

Project Description

Improving Analgesia in Hospital Emergency Departments: Optimising Use of Pethidine

Background:

NSW TAG is an independent, non-profit organisation funded by NSW Health Department, which promotes quality use of medicines in NSW hospitals through collaboration and consensus. Teaching hospital Drug Committees and academic units are represented by clinical pharmacologists, directors of pharmacy and other clinicians. NSW TAG also supports a network of rural and metropolitan non-teaching hospitals (TAGNet), which shares information via a web site (www.nswtag.org.au), accessible via the NSW Health's Clinical Information Access Program. NSW TAG has received funding from the National Institute for Clinical Studies (NICS) to coordinate a collaborative quality improvement activity in hospitals within the TAG network. NICS is a Commonwealth owned company that provides a national and integrated focus for work being undertaken to continuously improve the quality of clinical practice and its delivery to patients in Australia.

The Issue: Pain Management in Hospital Emergency Departments

Pain management is an ongoing area of interest for NSW TAG. In 1998 TAG produced guidelines for rational use of opioids for GPs Prescribing for Pain in Migraine and Low Back Pain. These are currently being revised and updated. NSW TAG has also produced guidance documents on the use of newer analgesics in hospitals, including COX-2 inhibitors and tramadol. These documents can be downloaded from the NSW TAG web site.

Pain management in hospital emergency departments (EDs) is an issue of current interest. In particular, the ongoing use of pethidine in EDs is of concern. Evidence¹ suggests that pethidine has a shorter duration of action than morphine, yet causes a similar degree of bronchospasm and increased biliary pressure. It is metabolised to norpethidine, which has potential toxic effects, especially in renal dysfunction. There are potentially serious interactions between pethidine and other drugs and pethidine is the drug most commonly requested by patients seeking opioids. Despite these limitations, pethidine is widely used in hospitals, and a recent survey of 18 NSW hospitals (2001, unpublished) showed that a significant proportion of pethidine prescribing occurred in the Emergency Department (average 15%; range 0-38%).

The Objective:

To increase awareness of the appropriate place for pethidine in pain management and to optimise pethidine prescribing by implementing a simple, ongoing audit and feedback process in hospital EDs.

The Approach: Drug Use Evaluation (DUE)

DUE is a proven methodology for changing clinical practice. It is a cyclic, dynamic and iterative process involving investigation and intervention steps to improve drug use and hence patient care.² Success is measured by comparing observed practice with best practice standards such as evidence-based consensus guidelines.

NSW TAG has identified DUE as an important strategy for improving the quality of drug use in hospitals. Through its DUE Support Group, NSW TAG has coordinated a number of successful collaborative activities, including most recently a multi-centre DUE study of proton pump inhibitor use in 30 hospitals in NSW, Victoria and Queensland (commissioned by the National Prescribing Service).³

DUE is recommended as a core function of Drug Committees in NSW hospitals.⁴ DUE programs exist in some hospitals, often led by pharmacists. However, pharmacy workforce issues and lack of suitable electronic information systems have limited the implementation of such programs. This project will facilitate implementation of a simple but important DUE, using methods which are not dependent on the existence of DUE pharmacists or elegant information systems and which are sustainable over time without the need for additional staff or equipment.

Methodology

All hospitals in the TAG network will be invited to participate. The project will employ established DUE methodology, which has been successfully implemented by NSW TAG previously. This involves data collection, evaluation of data against pre-determined standards, feedback of evaluated data and targeted intervention. Over a 12-month period, multiple DUE cycles will be implemented in each participating hospital.

A steering committee will be convened comprising ED specialists, pain specialists, clinical pharmacologists, pharmacists, ED nurses, quality improvement staff, consumers and other stakeholders. It will provide advice for development of feedback and educational materials and mechanisms for on-going sustainability of the program.

Each hospital will be asked to nominate a project coordinator. The hospital coordinator will be responsible for liaison with ED staff, hospital Drug Committee and other overseeing committees in the hospital and coordinating the data collection and feedback programs in the hospital. NSW TAG will provide information and support to hospital coordinators to facilitate these processes.

At commencement, and over a one-week period approximately every 3 months, education sessions on appropriate use of pethidine will be facilitated. Hospital project coordinators will record the number of patients receiving pethidine in the ED (from existing Schedule 8 drug registers) and indications for that use. Where prospective data collection is not possible, indication for use will be recorded retrospectively from the Emergency Department Information System database and/or medical record. All patient data will be de-identified before recording.

A feedback summary including number of patients, indications for use and prescriber will be prepared by the hospital coordinator using a format prepared by NSW TAG. As part of the summary, prescribing patterns will be compared with evidence-based guidelines. Areas of non-concordance will be highlighted. Feedback summaries will be distributed to the ED Director, individual prescribers and the hospital Drug Committee. Targeted educational interventions will be introduced to address areas of non-concordant prescribing. This process will be repeated approximately 3monthly (or at intervals which take account of staff rosters and rotations).

NSW TAG will:

- provide support to hospital coordinators at each stage of the project
- provide guidance regarding data collection and management
- prepare templates for data collection and feedback
- prepare and distribute materials to facilitate and support educational interventions (evidence-based guideline documents, posters, presentation slides, guides for discussion group leaders, reminder stickers, etc)
- facilitate on-line and teleconference discussion forums for hospital coordinators to allow sharing of information (eg, about successful interventions and strategies)
- coordinate evaluation of the project.

Project Team

This collaborative project will be managed under the auspices of the NSW TAG Drug Use Evaluation Support Group. The project team includes:

- Prof Ric Day, Head, Department of Clinical Pharmacology and Toxicology, St Vincents Hospital, Sydney
- Dr Andis Gaudins, Emergency Physician and Consultant Toxicologist, Westmead Hospital, Sydney
- Ms Karen Kaye, Executive Officer, NSW Therapeutic Assessment Group
- Ms Linda Gaudins, Chair, NSW TAG DUE Support Group
- Ms Susie Welch, Project Officer, TAG

Further information can be obtained by contacting Karen Kaye, Executive Officer, NSW TAG
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¹ National Health and Medical Research Council. Acute pain management: scientific evidence, Commonwealth of Australia, 1999

² Dartnell JGA. Understanding, influencing and evaluating drug use. Melbourne: Therapeutic Guidelines Limited, 2001: 51.

³ NSW TAG. An investigation of hospital prescribing of proton pump inhibitors: report to the National Prescribing Service Sydney: 2001.

⁴ NSW Health Department Circular 2001/64: Policy on the handling of medication in New South Wales public hospitals. Sydney: 2001.