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A Pain in the Pilot

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Abstract. Multi-agency guidelines recommend use of a functional pain assessment tool as an objective assessment of pain, rather than relying on a subjective verbal rating scale. This project was created to address issues managing Patients' pain in inpatient settings. The project aimed to answer: 'How can we adopt the use of a Functional Pain Assessment into our clinical practice, optimising its effectiveness for ALL patient groups in our inpatient ward areas?' Output from multi-disciplinary working group: two electronic documents were created - Pain Assessment Tool and Pain Observations Chart: for staff to document routine pain observations. Five wards participated in the pilot study, with training/support provided. Result: Staff and patients preferred the new approach, compared to previous pain documentation method. However, documents are effective in pain management, but more education and support is needed to embed cultural shift.

Keywords. Pain, pain management, EPR, electronic pain assessment, functional pain assessment, electronic documentation

1. Introduction

Pain is a subjective experience and can only be compared to the patients past pain experiences in the current moment. Pain is what the patient says it is, however adding an objective measure with a validated functional pain assessment tool is useful and recommended in both the acute and chronic pain settings.

Recent multi-agency guidelines^[1] recommend the use of a functional pain assessment tool for acute surgical pain rather than relying on a unidimensional numerical scale. In patients with chronic pain the Scottish Intercollegiate Guidelines Network recommend assessing the type, severity and functional impact of pain.

Use of a functional pain assessment tool justifies actions/omissions of analgesia, prevents over medicating the patient, improves patient's safety and reduces risk.

A subjective assessment of Patients' pain only provides clinical staff with part of the picture, and can be affected by several factors:

- Patients' understanding of the verbal rating tool
- Their experience and impression of their own pain and tolerability
- Age, gender, and cultural factors
- Personal coping factors.

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Adding the use of an objective assessment, by way of a functional pain assessment (FPA) could provide a more complete picture of a Patient's pain than using a self-reporting Verbal Numerical Rating Scale alone.

2. Case Study Description and Relevance

Historically, we have had no method of recording the location, cause, or nature of a Patient's pain within our Electronic Patient Record, meaning our care delivery had gaps. Routine pain observations, and recording of verbal pain scores has traditionally been documented in the general Observations Chart (where, amongst others, NEWS2 is also recorded). This arrangement is not ideal due, in part, to the frequency Patients' vital signs are often recorded may not match the required frequency for monitoring pain. We used a verbal rating scale -relying on the Patient's own experience of their pain with their verbal scoring (which is a subjective opinion and only offers part of the overall picture of the Patient's pain). We attempted to add a Functional Pain assessment here, but this was not properly understood by staff and as a result was not well used. We recognised the need for a digital stand-alone platform, with decision making supported by an algorithm, specifically for effective pain management to be added to our EPR.

The aim of this quality improvement project was to design and build a suitable Trust-wide Pain Assessment Tool. This tool should provide our clinical staff a platform to assess and document pain factors, record a pain management care plan (setting goals, parameters for escalation, and frequency of routine pain monitoring needed), and select an appropriate Functional pain assessment tool for the Patient to improve the overall effectiveness in managing our Patients' pain.

3. Project Design

This project began by establishing a multi-disciplinary working group, incorporating representatives from Acute Pain team (Pain Specialist Nurses and Pain Consultant), Surgical, Medical, Palliative Care, Stroke, and Elderly Care Ward Managers and Staff, as well as Palliative Care Specialist Nurse and Digital Informatics Nurse. The working group was chaired by one of the Trust's Matrons, and had a timeframe of one year. The expected output of the working group was to create the design for a new Pain Assessment that would include both verbal and functional Pain assessment, and which would be suitable for use across all types of inpatient wards in the Trust.

The second stage of the project was to build the agreed design into our Trust's EPR, within the technological constraints and capabilities of the system (Meditech V6) to do the digital 'heavy lifting'. This stage involved collaborating with our IT Software Services team to build the Pain Assessment Tool as per the agreed design from the working group incorporating the clinical decision-making algorithm.

