

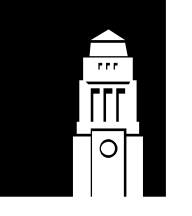
Challenges of conducting an audit of pressure ulcer monitoring systems in NHS England



Isabelle Smith¹, Jane Nixon¹, Sarah Brown¹, Lyn Wilson² and Susanne Coleman¹

¹Clinical Trials Research Unit, Leeds Institute of Clinical Trials Research, University of Leeds, UK

²Mid Yorkshire Hospital NHS Trust, Wakefield, UK



UNIVERSITY OF LEEDS

Background

A number of initiatives have been introduced throughout the NHS to reduce avoidable pressure ulcer harm, including monitoring systems such as:

- Safety Thermometer¹ (STh)
- Incident Reporting Systems (IRS)² (e.g. Datix/Ulysses)
- Strategic Executive Information System (STEIS) for the reporting of Serious Incidents Requiring Investigation³ (SIRI).

Concerns about inconsistencies in the local implementation of these systems and over-interpretation of data, prompted the Tissue Viability Society (TVS) to fund a project, supported by NHS England, to assess the accuracy of pressure ulcer monitoring in England and to inform the interpretation and further development of pressure ulcer monitoring.

The results of this project were presented at EPUAP 2015 and are now published^{4,5}.

This poster focuses on the challenges of conducting the audit of pressure ulcer monitoring systems in NHS England.

Summary of results

Reporting System	Sensitivity (95% CI)	Specificity (95% CI)
STh (weighted estimates)	48.2% (35.4%-56.7%)	99.0% (99.0%-99.0%)
IRS (unweighted estimates)	53.4% (46.3% to 60.4%)	98.3% (97.7% to 98.8%)

Table 2: overall accuracy of current monitoring systems

Under-reporting of pressure ulcers observed across monitoring systems

Correct classification when skin damage is identified across systems

- PUs not reported as IADs
- IADs not reported as PUs
- Other wounds not reported as PUs

When both the PUWA and monitoring system report a pressure ulcer on the same skin site:

- Good levels of accuracy classification
- Good levels of accuracy origin of pressure ulcer

Learning points

- ❖ Important to understand the data and working definitions of the systems you are assessing including the way these are implemented in practice.
- ❖ Important to interpret the results in combination with qualitative survey results to add **context** to the results
- ❖ To evaluate the accuracy of tools used for clinical management of pressure ulcers, **robust** data collection and analysis methods are required.
- ❖ A good team and co-ordinated approach is required

References

1. HSCIC (2014) NHS Safety Thermometer: Annual Publication, Patient Harms and Harm Free Care England. April 2012-March 2014, official statistics. H. a. S. C. I. Centre, HSCIC.
2. NPSA (2004) Seven steps to patient safety: Full reference guide. NPSA. London, NPSA.
3. NPSA (2010) National Framework for Reporting and Learning from Serious Incidents Requiring Investigation. NPSA. London, NPSA.
4. Smith, I.L., Nixon, J., Brown, S., Wilson, L., Coleman, S. Pressure ulcer and wounds reporting in NHS hospitals in England part 1: audit of monitoring systems. J Tissue Viability. 2016; 25:3-15
5. Coleman, S., Smith, I.L., Nixon, J., Wilson, L., Brown, S. Pressure ulcer and wounds reporting in NHS hospitals in England part 2: survey of monitoring systems. J Tissue Viability. 2016; 25:16-25

Methods and Data Collection

The project aimed to compare and contrast current data sources including in-patient STh prevalence data, IRS and STEIS incident data against a 'gold standard' Pressure Ulcer/Wound Audit (PUWA) and if appropriate develop proposals for a standardised approach to pressure ulcer monitoring.

To facilitate comparison of different monitoring systems it was important to understand the working definitions associated with each system and these are detailed in table 1. This demonstrates **variation** across monitoring systems and centres.

Table 1: Definitions

^{*}This is the definition for a 'Old' ulcer on the Safety Thermometer; [†]This is the definition for a 'New' ulcer on the Safety Thermometer; [‡] Questionnaire responses indicated that only 10 use on admission definition; [§] 12 use within 72 hours of admission; [¶] Severity of classification from worst to best is 4, 3, Unstageable, DTI, 2; [‡] Defined as complete re-epithelialisation in the absence of a scab including normal or erythematous skin.

