A new national Pressure Ulcer Surveillance system using The Model Hospital System: Phase 1

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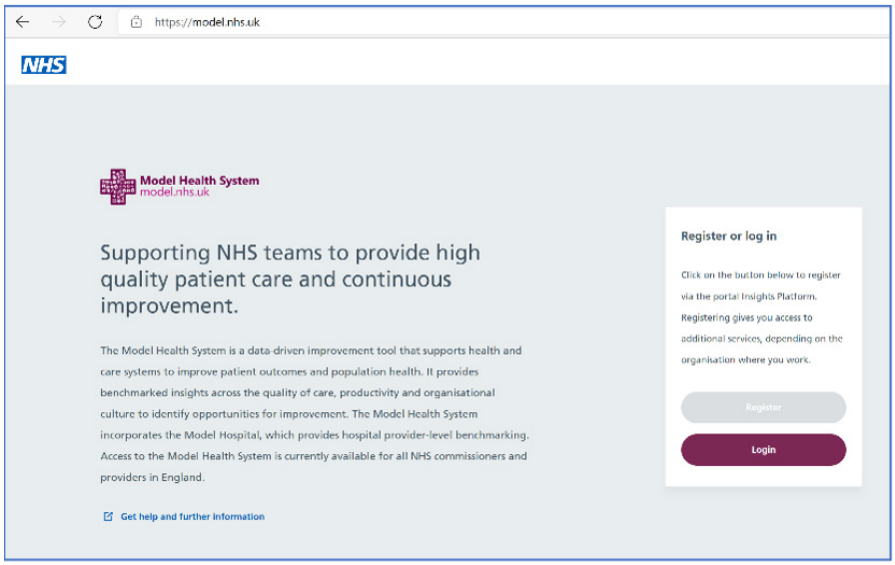
Improving pressure ulcer (PU) prevention has been a key quality driver for over a decade within all NHS provider organisations (Fletcher et al, 2021) with PU data being used to measure improvement.

In that time, PU data collection and reporting has become a time-consuming priority for many tissue viability specialist nurses who have been required to be responsible for PU classification, validation and allocation of attribution (Fletcher et al, 2021). These activities contribute little to patient care and reduce the amount of time tissue viability nurses can spend on preventing PUs. Individual organisations devote considerable time to deciding not only which data to capture, but also how they report it. This results in significant variation, so it is difficult to understand the true size of the problem at a national level.

The NHS Long Term Plan (2019) and NHS Digital (2021a) have set out goals to improve the quality of data being captured and used within the NHS. Hospital Episode Statistics (HES), which are based on data taken from patients' clinical records, have been published for many years, and are extracted from Commissioning Data Sets (CDS) submitted via the Secondary Uses Service (SUS) data (Nyamajiyah et al, 2021). As such, SUS data, offers an existing source of data to improve PU data collection and reporting.

This paper, the final in a series of three, will outline the reporting system through the Model Health System which will be used from 2022, for local and national PU surveillance to support quality improvement for those at risk of pressure damage.



Front page https://model.nhs.uk/

Background

In paper 1 (Fletcher et al, 2021) described three key underpinning principles for a new PU surveillance system:

- Data capture should be secondary to operational practice
- There should be clarity about the purpose of the data capture.
- Data should be of a level of granularity relevant to the purpose for which it is required.

For data to be useful and suitable for driving improvement it needs to be presented in a meaningful way to inform quality improvement.

With these principles in mind, the logical step is to use existing datasets for PU surveillance such as patients' clinical records, whether paper or electronic. From these, PU data along with other data such as patient demographics, diagnosis, treatment and investigation, can be extracted, coded and fed into SUS (Nyamajiyah et al, 2021) using the standard codes for PUs in line with other clinical diagnoses (***Box 1***; Nyamajiyah et al, 2021; NHS Data Model and Dictionary, 2021).

The Model Health System

The Model Hospital was developed following recommendations by Lord Carter (2016) to create

Box 1. Existing codes that can be used for pressure ulcer data capture

Relevant codes :
ICD-10 code L89 – Pressure Ulcer
ICD-10 code Y95- nosocomial condition (acquired in hospital but not necessarily this hospital)
NHS Data Model and Dictionary: Present on Admission Indicator

a data driven system, using one source of data, benchmarks and good practice to help Trusts understand what good looks like. A range of data sources are used to build the metrics, with SUS being one such source.

