these should mirror those established for similar data items as per the APC and outpatient activity data validity standards, thus ensuring consistency in terms of the data items being monitored across data sets and in the targets themselves.

5.7   A standardised set of reports to report data quality performance for EDDS activity data, available via a single, online data quality "portal" on the Health of Wales Information Service (HOWIS), is recommended.

6.   RECOMMENDATIONS

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

6.1   A single, standardised set of data quality indicators *for validity** should be adopted for submitted EDDS activity data. These are detailed in Appendix 5.

* 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 via the use of an online reporting tool (eWebIndicators) and a data validity performance monitoring report, to be updated and published monthly. 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   The Validation at Source Service (VASS) should be updated to ensure users are able to identify data validity errors in their EDDS activity data. A further programme of redevelopment will be undertaken to support the future implementation of the data consistency standards.

6.4   Performance against the new standards will be incorporated into appropriate national reports relating to data quality to ensure the Service is held accountable for the data quality of their organisation.

Appendix 1

NHS WALES EDDS ACTIVITY MINIMUM DATA SET

Data Item	Format
Record ID	a1
CONTRACT DETAILS	
Organisation Code (Code of Provider)	an5
PATIENT DETAILS	
Local Patient Identifier (CRN)	an10
NHS Number	n10
NHS Number Status Indicator	n2
GP Practice Code	an6
Ethnic Group	an2
Patient's Name	an70
Name Format Code	n1
Birth Date	ccyymmdd
Birth Date Status	n1
Sex	n1
Patient's Usual Address 1	an35
Patient's Usual Address 2	an35
Patient's Usual Address 3	an35
Patient's Usual Address 4	an35
Patient's Usual Address 5	an35
Postcode of Usual Address	an8
Organisation Code (Local Health Board of Residence)	an3
REFERRAL DETAILS	
Source of Service Request	an2
Referring Organisation Code	an6
Referrer Code	an8
Arrival Mode	n2
Ambulance Incident Number	An8
ATTENDANCE DETAILS	
Site Code (of Treatment)	an5
Administrative Arrival Date	ccyymmdd
Administrative Arrival Time	hh:mm:ss
Health Event Date	ccyymmdd
Health Event Time	hh:mm:ss
Attendance Group	an2
Attendance Category	n2
Triage Category	n2
Accident and Emergency Investigation 1	n3
Accident and Emergency Investigation 2	n3
Accident and Emergency Investigation 3	n3
Accident and Emergency Investigation 4	n3

Data Item	Format
Accident and Emergency Investigation 5	n3
Accident and Emergency Investigation 6	n3
Accident and Emergency Principal Diagnosis Type	an3
Accident and Emergency Diagnosis Type 2	an3
Accident and Emergency Diagnosis Type 3	an3
Accident and Emergency Diagnosis Type 4	an3
Accident and Emergency Diagnosis Type 5	an3
Accident and Emergency Diagnosis Type 6	an3
Anatomical Area 1	n3
Anatomical Area 2	n3
Anatomical Area 3	n3
Anatomical Area 4	n3
Anatomical Area 5	n3
Anatomical Area 6	n3
Anatomical Side 1	n2
Anatomical Side 2	n2
Anatomical Side 3	n2
Anatomical Side 4	n2
Anatomical Side 5	n2
Anatomical Side 6	n2
Accident and Emergency Treatment 1	an3
Accident and Emergency Treatment 2	an3
Accident and Emergency Treatment 3	an3
Accident and Emergency Treatment 4	an
Accident and Emergency Treatment 5	an3
Accident and Emergency Treatment 6	an3
Additional Incident Details	an255
Appropriateness of Attendance	n2
Outcome of Attendance	n2
Treatment End Date	ccyymmdd
Treatment End Time	hh:mm:ss
Administrative End Date	ccyymmdd
Administrative End Time	hh:mm:ss
Alcohol Indicator	n2
Incident Location Type	n2
Road User	n2
Presenting Complaint	an255
Mechanism of Injury	n2
Activity at Time of Injury	n2
Sports Activity	n2

