Establishing a Pediatric Pain Service

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Introduction

More 20 years ago large pediatric centers established the first pediatric pain services1, 2. A rising awareness of the inadequate clinical management of children’s acute pain coincided with the development of improved monitoring capabilities with pulseoximetry and more effective and specialized analgesic techniques such as patient-controlled analgesia (PCA)3 and continuous epidural analgesia. Trained and specialized experts were required to improve care and administer the new modalities safely. While larger pediatric centers have made great strides pediatric pain management in resource-poor facilities and geographic locations remains problematic.4

Appropriate assessment of pain in pediatric patients and provision of safer and more efficacious therapy are the principle objectives when establishing a pain service. Acute pain management is often the first place to start, as it is the easiest and a natural extension of the pediatric anesthesiologist’s domain. Extending patient care to include acute, chronic, procedural and/or cancer and palliative pain may require inclusion of other providers, particularly in centers with limited resources.

This article and the workshop will provide an overview over the fundamental components required for the provision of pain management in pediatric patients.
Scope of practice and clinical responsibilities

Prior to deciding on the desired scope of practice of a pediatric pain service it is advisable to review current pain management practices at a particular location, to identify stakeholders, to complete a needs assessment, and to identify the greatest perceived obstacles. Limiting services to patients receiving PCA or epidural analgesia maintains the risks for particularly vulnerable children, such as those that are very young or cognitively impaired. Ideally, the acute pain service should be involved the care of all patients receiving non-oral analgesia and requiring titration or weaning of strong analgesia. This involvement should extend to the prescription of discharge analgesia as children continue to report significant pain at home after “minor” day-stay procedures.

An ideal acute pain service

Essential components of clinical service provision include availability, contractibility, regular patient review, and continuity of care. Acute pain service staff needs to be available in a timely fashion around the clock and on every day of the week to address patients’ analgesic needs and to respond to any adverse effects associated with analgesic therapy. In order to encourage communication of concerns and problems by nursing and medical staff, clear guidelines for whom to contact and how should be in place. Twice daily ward rounds will improve quality and timeliness of patients’ clinical care. Communication with the primary team responsible for the patient’s care is important for review of ongoing patient needs and discharge planning. Continuity of care, particularly for complex patients, and avoidance of changes in management due to variability of practice can best be achieved in a several day or week-long block of service model.
Administrative tasks of an acute pain service

Charting, prescription writing, and documentation are the daily administrative task of an acute pain service. Regular assessment of pain with age- and cognition-appropriate pain scores and their documentation is associated with an increased likelihood of timely and efficacious analgesia. In order to decrease the risk of respiratory depression associated with analgesic therapy sedation scores should be monitored on a regular basis. Standardization of tools within institutions will improve the staff’s familiarity with them and communication between providers. Limits for changes in vital signs and appropriate responses to such changes should be defined and recorded.

Safe prescribing can be better assured when printed dosage guidelines are followed and delivery systems and preparation of drug are standardized. After initial assessment by pain service staff each patient should receive a treatment plan. Based on the invasiveness of the procedures and anticipated pain treatment ladders can be designed. Algorithms can be developed for common surgical procedures or for responses to more frequent adverse effects such as nausea and emesis. When resources are limited introduction of a reduced number of standardized treatment protocols may be advisable. Parents should receive advice regarding administration of medications and management of inadequate analgesia and potential adverse effects at patient discharge.

Doses, dilutions, administration and monitoring of medications should be standardized across the institution. These protocols and guidelines require regular reviews and updates.

Education

In addition to clinical care provision of ongoing education is another major task of a pediatric pain service. Pediatric Pain Services can be champions of change in assessment and management of pain in children in their institutions. Initial orientation and ongoing updates should be provided for all staff.
including nursing, pharmacists, physiotherapist, medical students, junior and senior medical staff. Feedback should also be provided to anesthesiologists in order to improve the quality of intraoperative analgesic management. Education of parents and children regarding management of postoperative pain can be supplemented with appropriate patient handouts.

Quality improvement and research

Improvement in the provision of care is an ongoing process requiring regular assessment of the quality of care, adherence to protocols, identification of potential obstacles, and satisfaction of staff, parents and patients. Based on these findings specific interventions can be designed.

Funding an Acute Pain Service

Funding a new acute pain service can be difficult and often requires reallocation of existing resources if other sources of funding cannot be identified. Local and national guidelines, staffing resources and reimburses for provided services will influence with delivery model of care is most appropriate. Successful examples exist for physician (usually anesthesiologist)-based, nursing-based, and mixed provider care models.10,11,12 Nevertheless, institutional support is vital. Adapting the service to local requirements and identifying realistic and achievable objectives increases the likelihood of success.

References