Since 2018, the Model Hospital has been followed by the Ambulance, Model Mental Health Trust and Model Community Health Trust systems. Most recently the Model Health System was developed to house all these systems, bringing data together at Integrated Care System level.

The Model Health System is a data-driven improvement tool that enables NHS health systems and trusts to benchmark quality and productivity to identify opportunities for improvement. By identifying these opportunities, the Model Health System empowers NHS teams to continuously improve care for patients.. Access to the Model Health System is currently available for all NHS commissioners and providers in England, and their staff.

The objectives of the Model Health System are:

- To support the NHS to eradicate unwarranted variation in the quality, safety, and productivity of healthcare
- To provide improvement and analytical insights to support local systems working
- To support trusts, regions, and systems in the restoration, recovery, and transformation of services.

Moving to using the Model Health System for PU surveillance will be the first national large-scale change since the Safety Thermometer was launched in 2011 (Fletcher et al, 2021). This change has been driven by the discontinuation of the Safety Thermometer in 2020.

Each health care provider organisation should have a Model Health System Ambassador assigned to them. The role of Model Ambassadors is to help to champion the Model Health System locally and to be a point of contact for advice on how to make best use of the system.

A phased approach to improving PU surveillance

A phased approach will be used to develop PU surveillance in the NHS. Phases 1 and 2 will be limited to acute trusts using data from SUS.

Phase 1 will be limited to providing information on the number of patients with a PU. Acute trusts will access their data via the Model Hospital component of the Model Health System. This will report the number of patients with a PU indicated by the presence of the L89 code and Y95 if acquired during a hospital stay. Phase 1 metrics are currently being piloted with a growing number of trusts. Pilot sites are reviewing their clinical documentation and working with coding teams to align internal processes and ensure that all PUs are appropriately captured and coded.