	PUWA	STh	IRS/STEIS
Classification			
2	✓	✓	
3	✓	✓	As per local Trust policy (see questionnaire results)
4	✓	✓	
Unstageable	✓	X	
DTI	✓	X	
Origin			
Present on admission (POA)	Recorded in the patient's clinical record as category 2, 3, 4, U or DTI at the time of admission	A pressure ulcer that was present when the patient came under your care, or developed within 72 hours of admission to your organisation. [*]	Recorded at the time of admission as per Trusts local classification system [‡]
Hospital Acquired (HA)	A pressure ulcer which was not POA	A pressure ulcer that developed 72 hours or more after the patient was admitted to your organisation. [†]	Not POA
Pressure Ulcer Data Recorded			
Current pressure ulcers	<ul style="list-style-type: none"> • 'Current category' recorded as the category of PU observed at the PUWA skin assessment • 'Worst category' recorded as the worst category[¶] reported in the patient's clinical records during this admission. 	For New and Old the classification of the worst pressure ulcer should be reported.	All data recorded for a patient during their current admission should be recorded, including all classifications of ulcers from all reports listed.
Healed pressure ulcers [‡]	<ul style="list-style-type: none"> • 'Worst category' recorded as the worst category[¶] reported in the patient's clinical records during this admission. 	N/A	

This was an audit and used anonymised data, **ethical approval** was not required. However, verbal consent for skin inspection was obtained in line with usual clinical procedures and care. To allow comparison of monitoring systems all data was recorded in a single booklet by 3 nurses (figure 1).

Comprehensive **training** for the **audit process** was required. We liaised with participating Trusts audit lead/staff to ensure that that everyone was clear about their role within the audit process prior to data collection on the October STh census. The assessors, were members of the Tissue Viability Team or ward based expert nurses and experienced in undertaking skin assessment and were given no additional training prior to the audit taking place

