

Data Quality

Final Internal Audit Report

2024/25

Hywel Dda University Health Board



Limited Assurance

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Review Reference

HDU-2425-28

Fieldwork

04 October – 05 November 2024

Executive Sign Off

29 January 2025

Audit Committee

February 2025

Executive Lead

Huw Thomas, Director of Finance

Audit Team

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Executive Summary

Purpose

To review the structures and processes for ensuring data quality within the health board.

Overview

We have concluded **limited** assurance on this area. This is provided primarily due to persistent data quality issues within the health board, despite the Information Quality Assurance (IQA) team having good processes in place. The primary concern lies with a lack of accountability at service level, where data quality issues originate but are not being adequately addressed. Consequently, the IQA team’s resources are constrained to overseeing ongoing issues in one key system, leaving them unable to manage or improve data quality across other systems.

The matters requiring management attention include:

- a gap exists in the resources needed to fully implement and maintain data quality standards across all health board systems.
- lack of accountability for data quality within service areas.
- absence of data quality metrics to aid performance monitoring.
- absence of a formal Information / Intelligence Strategy to ensure a coordinated and systematic approach to utilising intelligence across teams and services.

Full details of matters arising are detailed within the Findings & Agreed Action Plan.

Scope & Assurance Summary

Objectives

		Related Findings	Assurance
1	Guidance is in place that sets out the requirements and responsibilities for data quality across the health board.	-	Substantial
2	There are adequate quality assurance checks to ensure the data reported is complete, valid, timely, accurate, consistent and precise.	1, 2	Limited
3	There is appropriate monitoring and reporting of data quality within the health board.	3	Limited
4	There is a structure within the health board to enable the coordinated use of its information for planning, reporting and decision making.	4	Reasonable

Management Actions



High Priority



Medium Priority

Themes



Risk Types

- Financial Loss
- Legal & Regulatory Non-Compliance
- Quality or Safety Issues
- Public Perception & Reputational Risk

Findings & Agreed Action Plan

Objective 1: Guidance is in place that sets out the requirements and responsibilities for data quality across the health board.

Substantial

Overview / Summary of Observations

Our review of the Information Quality Assurance (IQA) policy positively notes that it has been designed to ensure that the importance of high-quality data is disseminated to all staff. It describes what is meant by high-quality data and clearly sets out the implications of poor data and information. It clearly defines the roles and responsibilities for maintaining, improving and monitoring data quality through a clear framework of accountability, inclusive of an escalation plan to address non-conformance with IQA requests to correct potentially erroneous data.

We identified no matters arising for this objective.

Objective 2: There are adequate quality assurance checks to ensure the data reported is complete, valid, timely, accurate, consistent and precise.

Limited

Overview / Summary of Observations

The Information Quality Assurance (IQA) team is established to emphasise the importance of addressing poor quality data at its source. Data quality tools are not utilised, as the priority remains on rectifying the data source rather than manipulating data through available tools. Due to limited resources within the team, the organisation has focused its quality assurance efforts on a single key system (Welsh Patient Administration System) rather than implementing quality assurance (QA) checks across all systems. This approach ensures that essential QA standards are maintained where they have the greatest impact. Regular checks are conducted by the IQA team which generates reports highlighting potential erroneous data, which are distributed to relevant services, prompting them to review and correct inaccuracies as needed. However, we note that engagement has been poor overall from services, which may indicate that they do not fully understand the implications of data inaccuracies. This limited awareness can lead to low prioritisation of data quality tasks and as the IQA team faces resource constraints, it limits their ability to provide services with the necessary support and guidance on data quality improvements. The IQA team's capacity to follow up on identified data issues as per the escalation plan is also limited, reducing their ability to drive timely corrections and reinforce data

quality expectations across the organisation. These issues have been captured within the IQA Improvement Plan and whilst actions have been identified to address, the lack of sufficient capacity is hindering its effective implementation.

As QA is limited to one system, other systems may lack the same level of data scrutiny, which could introduce risks of inconsistent data quality across the organisation. Whilst this selective approach reflects a resource-efficient strategy that balances quality with feasibility, further investment is required over time to ensure all critical systems receive adequate QA attention and staff are fully supported in understanding the significance of maintaining high data quality standards.