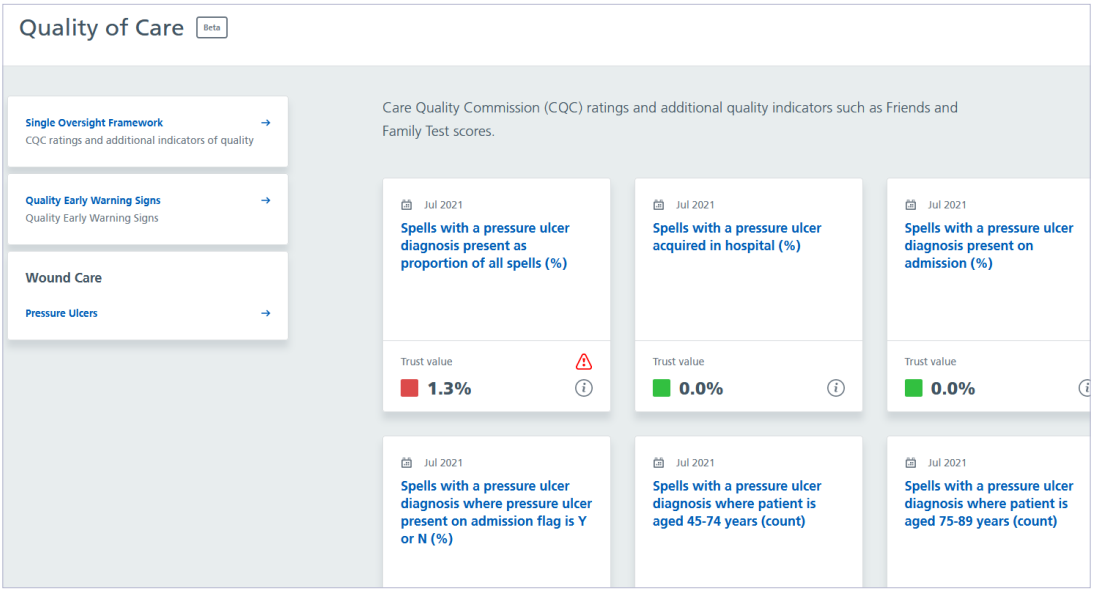


Figure 1 The Quality of Care landing page

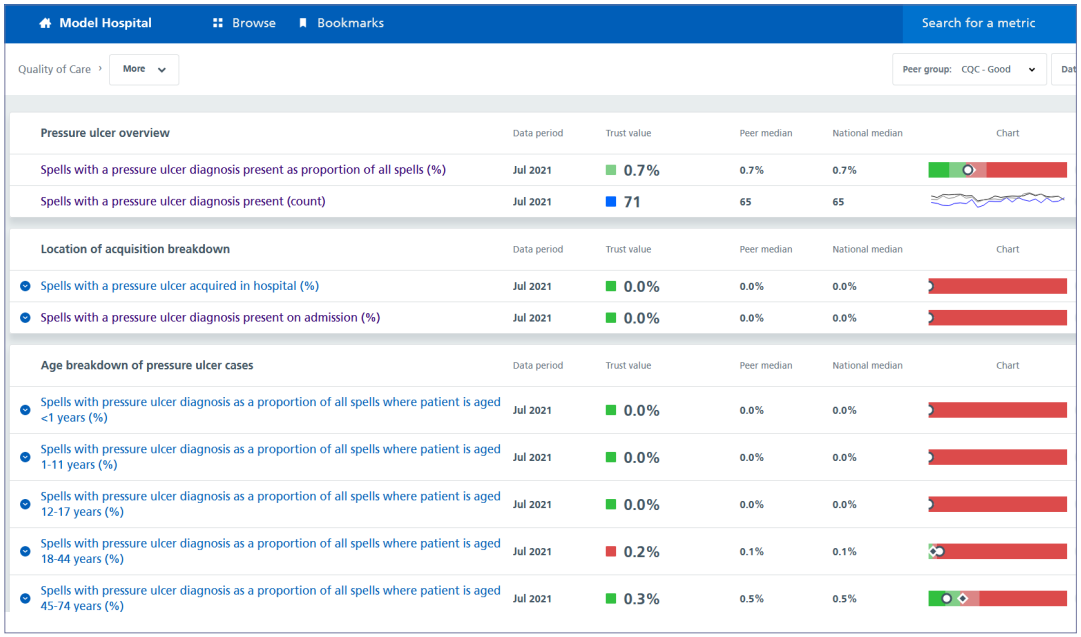


Figure 2: Pressure Ulcer Metrics

Phase 2, which is in development, will extend to reporting on PU category, Phase 3 will extend to reporting on PUs in community services that are reported by the Community Services Data set.

What will the Model Health System look like?

The Model Health System presents surveillance in easy-to-use screens with tiles and rows that can be clicked on to further expand the measure being presented.

The PU metrics will be found from the home page, within the Board Level Oversight grouping and then within Quality of Care ***(Figure 1)***.

This screen allows the user to view the metrics in a headline style. Clicking on the metric tile will allow viewing in more detail, with an interactive chart option that can allow benchmarking with national and peer median also. Currently, only PU metrics are visible here.

The PU metrics can also be viewed in rows by selecting the Pressure Ulcers section within Wound Care ***(Figure 1)***. This will then present as in ***Figure 2***.

As with the headline tiles, these can be clicked on to view the metric in further detail. Clicking on the charts in the chart column will take the user straight to the interactive chart.

What is needed locally to support this change

Clinicians with responsibility for PU reporting (most likely tissue viability nurses) will need to ensure their organisations are aware of and prepared for the new surveillance system. As part of this, systems will need to understand the difference between surveillance reporting and clinical incident reporting. The purpose of surveillance reporting is to capture the full incidence and prevalence of PUs across a system to drive quality improvement at organisational level. The purpose of clinical incident reporting is to support learning from mistakes so action can be taken to keep patients safe.

Guidance for local implementation of Phase 1 is being developed with pilot sites. The guidance will advise trusts what steps they may need to take to ensure that their SUS data gives an accurate representation of their PU incidence and prevalence.

The guidance will focus on the need to improve the quality of data by improving the quality of clinical record keeping and coding. Initially, the quality of existing recorded data or the process of data capture and coding, may be inadequate but this provides a starting point for quality improvement in PU prevention. Improving clinical record keeping will provide a robust dataset against which further improvement can be measured. To achieve this,

clinicians and coding departments will need to work together to review and improve current documentation and coding. During this period of change, senior management, Boards and the local commissioners of care will need to be kept informed of the changes so they are aware that PU surveillance is being 're-set', will differ from previous data, and that the Model Health System should be used for surveillance purposes going forward.

SUMMARY

Using the Model Health System for PU surveillance will:

- Support clinicians responsible for preventing pressure damage
- Release time for more productive tissue viability care other than validation of current data capture
- Meet the three key underpinning principles (as outlines previously) of data capture (Fletcher et al, 2021).

