

SCH-169 – Investigation Report

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Version: 1.5
Created: 21/11/2023
Updated: 03/01/2024
Classification: COMMERCIAL IN CONFIDENCE

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Amendment record

Issue status	Version	Date	Actioned by	Description
Draft	V0.1	21/11/2023	[REDACTED]	Internal copies for review & authorisation
Final	V1.0	29/11/2023	[REDACTED]	Issued to client
Final	V1.1	07/12/2023	[REDACTED]	Updated
Final	V1.2	15/12/2023	[REDACTED]	Updated
Final	V1.3	29/12/2023	[REDACTED]	Updated
Final	V1.4	03/01/2024	[REDACTED]	Updated
Final	V1.5	04/01/2024	[REDACTED]	Updated

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1 Executive Summary

A coroner's report was received on the 21st of November 2023 that required an investigation to be conducted, the Legal Investigation process was initiated. Two factors were identified in the coroner's report that required investigation:

- In the Badgernet electronic system used at the Royal Victoria Infirmary by the Newcastle Upon Tyne Hospitals NHS Foundation Trust, the current risk assessment (NEWS) does not map the national guidance fully and if would be more user-friendly, and thereby assist towards more effective, and therefore safer, risk assessment for it to map the national guidance completely.
- The current NEWTT2 chart is not yet available, and it would assist in the more effective management of risk for it to be in Badgernet. This was supposed to be implemented in July 2023 but as, yet it has not.

The System C investigation ("the investigation") commenced on Tuesday 21st of November 2023.

There are three main 'Badgernet' products as follows:

1. Maternity
2. Neonatal EPR
3. Clinical Summary

For the avoidance of doubt, the only product in Live use at the Trust at the time of the incident was Clinical Summary in neonatal.

The investigation found that on the 13th of June 2022, the customer site referenced in the report was utilising the Clinical Summary application for neonatal department only. The patient **was not** admitted into Neonatal and therefore was never added to the Clinical Summary.

The Clinical Summary application product does not contain the National Early Warning Score (NEWS)¹, Newborn Early Warning Score (NEWS – New Zealand National Guidance)⁴, Paediatric Early Warning Score (PEWS) or the Newborn Early Warning Trigger & Track (NEWTT)² functionality and therefore any recording of information on the NEWTT chart was not generated from the 'Badgernet' Clinical Summary application.

The customer agreed a deployment plan of Maternity for Go Live in January 2023 and Neonatal EPR for the 14th of November 2023.

The Maternity product implemented in January 2023 contains Newborn Early Warning Score (NEWS – New Zealand National Guidance)⁴ functionality requested for New Zealand customers that map to New Zealand national guidance. This functionality is available to United Kingdom customers on an elective basis and is not intended to map to Newborn Early Warning Trigger & Track (NEWTT)²

System C adopt best practice and national guidance from multiple countries, customers can elect to use the functionality to meet their specific needs.

Newborn Early Warning Trigger & Track (NEWTT)² functionality is available in the Neonatal EPR product, which was deployed in November 2023, this does map to NHS England national guidelines as intended.

NEWTT³ is planned to be introduced into Neonatal EPR and Maternity once the factors affecting deployment have been addressed. It should be noted that NEWTT² was not fully agreed by NHS England until June 2023 and a digital specification will be made available by NHS England by Autumn 2024.

From the investigation it has been determined that the following lessons learnt need to be completed.

- To plan to implement NEWTT² in the Neonatal and Maternity application for delivery to the customer estate once NHS England has finalised the release of NEWTT².

- Ensure the NEWS functionality is clearly distinguishable from UK national guidance by defining its full title of Newborn Early Warning Score.

2 Investigation Methodology

2.1 Stakeholders

The following stakeholders have been identified to complete the investigation.

Name	Role
[REDACTED]	Primary Investigator
[REDACTED]	Investigator
[REDACTED]	Legal Counsel
[REDACTED]	Executive Sponsor
[REDACTED]	Executive Sponsor
[REDACTED]	Executive Sponsor
[REDACTED]	Clinical Safety Officer
[REDACTED]	Technical Authority
[REDACTED]	Technical Authority
[REDACTED]	Technical Authority
[REDACTED]	Technical Authority

2.2 Roles & Responsibilities

2.2.1 Primary Investigator

Accountable for directing the investigation, to act impartial and independent to ensure a thorough investigation is conducted.

Accountable for the creation of an investigation methodology plan that is followed that defines the actions to be completed, expected deliverables, targets and measurements as required.

Accountable for the identification of stakeholders with specific competency to assist in the investigation, to ensure stakeholders are clearly defined and what remit they have within the constraints of the investigation.

2.2.2 Investigator

Responsible for performing specific activities during the investigation as directed by the Primary investigator.

Responsible for ensuring investigations progress to agreed deliverables and evaluate the outputs.

2.2.3 Legal Counsel

Accountable for providing legal guidance during the investigation and support any actions that are required that have legal implications and therefore require special attention.

2.2.4 Executive Sponsor

Accountable for providing sponsorship to the investigation allowing autonomy for the investigation to be conducted without impedance, delegating authority for resource allocation to the Primary investigator.

Responsible for providing support to the investigation for appropriate escalations when required from the Primary Investigator.

2.2.5 Clinical Safety Officer

Accountable for providing clinical safety authority within the investigation.

2.2.6 Technical Authority

Accountable for providing technical investigation, defining the technical actions required to investigate and retrieve information relevant to the investigation.

To perform analysis of technical information to support the outcome of the investigation.