Format / Length Code Key

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

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Appendix 2

NHS ENGLAND ACCIDENT & EMERGENCY COMMISSIONING DATA SET

CDS Data Element	Field Status
Local Patient Identifier	Mandatory
Organisation Code (Local Patient Identifier)	Mandatory
Organisation Code Type	Mandatory
NHS Number	Optional
Birth Date	Mandatory
Carer Support Indicator	Optional
Ethnic Category	*
Marital Status (psychiatric patients only)	*
NHS Number Status Indicator	Mandatory
Sex	Mandatory
Name Format Code	Optional
Patient Name	Optional
Address Format Code	Optional
Patient Usual Address	Optional
Postcode of Usual Address	Mandatory
Organisation Code (PCT of Residence)	Mandatory
Organisation Code Type	Mandatory
GMP (Code of Registered or Referring GMP)	Mandatory
Code of GP Practice (Registered GMP)	Optional
Organisation Code Type	Optional
A+E Attendance Number	Mandatory
A+E Arrival Mode	Mandatory
A+E Attendance Category	Mandatory
A+E Attendance Disposal	Mandatory
A+E Incident Location Type	Mandatory
A+E Patient Group	Mandatory
Source of Referral For A+E	Mandatory
Arrival Date	Mandatory
A+E Attendance Conclusion Time	Mandatory
A+E Departure Time	Mandatory
A+E Initial Assessment Time (first and unplanned follow-up attendances only)	Mandatory
A+E Time Seen For Treatment	Mandatory
Arrival Time	Mandatory
Commissioning Serial Number	Mandatory
NHS Service Agreement Line Number	Optional
Provider Reference Number	Optional
Commissioner Reference Number	Optional
Organisation Code (Code of Provider)	Mandatory
Organisation Code Type	Mandatory
Organisation Code (Code of Commissioner)	Mandatory
Organisation Code Type	Mandatory

CDS Data Element	Field Status
A+E Staff Member Code	Mandatory
Diagnosis Scheme In Use	Mandatory
Accident & Emergency Diagnosis - First	Mandatory
Accident & Emergency Diagnosis - Second	Mandatory
Investigation Scheme In Use	Mandatory
Accident & Emergency Investigation - First	Mandatory
Accident & Emergency Investigation - Second	Mandatory
Procedure Scheme In Use	Mandatory
Accident & Emergency Treatment - First	Mandatory
Accident & Emergency Treatment - Second	Mandatory
Healthcare Resource Group Code	Mandatory
Healthcare Resource Group Code – Version Number	Mandatory
Procedure Scheme In Use	Optional
HRG Dominant Grouping Variable - Procedure	Optional

Code Key

Code	Description
*	Must Not Be used

Source: Connecting for Health NHS Data Dictionary

Appendix 3

NHS SCOTLAND UNSCHEDULED CARE CORE DATA STANDARDS

The core standards, as listed below, define thirteen data items which are specifically relevant to an A&E attendance. In addition to the core standards, there are also seven injury related data items. These data standards were devised to be UK compatible and there is some clear overlap between the data structures developed in NHS Wales.

Accident & Emergency:

- Generic Data Items
- Arrival Mode
- Referral Source
- Date and Time of First Full Clinical Assessment
- Date and Time of Completion of Treatment
- Patient Management Type
- Referrals
- Discharge Type
- Discharge Destination
- Place of Occurrence of Incident
- Initial Assessment Triage Category
- Investigation Type
- Procedure
- Diagnosis

Injury Data Set

- Date and Time of Event
- Person Age
- Nature of Injury
- External Cause of Injury
- Activity when Injured
- Intent
- Bodily Location of Injury

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<div align="right">**Appendix 4**</div>

DECEMBER 2009 INTERIM EDDS DATA VALIDITY REPORT

Welsh NHS Trusts are required to send emergency department data set (EDDS) extracts to Health Solutions Wales by the 10th day of each month.
The following report details the percentage validity of data items in the EDDS dataset by Welsh NHS Trust.

Report details the validity of records whose administrative arrival date falls within the 2009/10 financial year - includes data received by 13th of December 2009