Data will only ever be as good as the clinical documentation and coding but focusing on improving documentation will improve the existing data and make it truly reflect the clinical situation. This in turn will support improvements in preventing pressure damage.

This PU data and the Model Health System initiative is laying the foundations for improving wound care data for other areas of wound care, such as lower limb wounds and surgical wounds. Moving forwards, the National Wound Care Strategy Programme (NWCSP) anticipates similar metrics initiatives for these topics.

How to use the Model Health System

Register and log in at https://model.nhs.uk/. Register with an NHS email address and organisation. You will then be taken to the main home page for your organisation. If you scroll down this page you will find a button to contact your Model Ambassador. Each organisation should have a Model Health System ambassador assigned to them. The role of Model Ambassadors is to help to champion the Model Health System locally and offers networking and support between organisations. Ambassadors work collaboratively across their local systems and have the opportunity to learn from and share with colleagues across the country.

The Ambassadors support Model Health System by:

- Supporting colleagues to use the platform and raising awareness across their organisation
- Providing feedback to the national team to shape future development
- Networking with other ambassadors to learn from and share with each other.

Depending upon the organisation this page might be a Model Community Health Trust or Model Hospital or Model Health System (STP/ICS) or Model Mental Health Trust.

The top of the home page will show Opportunities for improvement ***(Figure 3)***

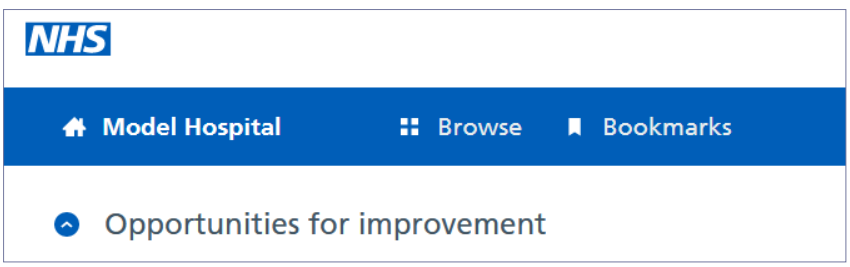


Figure 3. Top of the home page

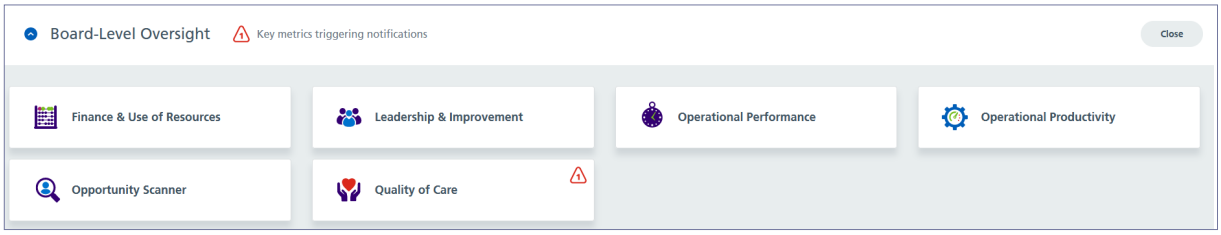


Figure 4. Board level oversight details

The PU metrics will be found from the home page, within the Board Level Oversight grouping and then within Quality of Care ***(Figure 4)***. Once the Quality of Care button is clicked on it only goes through to PU metrics at the moment.