Key Findings	Risk & Impact	Agreed Management Action
<p>1 IQA Resourcing</p> <p>Whilst a comprehensive data quality policy and supporting guidance are in place, a gap exists in the resources needed to fully implement and maintain these standards across all health board systems. Although the framework provides clear expectations and procedures for ensuring data accuracy, consistency and completeness, there is insufficient resource to monitor, audit, and enforce these guidelines effectively. As a result, data quality efforts may be applied inconsistently, leading to variability in data reliability and undermining the overall effectiveness of the data governance framework. Linked to Key Finding 2, we note that responsibility for data quality lies at service-level. Their lack of action in addressing the data quality issues that they have created places undue strain on the IQA team.</p> <p>Theme: Resourcing</p>	<p>Poor quality data leads to:</p> <ul style="list-style-type: none"> • poor decision making; • failure to achieve performance measures and organisational objectives; • patient harm; and • exposure to financial loss and reputational damage. <p>High Priority</p> <p>Control Operation</p>	<p>Agreed Action:</p> <p>The IQA Team along with the Performance Team will design specific metrics for data quality and these will be used in directorate escalation meetings to provide a greater focus on data quality.</p> <p>The IQA will continue conduct regular audits and reviews of data quality practices at both the centralised and service levels.</p> <p>Expected Evidence of Implementation:</p> <p>Explore investment in automated data quality monitoring tools that can continuously check for data accuracy, consistency, and completeness.</p> <p>Develop an escalation process via “Our Performance Dashboard”</p> <p>Define clear roles and responsibilities for data quality at all levels of the organisation. Establish a reporting structure that ensures data quality issues are escalated and addressed promptly.</p> <p>Officer: Director of Digital Date: April 2025</p>

2	<p>Data Quality Corrections</p> <p>The IQA team frequently brings data quality concerns to the attention of relevant services; however, these issues are not consistently resolved. The IQA Annual Report for 2023-24 indicates persistent problems with duplicate registrations in WPAS, with 59% occurring in A&E and Minor Injury Units. This challenge has been ongoing, and past interventions have yielded minimal lasting results. To foster accountability, monthly reports detailing names and numbers are shared with senior site managers, clinical leads, and supervisors at each location, however, this has had little impact to date.</p>	<p>Poor quality data leads to:</p> <ul style="list-style-type: none"> • poor decision making; • failure to achieve performance measures and organisational objectives; • patient harm; and • exposure to financial loss and reputational damage. 	<p>Agreed Action:</p> <p>The IQA Team along with the Performance Team will design specific metrics for data quality and these will be used in directorate escalation meetings to provide a greater focus on data quality.</p>
	<p>High Priority</p>	<p>Expected Evidence of Implementation:</p> <p>Further expansion of the “Our Performance Dashboard” to include directorate specific reports with actions which will be used in escalation meetings with operational teams.</p>	
	<p>Theme: Information, Data Quality & Data Accuracy</p>	<p>Officer: Director of Digital</p> <p>Date: April 2025</p>	

Objective 3: There is appropriate monitoring and reporting of data quality within the health board. **Limited**

Overview / Summary of Observations

The health board demonstrates a commitment to data quality through routine error identification processes. This includes the use of the Validation at Source Service (VASS) provided by Digital Health and Care Wales (DHCW), which enables users to review and assess the quality of data before submitting it to the national database. This allows for error minimisation and ensures that data aligns with required formats and national standards, leading to a baseline level of reliability.

Linked to Key Finding 1, resource and capacity limitations are hindering the health board's ability to advance its data quality practices. These constraints affect the development of more comprehensive data quality metrics and improvements to current monitoring efforts, creating challenges in moving beyond error identification to more proactive quality enhancement for all health board systems.

The IQA team has recently developed a self-service Data Quality dashboard accessible to all staff to review their blank outcomes, rather than the limited number of key staff who received email notifications and manual reports. It is anticipated that the dashboard will have a positive impact on the IQA team, reducing the current labour-intensive process which will enable them to focus on other data quality issues identified within their improvement plan, which includes further development of the Data Quality dashboard to incorporate wider data quality issues.

We observed regular comprehensive reporting from the IQA team to the Information Governance Sub Committee (IGSC), which in turn reports to the statutory committee Sustainable Resources Committee. However, we note that there are limited data quality metrics being reported outside of the IQA Annual Report.