Trust / Site	Target* (%)	All Welsh Providers	Abertawe Bro Morgannwg ULHB — Princess Of Wales Hospital	Morriston Hospital	Cardiff and Vale ULHB — University Hospital Of Wales	Cwm Taf LHB — The Royal Glamorgan Hospital	Prince Charles Hospital	Aneurin Bevan LHB — Nevill Hall Hospital	Royal Gwent Hospital	Hywel Dda LHB — West Wales General Hospital	Bronglais General Hospital	Withybush General Hospital	Betsi Cadwaladr ULHB — Ysbyty Glan Clwyd	Wrexham Maelor Hospital	Ysbyty Gwynedd (non Psychiatric)
EDDS submission received by the 10th of October	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of Records Loaded	-	484368	45561	50716	85495	24872	16760	29432	49007	25696	17154	25510	38366	42900	32899
Accident and Emergency Investigation 1	-	33.9	98.6	94.2	33.5	10.2	0.0	0.0	0.0	0.0	0.0	45.4	50.9	21.4	0.0
Accident and Emergency Principal Diagnosis Type	-	59.0	99.6	100.0	75.3	19.1	76.3	0.0	0.0	0.0	0.0	99.9	85.3	52.1	82.3
Accident and Emergency Treatment 1	-	44.1	100.0	100.0	32.3	20.3	0.0	0.7	2.1	0.0	0.0	89.5	100.0	52.0	0.0
Activity at Time of Injury	-	59.4	100.0	100.0	100.0	0.0	97.9	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0
Administrative End Date	98%	89.5	100.0	100.0	59.9	35.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	100.0
Administrative End Time	-	86.0	100.0	100.0	40.5	37.3	100.0	100.0	100.0	100.0	100.0	100.0	97.2	99.0	100.0
Alcohol Indicator	-	61.0	100.0	100.0	100.0	1.5	100.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0
Anatomical Area 1	-	46.7	99.6	100.0	44.3	15.2	76.3	0.0	0.0	0.0	0.0	81.8	98.7	9.2	40.1
Anatomical Side 1	-	41.5	99.4	99.9	36.9	8.6	76.3	0.0	0.0	0.0	0.0	26.3	100.0	0.5	40.2
Appropriateness of Attendance	-	56.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	99.4	100.0	0.0	100.0
Arrival Mode	-	88.7	100.0	100.0	99.8	99.8	100.0	100.0	100.0	99.5	0.0	100.0	100.0	13.3	100.0
Attendance Category	98%	91.0	100.0	100.0	100.0	98.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0
Attendance Group	-	82.5	100.0	100.0	100.0	49.2	76.3	82.2	81.9	0.0	0.0	99.9	100.0	74.5	100.0
Birth Date	98%	100.0	100.0	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ethnic Group	98%	81.4	98.5	99.9	100.0	100.0	100.0	13.0	19.5	99.4	99.9	100.0	37.6	100.0	100.0
GP Practice Code	98%	74.9	97.6	98.2	95.6	93.5	99.0	11.5	10.7	0.0	0.0	96.4	98.6	100.0	99.9
Health Event Date	-	73.1	100.0	100.0	66.0	95.8	100.0	100.0	100.0	100.0	100.0	42.9	74.9	0.0	0.0
Health Event Time	-	37.0	100.0	100.0	8.1	2.6	100.0	6.3	3.0	100.0	100.0	42.9	3.4	0.0	0.0
Incident Location Type	-	65.7	100.0	100.0	100.0	0.0	64.2	0.0	0.0	100.0	0.0	100.0	100.0	7.5	100.0
Local Health Board of Residence	95%	92.6	99.9	100.0	99.9	91.7	99.5	71.6	76.6	99.0	97.9	99.1	88.7	85.6	93.2
Mechanism of Injury	-	53.9	100.0	100.0	100.0	0.0	82.2	0.0	0.0	100.0	100.0	100.0	100.0	3.6	0.0
NHS Number	95%	76.3	95.5	95.7	81.9	0.0	92.6	91.7	90.1	0.0	0.0	92.5	92.2	76.8	87.8
NHS Number Status Indicator	95%	78.3	99.7	100.0	37.8	100.0	100.0	74.2	74.8	100.0	100.0	100.0	100.0	26.0	100.0
Outcome of Attendance	98%	78.5	100.0	100.0	62.6	80.4	100.0	83.6	83.6	99.8	0.0	100.0	100.0	13.3	100.0
Postcode of Usual Address	98%	87.7	99.3	98.9	89.6	92.0	99.2	95.1	95.1	0.0	0.0	99.8	99.8	98.9	98.3
Referrer Code	98%	56.9	93.8	99.9	0.0	0.0	0.0	100.0	100.0	97.9	88.2	3.4	49.9	24.2	100.0
Referring Organisation Code	98%	74.0	97.7	100.0	49.7	0.0	0.0	100.0	100.0	99.8	99.9	7.9	99.5	61.8	100.0
Road User	-	37.7	100.0	100.0	3.4	2.9	4.7	0.0	0.0	100.0	100.0	2.1	100.0	0.0	0.0
Sex	98%	83.8	100.0	100.0	100.0	99.5	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Site Code (of Treatment)	98%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source of Service Request	98%	87.7	100.0	100.0	99.5	81.5	100.0	80.6	80.2	0.0	0.0	100.0	99.9	49.3	100.0
Sports Activity	-	2.1	2.5	5.4	4.7	0.0	5.9	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0
Treatment End Date	-	78.5	100.0	100.0	100.0	81.0	100.0	3.7	21.9	100.0	100.0	100.0	100.0	99.8	0.0
Treatment End Time	-	78.0	100.0	100.0	100.0	76.0	100.0	3.7	21.9	100.0	100.0	100.0	97.2	99.9	0.0
Triage Category	-	60.2	100.0	99.6	37.8	74.0	84.7	0.0	0.0	53.5	51.7	100.0	100.0	26.0	100.0

