Background

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

- **Safety Thermometer**
- **Incident Reporting Systems (IRS)** (e.g. Datix/Ulysses)
- **Strategic Executive Information System (STEIS)** for the reporting of Serious Incidents Requiring Investigation (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. This poster focuses on the challenges of conducting the audit of pressure ulcer monitoring systems in NHS England.

Summary of results

<table>
<thead>
<tr>
<th>Reporting System</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STh (weighted estimates)</td>
<td>48.2% (35.4-56.7%)</td>
<td>99.0% (99.0%-99.0%)</td>
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<tr>
<td>IRS (unweighted estimates)</td>
<td>53.4% (46.3% to 60.4%)</td>
<td>98.3% (97.7% to 98.8%)</td>
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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.

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>
<thead>
<tr>
<th>IRS 1</th>
<th>STh 1</th>
<th>STh 2</th>
<th>STh 3</th>
<th>STh 4</th>
<th>STh 5</th>
<th>STh 6</th>
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<tr>
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Table 1: Definitions

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 everyone was clear about their role within the audit process prior to data collection on the October 5th 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.

Analysis

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

- Combined PUWA skin data to conduct overall comparison on a patient level (i.e. PU or no PU)
- Combined PUWA skin data to conduct overall comparison of origin and PU categories on a patient basis
- Could use detailed PUWA data to try and explore any under or over-reporting of ulcers
- Combined skin data to conduct overall comparison on a patient level (i.e. PU or no PU)
- Used PUWA data to compare skin sites reported and corresponding current and worst categories for current and healed ulcers (during that admission)
- Could use detailed PUWA data to try and explore any under or over-reporting of ulcers

Other considerations:

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

References


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- NHS England’s Patient Safety Domain
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