2.3 Investigation Plan

The investigation commenced on Tuesday 21st of November 2023 after escalation of a coroner's report from legal counsel requiring an investigation to be conducted to provide a report to the coroner. Two factors were identified in the coroner's report that required investigation:

- In the Badgernet electronic system used at the Royal Victoria Infirmary by the Newcastle Upon Tyne Hospitals NHS Foundation Trust, the current risk assessment (NEWS) does not map the national guidance fully and if would be more user-friendly, and thereby assist towards more effective, and therefore safer, risk assessment for it to map the national guidance completely.
- The current NEWTT2 chart is not yet available, and it would assist in the more effective management of risk for it to be in Badgernet. This was supposed to be implemented in July 2023 but as yet it has not.

To gather information about the admission of the patient and understand what systems were in use, [REDACTED] accessed the Clinical Summary product for the site and filtered the dates between the 12th of June 2022 and the 14th of June 2022. The investigator confirmed the patient record did not exist in the system between these dates.

To determine if the Clinical Summary product maps to the NHS England national guidance, the investigation required the determination of the product and functionality in use at the time of occurrence on the 13th of June 2022.

To determine what products were deployed at the time of the incident the investigation engaged [REDACTED] as the technical authority for development. He reviewed release notes to understand what versions and functionality had been deployed to the site and when.

Contracts were reviewed for the delivery of Maternity and Neonatal EPR products with the project deliverables agreed with the customer for Go Lives of Maternity and Neonatal in 2023.

To determine what functionality was within the deployed products at the time of the incident, the investigation engaged [REDACTED] as the product clinical specialist technical authority. The functionality of the product was demonstrated to determine whether NEWS and/or NEWTT was included in the product to the investigators.

To determine if the Neonatal EPR and Maternity product maps to national guidance, [REDACTED] assessed the Neonatal EPR and determined NEWTT functionality is included and does map to national guidance and Newborn Early Warning Score (NEWS – New Zealand) functionality is included and maps to New Zealand national guidance. Customers can elect to use either or both functions. The customer does not have either enabled, therefore cannot use these within the Neonatal EPR product currently.

To determine if the Maternity product maps to National Guidance, [REDACTED] verified NEWTT functionality is not included in the product and Newborn Early Warning Score (NEWS – New Zealand) functionality does map to national guidance for New Zealand. Customers can elect to use this functionality.

[REDACTED] (Product Clinical Specialist – Maternity Lead) identified NEWTT2 was postponed in the neonatal application due to:

- NEWTT2³ is planned to be introduced into Neonatal EPR and Maternity once the factors affecting deployment have been addressed. It should be noted that NEWTT2 was not fully agreed by NHS England until June 2023 and a digital specification to be made available by NHS England by Autumn 2024.

3 Investigation Findings

On the 13th of June 2022, the site was utilising the Clinical Summary application within the neonatal unit, the patient **was not** admitted to the neonatal unit and therefore was not recorded into the Clinical Summary application.

In addition, the Clinical Summary application product did not contain the National Early Warning Score (NEWS)¹, Newborn Early Warning Score (NEWS – New Zealand National Guidance)⁴, Paediatric Early Warning Score (PEWS) or the Newborn Early Warning Trigger & Track (NEWTT)² functionality and therefore any recording of information on the NEWTT chart was not generated from the 'Badgernet' Clinical Summary application.

The customer would not have been able to record National Early Warning Score (NEWS) or Newborn Early Warning Trigger & Track (NEWTT)² records within the Clinical Summary application as this was not part of the application, and therefore had to use another system or forms provided directly from the NHS as advised under the Newborn Early Warning Trigger & Track (NEWTT) – a Framework for practice (2015)².

Further investigation by the trust would be required to determine what solution was used to generate the NEWTT chart referenced.

The customer agreed a deployment plan of Maternity for Go Live in January 2023 and Neonatal EPR for the 14th of November 2023.

The Maternity product implemented in January 2023 contains Newborn Early Warning Score (NEWS – New Zealand National Guidance)⁴ functionality requested for New Zealand customers that map to New Zealand national guidance. This functionality is available to United Kingdom customers on an elective basis and is not intended to map to Newborn Early Warning Trigger & Track (NEWTT)²

System C adopt best practice and national guidance from multiple countries, customers can elect to use the functionality to meet their specific needs.

Newborn Early Warning Trigger & Track (NEWTT)² functionality is available in the Neonatal EPR product, which was deployed in November 2023, this does map to NHS England national guidelines as intended.

NEWTT2³ is planned to be introduced into Neonatal EPR and Maternity once the factors affecting deployment have been addressed. It should be noted that NEWTT2 was not fully agreed by NHS England until June 2023 and a digital specification made available by NHS England by Autumn 2024.

4 Improvements & Lessons Learnt

4.1 Implement NEWTT2

- To plan to implement NEWTT2 in the Neonatal and Maternity application for delivery to the customer estate once NHS England has finalised the release of NEWTT2.
- Ensure that the NEWS functionality is clearly distinguishable from UK national guidance by defining its full title of Newborn Early Warning Score.

5 References

1. National Early Warning Score (NEWS) - <https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2> Royal College of Physicians, July 2012.
2. Newborn Early Warning Trigger & Track (NEWTT) – a Framework for practice (2015) (<https://www.bapm.org/resources/38-newborn-early-warning-trigger-track-newtt-a-framework-for-practice-2015>). British Association of Perinatal Medicine. 31st of May 2015.
3. Framework: NEWTT2 – Deterioration of the Newborn, A Framework for Practice. (<https://www.bapm.org/resources/deterioration-of-the-newborn-newtt-2-a-framework-for-practice>). British Association of Perinatal Medicine. 19th of January 2023.
4. Newborn Early Warning Score (NEWS) - <https://www.nationalwomenshealth.adhb.govt.nz/assets/Womens-health/Documents/Policies-and-guidelines/Newborn-Assessment-Observation-Chart-Early-Warning-Score.pdf> Te Whatu Ora, Health New Zealand. 23rd February 2021