Comments
The term "data validity" refers to whether the submitted data is provided in the agreed format and is populated with a nationally-agreed value, as defined in the NHS Wales Data Dictionary.

* Target is aspirational to be achieved by September 2009 in time for full rollout of EDDS. Targets are equivalent to those applied to equivalent data items in Admitted Patient Care and/or Outpatient activity data sets. Where a target is not specified, this is because an equival
* A full consultation exercise will be undertaken between April and September 2009 in order to determine an agreed set of data items (with associated targets) to monitor for data validity.

For further information, please visit the Corporate Health Information Programme website: **http://howis.wales.nhs.uk/pmuw/chip**

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Appendix 5
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PROPOSED EDDS DATA VALIDITY STANDARDS

#	Data Item / Quality Indicator	Why monitor this data item for validity?	Target (% Valid)
1	Accident and Emergency Investigation 1	Important for monitoring the use of resources associated with A&E activity.	95%
2	Accident and Emergency Principal Diagnosis Type 1	Identifies the main type of injury/disease that a patient attends A&E with. Essential information for clinicians, understanding casemix and for epidemiology studies.	95%
3	Accident and Emergency Treatment 1	Identifies the main type of treatment given to a patient whilst admitted to A&E. Important in the analysis of resource consumption and for understanding casemix within an A&E department.	95%
4	Activity at Time of Injury	AWISS Requirement.	98%
5	Administrative Arrival Date	Important data item in measuring activity levels over time and in resource and service planning.	100% [L]
6	Administrative Arrival Time	Important data item in measuring activity levels over time and in resource and service planning. Is also a fundamental component in the measuring of performance against the AOF Target 7.	100% [L]
7	Administrative End Date	Important data item in measuring activity levels over time and in resource and service planning.	98%
8	Administrative End Time	Important data item in measuring activity levels over time and in resource and service planning. Is also a fundamental component in the measuring of performance against the AOF Target 7.	98%
9	Alcohol Indicator	Ministerial requirement. Important for monitoring whether an attendance to A&E had been influenced by the consumption of alcohol. This data item is being used to support service planning and the monitoring of alcohol-related attendances to A&E.	98%
10	Anatomical Area 1	Identifies the main area of injury/disease. Essential information for clinicians, understanding casemix and for epidemiology studies.	95%
12	Appropriateness of Attendance	Ministerial requirement. Important for monitoring whether an attendance to A&E was clinically necessary. This data item is being used to support service planning and monitoring arrangements with respect to identifying inappropriate referrals to major A&E units across Wales, where it could have been possible to see and treat the patient in the primary care environment.	98%
13	Arrival Mode	Essential for identifying the mode by which a patient arrives at an A&E department. Important in service and healthcare planning at local and national level.	98%
14	Attendance Category	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%
15	Attendance Group	Identifies a general reason for an A&E attendance. Important data item for service planning and for understanding demand.	98%