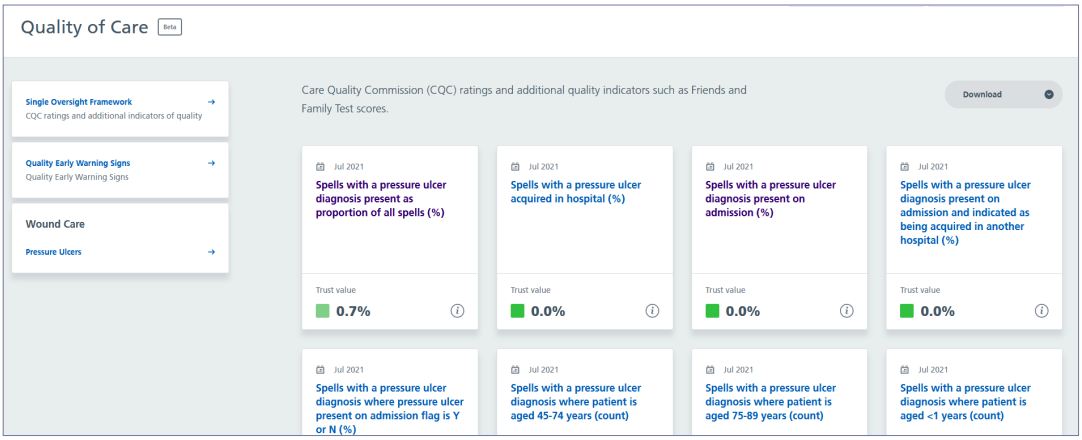


Figure 5. The Quality of Care landing page

This landing page will look like ***Figure 5***. The above tiles/metrics are 'Headline metrics' — these are metrics deemed to be important or key summary metrics for Wound Care. It is also at this point that the peer groups and data period can be changed ***(Figure 6)***.

Figure 6. Changing your peer group

Clicking Pressure Ulcers (under wound care — ***Figure 7***) moves pages beyond the headline metrics and into the more detailed metrics list ***(Figure 8)***. These will allow you to identify the number of spells with a PU diagnosis present, the spells as a proportion of all spells, spells acquired in hospital and spells present on admission. You can also see the spells broken down into age groups.

In addition, on this page there is a section for Data quality indicators. This provides an indication where data quality might need improvement. For instance, as seen in ***Figure 9,*** if the number of spells with a PU diagnosis where the present on admission indicator is Y or N equals 0% then it is clear that either the

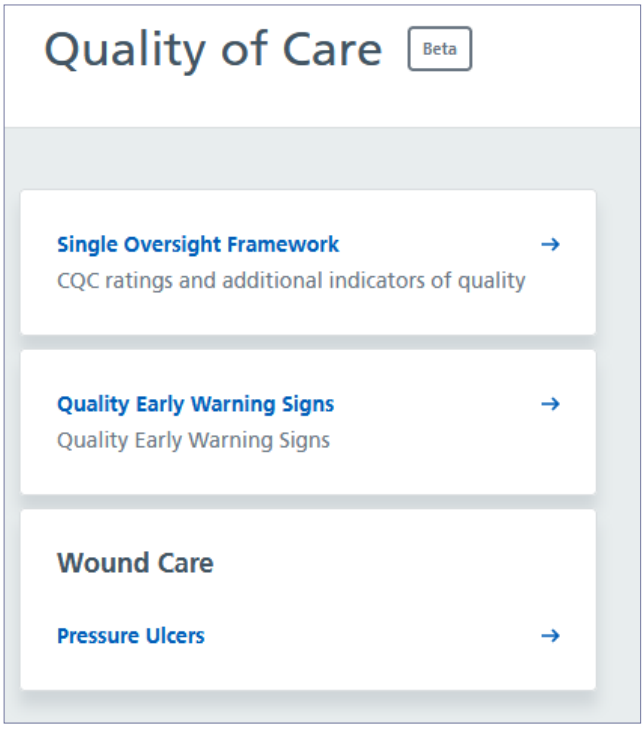


Figure 7. Opening the Pressure ulcer pages.

indicator has not been used or there were no PU present on admission. If the spells with a PU diagnosis where the present on admission indicator was not clearly specified is 100% then it is clear that this is about data quality or process of coding capture and the Present on Admission (POA) indicator is not being used or able to be used by the coding department.