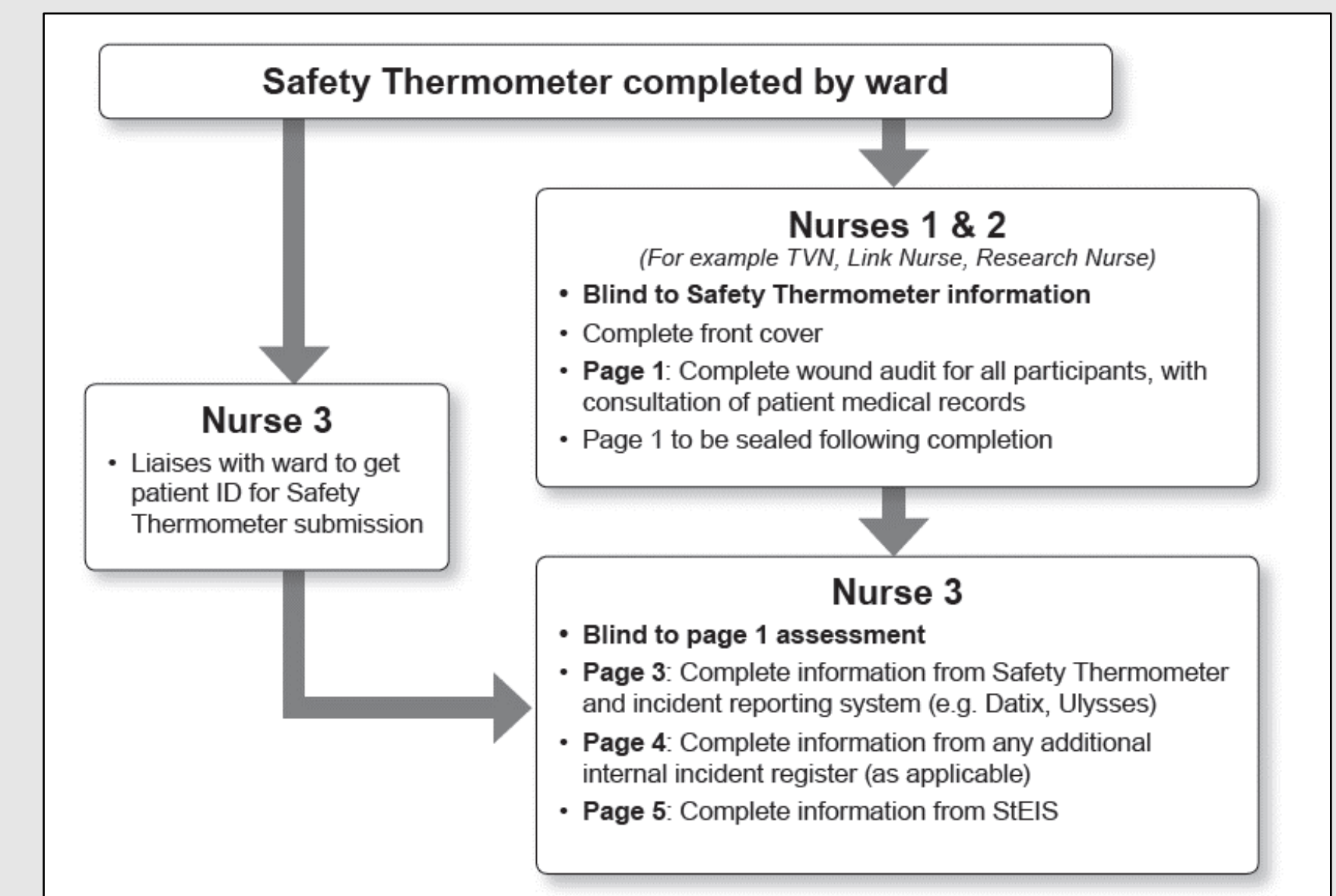
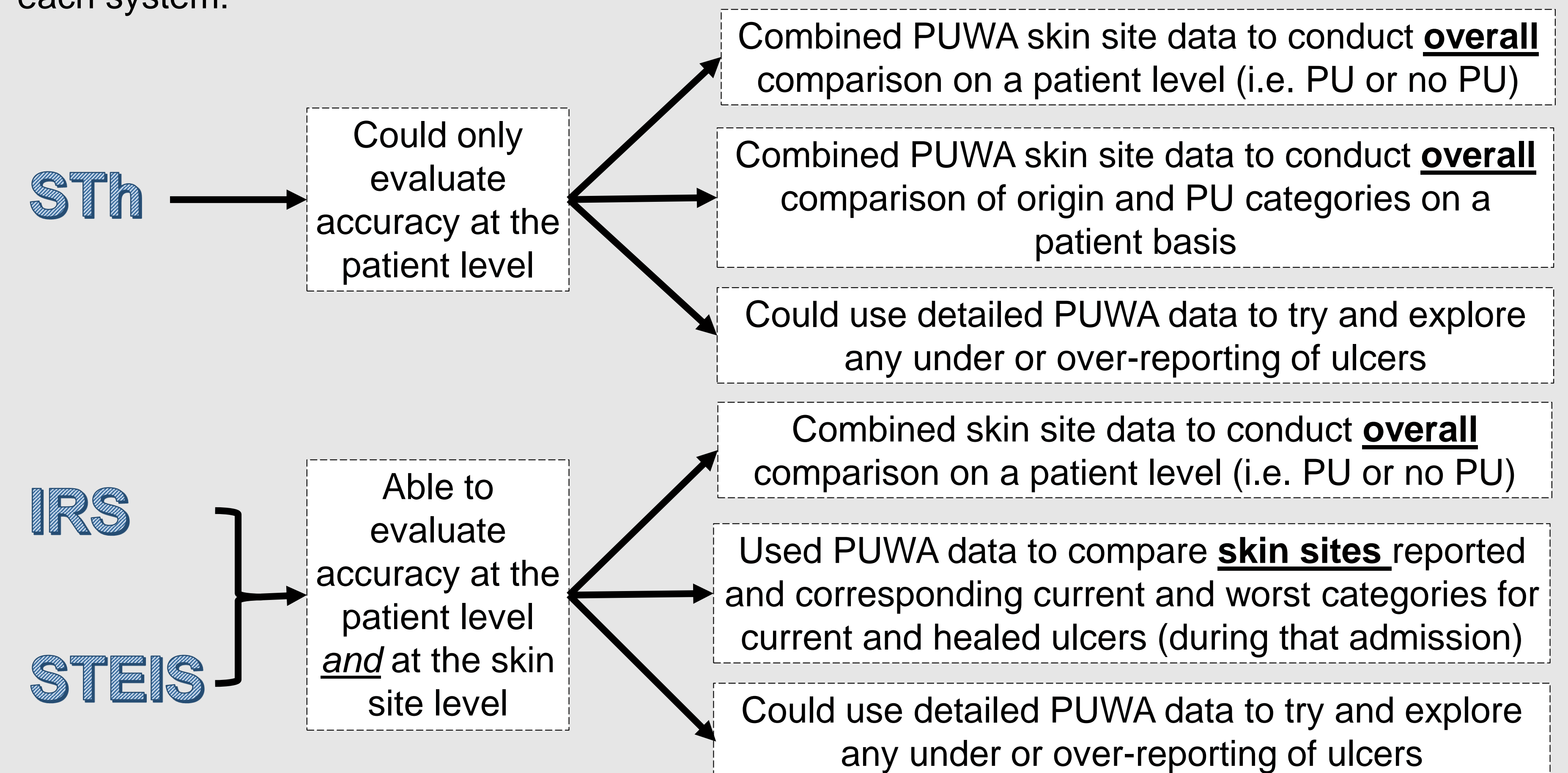


Figure 1: Audit process

Analysis

Data obtained from the PUWA required **restructuring** and combining depending on each system:



Other considerations:

- Weighting accuracy measures according to the sampling of Trusts
- Timelines for producing study report
 - Preparation for analysis and reporting is key

Acknowledgements

- NHS England's Patient Safety Domain
 - NHS England - North (Yorkshire & the Humber) Pressure Ulcer Safeguarding Professional Reference Group
 - The 24 participating NHS Trusts and their staff
 - Val Henderson, Clinical Lead Tissue Viability, Northumbria Healthcare Foundation Trust
 - Margaret Broome, Wound Care Research Nurse, Harrogate and District NHS Foundation Trust
 - Tracy Vernon, Lead Nurse - Tissue Viability, Doncaster & Bassetlaw Hospitals NHS Foundation Trust
 - CTRU team: Prof. Linda Sharples, Howard Collier, Chris Taylor, Abigail Ledger
- This publication presents independent research funded by the Tissue Viability Society. The views expressed in this publication are those of the author(s) and not necessarily those of the Tissue Viability Society.