



Pwyllgor Digidol, Data ac Arloesi/ Digital, Data and Innovation Committee

DYDDIAD Y CYFARFOD: DATE OF MEETING:	21 JULY 2026
TEITL YR ADRODDIAD: TITLE OF REPORT:	Data Quality Deep Dive
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Huw Thomas, Executive Director of Finance
SWYDDOG ADRODD: REPORTING OFFICER:	Anthony Tracey, Director of Digital, Data and Technology Gareth Beynon, Head of Information Services

Pwrpas yr Adroddiad (dewiswch fel yn addas)

Purpose of the Report (select as appropriate)

Er Sicrwydd/ For Assurance

ADRODDIAD SCAA SBAR REPORT

Sefyllfa / Situation

The purpose of this paper is to provide the Digital, Data and Innovation Committee (DDIC) with an updated overview and assurance regarding the ongoing data quality deep dives. It references the methodologies, governance processes, and analytical frameworks employed to assess, monitor, and improve data quality across key digital systems. This paper also highlights progress made to date and identifies areas of concern and opportunities for improvement.

Cefndir / Background

High-quality data is fundamental to the effective delivery of healthcare services. In a clinical and operational environment, data must be accurate, timely, and fit for purpose to support informed decision-making, which directly contributes to improved patient outcomes, enhanced safety, and overall well-being.

Robust data quality is also essential for the production of reliable management information, enabling the Health Board to operate efficiently and make best use of its resources. Whether supporting strategic planning, performance monitoring, or service improvement, data underpins every aspect of organisational intelligence and accountability.

Poor data quality can have far-reaching consequences. It can undermine clinical decision-making, distort performance reporting, and lead to inefficient use of resources. In some cases, particularly with national datasets, data quality directly affects how the Health Board's performance is represented against Welsh Government targets, with implications for public accountability and funding.

Maintaining high standards of data quality is therefore not just a technical or operational concern, it is a strategic imperative that supports the Health Board's mission to deliver safe, effective, and person-centred care.

Asesiad / Assessment

The [update](#) provided to the DDIC in October 2025 included an overview of the following established processes and methodologies:

- Deep Dive work plan;
- Escalation process;
- Data usability matrix;
- Prioritisation matrix.

Positive progress has been made to embed the data quality process and usability matrix into the organisation's datasets, however progress has been slower than anticipated due to capacity limitations. The team is having to prioritise the investigation of, and where necessary corrective action relating to, patient identification issues. This is becoming increasingly complex with the introduction of new patient-facing applications, including Hybrid Print & Post solutions, Electronic Patient Flow, Electronic Observations, Electronic Prescribing and Medicines Administration, and Digital Maternity Cymru.

To progress the data usability matrix methodology, the team plans to carry out an abridged data quality deep dive into outpatient activity to test and refine the approach. The outpatient dataset has been selected because it is sufficiently large, spans most secondary care services, and is complex enough to provide an appropriate use case.

The usability matrix is intended to provide a more nuanced assessment of data quality than a simple binary judgement and to help users determine whether data is fit for specific use cases. For example, users who are looking purely at the number of outpatient appointments may not be overly concerned that some specific data items may be inaccurate, or that a number of data items may not accurately reflect the appointment and may instead be more concerned that the dataset being used is complete.

The matrix focuses on three data quality parameters and provides a score out of five based on percentage or time against each parameter.

Score	Accuracy (%)	Completeness (%)	Timeliness	
			Live Data (mins)	Other Data
1	0 - 19	0 - 19	120 +	7 days +
2	20 - 49	20 - 49	60 - 120	3 to 6 days
3	50 - 79	50 - 79	30 - 59	48 - 72 hrs
4	80 - 94	80 - 94	5 - 30	24 - 48 hrs
5	95 +	95 +	Live - 5	Within 24 hrs

Accuracy (%) - Definition – *Accuracy is the quality or state of being true, correct, or exact.*

The deep dive will compare the information captured on the Welsh Patient Administration System's (WPAS) Outpatient module with the detail in the clinical letter dictated by the clinician. The number of inaccuracies identified in the sample will be used to calculate a percentage value, which in turn corresponds to a score.

Completeness (%) - Definition – *The state or condition of having all the necessary or appropriate parts.*

The scope of the deep dive will identify all key data items that should be captured in the WPAS Outpatient module. The number of data items not captured will be used to calculate the percentage, which in turn corresponds to a score.

Timeliness (hrs) - Definition – *The fact or quality of being done or occurring at a favourable or useful time.*

The scope of the deep dive will determine whether the analysis is based on near real-time/live data entry or post-event data entry. The sample will identify the time taken to enter 95% of the required data onto WPAS. The score will be based on the time range the value falls between. For example, 95% of activity entered by 27.2 hours = 4.

Once a score has been derived for each parameter, the intention is to introduce a three-part usability score for the outpatient dataset.

		*example scores			
Application	Dataset/Theme/Module	Accuracy	Completeness	Timeliness	Review Date
WPAS	Outpatient Activity	5	1	3	Jul-26

The detail will be available to analysts when accessing the Outpatient dataset through the Information Services Data Platform, supporting decisions around usability for their specific use case.

Kitemark

Assurance is key when making decisions, especially when using large amounts of data that have been prepared and published into dashboards and other business intelligence outputs. The Information Services Team is developing a kitemark with the intention of providing assurance to users of the Information Reporting Intelligence System (IRIS), so that both the quality of the data and the robustness of the dashboard are suitable for use.



The kitemark brings together the usability score and assurance that the dashboard retrieves data from the data platform, is updated automatically through routine processes, and aligns with approved data standards and definitions.