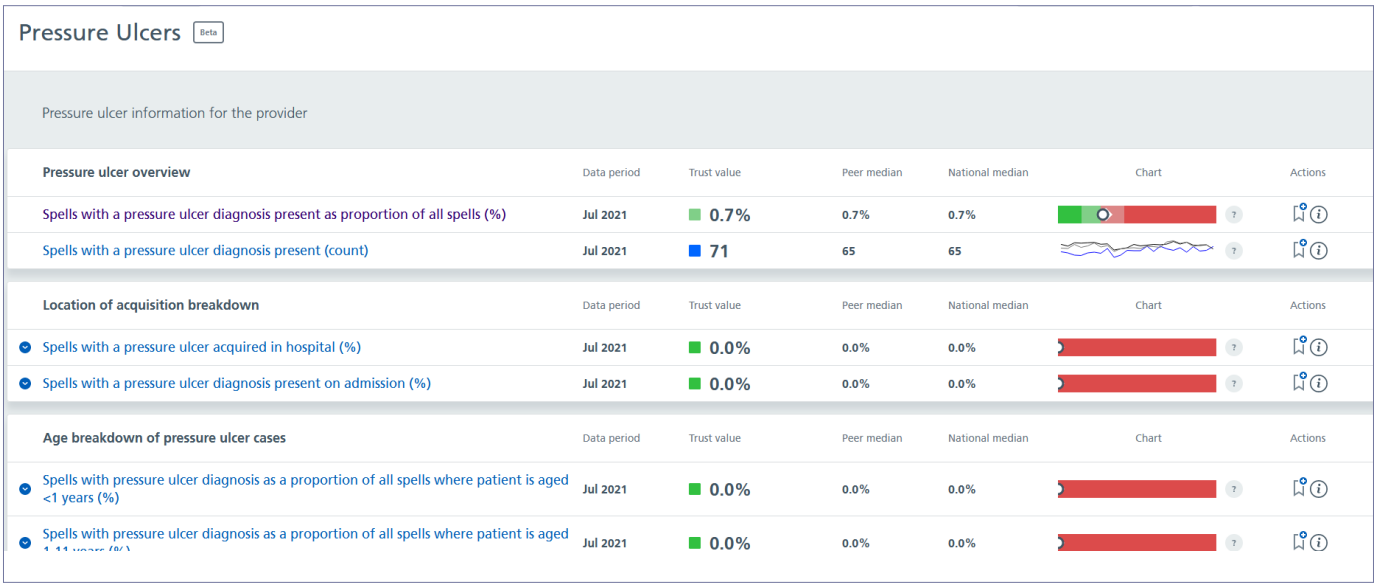


Figure 8. More detailed information

Data quality indicators	Data period	Trust value	Peer median	National median	Chart	Actions
Spells with a pressure ulcer diagnosis where pressure ulcer present on admission flag is Y or N (%)	Jul 2021	0.0%	0.0%	0.0%		