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#	Data Item / Quality Indicator	Why monitor this data item for validity?	Target (% Valid)
16	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%
17	Ethnic Group	Important for the monitoring of epidemiology, where it is known that certain illnesses and diseases are more prevalent amongst certain ethnic groups. The collection of this is also a legal requirement under Government equal opportunities legislation.	98%
18	GP Practice Code	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%
19	Health Event Date	Identifies the actual date on which an incident or acute medical episode occurred. Useful in monitoring patient behaviours and demand – i.e. amount of time between an event occurring and a patient actually attending A&E.	98%
20	Health Event Time	Identifies the actual time on which an incident or acute medical episode occurred. Useful in monitoring patient behaviours and demand – i.e. amount of time between an event occurring and a patient actually attending A&E.	98%
21	Injury Location Type	AWISS Requirement.	98%
22	Mechanism of Injury	AWISS Requirement	98%
23	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%
24	NHS Number Status Indicator	Important field for ensuring the validity of the NHS number is maintained and validated.	95%
25	Organisation Code (Code of Provider)	Identifies the organisation providing the care to a patient. Fundamental in enabling LHB-level monitoring of A&E activity and performance.	100% [L]
26	Organisation Code (Local Health Board of Residence)	Enables LHB-based epidemiology and activity analysis. Essential to the service planning and funding allocation processes.	98%
27	Outcome of Attendance	Identifies the destination of a patient following discharge from an A&E department. Important in the monitoring of patient outcomes and for quantifying the output of A&E patients into other clinical and non-clinical areas.	98%
28	Postcode of Usual Address	Essential for epidemiology studies and resource allocation investigation. Provides detailed information as to the geographical distribution of patients attending A&E.	98%
29	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 A&E setting.	98%
30	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 A&E setting.	98%

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#	Data Item / Quality Indicator	Why monitor this data item for validity?	Target (% Valid)
31	Road User	AWISS Requirement.	98%
32	Sex	Used for epidemiology studies and also used in the tracing and verification of the NHS number.	98%
33	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%
34	Source of Service Request	An essential data item for monitoring demand, providing high-level information about the source of an A&E attendance.	98%
35	Sport Activity	AWISS Requirement.	98%
36	Treatment End Date	Identifies the date on which a patient's treatment in A&E finished. Essential in understanding potential bottlenecks in the patient A&E pathway by comparing it with a patient's Administrative End Date.	98%
37	Treatment End Time	Identifies the time a patient's treatment in A&E was finished. Essential in understanding potential bottlenecks in the patient A&E pathway by comparing it with a patient's Administrative End Date.	98%
38	Triage Category	Identifies the severity of an admission to A&E based on an initial clinical assessment by medical or nursing staff. Essential in service planning and for understanding demand on the A&E service.	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 EDDS activity national database that should be correctly populated with an acceptable value for the associated data item at any point in time.

[L] indicates that the data item will also be classed as a Load Error within VASS. A Load Error is a distinct VASS check that detects key data integrity errors in submitted activity. The presence of a load error on a submitted record results in the rejection of the whole record from the data upload.

Although the data items are not to be monitored for performance management purposes (they have no significant value in a secondary use context) the following load checks will be introduced within VASS as the data items concerned are essential for maintaining the integrity of the database:

- **Invalid Record ID;**
- **Invalid Local Patient Identifier.**

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Appendix 6

PROPOSED IMPLEMENTATION PLAN

Recommendation Number	Finding	Recommendation	Timescales
6.1	It is considered appropriate to introduce data quality checking and assurance measures to assess whether EDDS activity data can be considered safe and of sufficient quality to use.	A single, standardised set of data quality indicators *for validity** should be adopted for submitted EDDS activity data. These are detailed in Appendix 5.	1st April 2010 onwards
6.2	A standardised set of reports to report data quality performance for EDDS activity data, available via a single, online data quality "portal" on the Health of Wales Information Service (HOWIS), is recommended.	The reporting of performance against these targets should be standardised via the use of an online reporting tool (eWebIndicators) and a data validity performance monitoring report, to be updated and published monthly. 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.	1st April 2010 onwards
6.3	There is a need for Trusts to be able to identify errors in their data against the proposed standards at the point of submission to the NWDSS.	The Validation at Source Service (VASS) should be updated to ensure users are able to identify data validity errors in their EDDS activity data. A further programme of redevelopment will be undertaken to support the future implementation of the data consistency standards.	1st April 2010 onwards
6.4	Trust performance against the new standards should be referenced in any national reports where data quality is escalated to a senior authority for further investigation and corrective action.	Performance against the new standards will be incorporated into appropriate national reports relating to data quality to ensure the Service is held accountable for the data quality of their organisation.	1st April 2010 onwards

* 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 EDDS data validity standards and their associated reporting and monitoring tools (e.g. VASS).

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