The third stage was to thoroughly test the newly built Pain Assessment Tool. Acute Pain Team created some fictional case scenarios to test the functionality.

With approval from Senior Nursing and Nursing Assurance Group, the fourth stage was to pilot the Pain Assessment Tool on selected wards. This pilot would assess how this functioned within our EPR in real clinical practice, staff satisfaction, and impact to effectiveness of managing Patients' pain. Following analysis of the pilot, implementing the Pain Assessment Tool into routine clinical practice across all wards in the Trust is the final stage of the project.

4. Execution

There is no 'one size fits all' functional pain assessment. As advised by research conducted by the Acute Pain Team, we decided to include three validated functional pain assessments (FPAs): FLACC, Functional Pain Assessment, and PAINAD. These are used for specific Patient groups. The first challenge we faced was identified during the first stage. There are several functional pain assessment tools validated for different Patient groups.

The challenge: <u>How can we design one electronic assessment to effectively utilise</u> multiple different FPAs appropriately for all of the different Patient groups across the <u>Trust?</u>

This challenge was overcome with the inclusion of 2 essential questions:

"What is the Patient Population?" (E.g. Adult, Aged 65+ years AND/OR Dementia/Delirium, Paediatric, Stroke, Learning Disability, Palliative, End of Life),

"What is the pain type?" (E.g. Acute pain, Post-operative pain, cancer pain, chronic pain, neuropathic pain, acute on chronic pain). The results from both of these selections drives the assessment to select the appropriate functional pain tool for that Patient's scenario.

For example:

- Adult + Acute pain = Functional Pain Assessment
- Adult + Post-operative pain = FLACC
- Age 65 years + Acute on chronic pain = PAINAD

(Incorporating the algorithm into EPR was itself challenging, requiring a multitude of rules to be coded to satisfy the algorithm.)

Specific Patient groups also needed additional key criteria included into the design of the assessment, which were not relevant to other Patient groups. Again, a technical challenge to apply relevant rules to enable these criteria to be available where relevant and only to those.

The outcome from the working group was the creation of two separate electronic documents:

- Pain Assessment Tool: Registered Nurse to record a comprehensive assessment: Patient and pain type driving the automatic selection of the appropriate FPA, descriptors of the Patient's pain to formulate a clear picture of the pain, record baseline pain score – both verbal and functional. From this information, the RN documents the plan for the Patient's pain in the Pain Management Plan (goal/expected outcome, interventions, parameters for escalation, and frequency for routine pain observations).
- Pain Observations Chart: A dedicated place for ALL staff to document routine observations of pain, as per the frequency in the Pain Management Plan (which could be different from the frequency of recording the Patient's vital signs). This chart includes details from the Pain Management Plan to advise chart users of the expectations for this Patient's pain, and when staff should document any escalation if the escalation parameters were met at that time.

After thorough functional testing and design refinements (as requested by Senior Nursing team) were applied, preparations for the pilot were made. Five different wards (medical, surgical, elderly care, palliative care, orthopaedics) were selected and agreed to participate. Training materials were prepared (training video, guidance documents, and face-to-face training programme and demonstration agreed). Pre-pilot surveys for staff and also patient/carer were designed to obtain a baseline of current opinion of pain management. Pre-pilot staff and patient/carer surveys were shared and completion encouraged. Once approval for pilot to commence was granted, Face-to-face training for registered nurses and healthcare assistants commenced, delivered by Acute Pain Nurses and Digital Practice Development Nurse. Go-live date for each pilot ward was agreed and staggered across several weeks, to enable Acute Pain Nurses and Digital Practice Development Nurse to focus attention and intensive support to one pilot ward at a time. Ongoing support for ward staff was offered throughout the pilot phase.