Figure 9. Data quality information

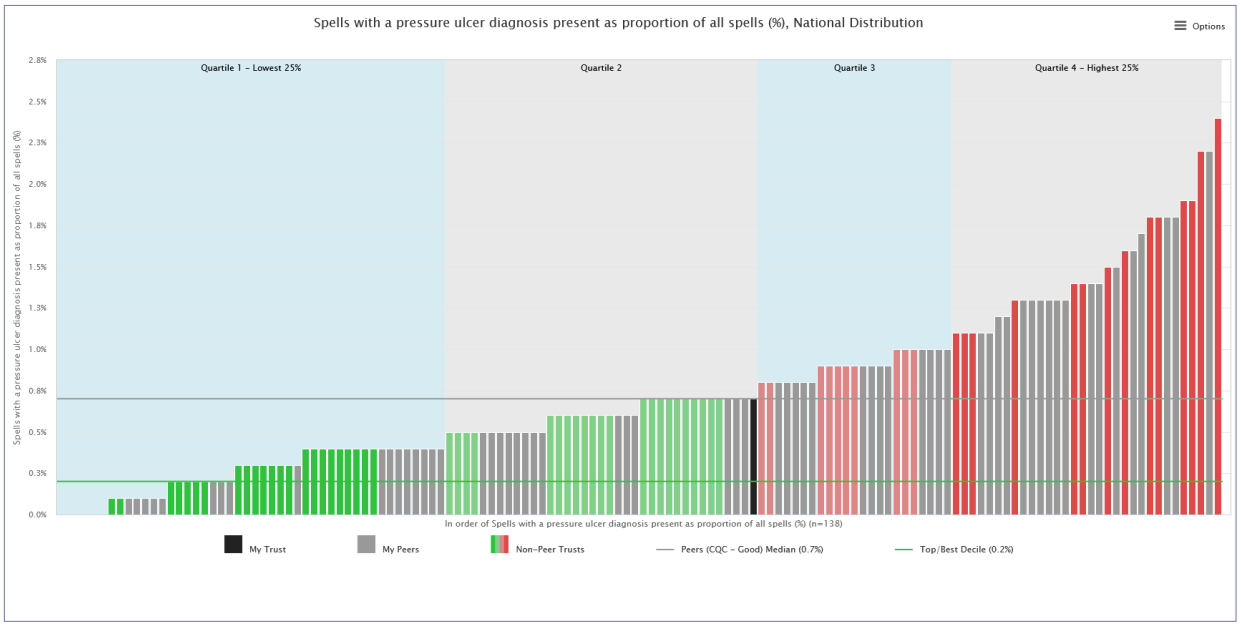


Figure 10. Showing peer groupings by bar chart

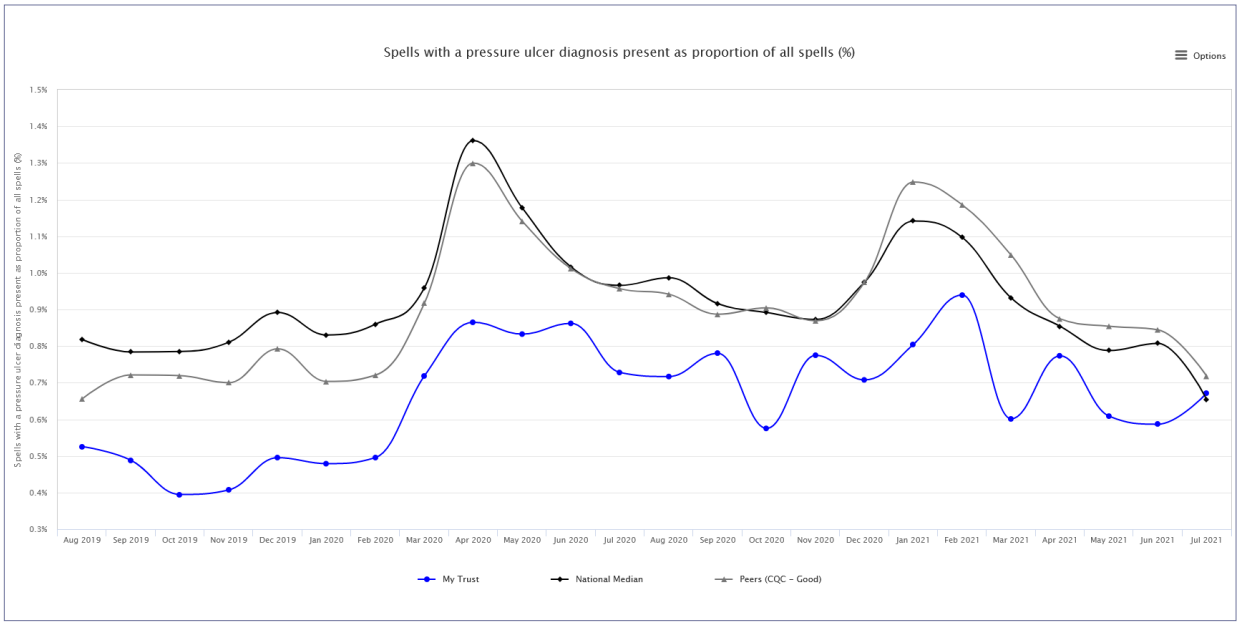


Figure 11. Showing peer groupings by trend line

HOW TO USE THE CHARTS

Each of the horizontal lines in ***Figure 9*** presented can be clicked onto for a different view with trend charts and bar charts. The data presented in this view also allows some benchmarking against the national average and median as well as against peer Trusts. Viewing different peer groups and creating a bespoke peer list is possible. By default, organisations are matched to similar size organisations with a CQC rating of good. They may not necessarily have the same level of acuity so caution should be exercised in benchmarking against others, remembering that the primary purpose of the Model Health System is to allow quality improvements within a local system. It may be preferable to benchmark with organisations within the local Integrated Care System (ICS) to look at the quality of the patient care across the ICS. See for example ***Figures 10 and 11.***

To support the implementation of this new surveillance system a collection of resources will be made available on the National Wound Care Strategy Programme Pressure ulcer web page (https://www.nationalwoundcarestrategy.net/pressure-ulcer/).

What to do next:

1. Log into Model Health System and register, spend some time looking at how the system works
2. Arrange a meeting with the coding lead to discuss what may need to be done, key points may include
    a. do they review medical notes and nursing notes?
    b. is there a specific place that the verified PU data is recorded?
    c. what do they need from the documentation to accurately code PU?
3. Review your documentation to ensure the necessary information is clearly presented.
4. Arrange to meet with your Director of Nursing or other Board members to flag the coming changes.
5. Start to use the data being captured in Model Health System and focus on data capture improvement.

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