Key Findings		Risk & Impact	Agreed Management Action
3	Data Quality Metrics Whilst the IQA team regularly reports to the IGSC, there are no established metrics to comprehensively measure and monitor performance across services e.g. error resolution rates, timeliness and accuracy levels. Whilst an escalation plan is in place, which requires non-responses from services to be formally reported to the IGSC, as noted in Key Finding 1, IQA team capacity constraints have hindered this process. Developing performance metrics presents an opportunity to reduce the labour-intensive element of the escalation process and enables proactive monitoring.	Poor quality data leads to: <ul style="list-style-type: none"> • poor decision making; • failure to achieve performance measures and organisational objectives; • patient harm; and • exposure to financial loss and reputational damage. 	Agreed Action: The IQA Team to develop a streamline process to focus on the delivery of actions which will be reported to IGSC for monitoring and review.
		High Priority	Expected Evidence of Implementation: Explore investment in automated data quality monitoring tools that can continuously check for data accuracy, consistency, and completeness to release the time of the IQA team
Theme: Performance Monitoring		Control Design	Officer: Director of Digital Date: June 2025

Objective 4: There is a structure within the health board to enable the coordinated use of its information for planning, reporting and decision making. **Reasonable**

Overview / Summary of Observations

The health board has the Information Reporting Intelligence System (IRIS) in place which provides a suite of Power BI reports / dashboards fed from the data warehouse, which allows users to manage, analyse and visualise data to support decision-making, reporting and strategic planning. Known as the 'front door' to the data held by the organisation, dashboards are available for various areas within the organisation such as Admissions & Wards, Cancer Services, Outpatients, Referral to Treatment, Theatres & Endoscopy, which offer insight into key metrics.

The health board acknowledges that there is an undocumented roadmap regarding siloed information, with the goal of integrating these into IRIS, where they will have dedicated dashboards. Several services have expressed interest in sharing their reports via IRIS, which will allow increased transparency, accountability and collaboration. The aim is to differentiate these reports from those produced by Information Services, ensuring viewers recognise their ownership by the respective service. Information Services are currently transitioning from a generic email address to the IT Service Desk portal to handle requests for information and products. From 1st April to mid-October 2024, Information Services has received over 920 requests and linked to Key Finding 1, there is a challenge to keep up with increasing demand.

We positively note that a Data Science team is in place, enabling the use of predictive analytics to improve patient outcomes, operational efficiency and resource management. However, poor data quality limits the effectiveness of these initiatives, reducing their financial return and leading to potentially high investments with low impact.

The health board is progressing with the Local Data Repository / National Data Resource project, which will serve as a single source of truth for healthcare data across Wales.

Key Findings	Risk & Impact	Agreed Management Action
<p>4 Information / Intelligence Strategy</p> <p>The health board does not currently have a formal information / intelligence strategy that outlines not only what the organisation aims to achieve with data but also how it intends to collect, manage, analyse and apply that data effectively to ensure a coordinated and systematic approach to utilising intelligence across teams and services. This absence impacts the ability to align efforts, prioritise key areas and effectively use data for decision-making.</p>	<p>Poor quality data leads to:</p> <ul style="list-style-type: none"> • poor decision making; • failure to achieve performance measures and organisational objectives; • patient harm; and • exposure to financial loss and reputational damage. 	<p>Agreed Action:</p> <p>The Digital Response requires refreshing, and “data” will be a key element to be document. As part of the data management and analytics plan, we will look to expand how the organisation will use this information to make informed decisions and create machine learning (ML) or generative artificial intelligence (AI)</p>
	<p>Medium Priority</p>	<p>Expected Evidence of Implementation:</p> <p>Signed off Digital Response, which will outline how the Health Board will collect, manage, store, and use its data to achieve its business goals</p>
<p>Theme: Strategy</p>	<p>Control Design</p>	<p>Officer: Director of Digital Date: August 2025</p>

Appendix A

Assurance Opinion

	Substantial	Few matters require attention and are compliance or advisory in nature. Low impact on residual risk exposure.
	Reasonable	Some matters require management attention in control design or compliance. Low to moderate impact on residual risk exposure until resolved.
	Limited	More significant matters require management attention. Moderate impact on residual risk exposure until resolved.
	Unsatisfactory	Action is required to address the whole control framework in this area. High impact on residual risk exposure until resolved.
	Advisory	Given to reviews and support provided to management which form part of the internal audit plan, to which the assurance definitions are not appropriate. These reviews are still relevant to the evidence base upon which the overall opinion is formed.

Prioritisation of Findings

Priority	Explanation
High	Significant risk to achievement of a system objective OR evidence present of material loss, error, or misstatement. Poor system design OR widespread non-compliance.
Medium	Some risk to achievement of a system objective. Minor weakness in system design OR limited non-compliance.

Website: [Audit & Assurance Services - NHS Wales Shared Services Partnership](#)

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