The pilot ran throughout September – October 2023, allowing enough time for every ward to have at least 4-weeks' experience of using the new documentation and support with its use. At the end of this pilot period, we approached our business information service to extract the raw data from our EPR to enable us to analyse the documentation activity, compliance, and quality.

(At time of writing this case study, we have finished the fourth stage (pilot) of the project. Plans for Trust-wide implementation will commence once the pilot has been presented to and considered by the Senior Nursing team and assurance group, and approval for Trust-wide implementation is granted if agreed.)

5. Analysis

1,049 Patients were included in the pilot. Of these, approximately half had reported a verbal pain score 3+, meaning they should have had a Pain Assessment Tool documented. In reality, this was completed for only 20% of Patients, whose pain was more effectively managed as a result.

Extrapolating from this, we anticipate about 50% of inpatients may need the RN to complete a Pain Assessment Tool sometime during their admission, with regular pain monitoring for up to 20% of inpatient population at any one time. This should not be too much of an increase to the staff workload burden, but the payoff will offer them a more comprehensive method of assessment and planning appropriate outcomes, as well as an effective method for routine monitoring of their Patients' pain, and patients feeling their pain is more effectively managed.

6. Impact and lessons learned

Impact of the project:

- Feedback from Patients and carers:
 - o PRE-PILOT patients reported they didn't quite understand the verbal score and didn't feel like their pain was fully assessed: "It is difficult to score your pain based on a number.": "I felt the nurse did not ask me where my pain is and how to describe it."
 - o POST-PILOT patients liked the new method of assessing their pain: "As well as been asked about my pain score out of 10, I was also asked to describe my pain

and the location. This is more detailed than previous pain assessments."; "I felt that pain assessment is more detailed and my pain relief was more tailored to my requirements."; "During the pain assessment the nurse set pain management goals that gave me clear focus to achieve."

• Feedback from staff (Registered Nurses and Healthcare Assistants):

- PRE-PILOT staff reported they were unable to conduct a complete assessment of their Patients' pain: "Unable to assess effectively and manage pain effectively."; "Unable to document a pain score for dementia patients."; "Unable to document functional pain score for chronic pain and IV drug user patients. This makes it difficult to say the patient does not warrant any extra pain relief."; "Scoring on verbal pain scores alone is not ideal and makes achieving adequate pain management difficult.",
- o POST-PILOT The overwhelming feedback from both registered and non-registered staff was they liked the new documentation, and felt they were able to thoroughly assess, plan, and manage their Patients' pain: "I really like this!"; "I felt like I was thoroughly assessing pain."; "Once the initial pain assessment is completed, it is quick and easy to use. The more often it is used the easier it is to complete."; "Very useful. I feel more confident using functional pain assessment tool with IV drug users"

• Culture:

o Although staff feedback about the new documentation was positive overall, the actual use of both the assessment and the routine pain monitoring chart were less than optimal. This is due, in part at least, to the change in culture and practice still bedding in as staff become familiar with the new process. Patients with the new documentation received more effective pain management care and interventions.

Several lessons were learned along the pathway of this quality improvement project:

- Analysis of the pilot data proved our prior concerns that the general Observations Chart (where, amongst others, NEWS2 is recorded) is not an ideal place for routine pain observations due to the frequency Patients' vital signs are recorded very often do not match the required frequency for effective pain monitoring, meaning Patients might be left too long with pain.
- 2. Early multi-disciplinary involvement across several specialties is necessary to increase the success of a project of this magnitude, with a clear project management plan, communications strategy, and timeframe for delivery.
- 3. Close collaboration with IT team is essential to accurately recreate the 'design on paper' into a fully functioning assessment, ensuring all parties understand the expectations. Pilot results highlighted some technical changes to the documents to further improve their effectiveness.
- 4. Ensuring all parties are kept updated with progress along the entire journey of the project.
- 5. Training and ongoing support for all end users is vital, especially as this is a cultural shift in the approach and process to pain management.

References

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