The kitemark intends to make a distinction between dashboards that have robust end-to-end processes and automation built in and dashboards that rely on manual intervention to update base spreadsheets and data sources. While manually maintained datasets may still be fit for purpose, Information Services cannot fully guarantee that they are consistently up to date, sourced directly from a digital applications, or aligned with appropriate data standards and definitions.

This becomes more prevalent as more dashboards are hosted on Incident Response Improvement System (IRIS) that are managed and updated by teams outside Information Services. The IRIS ambition is to become the Health Board's starting point for organisational business intelligence tools, while ensuring that the data surfaced through it does not unintentionally mislead users with potentially outdated dashboards or outputs that have not been updated for a number of months due to a breakdown in a manual refresh process. The Information Services Team will continue to work with and support other dashboard developers to ensure their dashboards mature to the point where the kitemark can be applied, providing further assurance and governance to the work of developers and analysts outside of the Digital Team.

Conclusion

The development of the data quality deep dive methodology, usability matrix and IRIS kitemark represents an important step in strengthening organisational assurance around the quality, reliability and appropriate use of data. While progress has been constrained by capacity and the need to prioritise patient identification issues, the approach described in this report provides a clear framework for identifying data quality risks, improving confidence in reporting outputs and supporting safer, more informed decision-making across the Health Board.

The proposed abridged outpatient deep dive will provide a practical test case for the methodology and will support further refinement before wider application to other priority datasets. Continued development of the kitemark will also help distinguish between assured, automated and standards-based reporting outputs and those that require further improvement, thereby improving transparency for users of IRIS and strengthening governance across business intelligence activity.

Next Steps

- Complete the abridged data quality deep dive into outpatient activity, using the agreed accuracy, completeness and timeliness measures.
- Review the findings from the Outpatient Deep Dive and refine the usability matrix methodology where required.
- Develop a clear process for surfacing usability scores through the Information Services Data Platform so analysts can understand the suitability of datasets for specific purposes.
- Continue development and testing of the IRIS kitemark, including criteria relating to data source, automation, refresh frequency, approved definitions and governance standards.
- Engage with dashboard developers and service teams outside Information Services to support improvement of reporting outputs and readiness for future kitemark application.
- Provide a further update to the Digital, Data and Innovation Committee once the outpatient deep dive has been completed and the methodology has been reviewed.

Argymhelliad / Recommendation

The Committee is requested to **RECEIVE ASSURANCE** regarding the ongoing data quality deep dives and the continued refinement of the data quality methodology to support assurance. These activities remain a key element of the Health Board's approach to strengthening data integrity, and their consistent application provides a robust, systematic, and repeatable process for identifying, monitoring, and addressing data quality issues.

Amcanion: (rhaid cwblhau)
Objectives: (must be completed)

Cyfeirnod Cylch Gorchwyl y Pwyllgor: Committee ToR Reference:	3.1.1 Seek assurance on the direction, development and delivery of the Health Board's digital, data and information governance strategies to drive change and transformation in line with the Health Board's Annual Plan/Integrated Medium Term Plan (IMTP) that will support modernisation through the use of information, data and digital technology.
Cyfeirnod Cofrestr Risg Datix, Teitl a Sgôr Risg Cyfredol: Datix Risk Register Reference and Score:	Not applicable
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	7. All apply
Galluogwyr Ansawdd: Enablers of Quality: Quality and Engagement Act (sharepoint.com)	6. All apply
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Nodau Cynllunio 2026/27 Planning Goals 2026/27	All Planning Goals Apply
Hypergyswllt i Amcanion Llesiant HDdUHB 2026 Hyperlink to HDdUHB Well-being Objectives 2026	9. All HDdUHB Well-being Objectives apply
Model Cymdeithasol ar gyfer Iechyd a Llesiant: (wedi'i gwblhau ar gyfer newid strategol a/neu newidiadau sylweddol i wasanaethau) A Social Model for Health and Wellbeing: (complete for strategic change and/or significant service changes)	7. All Apply

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Not applicable
Rhestr Termau: Glossary of Terms:	Contained within the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y cyfarfod hwn: Parties / Committees consulted prior to this meeting:	Not applicable

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Incomplete or missing data can lead to significant errors in the calculation of financial cost returns, potentially resulting in inaccurate projections, flawed budgeting decisions, and misinformed strategic planning. This can undermine financial reporting integrity and affect overall organisational performance.
Ansawdd / Gofal Claf: Quality / Patient Care:	Poor quality data can lead to the misidentification of patients, which poses serious risks to safety and care continuity. Additionally, service changes may be implemented based on incomplete or inaccurate information, preventing healthcare providers from gaining a full and accurate understanding of patient needs and system performance. This can compromise decision-making, resource allocation, and the overall effectiveness of healthcare delivery.
Gweithlu: Workforce:	Poor data quality can lead to inaccurate workforce planning, misallocation of staff, and ineffective deployment of resources. This can result in increased workload pressures, reduced staff morale, and compromised service delivery, ultimately affecting both employee well-being and organisational performance.
Tegwch Iechyd: Health Equity:	Not applicable.
Risg: Risk:	The accuracy of Welsh costing returns, which rely heavily on derived Healthcare Resource Groupings (HRGs), is critical for informed financial planning and service evaluation. Inaccurate or incomplete HRG data could undermine the effectiveness of clinical service reconfigurations, potentially preventing the University Health Board (UHB) from achieving its strategic objectives to enhance patient care.
Cyfreithiol: Legal:	Not applicable.

Enw Da: Reputational:	Poor data quality can hinder the ability to meet key Delivery Targets set by the Welsh Government, leading to potential reputational damage for the organisation. Inaccurate or incomplete data undermines performance reporting, erodes stakeholder confidence, and may result in increased scrutiny or loss of public trust.
Gyfrinachedd: Privacy:	Not applicable.
Cydraddoldeb: Equality:	Not applicable.