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**Abstract Title**

PIMS – improving patient outcomes through making audit data more accessible.

**Background**

Quality assurance is at the centre of effective healthcare and can be attained through reflective and evidence-based practice. Critical to this is the analysis of both treatment patterns and patient responses. An effective Acute Pain Service needs to be continually evaluating treatment options and analgesic interventions in order to reduce the burden of unrelieved pain. Improving pain management for patients has been demonstrated to positively impact on both short- and long-term health outcomes. One tool that enables quality assurance is an electronic database containing patient information. Large quantities of organized data can then be used to analyze patient populations, characterize symptoms and evaluate responses to treatments, or as part of the planning and justification of prospective investigations.

**Aim and Objectives**

The aim of the project was to maximise collection and analysis of essential data related to Pain Management throughout our Health Board. Data is used to improve patient safety, evaluate efficacy of interventions and address clinical governance issues. This data can be used to inform resource planning and educational requirements, in-line with Organisational Policies and Strategies and complies with National Guidelines. This information was previously obtained through a time consuming manual interrogation of patients’ notes and patient data sheets.

**Methods**

Initial database development involved identifying the primary objective for its use and a strategic plan for data collection, entry and analysis. Specific protocols were designed for data cleaning quality control and an ongoing evaluation system was produced to enable continual refinement of the database. An initial pilot test was used to evaluate the robustness of the database by comparing existing data to assess data collection burden, accuracy and functionality of the database.

**Main results**

* It used to take several weeks or even months to identify ‘worrying’ trends through audit. Data is now immediately accessible and any worrying trends can be identified quickly. Improvement in standards can be measured rapidly and efficiently.
* Data collection used to be time consuming and involve masses of paper documentation. Following implementation of the database data collection is now streamlined and efficient.
* Confidentiality has improved with a password secured database.
* Substantial reduction in CNS time inputting and analysing data thereby enabling more time to work clinically and improve standards of care.
* Storage space is at a premium within the NHS and a dedicated secure space was required to physically store 1000s of data sheets. Now data is stored electronically in a ‘data warehouse’, thus there is no longer a requirement for a ‘physical’ space for storage.
* Previously contributing to R&D requests significantly added to the service’s workload however data can now be analysed electronically within minutes.
* The data entered is highly organized and individual cases can be identified as required.
* Subgroups of patients can be isolated for analysis based on an extensive selection of variables such as surgery type, intervention utilised, age, sex, ward etc.

**Conclusions**

PIMS ‘Pain Information Management System’ has improved the efficiency of data analysis. This has been achieved by streamlining processes for data input, analysis and extraction including automatic collation of infection rates post epidural insertion, collation of pain scores, incidence of side effects and analgesic failure rates. Improving pain management for patients has been demonstrated to positively impact on both short-term (reducing complications experienced during hospital stay and delays in discharge) and long-term (reducing the incidence of chronic pain) health outcomes. Establishing standards for data collection, entry and evaluation is therefore a crucial step in ensuring evidence-based pain management practice. With this electronic database quality assurance and patient-centred care can be seen to be the focal point of a highly effective Acute Pain Service.